

Mimetic Posthumanism

Homo mimeticus 2.0 in Art, Philosophy and Technics

Edited by Nidesh Lawtoo

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Mimetic Posthumanism

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l'inhumain dans Westworld: Scepticisme, perfectionnisme et mise à l'épreuve réciproque," *TV Series*, no. 17 (2021); and "Abstraction, production sociale et production de l'espace," *Cahiers de géographes*, no. 13 (2020).

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Mimetic Posthumanism: An Introduction

Nidesh Lawtoo

What is the relation between mimesis and posthumanism? And why should these seemingly antagonistic concepts be joined in a volume opening up a new branch of posthuman studies titled *Mimetic Posthumanism*? After the plurality of innovative qualifications that, since the twilight of the twentieth century, have been giving critical and creative specificity to the posthuman turn, rendering posthumanism "critical" and "speculative," "philosophical" and "ecological," among other future-oriented perspectives, adding "mimetic" to the list of qualifications may initially sound disappointing. Skeptics might wonder: What now? Is the posthuman turn so deprived of originality that it returns to the old humanistic notion of "mimesis," traditionally restricted to all-too-human forms of artistic representation?

This first impression is partially justified. At first sight, what we group under the rubric of mimetic posthumanism appears to look in two diametrically opposed directions: the mimetic side looks back to the past origins of aesthetic and philosophical theories attentive to the ways humans are uniquely endowed with a capacity to copy, represent and, in this restricted sense, imitate the world; the posthuman side looks ahead to technological developments that go beyond the human and are characterized by posthumanist difference rather than humanistic sameness, innovation instead of repetition, creativity and originality rather than copying or imitation. Given the long shadow mimesis casts on the very idea of technological innovation that drives posthuman studies, mimetic posthumanism might thus not only seem deprived of originality, it may also appear to generate a performative contradiction that a genealogy of philosophers informing posthuman studies has long trained us to critique, unmask, and deconstruct.

And yet, precisely if we adopt genealogical lenses, the opposition between mimesis and posthumanism reveals itself to be less stable than it appears to be, generating mirroring inversions of perspective that open up new possibilities for alternative reconstructions. Convoking the ancient philosophical and aesthetic concept of "*mimēsis*" should at least remind thinkers of the posthuman that first appearances tend to be deceiving. A second look, in fact, shows that if the two perspectives look in opposed directions, they can be joined to compose a Janus-faced conceptual figure. As we shall see, a plurality of posthuman figurations, configurations, or, better still, transfigurations open up creative,

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strikingly metamorphic, and even original directions of inquiry to further a "mimetic turn or *re*-turn to mimesis"[1] in the twenty-first century.

After all, the same genealogists that paved the way for the supplementary "post" that now destabilizes the anthropocentric concept of the "human," rendering it "posthuman," started by troubling the hierarchical metaphysical binaries on which humanism relied.[2] Such binaries were often structured on much-iterated oppositions such as inside/outside, nature/culture, mind/body, self/other, male/female, dominant/subaltern, and human/nonhuman. They also rested on an idealist metaphysics that opposed the "copy" to the "original," the material "phenomenon" to the ideal "Form," the "imitation" to the "model." Despite their multiple iterations that traverse the history of western thought, ultimately, such binary oppositions rested on a dominant conception of mimesis that, at least since Plato, was predicated on the mirroring logic of the Same, a vertical mimetic logic that has long been deconstructed, overturned, and unmasked as a metaphysical fiction.

In the wake of Nietzsche's critique of metaphysics, humans revealed themselves to be far removed from being mere debased imitations of a divine, transcendental, and ideal model posited in an imaginary world behind the world. Rather, the very idea of a divine model, ideal, or phantom turned out to be given form by all-too-human drives constitutive of our evolutionary history in general and modernist critiques of that history in particular. As a period characterized by technological innovations and accelerations, modernist thinkers were thus quick to diagnose a change in human character or subjectivity that turned the ego into a copy, simulacrum, or, to use Nietzsche's phrase, a "phantom of the ego."[3] Over a century later, in the wake of recent developments in robotics and algorithmic reason, and especially artificial intelligence (AI) revolutions that increasingly blur the frontier between human and artificial

1 The mimetic turn or *re*-turn originates in the 'Homo Mimeticus' project (funded by the European Research Council), of which this volume provides a 2.0 supplement. Its theoretical foundations are articulated in a trilogy on homo mimeticus currently in progress. See Nidesh Lawtoo, *Homo Mimeticus: A New Theory of Imitation* (Leuven: Leuven University Press, 2022); Nidesh Lawtoo and Marina Garcia-Granero (eds.), *Homo Mimeticus II: The Re-Turns of Mimesis,* (Leuven: Leuven University Press, 2024); Nidesh Lawtoo and Willow Verkek, eds., *Homo Mimeticus III: Plasticity, Mimesis, and Metamorphosis with Catherine Malabou* (in progress). See also www.homomimeticus.eu.

2 For first steps see Nidesh Lawtoo, ed., "Posthuman Mimesis," Special Issue, *Journal of Posthumanism* 2, no. 2 (2022), https://journals.tplondon.com/jp/issue/view/124.

3 Friedrich Nietzsche, *Daybreak*, trans. R. J. Hollingdale (Cambridge: Cambridge University Press, 1982), 61.

intelligence, it is thus tempting to repeat modernist claims on radical changes or transformations.

We could say, for instance, that on and about November 30, 2022, posthuman character changed, in an echo of modernist claims. This, at least, is what the launch of ChatGPT (Generative Pre-Trained Transformer), a conversational AI system developed by OpenAI and made available for free use on that date seems to suggest. Designed to fine-tune conversational language on the bases of inputs, exchanges, and questions from users, as the program itself puts it, ChatGPT can generate "human-like responses in natural language based on the input it receives."[4] While likeness is one of the traditional translations of mimesis, the adequation to human responses is not based on a passive imitation or representation of a preexisting human model, or origin. It is not simply a matter of AI imitating or reproducing human speech. It is rather a simulation of human communication that is productive, or generative of new texts without origins, for it is based on statistical patterns learned from a vast amount of internet data during its training process.

This artificial simulation is certainly impressive, generative, and revolutionary. Its consequences for the transformation of posthuman character are far-reaching and in need of careful investigation, if only because an entire tradition of thinkers of mimesis from Plato to Nietzsche, Stiegler to Hayles and beyond have warned that the power of simulations is at least double: Not only can they generate lies far removed from reality that can be illusory and false, leading to what is currently called post-truth, they also have the magnetic power, or will to power, to tap into the mind, soul, or brain of homo mimeticus and cast a spell so profound that it "spell-binds" people living a "*vita mimetica,*" as an ancient myth already warned us at the dawn of philosophy.[5] Posthuman character may not have changed once and for all on and about November 30, 2022, but it is certainly more open than ever to fast transformations in the years to come.

At the same time, if we adopt a long-distance, genealogical perspective, as this book aims to do, there are reasons to be suspicious of a single transformational moment in the history of homo mimeticus. The same philosophical tradition suggests that a *re*-turn of attention to the performative properties of what the ancients enigmatically called *mimēsis* (from *mîmos*, actor but also performance) had been in the making for some time: From hyperreal simulacra without origins to identifications with avatars, impersonations in videogames to deep fakes, fake news online to (new) fascist insurrections offline, it is

4 Text generated by ChatGPT, June 3, 2023, OpenAI, https://chat.openai.com. ChatGPT.

5 Lawtoo, *Homo Mimeticus*, 69–91.

clear that AI simulations are not simply "hyperreal" in the sense that they do not rest on the logic of "imitation" already critiqued in the past century;[6] they are also and above all, "hypermimetic" in the sense that they generate material effects on the brains and bodies, actions and reactions of homo mimeticus 2.0 living increasingly digitized lives in the twenty-first century. In the process, a radical inversion of perspectives has taken place: It is no longer posthuman intelligence or consciousness that aspires to imitate artificial intelligence. On the contrary, it is the human mind or brain that turns out to be the immanent model computers are currently programmed to imitate or copy. They do so in view of aspiring, perhaps not to human intelligence as such (a notoriously difficult concept to define, let alone copy), but at least to a simulation thereof with the power to retroact on posthuman users generating mimetic, or rather, hypermimetic effects that call for new diagnostics.

Either way, the general assumption of this volume is that mimesis in its multiple iterations (imitating and copying, but also mimicking, doubling, impersonating, simulating, and the like) plays a central role in the posthuman turn. It provides, in fact, a multifaceted mirror to reflect critically on what it means to be human or become posthuman in the first place. In the process, a mimetic drive also informs "posthumanist reading[s]" inclined to "sympathize and empathize with a position that troubles and undoes identity,"[7] if only because both sympathy and empathy generate a shared affect, or *sym-pathos* that increasingly blurs the boundary dividing embodied self and digital others, connecting humans to technology in a plurality of different ways characteristic of the digital age.

Furthering a critical line of posthuman inquiry, this volume suggests that the so-called "originality" constitutive of an all-too-human species with the narcissistic presumption to call itself *Homo sapiens sapiens* (notice the mimetic repetition), rests on a different, perhaps more ancient and destabilizing, but also more embodied, relational, immanent, and social conception of mimesis constitutive of a chameleon-like species that we call homo mimeticus. That is, an eminently adaptable, plastic, and protean species born without proper or essential qualities that would fix, once and for all, all-too-human identities in a stable essence, mold, or form. Instead, homo mimeticus is animated by an immanent drive to mimic others, be they human or nonhuman, real or fictional, offline or online, in reflex, unconscious, and embodied ways that are always relational in nature and open up the humanistic ideal

6 Jean Baudrillard, *Simulacres et simulation* (Paris: Galilée, 1981), 10.

7 Ivan Callus and Stefan Herbrechter, "What Is a Posthumanist Reading?" *Angelaki* 13, no. 1 (2008): 95–111, 95.

of an autonomous, rational, and fully conscious *Homo sapiens* to a plurality of forms to becoming other. Over the ages, this will to mime rendered homo mimeticus not only relational and social, empathetic and prosthetic, but also eminently vulnerable to external human, animal, and technological influences that formed and continue to transform sapient and not-so-sapient humans and posthumans today—for both good and ill.

If this more complex, immanent, and intersubjective mimetic hypothesis is correct—and a number of recent developments in the human, social, and evolutionary sciences, including the neurosciences, indicate that it is—then, the transformations of humans across historical periods, societies, and cultures may not only be the product of "intersubjective" agricultural, industrial, and now digital "revolutions" constitutive of popular histories of *Homo sapiens*;[8] these transformations are also dependent on a relational, affective, and embodied conception of homo mimeticus open to the shared experience of sym-pathos that makes intersubjectivity possible in the first place.

Mimetic pathos should thus not be confused with mimetic or Oedipal desire, for it rests on relational processes that transgress triangular structures. This also means that intersubjectivity, relationality, embodiment, the unconscious, metamorphoses, and other concepts central to posthuman studies go beyond the pleasure principle. They rest instead on a little-discussed mimetic principle that amplifies the power of myth, fictions, ideologies, and technologies to form and transform homo mimeticus 2.0 in unpredictable ways that require new diagnostic evaluations. This mimetic principle, affect, or pathos is constitutive of a will to mime that—from the dawn of consciousness to the development of language, from mythic origins to philosophical reflections, from technological inventions to social cooperation—reached into the present, forming and transforming not simply what humans were in the past and are in the present, but also what they can potentially become in the future.

Thus reframed, then, our opening question may begin to sound less improbable than it first sounded. It could be reformulated as follows: Could it be that this different, more immanent, embodied, and relational conception of mimesis serves an important and, so far, still underexplored genealogical link in the narrative of how we became posthuman as well? And if this hypothesis is correct, then shouldn't the recent manifestations of mimesis in the digital age—from avatars to deep fakes, AI simulations to hypermimesis, among others—call for new critical and theoretical bridges between mimetic studies and posthuman studies? This is, indeed, what this inaugural volume on mimetic

8 Yuval Noah Harari, *Sapiens: A Brief History of Humankind* (London: Vintage Books, 2011), 132.

posthumanism aims to perform from the threefold perspective of art, philosophy and technics on different manifestations of posthuman mimesis.

1 Posthuman Mimesis: Precursors

We are not alone in arguing for new connections between mimesis and the posthuman. In a dialogue on posthuman mimesis, Katherine Hayles joined forces to promote a mimetic turn in posthuman studies, which now serves as a "Dialogic Prelude" to the present volume as well.[9] She did so through a retrospective glance that cast new light onto the opening of her landmark study, *How We Become Posthuman* (1999)—a book central to the genealogy of posthuman studies that provides a starting point for mimetic posthumanism as well.

In that book, Hayles' goal was to bring posthuman phantasies of disembodiment promoted by cybernetics back to Earth, by rooting them in the immanence of the body. For this operation, she selected as a genealogical starting point an exemplary case study: the "imitation game," which Alan Turing envisioned in the 1950s to distinguish between humans and machines, so as to answer the question, "Can machines think?"[10] As the name of the game suggests, it was designed in traditional mimetic terms that relied on the original/copy metaphysical opposition I mentioned, a *meta* (after) *physics* (nature) which, at least since Plato and Aristotle, structures other binaries such as intelligible/sensible, forms/phenomena, transcendence/immanence, mind/body, male/female, and idea/copy by privileging the former, more abstract, disembodied, and supposedly universal term over the latter. This traditional conception of imitation is predicated on a dualistic metaphysics that, Hayles convincingly argues, goes from Plato to cybernetics and continues to (mis)inform transhumanism as well. In the process, it had the unfortunate effect of erasing embodiment at the dawn of posthuman studies, while turning out to be radically insufficient to distinguish between humans and machines, as also dramatized in sci-fi films such as Alex Garland's *Ex Machina* (2014). There is thus a genealogical link between posthuman studies and mimetic studies: Both are invested in opposing, deconstructing, or overturning traditional

9 With some minor adaptations, this prologue is a reprint of a dialogue titled "Posthuman Mimesis 11—Connections: A Dialogue Between Nidesh Lawtoo and Katherine Hayles," *Journal of Posthumanism* 2, no. 2 (2022): 181–91, 185. I am grateful to Kate Hayles for agreeing to reproduce it here.

10 See N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), xi–xiv.

conceptions of mimesis modeled on disembodied phantoms far removed from reality.

Now, Hayles adds an interesting twist, in line with the mimetic turn, to give genealogical substance to posthuman mimesis. A few years later, Turing was in fact forced to undergo hormonal treatment as a supposed "cure" for his homosexuality. The cure eventually turned out to be a poison: Turing committed suicide a few years later. Yet, the pathological cure was not deprived of logical or—as I call it, to emphasize the productive interplay of affect and reason, pathos and logos—patho-*logical* insights. In fact, Hayles stresses that Turing, in a later, lesser-known article on "morphogenesis," turned to a more fluid, embodied, and metamorphic conception of mimesis that challenged the metaphysical binaries (human/machine, male/female, original/copy) he had previously set up in the imitation game. This time, in fact, he focused on "the ability of organisms to change form and become something other than what they were."[11] This immanent, morphogenetic, and metamorphic conception of (post)humans endowed with the power to "become something other" is, indeed, the one that the mimetic turn in general and this volume in particular set out to re-evaluate from a plurality of artistic, philosophical, and technological perspectives.

With characteristic foresight, Hayles was quick to establish a genealogical link that connects the two faces of mimetic posthumanism looking in opposed directions. Thus, joining forces to build a bridge between the posthuman turn and the mimetic turn, she asserts that Turing's later revision of the imitation game "is very much in line with the strain of mimetic theory that emphasizes plasticity and transformation."[12] That strain of mimetic theory, or—as we now call it to differentiate it from humanistic theories restricted to desire and rivalry—*mimetic studies,* aims to give material, embodied, and relational substance to the ancient concept of mimesis that now casts new light on the nonhuman processes of posthuman becoming as well.[13] Often simplistically restricted to copying, or aesthetic realism, the Greek concept *mimēsis* is an untranslatable, destabilizing, and troubling concept that includes mimicry

11 Hayles and Lawtoo, "Posthuman Mimesis," 185.

12 Hayles and Lawtoo, "Posthuman Mimesis," 185.

13 Theoretical foundations for mimetic studies are set in Lawtoo, *Homo Mimeticus* 9–40; Nidesh Lawtoo, *Violence and the Mimetic Unconscious: Vol. 2. The Affective Hypothesis* (East Lansing: Michigan State University Press, 2023), 1–33; Nidesh Lawtoo, ed., "The Mimetic Condition," Special Issue, *CounterText* 8, no.1 (2022); and Nidesh Lawtoo, ed., "The Mimetic Turn," Special Issue, *MLN*, 138, no. 5 (2023). We also refer to "new mimetic studies" when the focus is on new media, AI, algorithms, etc., though there are many continuities between old and new manifestations of homo mimeticus.

and imitation, but also impersonation, identification, influence, contagion, simulation, mirror neurons, and plasticity, among other contemporary avatars constitutive of an eminently mimetic species—namely, a hypermimetic species that is not exceptionally self-contained or autonomous, but rather is entangled, often unconsciously, with human and nonhuman others.

Thus redefined, mimesis operates as a relational affective force, power, or pathos that includes desire as previous theorists of imitation have emphasized, but is not restricted to it; if only because it is based on the realization that all affects, from joy to grief, sympathy to panic, love to anxiety, admiration to identification, are manifestations of a mimetic pathos that troubles the boundaries of individuation. Thus it blurs the line between mind and body, self and others, consciousness and the unconscious, humans and nonhumans, often with contradictory, paradoxical effects that operate below the radar of conscious awareness and are in this sense *un*-conscious. Hence the importance of developing new diagnostics of a concept that goes beyond good and evil, for it generates both pathological infections that are life-negating and patho-*logical* opportunities that are life-affirmative. If this unconscious, or as Hayles calls it, "nonconscious," is a "source for intuition, creativity, aesthetic preferences, and social interaction" that operate on the logical side, we shall also see that this "mimetic unconscious,"[14] is equally a source of hypnotic spells, contagious influences, and technological dispossessions that operate on the "pathological" side.[15] Both sides are part of the Janus-faced configuration this volume sets out to explore from a multiplicity of perspectives at the critical and creative crossroads of arts, philosophy, and technics which, together, provide a 2.0 update to homo mimeticus for the digital age.[16]

Given the scope of the concept of mimesis, its protean power of transformation over the ages, and the misunderstandings it continues to generate, a broader contextual framing is in order. This volume is part of a series of books on homo mimeticus that provide new epistemic foundations to rethink

14 Nidesh Lawtoo, "The Mimetic Unconscious: A Genealogy," in *Imitation, Contagion, Suggestion: On Mimesis and Society*, ed. Christian Borch (New York: Routledge, 2019), 37–53.

15 N. Katherine Hayles, *Unthought: The Power of the Cognitive Nonconscious* (Chicago: University of Chicago Press, 2017), 52. See also Lawtoo, *Violence and the Mimetic Unconscious* and the essays collected in Christian Borch ed., *Imitation, Contagion, Suggestion: On Mimesis and Society* (New York: Routledge, 2019).

16 For a diagnostic of homo ludens 2.0 reloded via digital culture that in many ways resonates with the study at hand see Valerie Frissen, Sybille Lammes, Michiel de Lange, Jos de Mul and Joost Raessens, "Homo ludens 2.0: Play, Media and Identity," in *Playful Identities: The Ludification of Digital Media Culture*, ed. Valerie Frissen, Sybille Lammes et al. (Amsterdam: Amsterdam University Press, 2015), 9-50.

mimesis in the twenty-first century across continental philosophy, aesthetics, and politics.[17] The general goal, or *telos*, of this series is to open up the transdisciplinary field of mimetic studies—a pluralist, intersectional, or diagonal field that cuts across humanistic disciplines and ossified two-cultures (humanistic/scientific) divides to generate a paradigm shift in the way we think about mimesis in the twenty-first century.

Schematically put, this entails going beyond two dominant definitions of mimesis central to both philosophy and the arts, which, despite their differences, traditionally restricted mimesis to the mirroring logic of visual representation. On the philosophical side, since at least Plato, philosophers defined mimesis as a metaphysical mirror (or mimetic re-presentation) opposing intelligible ideas to material phenomena, universals to particulars, forms to phantoms or shadows; on the literary side, up to the nineteenth century, mimesis was understood as a realistic representation of reality (or mimetic realism) that in-*forms* (gives form to) western aesthetics from Homer to Zola. Although this restricted definition rests on an ancient quarrel between philosophy and literature, these agonistic perspectives share, paradoxically, the same genealogical foundations that can be traced back to book 10 of Plato's *Republic*. This dominant idealist tradition that reduces the many to the one, phenomenal multiplicity to intelligible abstraction is well-documented in the history of philosophy. It is also part of what Hayles calls the "Platonic backhand"[18] mimetic posthumanism is up against.

And yet, at the same time, Plato, in the same dialogue, was the first to theorize that mimesis is first and foremost a theatrical practice (*mimēsis*, from *mîmos*, actor or performance) that plays a key role in the education, formation, and transformation of humans, often for the worse but also for the better. This pharmacological, or as I call it, "patho(-)logical" lesson was reloaded by anti-Platonic modernist philosophers like Friedrich Nietzsche, who paved the way for poststructuralist and postmodernist thinkers—such as Jacques Derrida, Luce Irigaray, Michel Foucault, Jean Baudrillard, Philippe Lacoue-Labarthe, Bernard Stiegler, and Catherine Malabou, among others—who now inform posthuman studies as well. More recently, Nietzsche also laid the foundations for a transdisciplinary theory of imitation that benefited from collaborations with key figures in different areas of inquiry—including literary studies (J. Hillis Miller), political theory (William E. Connolly), continental philosophy (Jean-Luc Nancy), feminist philosophy (Adriana Cavarero), new materialism

17 See footnote 1 of this chapter. For more outputs, see https://cordis.europa.eu/project/id/716181.

18 Hayles, *How We Became*, 12–13; Hayles and Lawtoo, "Posthuman Mimesis."

(Jane Bennett), the neurosciences (Vittorio Gallese)—who joined forces with mimetic studies in a series of dialogic encounters.[19] This recent mimetic turn is now informing and transforming posthumanism as well via a minor, intersectional, collaborative, and increasingly influential theory of embodied imitation that is central to the genealogy of homo mimeticus. It is mediated via new technics of simulations that problematize metaphysical binaries dividing copy and original, fictional and real, phantoms and egos, digital shadows and material realities, among other oppositions that no longer hold today and will become increasingly blurry in the future.

Mimetic Posthumanism assembles essays that were first presented at an interdisciplinary conference titled, "Posthuman Mimesis: Embodiment, Affect, Contagion," hosted at the Institute of Philosophy at KU Leuven, Belgium, in 2021. Bringing together over fifty international scholars from around the world in the midst of the COVID-19 pandemic crisis, the Janus-faced patho(-)logical orientation of mimetic posthumanism was performatively at play during the conference itself. On one side, Zoom simulations mediated by our computers kept speakers at a safe distance from the risk of viral contagion, allowing participants to join intellectual forces over three intense days to turn a pathological health crisis into an untimely occasion to develop life-affirmative patho-*logies* for our increasingly precarious posthuman future. On the other side, the same simulations reminded us not only that homo mimeticus continues to be dependent on bodily encounters in the real world for survival, but also that an excess of technological mediation can lead to isolation, fatigue, and anxiety among other posthuman pathologies.

A complex diagnostic lesson was thus already at play at the level of the medium itself: It revealed how digital simulations could not only be used as straightforward antidotes to prevent the spread of a viral mimetic pathology; the simulations also allowed us to develop critical diagnostics, or patho-*logies*,

19 For a representative sample see, J. Hillis Miller and Nidesh Lawtoo, "The Critic and the Mime: J. Hillis Miller in Dialogue with Nidesh Lawtoo," *Minnesota Review* 95 (2020): 93–119; Jean-Luc Nancy and Nidesh Lawtoo, "Mimesis: A Singular Plural Concept," *CounterText* 8, no. 1 (2022): 23–45; Adriana Cavarero and Nidesh Lawtoo, "Mimetic Inclinations: A Dialogue with Adriana Cavarero," in *Contemporary Italian Women Philosophers: Stretching the Art of Thinking*, eds. Silvia Benso and Elvira Roncalli (New York: State University of New York Press, 2021), 183–199. See also "Poetics and Politics: with Lacoue-Labarthe," Special Issue, *MLN* 132, no. 5 (2017); Jeffrey Stuker and Jan Tumlir, eds., "Mimicries," Special Issue, *Effects* 3 (2022); Lawtoo, "The Mimetic Condition"; Lawtoo and Verkek, eds., "Mimetic Inclinations with Adriana Cavarero," Special Issue, *Critical Horizons* 24, no. 2 (2023); Lawtoo, ed., "The Mimetic Turn"; and HOM Videos ERC Project 'Homo Mimeticus', YouTube, https://www.youtube.com/channel/UCJQy0y0qCxzP4QImG2YWqpw.

that, in a spiraling feedback loop, included the pathologies developed by new media simulations in which a large part of the world population was then entangled. In a reloaded, diagnostic sense, then, the medium was indeed still the message in a globally infected village—to echo Marshall McLuhan famous phrase with a difference.[20] In particular, it revealed that posthuman mimesis continues to operate as a patho(-)logy, understood both as sickness and as a diagnostic discourse (*logos*) on the suffering or affect (*pathos*) it generated. Or, to use a more ancient term inscribed in the long history of mimesis, the medium operated as a *pharmakon*, both poison and cure,[21] albeit one in need of new diagnostic evaluations, which takes us to the level of the message, or rather, messages.

Despite the variety of perspectives presented, many of which dealt directly with the patho(-)logies of viral contagion, the intellectual cohesion of the conference and, at one further remove, of the volume and the series on homo mimeticus of which it is part, was guaranteed by a shared intellectual objective constitutive of mimetic studies: The general goal was to initiate a mimetic turn, or *re*-turn of attention to mimesis already at play in different areas of critical theory—from philosophy to literary studies, media studies to political theory—in posthuman studies as well. We did so by inviting founding figures of posthuman studies like Katherine Hayles and Kevin Warwick as keynote speakers in view of presenting both posthumanist and transhumanist perspectives on mimesis. They were supplemented by a number of influential theorists of posthumanism who contributed to expanding the reach of posthuman mimesis, including Stephen Shaviro, Ivan Callus, Stefan Lorenz Sorgner, Roberto Marchesini, Stefan Herbrechter, Jean-Marie Schaeffer, Patricia Pisters, Kevin La Grandeur, and Francesca Ferrando, along with a host of young emerging voices. The second collective output to emerge from the conference, the contributors of the present volume redouble and supplement a 2022 special issue of the *Journal of Posthumanism* titled *Posthuman Mimesis,* which already set new conceptual and theoretical foundations for the mimetic turn from representation to posthuman simulations.

What I want to stress now is that the distinguished speakers we invited at the conference had already provided some steps for the mimetic turn, albeit not under the rubric of posthuman mimesis as yet. Kevin Warwick, for instance, in

20 Marshall McLuhan, *Understanding Media: The Extensions of Man* (New York: Signet Books, 1964).

21 Jacques Derrida, "Plato's Pharmacy," in *Dissemination*, trans. Barbara Johnson (Chicago: University of Chicago Press, 1981), 61–172; Bernard Stiegler, *Technics and Time, 1: The Fault of Epimetheus* (Stanford, CA: Stanford University Press), 1998.

his keynote address, not only took us through a tour de force of his pioneering "cyborg experiments" with therapeutic, existential, and philosophical implications, for they allowed him to generate electronic communications with both machines and (post)humans (most notably his spouse, Irena); he also reminded us that he found mimetic sources of inspiration for his experiments in literary classics about mimetic doubles, or doppelgangers, such as Robert Louis Stevenson's *Strange Case of Dr. Jekyll and Mr. Hyde* and Oscar Wilde's *The Picture of Dorian Gray.*[22] This genealogical step back confirmed our hypermimetic hypothesis that technological innovation in the real world can be stimulated by mimetic fictions at play in imaginary worlds. It is thus perhaps no accident that the same texts also played a key role in the modernist strain of mimetic studies that I developed elsewhere and now paves the way for the posthuman *re*-turn to mimesis.

In the context of the COVID-19 pandemic crisis, Hayles's keynote, titled "Survival as Mimesis: Microbiomimesis and the Production of Posthuman Bodies" (later published in *Critical Inquiry*) made clear that she had already started to take mimesis beyond traditional anthropocentric accounts restricted to realism by considering "what mimesis might signify in the nonhuman realm."[23] In particular, Hayles relied on her training in biology to give an account of "microbiomimesis" in view of, among other insights, extending human sympathy beyond the human so as to "empathize with, conserve, and consider the value of all species."[24] In yet another timely confirmation that the genealogies of posthuman studies and new mimetic studies are already entangled, Hayles recalled the pioneering work on animal mimicry of the French diagonal thinker Roger Caillois, who put mimesis to use to affirm "nonhuman forms of creativity, which he saw as freeing creative acts from rational thought and agency."[25] This connection is timely for Caillois, along with his collaborator Georges Bataille, occupies a privileged place in the "diagonal" genealogy of homo mimeticus as well.[26] After a long period of subordination to traditional humanist concerns with representation, the pandemic crisis made clear that there is now a significant drive to rethinking mimesis beyond the human anthropocentrism and exceptionalism characteristic of the epoch of the Anthropocene. This is also what the emerging field of "biomimicry" suggests

22 See Kevin Warwick, *I, Cyborg* (London: Century, 2002), 9.

23 N. Katherine Hayles, "Microbiomimesis: Bacteria, Our Cognitive Collaborators," *Critical Inquiry* 47, no. 4 (2021): 777–787, 777.

24 Hayles, "Microbiomimesis," 787. See also Lawtoo, *Homo Mimeticus*, 277–99.

25 Hayles, "Microbiomimesis," 777, n1.

26 See Lawtoo, *Homo Mimeticus*, 157–90.

by taking nature as a "model" and "mentor" for developing life-sustaining innovations and technological transformations that are mimetic yet original in nature and whose innovative potential for posthuman studies still needs to be explored.[27]

From a different but genealogically related perspective, before Hayles, Donna Haraway equally counts as a genealogical precursor for the mimetic turn in posthuman studies. It is, in fact, well known that in "A Cyborgs Manifesto" (1985), Haraway argued that the hybrid figure of the cyborg transgresses the nature/culture binary so as to entangle nonhuman and human animals with machines via a "cyborg imagery [that] can suggest a way out of the maze of dualisms."[28] Less known is that this foundational anti-dualistic move hinges on a less visible, yet equally fundamental redefinition of mimesis as well. Thus, Haraway calls future generations of theorists to move beyond the "comfortable old hierarchical" logic of "Representation" to account for the more troubling and complex logic of "Simulation."[29] This is a foundational move that already in the 1980s began to tilt the balance of other, previously stable, binaries. Hence the turn from "Reproduction" to "Replication," "Depth" to "Surface," "realism" to "postmodernism," among other shifts of emphases that will lead up to the posthuman turn. Interestingly, Haraway paves the way for posthumanism by *re*-turning to a differential conception of simulation endowed with the power to induce what she calls, drawing on an anthropological category, a "trance state."[30] These altered states of consciousness, or trance, we should now specify, rest on a mimetic conception of the unconscious that finds in hypnosis, suggestion, and mirroring reflexes, more than dreams, a trans-formative power, pathos, or sym-pathos that is in a relation of continuity with animal mimicry, reaching to animate avatar simulations as well. Dismissed as magical in the past Freudian century, the tradition of the mimetic unconscious is currently regaining traction in the present post-Freudian century, in which the power of

27 See Janine M. Benyus, *Biomimicry: Innovation Inspired by Nature* (New York: HarperCollins, 1997). For a rich study that gives philosophical foundations to biomimicry in ways that contribute directly to mimetic studies and appeared too late to be fully incorporated here, see Henry Dicks, *The Biomimicry Revolution: Learning from Nature How to Inhabit the Earth* (New York: Columbia University Press, 2023); see also Henry Dicks, "The Biomimicry Revolution: Contribution to Mimetic Studies," in Lawtoo and Garcia-Granero eds., *Homo Mimeticus II*.

28 Donna Haraway, "A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s," in *The Norton Anthology of Theory and Criticism*, ed. Vincent B. Leitch (New York: W. W. Norton, 2001), 2269–99, 2299.

29 Haraway, "A Manifesto for Cyborgs" 2281–82.

30 Haraway, "A Manifesto for Cyborgs," 2282, 2296.

hypnotic spells is amplified by "hypermimetic simulations" at play on digital screens qua "black mirrors."[31]

Warwick, Hayles, Haraway: These are just three examples who provide initial steps to mimetic posthumanism. Still, they are significant ones. They testify that a mimetic turn, or *re*-turn to a different conception of mimesis had been implicitly informing the posthuman turn all along, waiting for future theorists and critics to make it explicit. Consequently, if the posthuman, as Rosi Braidotti noted more recently, is indeed a "work in progress … a working hypothesis about the kind of subjects we are becoming,"[32] an explicit theoretical supplement is still needed to account for this immanent process of becoming other: namely, the realization that the relational, embodied, and affective (im)properties of homo mimeticus play a so far rarely noticed, often imperceptible, yet foundational and transformative role in our current process of becoming posthuman in the twenty-first century.

From digital simulations to AI, trance to contagion, conspiracies online to insurrections offline, robotics to gene editing, unconscious mimicry to biomimicry, microbiomimesis to hypermimesis, there is hardly an aspect of posthuman transformation today that does not entangle our processes of (non)human becoming with an iteration, repetition, or re-enactment of the protean concept of mimesis. If we still had doubts about the power of technological simulations to (mis)inform the population, deepfakes and, more recently, GPT-4 (the latest iteration of OpenAI's generative language model) should make clear at least two points: First, the copy/model binary that traditionally structured discourses of mimesis does not apply to simulations deprived of referential origins. If it is true that the driving goal of AI is to mimic, or "copy fragments of human intelligence,"[33] as Daniel Andler recently puts it in an informed philosophical study on AI, it is equally true that human intelligence is notoriously difficult to define. It cannot be reduced to quantifiable criteria, generating a disconcerting paradox that can be summarized as follows: The more AI progresses, the further away does the approximation of

31 On trance, mimesis, and simulation, see also Nidesh Lawtoo, "*Avatar* Simulation in 3Ts: Techne, Trance, Transformation," *Science Fiction Studies* 125, no. 42. (2015): 132–50; Nidesh Lawtoo, "Black Mirrors: Reflecting (on) Hypermimesis," *Philosophy Today* 65, no. 3 (2021): 523–47.

32 Rosi Braidotti, *Posthuman Knowledge* (London: Polity Press, 2019), 2. Braidotti had kindly agreed to join us as keynote speaker at the "Posthuman Mimesis" conference but unfortunately had to cancel due to sickness. As the numerous references to her work will show, she plays a key role in our theorization of posthuman mimesis.

33 Daniel Andler, *Intelligence artificielle, intelligence humanine: La double enigme* (Paris: Presses Universitaires de France, 2023), 15 (my translation).

human intelligence appear to be. Rather than a copy of a model, AI seems to have the properties of "chimera."[34] This, at least, is what not only Andler but also Noam Chomsky and other leading scholars seem to suggest, at least for the moment.

And yet, this does not mean that AI cannot generate phantoms without human origins—be they linguistic, vocal, visual, or a combination thereof—with the power to trigger disconcerting hypermimetic effects on homo mimeticus 2.0 that can be as logical and informative as they can be pathological and manipulative, which leads us to the second point: If the first version of ChatGPT could go as far as simulating inner experiences such as love and jealousy with troubling effects on (post)humans,[35] it is not difficult to imagine that without a strict regulation system, it can be used to cast a pathological spell on the population: AI can radically amplify an all-too-human vulnerability to conspiracies, fake news, and manipulations that have already led to "(new) fascist"[36] insurrections in the recent past and are likely to affect (post)humans in the near future as well.

Our argument to promote a mimetic turn is thus as past-oriented as it is future-oriented; it rests both on a genealogy of homo mimeticus and on its technological process of becoming 2.0. On one side, our "mimetic faculty,"[37] as Walter Benjamin reminded us, is what allows us to become other in the first place. On the other, after a long parenthesis in the cognitive sciences during which the human brain was reduced to the model of the computer, new developments in both AI and the neurosciences overturn perspectives in order to ask if algorithms are "already able to mimic" our brain.[38] This plastic brain, as the French philosopher Catherine Malabou notes, serves as a model for the development of "synaptic chips" that "not only imitate the brain" but also simulate a synapsis so effectively that, she argues, it "*is* a synapsis."[39] Once again, mimesis

34 Andler, *Intelligence*, 15. See also Noam Chomsky, Ian Roberts, and Jeffrey Watumull, "The False Promise of ChatGPT," *New York Times*, March 8, 2023.

35 Kevin Roose, "Why a Conversation with Bing's Chatbot Left Me Deeply Unsettled," *New York Times*, February 17, 2023.

36 Nidesh Lawtoo, (*New*) *Fascism: Contagion, Community, Myth* (East Lansing: Michigan State University Press, 2019).

37 Walter Benjamin, "On the Mimetic Faculty," in *Reflections: Essays, Aphorisms, Autobiographical Writings*, trans. Edmund Jephcott, ed. Peter Demetz (New York: Schocken Books, 1986), 333–38.

38 Stanislas Dehane, *How We Learn: The New Science of Education and the Brain* (New York: Penguin Books, 2020), xxii.

39 Catherine Malabou, *Métamorphoses de l'intelligence: Que faire de notre cerveau bleu* (Paris: Presses Universitaires de France, 2017), 108 (my translation). For a first genealogical link between Malabou's concept of plasticity and mimesis see also Lawtoo, *Homo*

is not simply a passive imitation that upholds traditional binaries such as the model and the copy, the human and the machine (or vice versa). On the contrary, it is a destabilizing mirroring concept that blurs the boundaries between copy and original, appearance and being. It does so by entangling humans and machines in mimetic processes of embodied and algorithmic transformation that we shall group under the rubric of hypermimesis.

On either side of a human/nonhuman binary which is not one, the lesson is double too. On the one hand, human brains remain thoroughly mimetic and thus adaptable, plastic, and shaped by external impressions. Traditionally, subject formation was linked to human parenting, education, and social face-to-face interactions at work and during leisure activities that took place via embodied encounters, for better and worse. Such encounters are now increasingly mediated via a proliferation of nonhuman technological simulations and social media. Channeled via hand-held devices (the smartphone *in primis*), they operate regularly on the senses of increasingly younger generations triggering a flow of impressions in need of patho(-)logical diagnostics. On the other hand, the posthuman turn reveals that on either side of the human/machine binary, mimesis continues to operate as a transgressive link that allows for metamorphic transformations of both human and artificial intelligence. It is thus no longer clear who is the subject or the object of experience, active or passive. Hence the need for new diagnostics of a hypermimetic condition that goes beyond the human and the nonhuman. Hence the urgency of joining posthuman studies with new mimetic studies to foreground the role mimesis and its multiple contemporary avatars in the digital age—from simulation to identification, trance to mimicry, contagion to plasticity, influence to mirror neurons, techno-mimesis to hypermimesis, among others—play in the ongoing metamorphic transformations constitutive of mimetic posthumanism.

As the Janus-faced orientation with which we started already suggests, one of the genealogical assumptions that orient the chapters in this volume is that looking back to the different transformations mimesis made possible in the past is a necessary step to look ahead to some of the most recent challenges posthumans will have to face in the present and future. Before introducing the threefold perspective on posthuman mimesis centered on aesthetics (Part One), philosophy (Part Two), and technics (Part Three) in more detail, let me now briefly step back to consider why, at the dawn of the twenty-first century, a species called *Homo sapiens* requires a mimetic supplement to face

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Mimeticus, 129–55. *Homo Mimeticus III* will be entirely devoted to the plastic metamorphoses of mimesis.

posthuman challenges that are already here and will continue to proliferate in years to come.

2 *Homo sapiens* to Homo Mimeticus 2.0

It is now clear enough that humanism rests on an antiquated conception of *Homo sapiens* that uncritically values autonomy, free will, and solipsistic self-sufficiency in theory, yet remains radically dependent on human and nonhuman others for its survival in practice. Prone to the hypnotizing spell of mythic narratives of technological progress centered on a universal, exploitative, and exceptionalist conception of western "Man," for a long time, humanism relied on clear-cut patriarchal, ethnocentric, and anthropocentric distinctions between colonizer and colonized, humans and nonhumans, subjects and objects, culture and nature, ideas and phenomena, as well as male and female, white and black, heterosexual and homosexual, western and non-western, that is, barbaric (from *barbaros*, foreign, not Greek and thus not the same), among other binaries. This humanistic ideal is constitutive of violent hierarchies the "post" in posthumanism aims to move beyond.[40] It does so from multiple critical, creative, philosophical, and we shall now add, mimetic perspectives.

At the same time, as the humanistic origins of the concept of mimesis already implicitly suggest, posthuman mimesis must not necessarily be completely severed from the humanism it aims to move beyond. Humanistic aspirations continue to inform posthuman, all-too-human efforts for greater inclusiveness, social justice, agentic power, and technological innovations, all of which can be put to use to critique a growing network of techno-powers used for control and subjection in order to affirm more equality and freedom. Albeit no longer based on universalizing terms restricted to Eurocentric or even anthropocentric perspectives, such critiques offer discursive, deconstructive, immanent, and situated diagnostics that "relativize the radical novelty of the 'posthumanist' phenomenon" while at the same time showing the "innovative potential of *critical* posthumanism."[41] Posthuman mimesis furthers this Janus-faced approach by foregrounding a heterogeneous concept at the palpitating heart of the life-affirming and life-negating sides of posthuman studies. Its objective is to multiply genealogical perspectives that can help future-oriented scholars and readers map innovative metamorphoses for the future.

40 See Pramod K. Nayar, *Posthumanism* (Cambridge: Polity Press, 2014); Cary Wolfe, *What is Posthumanism?* (Minneapolis: University of Minnesota Press, 2010).

41 Stefan Herbrechter, *Posthumanism: A Critical Analysis* (London: Bloomsbury, 2013), viii.

On the genealogical front, for instance, it would be anachronistic to deny that the shift from a theocentric to an anthropocentric worldview started with humanism in the fifteenth century and accentuated with the scientific revolution in the seventeenth century, led to a series of industrial, economic, medical, and now digital revolutions that generated immense progress in many areas of cultural, political, and economic life over the past two centuries. Since the 1960s and 1970s, it also led to more egalitarian opportunities for traditionally marginalized and oppressed subjects like women, racial minorities, and, in recent years, sexual minorities as well—all figures that, from different perspectives, turned the destabilizing impropriety of mimesis qua "mimicry" to progressive political and emancipatory use,[42] thereby supplementing a liberating step to a genealogy of homo mimeticus that paves the way for posthuman mimesis as well. As the liberating potential of what was once called the World Wide Web democratized access to knowledge, information, and education with patho-*logical* potential, the *pharmakon* of technological innovation also opened up new hypermimetic pathologies that—from isolation to addiction, conspiracy theories to (new) fascism, violent insurrections to environmental catastrophes—now affect and infect homo mimeticus 2.0.

Furthermore, a mimetic perspective on the posthuman also reveals that despite the multiple proclamations of the death of man understood as a relatively modern discursive creation in theory,[43] humanism is far from dead in practice. Quite the contrary. This "enlightened" ideal of a rational western man qua *Homo sapiens* continues, often under different conceptual masks, to cast a shadow on future-oriented approaches to human and nonhuman processes of becoming in the twenty-first century. Often this humanist ideal informs, or rather misinforms, phantasies of endless technocratic progress and immortality animating what Bernard Stiegler calls "a transhumanist ideology that is first of all a story-telling of a colossal and totalizing marketing operation."[44] This operation, Stiegler and I agree, is entangled in what a key genealogical precursor of the mimetic turn, Friedrich Nietzsche, diagnosed under the rubric of

42 See Luce Irigarary, *This Sex Which Is Not One*, trans. Catherine Porter (Ithaca, NY: Cornell University Press, 1985); Homi K. Bhabha, *The Location of Culture* (New York: Routledge, 1994), 121–31; Judith Butler, "Imitation and Gender Insubordination," in *Inside/Out: Lesbian Theories, Gay Theories*, ed. Diana Fuss (New York: Routledge, 1991), 13–31.

43 Michel Foucault, *The Order of Things: An Archelogy of the Human Sciences* (New York: Vintage Books, 1973), 387.

44 Bernard Stiegler, "Le nouveau conflit des facultés et des fonctions dans l'Anthropocène," in *La technique et le temps*(Paris: Fayard, 2018), 847–76.

"herd-society."[45] That is, a mimetically driven process of modernization that, via increasingly invasive social media and technologies of mass manipulation, has the power to turn the ego into a "phantom of the ego."[46] Namely, a porous, suggestible, and docile ego prone to hypnotic spells, unconscious mimicry, and trance-like states of somnambulism familiar since modernism and now regularly registered in sci-fi films—from *The Matrix* to *Avatar* to *Her* to *Black Mirror*—at the crossroads of postmodernism and posthumanism. Spellbound by mesmerizing screens, vicariously immersed in second lives via digital avatars, increasingly disconnected from immanent, embodied, and social encounters that reveal the possibilities but also the limits of what bodies actually can do, the posthuman subject, as Hayles warned, risks indeed being particularly vulnerable to idealist phantasies of disembodiment, digital afterlife, genetic enhancement, space migrations, and illimited longevity. That transhumanist ideology often invokes the name of Nietzsche as a precursor of ideals of autonomy, free will, and endless technological progress; ideals that he was among the first to denounce in his writings. This reminds us of the insidious power of phantoms of disembodied conceptions of consciousness whose idealist origins we shall trace back to the beginning of mimetic studies.[47]

If we step back and adopt immanent genealogical lenses, it is clear that after a period of intense social strife for democratization in the 1960s, '70s, and '80s, where mimicry was put to deconstructive use in theory, an equally intense period of neoliberal exuberance for growth, expansion, and mimetically contagious forms of consumption was massively enacted in practice. At least since the Great Acceleration of 1945, if not earlier, mimetic pathologies of mass consumption turned out to be detrimental for both humans and nonhumans alike, with catastrophic consequences for future generations and the ecosystem more generally. Hitting first what Franz Fanon called "the

45 Bernard Stiegler, *Acting Out*, trans. David Barison, David Ross, and Patrick Crogan (Stanford, CA: Stanford University Press, 2009), 48.

46 Nidesh Lawtoo, *The Phantom of the Ego: Modernism and the Mimetic Unconscious* (East Lansing: Michigan State University Press, 2013), 68–83.

47 For a genealogy of transhumanism that reads Nietzsche in the opposite direction to the one I do, but aptly recognizes that "the signature themes of transhumanism—especially the preoccupation with intellectual immortality and physical resurrection—bear the marks of Abrahamic theology" and is born out of "middle-aged white male with a reasonable amount of disposable income," see Steve Fuller, *Nietzschean Meditations: Untimely Thoughts at the Dawn of the Transhumanist Era* (Basel: Schwabe Verlag, 2020) 199, 200. On the Nietzschean posthuman side, see Francesca Ferrando, *Philosophical Posthumanism* (London: Bloomsbury, 2019); Lawtoo and Hayles, "Posthuman Mimesis 11;" and Marina Garcia-Granero's chapter in this volume.

wretched of the earth"[48] who are currently being displaced in unprecedented numbers by climate catastrophes not of their own making, postcolonial and environmentalist historian Dipesh Chakrabarti points out that a good part of the humanities at the twilight of the past century was "environmentally blind," calling on "academics to rise above their disciplinary prejudices, for it is a crisis of many dimensions."[49]

This is a severe evaluation. But it is also a necessary wake-up call that urges both humanists and posthumanists to take a closer look in the mirror before going further. In particular, Chakrabarty urges "posthumanism," which, "by itself cannot address the political" (though that may be debatable) to continue joining forces across disciplines in view of shifting the focus of attention from "global" (anthropocentric) concerns toward "planetary" (postanthropocentric) processes that reveal how "the planet puts us in the same position as any other creature."[50] We are indeed entangled in what another major contributor to mimetic studies, William E. Connolly, calls "planetary processes" that call for a "politics of swarming" that puts mimetic communication to life-affirmative use.[51] Or, closer to the genealogy of posthumanism, Donna Haraway, in recent work that shifts her early preoccupations from making kin with cyborgs to making kin with compost, argues that this entangled and fragile creature endowed with different degrees of agency is nonetheless replete with what she calls "response-ability:"[52] namely, the ability to respond affectively and cognitively to others.

Furthering these lines of inquiry we could add that this (post)human ability to respond is rooted in a relational openness to mimetic pathos that, in specific circumstances, can generate *sym-pathos* (feeling with) the suffering of human and nonhuman animals. While in theory this ability to respond with pathos stretches to include nonhuman life more generally, that shift from human to nonhuman sym-pathos is easier to promote via domestic animals (dogs, cats, hamsters) and anthropocentric simulations (avatars, robots, AI) than with

48 Frantz Fanon, *The Wretched of the Earth*, trans. Constance Farrington (New York: Grove Press, 1963).

49 Dipesh Chakrabarty, *The Climate of History in a Planetary Age* (Chicago: University of Chicago Press, 2021), 38.

50 Chakrabarty, *Climate of History*, 91, 90.

51 William E. Connolly, *Facing the Planetary: Entangled Humanism and the Politics of Swarming* (Durham, NC: Duke University Press, 2017).

52 Donna J. Haraway, Staying with the Trouble: Making Kin in the Chthulucene (Durham, NC: Duke University Press, 2016), 11. For a study on the ethical implications of cyborgs understood as "persons" see Aleksandra Łukaszewicz, Are Cyborgs Persons: An Account of Futurist Ethics (New York: Palgrave, 2021).

wild nonhuman animals (worms, birds, plants), calling for a transformation of the concept of "sympathy" itself.[53] Either way, aggravated by the return of war, energy crises that cause a scramble for, rather than reduction of, fossil-fuel consumption and oil dependencies, not to speak of the threat of nuclear escalation, the Great Acceleration is currently generating a sixth mass extinction that casts a shadow on the present and future. It also sets up a rather unflattering mirror to the ideal of *Homo sapiens* in the twenty-first century thus far.

The mirroring reflection is constitutive of the shift from an autonomous and technocratic *Homo sapiens* toward a relational and affective homo mimeticus that has an important role to play in mimetic posthumanism. This is true not only because the mirror is a mimetic trope that has traditionally been used for reflections geared toward self-knowledge, but also because it provides a genealogical frame to re-evaluate a process of becoming posthuman made possible due to the plastic, relational, and affective foundations of subjectivity. Despite the vertiginous speed of current technological innovations that increasingly entangle posthuman subjects in human and nonhuman others, or perhaps because of this speed, we remain eminently mimetic, or rather, hypermimetic creatures influenced by virtual models, digital technologies, and neoliberal ideologies, which used to be the product of human intelligence but will increasingly be produced via artificial intelligence. This paradoxical loop in which the *logos* of science generates forms of technological mediation that retroact on posthuman bodies and minds, with both logical and pathological effects, is a central concern for many of the essays that follow: From viral pathologies to Zoom patho(-)logies, AI simulations to viral zombies, mimetic metamorphoses to figurations of desire, techno-mimetism to reverse mimesis, noomimesis to hypermimesis, the chapters that compose the volume are careful to trace the spiraling loops of patho(-)logies that escape linear logic, entangle posthumans in a widening net of technological processes, and are in need of careful diagnostics of the spiraling interplay of reason and affect, logos and pathos, which is one of the distinctive features of mimetic posthumanism.

As the spread of contagious affects triggered by the return of (new) fascist leaders made visible, and the viral disseminations of conspiracy theories during the first pandemic crisis to be shadowed by digital media confirmed, *Homo sapiens* does not appear to be driven uniquely by enlightened ideals of a pure autonomous reason characterized by a Kantian *saper aude* that once inspired the subject of *Aufklärung*. On the contrary, while this will to know

53 See Jane Bennett, *Influx & Efflux: Writing Up with Whitman* (Durham, NC: Duke University Press, 2020); Lawtoo, *Homo Mimeticus*, 255–75.

is now facilitated in the digital age for those endowed with a solid education that allows them to distinguish facts from alternative facts, the "mimetic inclinations"[54] of *Homo sapiens* qua *mimeticus* render us easy prey to the spell of a will to ignore unflattering realities that do not conform to the narcissistic ideal some might still aspire to in theory, but fail to achieve in practice.

Driven by spellbinding algorithms, Big political Lies, climate change denialism, beliefs in endless progress, fantasies of immortality, easy techno-fixes, or migrations to other worlds, a significant part of the Global North continues to mimetically reproduce patterns of destructive behavior in which posthumans increasingly dependent on fossil-fuels technologies are, *volens nolens*, deeply and problematically entangled with the fate of the planet. Hence the need for mimetic posthumanism to look into the critical mirror first. Should the picture not conform to the ideal (spoiler alert: it never does), it is then vital to contribute creatively to aesthetic, philosophical, technological, and, we should add, environmentalist perspectives that are currently informing the mimetic turn across disciplines, and now transform posthuman studies as well. Our shared goal in the pages that follow is to collectively affirm new beginnings by propelling the mimetic turn in posthuman studies toward new destinations.

3 Program

The genealogical move that oriented these chapters' original formulation at "The Posthuman Mimesis" conference remains at play in the present volume as well, providing a shared orientation across the plurality of disciplinary perspectives they convoke. Inspired by the double face of the Roman god Janus, traditionally placed on gates to preside over departures and new arrivals, contributors were invited to step back to the ancient realization that humans are, for better and worse, mimetic animals, to leap ahead to the uncharted new territories homo mimeticus 2.0 is currently exploring. The mimetic or hypermimetic forces at play in a digital age driven by breathtaking technological innovations in AI and robotics, gene editing and algorithmic influences, entangled with global pandemics and (new) fascist phantoms, massive displacement of populations due to war and famine as well as catastrophic climate change in the Anthropocene are many and still in need of diagnostic evaluations. In the "Dialogic Prelude" on "posthuman mimesis" Hayles and I join forces to establish genealogical links between posthuman studies and mimetic studies.

54 Cavarero and Lawtoo, "Mimetic Inclinations," 183–99.

Reframing her seminal work, *How We Became Posthuman*, from the angle of an embodied mimesis that was already implicit in her work allows Hayles to show how this foundational book paves the way for future explorations in mimetic posthumanism. Given the aesthetic, philosophical, and technological perspectives informing the emerging field of mimetic posthumanism, the volume is divided into three corresponding parts, with multiple resonances, echoes, and genealogical links that establish heterogeneous continuities between mimetic turns and *re*-turns.

Part 1: The Mimetic Turn in Posthuman Art revisits the aesthetic concept of mimesis by shifting the focus from traditional anthropocentric forms of human representation (or realism) to embodied forms of imitation that are constitutive of the posthuman age. Faithful to the genealogical perspective that orients the book, this part starts by returning to the marginalized subject of alchemy as a nonanthropocentric aesthetic source to rethink AI in general and humanoid robots in particular. Thus, in Chapter 1, Patricia Pisters looks back to the ancient concept of the "eidolon," traditionally linked since Greek mythology to "doubles" and "phantoms," animating homo mimeticus. She does so to cast new light on the ways AI operates on the mimetic unconscious. The genealogy of the mimetic unconscious is, indeed, closer to Jungian concerns with the human Shadow than to Freudian diagnostics of Oedipal complexes. This unexplored connection leads Pisters to exploit the alchemic deconstruction of human and nonhuman doublings of identity to account for emerging forms of AI at play in contemporary avatars and cyborgs. Starting with a classical literary reference to Walt Whitman's poem "Eidolons"(1876), Pisters reframes the Romantic poet's alchemical interpretation of these eidolons in terms of mimetic figures resonant with contemporary sci-fi films, from *Blade Runner* to *Ghost in the Shell*: that is, films where human fate is entangled with nonhuman forces that go beyond the nature/culture divide. Our high-tech culture and posthuman self-image, she argues, have still something to learn from ancient sources concerning eidolons and simulacra, especially as encountered in alchemical texts that contain mythical and symbolic images of human connections to the nonhuman. Pisters's genealogical wager, then, is that alchemy works as a low-tech (fore)shadowing of our high-tech future still in need of an update for the protean future of a hypermimetic homo mimeticus 2.0.

Shifting the artistic lens from poetry to sculpture while retaining the focus on AI, Nikoleta Zampaki and Peggy Karpouzou compare Auguste Rodin's *Le Penseur* (1904) with a contemporary machine artwork called *Thinking Robot.* Drawing on Maurice Merleau-Ponty's phenomenology of the body, or rather, "the flesh," they reinterpret both natural and artificial forms of embodiment by focusing on a lived experience that overcomes the artificial/natural, human/

nonhuman binary oppositions. Specifically, Merleau-Ponty's phenomenology allows Zampaki and Karpouzou to examine the embodied experience of thinking in both *Le Penseur* and *Thinking Robot* as an intentional choice that mobilizes postanthropocentric, mimetic, and plastic layers of thought about the materiality of the world. With AI inscribed in the immanence of the human body as well as in a lifeworld that does not simply oppose nature to culture, the authors propose the concept of "posthuman *flesh*" to account for an aesthetics characterized by embodied processes of subjectivation central to mimetic posthumanism.

After literature and sculpture, in Chapter 3, María del Carmen Molina Barea turns to the medium of film to address mimicry from the point of view of zombification: that is, the standardized replication of hordes of non-living individuals understood in the context of viral contagion. Molina Barea argues that a new type of zombie found in films like *28 Days Later* (Danny Boyle, 2002) and *World War Z* (Marc Forster, 2013) exceeds the traditional picture of zombies forged in George Romero's cinema and takes root in pandemic scenarios that speak to the COVID-19 pandemic crisis. Specifically, she argues that viral zombies show enhanced capabilities of strength, endurance, and physical brutality while also triggering rapid processes of zombification. They spread infection very quickly, even instantaneously. If French philosopher Michel Serres showed that the "parasite" lives, eats, and multiplies inside the body of its host, this chapter shows that we parasite each other within the environment of the body politic. The parasitic phenomenon is thus conceived as both intersubjective and mimetic for it is based on a type of reproduction that is not only viral but leads humans and posthumans to copy each other in ways that illustrate the pathological potential of zombification. In the language of mimetic studies, the figure of the zombie is Janus-faced: One side shows the homogenized subject of consumerism colonized by institutional powers, while the other side reveals a subversive patho-*logical* subject. Thus reframed, the patho(-)logies of zombies reflect two opposed faces of mimetic posthumanism.

Furthering this diagnostic of viral pathologies from the angle of the very medium we used to promote patho-*logies*, in Chapter 4, Majero Bouman turns to consider the patho(-)logical effects of Zoom simulations in the period of pandemic lockdowns. Adding yet another artistic perspective, Bouman turns to music in order to sound out the embodied and sonic dimension of aesthetic sensation as she echoes Aretha Franklin's 1985 song: "Who's zoomin' who? Take another look and tell me, babe." This repetition with a difference entails taking a critical stance toward the possibilities for intimacy and embodied connection at play in the hypermimetic feedback loop of real-time digital video telecommunication. The staging of a mirroring hand dance with online groups

during COVID-19 lockdowns led by Bouman herself in 2020–21 experimentally grounds her diagnostic of aesthetic performance, part of an emergent expression of hypermimetic intra-activity. In the process, Bouman establishes bridges between the neuroscientific account of mirror neurons, embodied cognition, and the materialist, posthuman theories of Braidotti and Hayles whose attention to embodiment and relationality, as noted, intersects productively with mimetic studies. In a performative move, the mirroring hand dance ritual Bouman discusses in her chapter also provided a hypermimetic experience all participants—picture over 100 hands floating—collectively enacted as a hypermimetic ritual to close off the online conference. It testified, among other things, to the affective power of mirroring gestures to establish relational bonds of *sym-pathos* that cut across posthuman simulations and continue to affect the bodies and minds of homo mimeticus 2.0.

Continuing the critical and creative focus on embodied aesthetic practices whose vital function was intimately felt when pandemic lockdowns made ritual gathering impossible, in Chapter 5, Andreea Stoicescu connects animation and posthuman mimesis by considering the patho-*logical* role played by music and dance during the pandemic crisis. She argues that through embodied manifestations of the dancing body, we can determine how movement is connected to mirroring reflexes constitutive of mimetic posthumanism. If the pandemic confined liberties of expression to the flat sphere of virtual simulations, the phenomenon of organic movement, be it in dance, theater, or music reveals an all-too-human propensity to be influenced by the presence of other bodies. Furthering immanent approaches to the posthuman proposed by Hayles, Braidotti, and others, Stoicescu shows that the immersive, evolutionary, and technologically determined cosmology of posthumanism resonates with mirroring forms of embodied animation rooted in organic life itself. It also offers the theoretical possibility of integrating the evolutionary history of mimetic humans within the digitalized world constitutive of hypermimetic posthumans.

Overall, despite the diversity of perspectives or, rather, thanks to this perspectivism, all the chapters in Part 1 confirm that aesthetics (from *aisthetikos*, perception by the senses) in the digital age remains genealogically connected to the different facets of mimesis (from *mîmos*, actor or performance), which, from dance to theater, sculpture to music, film to Zoom, contribute a relational, affective, and embodied *pathos* that is essential to the development of any discourse or *logos* attentive to tracing the plastic figurations of posthuman mimesis. Hence the need to supplement the pathos of art with the logos of philosophy without falling into the trap of setting up a quarrel or opposition between these entangled and complementary patho-*logical* perspectives.

Traditionally an ancient quarrel between philosophy and art was centered precisely on the Janus-faced problematic of mimesis. *Part 2: Mimetic* Re-*Turns in Posthuman Philosophy* goes beyond this antiquated opposition by furthering the mimetic turn in posthuman art from the related and complementary angle of the *re*-turn of mimesis in posthuman philosophy. In Chapter 6, I step back to tell, in concise form, the story of the birth of homo mimeticus 2.0. This entails, sketching, in broad brush strokes, a genealogy that goes from antiquity to modernity, modernism to postmodernism, reaching into poststructuralist decenterings of man that foreground posthumanism as well. Rather than starting with Plato's condemnation of mimesis as an illusory phantom, I trace *mimēsis* further back to mythic concerns with the dramatic powers of mimes or actors to trigger affective contagion among spectators. This step back allows for the development of alternative ontological foundations in the recuperation of mimesis now at play in posthuman studies . Articulated in nine fast-paced genealogical steps, the chapter goes from pre-philosophical accounts of dramatic mimesis in myth (Homer) to critiques and defenses of poetry in classical antiquity (Plato and Aristotle), theories of the sublime (Longinus) to Christian concerns with the imitation of exemplary models (Augustine), the imitation of the ancients central to humanism to the overturning of idealist models central to modernism (Nietzsche), before reaching into more contemporary philosophies of sameness and differences that—from Girard to Derrida, Lacoue-Labarthe to Irigaray, Baudrillard to Stiegler—prepare the mimetic turn in posthuman studies as well.

Given the notoriously protean meaning of the untranslatable Greek term "*mimēsis,*" which is usually reduced to representation, copy, or reproduction, but also entails mimicry, imitation, impersonation, dramatization, identification, and simulation, among other meanings under the lens of mimetic studies, it is useful to distinguish between different masks of mimesis. This is what Jean-Marie Schaeffer does in Chapter 7. The general aim of this chapter is to caution against the temptation to reduce the heterogeneous faces of mimesis to a homogeneous concept—a move in line with the pluralism of mimetic studies. To that end, Schaeffer disentangles four different "families" of copying behavior: mimicry, imitation, mimesis, and simulation. This critical move takes us, once again, back to the philosophical foundations of mimetic studies in Plato and Aristotle; it also stresses that copying processes and practices are ubiquitous across biological life forms. From an evolutionary point of view, Schaeffer agrees that these processes largely predate the birth of *Homo sapiens sapiens*, but he also emphasizes how, in humans, copying takes on a diversity of forms and functions unknown in the animal world. This evolutionary point is not intended to argue in favor of human exceptionalism, for mimicry can be

found across the human/nonhuman animal spectrum. Still, Schaeffer argues that some forms and functions of copying are the product of evolutionary heritages, while others are generally believed to be specifically human, and others still seem to emancipate themselves from their grounding in human agency by opening up forms of posthuman agency that the volume will continue to trace.

If Plato and Aristotle continue to provide the foundations for the *re*-turn of attention to homo mimeticus, among modern philosophers it is arguably Friedrich Nietzsche who articulates the most far-reaching theoretical foundations to further the mimetic turn in posthuman studies. Hence, in Chapter 8 Marina Garcia-Granero establishes new genealogical connections between mimetic studies and posthuman studies via Nietzsche's diagnostic of mimetic patho(-)logies once dominant in the modernist period and now reloaded in the posthuman period as well. As already noted, Nietzsche is widely recognized as a significant source for both philosophical posthumanism and transhumanism; his thought occupies a privileged position in mimetic studies as well. Garcia-Granero both strengthens and deepens the connection between the posthuman turn and the mimetic *re*-turn by showing how for Nietzsche, subject formation and transformation rest on mimetic phenomena that are not simply passive and pathological (mimicry, herd behavior, habitual reflexes), but also creative and patho-*logical* (exemplarity, education, arts of self-cultivation). At play in daily actions, both healthy and sick perspectives cut across the nature/culture, mind/body, and human/nonhuman divides, and are increasingly relevant to our technologically embedded lives, yet they do not give way to transhumanist fantasies of agentic freedom and disembodiment. On the contrary, as a Nietzsche scholar, Garcia-Granero is well positioned to confirm that Nietzsche's theory of the *Übermensch* urges posthuman theorists to remain rooted in the Earth. Reframed within his proper immanent perspective, she traces new connections between Nietzsche's theory of the mimetic subject and posthuman theorists of embodiment and transformation, of which Hayles, Braidotti, and Ferrando are the main representatives. In sum, Marina Garcia-Granero's immanent philosophical bridge between *mimetic* and critical posthumanism furthers the Nietzschean imperative to promote vital and creative metamorphoses for the future.

In the wake of Nietzsche's overturning of Platonism, we have seen that a number of poststructuralist thinkers who paved the way for posthumanism turned back to the concept of mimesis and its troubling avatars (mimicry, simulation, repetition, impersonation, performativity, etc.). They did so to deconstruct metaphysical binaries via mimetic concepts like writing, the trace, or the *pharmakon* that remain relevant to posthuman mimesis as well. It is, thus, useful to return to seminal deconstructive readings of mimesis to further the

mimetic turn in posthuman studies. This is what Ivan Callus sets out to do in Chapter 9. He reminds us that Jacques Derrida's interest in Plato concerns not only the *Republic* and the *Phaedrus* but also the *Timaeus,* where mimesis is tied to the formation of the universe via an imitation of an eternal model characteristic of Plato's metaphysics. Taking a marginalized but, for our topic, important Derridean text titled *Advances*, Callus performs a close reading that prefigures the connection between mimesis and posthumanism. In characteristic deconstructive fashion, Derrida—and at one remove Callus as well—keeps in view various sequences and iterations of mimesis in the *Timaeus* itself without letting the "original" text overshadow the deconstructive "copy" or commentary. If only because it is the copy, shadow, or phantom that serves as a guiding thread, or trace, that unsettles Plato's mimetic metaphysics. Needless to say, via this genealogical detour back to the origins of mimetic studies, Callus' interpretation of Derrida sharpens our understanding of the destabilizing (im)properties of posthuman mimesis.

Let us now briefly pause to note that a deconstructive focus on mimesis helps clarify the critical distinction between the posthuman as a figure and posthumanism as a discourse. The genealogy of the trope of the "figure," or *figura,* which shares the same stem as *fingere* and fiction, goes deep in western aesthetics. As Erich Auerbach has influentially shown, its links with mimesis are manifold, given its rendering as "copy" or "image." And yet, *figura* was not restricted to realism alone for it entailed the "outline," "outward shape," or "mold" endowed with a certain "plasticity." For Latin authors, in fact, *figura* was linked to the Greek *typos* and was rendered as "imprint of a seal," as in Dante's phrase from *Purgatorio*, "'*come figura in cera si suggella* [as a seal is stamped in wax]."[55] Scholars of mimetic studies will recognize that this is the plastic meaning recuperated by a deconstruction of mimesis emerging in the 1980s, most notably in Philippe Lacoue-Labarthe's work. There is thus a genealogical connection that goes from Auerbach to Lacoue-Labarthe to mimetic studies that ties *figura* to subject formation in plastic ways that anticipate recent accounts of brain plasticity or neuroplasticity that we have explored elsewhere and shall return to.[56]

It is against this genealogical background that Stefan Herbrechter furthers a deconstructive disarticulation of the traditionally humanistic concept of

55 Erich Auerbach, *Scenes from the Drama of European Literature* (Minneapolis: University of Minnesota Press, 1984), 11–175, 15.

56 See Philippe Lacoue-Labarthe, *Typography: Mimesis, Philosophy, Politics*, ed. Christopher Fynsk (Stanford, CA: Stanford University Press, 1998), 43–138; Nidesh Lawtoo, "The Plasticity of Mimessi," *MLN* vol. 132, no. 5 (2017): 1201–24. See also *Homo Mimeticus III.*

figura in Chapter 10 by linking it to posthuman discourses. As he points out, the use of the posthuman as a figure, or figuration, translates into different temporalities and strategies. To a certain extent, every posthumanism has to presuppose some minimal form of figural existence for the posthuman. However, exploiting the plastic potential of *figura*, Herbrechter specifies that the figuration of the posthuman takes a great variety of forms: It can be speculative or futural (we will be posthuman), retrospective (how we became posthuman), processual (we are becoming posthuman), reverse-teleological (we have always already been posthuman), among other plastic possibilities. Drawing from a variety of key figures in posthuman studies—from Hayles to Braidotti, Haraway to Malabou—he shows that these positions regarding the posthuman rely on corresponding figurations of the human onto which they are grafted (we will always be human; we are no longer human; we have to become human "otherwise," we were never human …). Behind these political, figurative, or strategic ontologies lie more or less openly articulated "desires." Critical posthumanism, Herbrechter argues, is a way of looking at these desires that drive, like a plastic force, or pathos, the mimetic figurations of the posthuman and the discourse of posthumanism.

The turn to technology, or as we call it, technics, cannot be dissociated from the aesthetic and philosophical perspectives on mimetic posthumanism explored so far, if only because *technē*, for the Greeks, meant both art and craft, or technique. Hence, both the artistic and conceptual insights that emerged from Parts 1 and 2 equally inform *Part 3: Technics Reloading Mimesis*. This final part builds on both the aesthetic and philosophical foundations of mimetic posthumanism by joining the *pharmakon* of mimesis with the *pharmakon* of technics via contemporary techno-patho(-)logies that haunt the epoch of the Anthropocene. In the wake of seminal deconstructions of western metaphysics, which as the mimetic *re*-turn shows, have mimesis as a fulcrum of attention, it is arguably Bernard Stiegler who went furthest in a critical rethinking of technics for future generations to explore. Stiegler's untimely passing in 2020 prevented him from joining forces with mimetic studies as he had planned and scheduled.[57] As a consequence, the genealogical bridge between technics and mimesis is still largely unknown and in need of construction.

57 Stiegler had agreed to participate in a series of video interviews titled HOM Videos whose goal was to widen the reach of the mimetic turn across disciplines via dialogues with influential thinkers (see https://www.youtube.com/@homvideosercprojecthomomim971). The interview was planned for March 2020, but the COVID-19 pandemic prevented this encounter, and it was rescheduled for August 2020. Sadly, Stiegler passed away a few days before the interview could take place.

To begin filling this gap and add another step to the genealogy of mimetic posthumanism, in Chapter 11, I return to the founding myth of posthuman studies: the myth of Prometheus and his brother Epimetheus, two mimetic figures that have not lost any of their untimeliness in the epoch of the Anthropocene. Rather than reiterating the myth of Prometheus's *anti*-mimetic originality characteristic of both Romantic and transhumanist myths, I adopt genealogical lenses to show how the philosophical forgetting of techne central to Stiegler's account of *Technics and Time*, overlaps significantly with the philosophical exclusion of mimesis. Starting with Hephaestus's warning in Aeschylus' *Prometheus Bound* that "you shall be grilled by the sun's bright fire" brings this ancient myth closer to home. It also allows to reframe the Promethean myth in the context of the catastrophic reality of the Anthropocene as theorized by Bruno Latour's final preoccupations about "where to land." Landing back on Earth is the only immanent option available for humans, posthumans, and transhumans alike. In particular, the chapter revisits the shared genealogical foundations of the excluded concepts of technics and mimesis via a pharmacology that is not only of Derridean, and thus of (anti-)Platonic origins. It also steps further back to a mythic tradition dramatized by Hesiod's *Theogony* and, above all, Aeschylus' *Prometheus Bound*, a mythic tradition that preceded philosophy but also informs it. Well before philosophy, myth is in fact attentive to the patho(-)logical lessons on the right measure central to the development of "self-knowledge" or "know thyself," which as Socrates will later argue, drives philosophy as well. As Promethean foresight is doubled by Epimethean hindsight, we shall thus remain faithful to the Janus-faced genealogy that orients mimetic posthumanism by looking back to better see what lies ahead. The hope is that the self-reflective mirror of myth can help, if not to fully avoid, at least to postpone the mythic prophecy of being "grilled by the sun."

In Chapter 12, Zeigam Azizov furthers the link between technics and mimesis by focusing on Stiegler's critique of technics and the processes of individuation and memorization it entails. He does so from the angle of what he calls *noomimesis* (from the Greek *noo*, knowledge, and *mimesis*, imaging or imitating). As the genealogy of homo mimeticus 2.0 already made clear, bipedalism, the liberation of the hand, and the invention of writing it entailed allowed for technologies of memorization that operate as a *pharmakon*, both poison and cure.[58] With Stiegler's pharmacology as a starting point, Azizov reminds us that the all-too-human fault of forgetfulness is supplemented by technics of memorization that cut both ways. The distinction between

58 See Lawtoo, *Homo Mimeticus*, 59–67.

automatic imitation based on biomimesis and more cognitive mimesis qua noomimesis divides conscious from unconscious forms of imitation. The latter, he argues, are central to processes of memorization that orient as much as they can disorient and are constitutive of the posthuman condition. Thus framed, Stiegler's pharmacological re-evaluation of technics, long repressed within the philosophical tradition, *re*-turns to play a key role in the mimetic turn, as it is located at the crossroads of knowledge and imitation. As Azizov explains, it also opens up intellectual space for new memorizations and translations of mimesis that connect Stiegler's pharmacology of technics with a critique of Quentin Meilassoux's theory of "the meaningless sign."

What emerges from post-deconstructive and post-phenomenological critiques of technology as a *pharmakon* qua patho(-)logy is thus not a unilateral evaluation of technical objects; rather, it is an urgent call to rethink the foundations of a subject that is increasingly alienated, dispossessed, and programmed by technocratic processes that disrupt individuation and call for the creation of alternative modes of existence. If mimetic posthumanism decenters humanistic and anthropocentric conceptions of free will, what role, then, does agency play in the posthuman/mimetic turn?

In Chapter 13, Diego Scalco reminds us that in its broad sense, agency consists of both the ability or the intention to act and of the mediated or immediate awareness of past, current, and potential interactions. Agency therefore constitutes a mode of subjectivation that we propose to approach in correlation with techno-mimetism. Techno-mimetism, he argues, is inseparable from the contemporary subject, even if the latter is not necessarily aware of the techno-mimetic aspects of his own development. Formulated initially in an anthropocentric framework, the question of subjectivation now receives answers that no longer conform to this very framework and problematize traditional conceptions of intentionality predicated on an autonomous subject that no longer holds in the posthuman age. Necessity and contingency, Scalco continues, frame the divergent ecological, political, and individual choices that are looming on the technological horizon as an inevitable condition. Those divergences are also framed by mastery and loss of control, given that the logic of technics can still be identified with an infrastructure from which subjects should emancipate themselves. This chapter, in sum, approaches subjectivation under the double perspective of posthuman agency and of techno-mimetism that informs mimetic posthumanism.

Further complicating autonomous ideals of subjectivity, in Chapter 14, Philipp Höfele argues that, since the eighteenth century, the genius has been regarded as the genuine paradigm of aesthetics and technology, while mimesis is seen as something to be overcome, as Hans Blumenberg also points out. The

aim of the chapter is to understand why, for structural reasons, the ancient problematic of the imitation of nature cannot simply be shelved. As Höfele shows, imitation is not simply an act of unfreedom, and freedom cannot be realized in the isolationist form of solipsistic and transcendental autonomy. On the contrary, technical imitation of living nature can be conceived as an excellent way of responding to the environmental challenges posed by the Anthropocene. In order to make this plausible, the chapter returns to Aristotle to examine the origin of the thesis that art (*technē*) imitates nature (*physis*). It then discusses Georges Canguilhem's reflections on the historically suppressed relationship or interdependence between organism and machine and shows how Canguilhem's pupil, Gilbert Simondon, comprehends the technical object as a living thing in relation to its environment, or "milieu." This provides the background to understand ethical claims expounded by the emerging interdisciplinary field of biomimetics, which is currently already contributing to mimetic studies.

In a last patho(-)logical overturning of perspectives, Kevin LaGrandeur, in Chapter 15, returns to ethico-political concerns for how "intelligent" technology generates a dangerous mimetic cycle in today's posthuman world. As a species, LaGrandeur argues, we have moved from creating intelligent tools in our own functional image to having those tools execute human functions so well that they force us to remake ourselves in their machinic image. In other words, to survive competition from our own intelligent inventions, we must incorporate into ourselves elements of those very inventions, or risk losing jobs—and perhaps even existential viability. For example, we automated many of our production processes in factories and the humans left working in those places have mostly become managers of machines. But as those machines have become smarter, they have begun to manage humans in the workplace, cycling to the next phase of this master-servant dialectic. Taking examples from businesses in China and elsewhere that monitor data on employees' brains by forcing them to wear caps outfitted with sensors while they work, LaGrandeur shows how these sensor arrays can scan employees' brainwaves for emotional disturbances and send that data to their bosses. The chapter sets out to discuss what the ethical and existential implications are of such scenarios, which are far from being isolated.

Art, philosophy, and technics, it should be clear by now, are not treated here as three autonomous perspectives on mimetic posthumanism. On the contrary, they are inextricably entangled in the metamorphic processes of becoming homo mimeticus 2.0—for good and ill. Since mimesis, as both a conceptual and creative tool, originates in dialogic practices already central to mimetic studies, the volume conforms to this ancient genre to further

transform mimesis so as to adapt it to our contemporary problems. Thus, in the final Coda, Francesca Ferrando and I join philosophical posthumanism and mimetic posthumanism in view of providing—via a tradition that goes from Plato to Nietzsche, Deleuze to Braidotti, and many other figures encountered along the way—immanent, embodied, and relational steps for a new theory of posthuman mimesis already at play in the twenty-first century. Going beyond the dualisms that dominated the anthropocentric tradition (mind/body, nature/culture, conscious/unconscious, human/nonhuman) Ferrando and I address contemporary topics that go from the pandemic crisis to online education, from (new) fascist drives to radical imagination, from unconscious adaptation to responsibility in the age of the Anthropocene, both in theory and practice.

From different but related perspectives, the dialogue suggests that mimetic posthumanism is based on a creative interplay between the pathos of art and the logos of thought that goes beyond good and evil. As the chorus of voices in this volume confirms, the patho(-)logies of hypermimesis are currently generating metamorphoses that already forming and transforming posthuman subjects to come.

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Posthuman Mimesis: A Dialogic Prelude with Katherine Hayles

N. Katherine Hayles and Nidesh Lawtoo

Posthuman mimesis composes a Janus-faced picture.[1] If the posthuman looks ahead to technological innovations that are increasingly blurring the boundaries between the human animal and technical devices, mimesis looks back to a distinctly human ability to represent the world via aesthetic techniques that have long painted a picture of *Homo sapiens* as "the most imitative animal." Not unlike the Roman god Janus, posthuman mimesis, then, appears to look in radically opposed directions: one is turned back to a past-oriented humanistic view of aesthetic representation that finds in mimetic realism its culmination; the other is turned toward future-oriented transformations that already entangle humans with computational machines generating a picture of disembodied consciousness that may not always be realistic, yet is constitutive of the genealogy of the posthuman, nonetheless.

And yet, we may still wonder: what principles render humans so strikingly adaptable, relational, and plastic in the first place, so impressionable and protean that, over less than a century, we have already been formed, conformed, and transformed by the intelligent machines we ourselves created? While idealizing phantasies of disembodiment that reduce the complexity of human bodies to the simplicity of abstract forms are constitutive of posthuman and, even more so, transhuman aspirations, it is useful to recall that these abstract phantoms have a much longer genealogy. They can in fact be traced back to the dawn of philosophy, to a Platonic metaphysics that has a dominant conception of mimesis framed as a mirror as the main medium of reflection between the origin and the copy, ideal forms and material phenomena. This dominant conception of mimesis continues to in-*form* (give form to) contemporary posthuman ideals of disembodiment as well. And yet, at the same time, a minor tradition in mimetic theory has long been attentive to embodied, relational, and immanent mirroring principles that, after a period of neglect, are now returning to the theoretical forefront via discoveries in the neurosciences,

1 This dialogue first appeared in a special issue on "Posthuman Mimesis" in *Journal of Posthumanism* 2, no.2 (2022).

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biology and evolutionary anthropology that are already transforming disembodied conceptions of the posthuman as well.[2]

Could it be, then, that a posthuman, all too human ability to imitate human and nonhuman others, often unconsciously, with our bodies, and thus also with our brains, minds, and perhaps souls too, is constitutive of an eminently plastic, relational, and adaptable chameleon species—or *homo mimeticus*—that already underwent significant transformations in the course of human history and is now part of our ongoing process of becoming posthuman as well? This is the overarching question this dialogue aims to address. We might in fact be entering a new phase of intensified posthuman metamorphoses that are not simply mimetic or hyperreal but hypermimetic in the sense that they blur the distinction between disembodied simulations that are nonhuman and an embodied mimetic faculty that is still all too human—without setting up a binary between the two. These hypermimetic transformations tend to escape the volitional control of consciousness but operate in unconscious or nonconscious ways that have both cognitive and debilitating consequences. Perhaps hypermimesis is even at play in spiralling feedback loops that blur the distinction between the human original and the technological copy, generating recursive movements of repetition and difference in which we are both subject and object, active and passive, giving form to digitized simulations which, in turn, are also forming and transforming the experience of becoming posthuman in the twenty-first century.

In this dialogue, I am delighted to join forces with Katherine Hayles in view of establishing new genealogical connections between the old concept of mimesis and the new concept of the posthuman. A continuation of a dialogue started during the *Posthuman Mimesis* conference,[3] our goal is to further what this special issue started to call, a mimetic turn in posthuman studies. Arguably the most influential theorist of the posthuman writing today, whose landmark study, *How We Became Posthuman* (1999) brought this emerging transdisciplinary field onto the international scene, Hayles is the perfect interlocutor to discuss the protean subject of "posthuman mimesis," and for a number of reasons. In her ground-breaking work, in fact, she provides genealogical foundations that trace the emergence of discourses on the "posthuman" out of different waves of cybernetic theories that, starting in the 1950s, tended to

2 See, for instance, the special issue on "The Mimetic Condition" in *CounterText 8*, no. 1 (2022).

3 Katherine Hayles' keynote was titled "Survival as mimesis: Microbiomimesis and the production of human bodies." For a printed version of this talk, see N. Katherine Hayles, "Microbiomimesis: Bacteria, Our Cognitive Collaborators," *Critical Inquiry* 47, no. 4 (2021): 777–787.

downplay or, as she puts it, "forget" the importance of "embodiment" in favour of an abstract idea of information that led to dreams of "downloading human consciousness into a computer" (Hayles, 1999, xii)—idealist dreams that reach back to the origins of metaphysics and continue to spread hypermimetically in the digital age.

Author of numerous influential books located at the crossroads of literature, science, and technology, Hayles' most recent titles include, *My Mother Was a Computer* (2005), *Electronic Literature: New Horizons for the Literary* (2008), *How We Think: Digital Media and Contemporary Technogenesis* (2012), *Unthought: The Power of the Cognitive Nonconscious* (2017), and *Postprint: Books and Becoming Computational* (2021). Hayles' double training in chemistry and literary criticism, her attention to the materiality of the flesh, digital media, and nonconscious processes, supplemented by an acute sense of the importance of genealogies to account for the emergence of new forms of consciousness and subjectivity, will help us trace the emergence of posthuman mimesis as a productive concept located at the juncture of the posthuman turn and the mimetic turn, or *re*-turn. Who knows? Perhaps the "terror" and "pleasure" the posthuman continues to evoke as we become increasingly entangled with hypermimetic simulations in the digital age, might reload all too human feelings first experienced via mimetic phantoms that still haunt our ongoing processes of becoming posthuman.

We shall take as a starting point a protean conception of "mimesis" that is not limited to anthropocentric concerns with aesthetic realism that, for a long time, restricted it to the passive logic of representation of reality. Rather, mimesis operates on the side of life as well. Hence it is constitutive of embodied processes of imitation that challenge autonomous, self-enclosed, and purely rational conceptions of *Homo sapiens*, animates what I call homo mimeticus, and plays a key role in the metamorphoses of posthuman subjectivity as well. This shift of perspective entails paying close attention to the affective, embodied, and relational qualities that already inform the genealogy of the concept of *mimēsis* (from *mimos*, actor and performance) since classical antiquity. Under different masks (identification, contagion, influence, simulation, mirror neurons, plasticity, among others) we are currently witnessing a mimetic turn, or *re*-turn of attention to mimesis in different areas of inquiry—including posthuman inquiries.[4] In the processes, we aim to reinscribe this minor, but increasingly ramified understanding of homo mimeticus in the genealogical

4 The mimetic turn is transdisciplinary in scope and includes contributions by major representatives in literary theory (J. Hillis Miller). continental philosophy (Jean-Luc Nancy), political theory (William Connolly), new materialism (Jane Bennett), feminist philosophy (Adriana

emergence of posthuman studies: from cybernetic ideals of disembodiment that mimetically reproduce metaphysical ideas to feedback loops between humans and avatar simulations that have both life-enhancing and life-negating potentials to the algorithmic spreading of disinformation with real, all too real effects in the age of rapid climate change, viral pandemics, and species extinction in the epoch of the Anthropocene. In short, mimesis not as realistic representation, then, but rather, mimesis as an embodied and contagious power, or mimetic *pathos,* that troubles the boundaries of individuation, often in unconscious ways, via mirroring human and nonhuman connections that require increasing attention.

But let us proceed in order by embarking in a dialogue with Katherine Hayles to reconstruct the role mimesis might have played in her influential genealogy of how we became posthuman.

NIDESH LAWTOO*:* How We Became Posthuman *is already a classic in posthuman studies, but it is rarely noticed that it starts by foregrounding a manifestation of mimesis that is already double. In fact, it begins with your dramatization of Alan Turing's famous "imitation game" in the 1950s. At the dawn of the computer age, he placed the problematic of mimesis, or imitation, at the core of the mirroring relation between humans and machines, which you locate right at the beginning of your genealogy of how we became posthuman. I say "dramatization" because you address the reader directly, as you set the scene as follows:*

> You are alone in the room, except for two computer terminals flickering in the dim light. You use the terminals to communicate with two entities in another room, whom you cannot see. Relying solely on their responses to your questions, you must decide which is the man, which is the woman. Or … you use the responses to decide which is the human, which is the machine.[5]

Redoubling this experience in language you rely on a mimetic, rather than diegetic, narrative in the sense that you use a first person, direct speech to account for the "erasure of embodiment" you consider constitutive of the emergence of the posthuman, opening up a double question concerning content and form with which we can perhaps start. On the side of content, why is Turing's conception

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Cavarero), among others. For outputs on the mimetic turn see, http://www.homomimeticus.eu/publications/.

5 N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), xi.

of "imitation" insufficient to account for the difference between humans and machines? And what would be needed to supplement his imitation game? On the side of form, why do you adopt a mimetic narrative discourse in order to frame this mimetic problem that opens your book, informs your genealogy of how we became posthuman, and perhaps, even gives birth to the problematic of the posthuman—out of an imitation game?

N. KATHERINE HAYLES*:* Turing's inspired strategy for answering the question posed by his title, "Can Machines Think?" was to interpret the question in operational terms. He proposed the famous Turing test to established human-equivalence if an entity passed it successfully. The idea was to create a very narrow bandwidth of communication through a typing terminal. The person taking the test could not see the entities, hear their voices, judge stress indicators, or assess any other bodily response, other than the type that appeared on the screen. The assumption was that the machine could lie in its answers, whereas the human was advised to answer honestly, for the human presumably had no need to prevaricate. In setting up the test in this way, Turing in effect subjected *both* the computer and human to becoming disembodied entities, thus anticipating the trajectory toward disembodiment that I underscored in my book through the theme "how information lost its body." This version of "imitation" is thus set up precisely to ignore all the embodied aspects of mimesis that has (re)-emerged in recent discourses.

In introducing Turing's test to a reader in a mimetic (rather than diegetic) mode, as you point out, I hoped to engage her or his bodily senses of proprioception, muscle tension, and other body sensing systems so that she or he entered my text as embodied individuals rather than as a disembodied eye reading a disembodied voice—ironically, a similarly narrow communication channel to the one that Turing envisioned, albeit one that can be enlivened and embodied through the rhetorical tricks that writers know and love. In several places in the book, I turn to the evocation of embodied sensations to underscore the theoretical point, for example at the end of the chapter on the Macy conferences when I refer to the aching back of Janet Fried, the secretary who was responsible for transcribing the noisy voice tapes into orderly transcripts.

As he was introducing the test, Turing also suggested it could be used to determine whether the subject being interrogated was a man or a woman. The questions that Turing gave as examples referred to physical qualities typically seen in gendered terms, such as hair length, musculature, etc. The close connection between gender identity and species identity was there at the dawn of the computer age, and has since proliferated into literally thousands of novels, films, games, and other media that interrogate the connection. To mention

only a couple, we might think of the Alex Garland film *Ex Machina* featuring a conscious female robot Ava who seduces Caleb, her interrogator; and Spike Jonze's movie *Her*, about Theo falling in love with an OS. Here a particularly subtle aspect of Turing's test is relevant. It challenges the test subject to correctly categorize the machine and human as such, but if the subject makes a mistake, that mistake is immediately converted into a truth, for the machine is then declared human-equivalent. To make a mistake is to change the nature of who counts as human, as Caleb learns to his sorrow in *Ex Machina* and Theo to his delight and eventual devastation.

A couple of years after his famous article, Turing published another much-less-known article on morphogenesis, the area within developmental biology that explores how cells, tissues or organisms develop their characteristic forms. At the time Turing himself was undergoing mandated hormone therapy as a putative "cure" for his homosexuality and was growing breasts and undergoing other physical changes. Although his article is highly technical with mathematical formulae and focused on nonhuman organisms such as the hydra, he remarks that the wave of changes he predicts for ring structures "could arise in a tissue of any anatomical form" that was leaving a homogenous state and beginning to undergo morphological changes. It is tempting to speculate, as some scholars have, that the article had a personal significance for Turing, perhaps as a means to intellectualize (and mathematicise) his own situation. In an odd way, he was modifying the Turing test by another kind of analysis that emphasized not the sorting of entities into traditional categories of male/female or human/machine, but rather the ability of organisms to change form and become something other than what they were. In this sense the article is very much in line with the strain of mimetic theory that emphasizes plasticity and transformation.

Interesting to see both disembodied and embodied sides of mimesis already embryonically and agonistically at play at the very birth of posthuman studies. Plasticity and transformation are indeed central to our understanding of bodily mimesis. But to linger on the traditionally dominant, disembodied side, your book starts by tracing a forgetting of the body that gives rise to posthuman phantasies of a disembodied consciousness that can be "downloaded in a computer." Constitutive of first wave cybernetics in the 1950s, such ideals are rooted in a liberal or neoliberal conception of autonomous subjectivity that reaches into the present and continues to shape the collective imagination. Among other means, it does so via a futuristic genre such as sf literature and, increasingly, film, as you

note, which have recently attracted me as well to start my genealogy of posthuman mimesis.[6]

To step back a little, as you narrate, with scientific rigor and conceptual precision, the story of how we became posthuman—how information lost its body, how the cyborg emerged from post-war culture, and how the human gave way to the posthuman—you are also careful to place this forgetting in a longer genealogy that goes back to what you call, the "Platonic backhand" and "forehand." That is, an intellectual mirroring game that in-forms the articulation between the phenomenal world (the many) and the ideal world (the One) in double ways that effectively erase materiality but, as your embodied image already implies, cannot fully make abstraction of the body. Let us recall that in the backhand, mimesis is centre stage for Plato, under the mask of Socrates, at the end of the Republic *relies on the trope of the "mirror" to articulate different layers of reality that privilege disembodied cognition over embodied experience; if only because the backhand sets up a metaphysical hierarchy that goes from abstract ideal Forms to material phenomena or phantoms, to artistic copies of phenomena, or phantoms of phantoms. This definition of mimesis as mirroring representation is well-known, traverses the entire history of metaphysics, and even spills over to the antagonistic literary front, as it continues to inform classics of realism like Auerbach's* Mimesis *that once defined the age of printed literature. The forehand, on the other hand, is less known and evolving as we speak. Can you explain how a related but alternative manifestation of mimesis as computer "simulation" plays a mirroring role in what you call the "Platonic forehand"? Where do you see this move at play in recent manifestations of the posthuman that were not present yet when you first wrote the book? And if realistic mimesis still informed the age of print literature, what is the role of simulation, algorithmic memes, and other avatars of mimesis in what you call, in your most recent book, the "postprint era" in which new computational media not only partially share the plastic adaptability of homo mimeticus but also contribute to transforming it?*

When I wrote about the Platonic forehand, I was thinking of simulations that start from an algorithmic seed and then exfoliate into increasingly complex patterns, visually dramatized in Karl Sims' wonderful video *Panspermia,* where the starting algorithms are imaged as literal seeds that sprout into amazingly complex fractal plants and forests. The kind of contemporary simulations that create deep fakes are quite different, for their basic strategy is not to unfold

6 See Nidesh Lawtoo, "*Avatar* Simulation in 3Ts: Techne, Trance, Transformation," *Science Fiction Studies* 125, no. 42.1 (2015): 132–50; and "'This is no simulation!': Hypermimesis from *Being John Malkovich* to *Her*," *Quarterly Review of Film and Video* 37, no. 2 (2020): 116–44.

complexity from a simple starting algorithm but rather to use recursive dynamics that continually feedback output into input, each time coming closer to duplicating the original image or person. In Generative Antagonistic Networks, for example, the generator creates an image (or voice pattern, posture, etc.), and the discriminator criticizes the output as bit patterns where deviation from the original appears, whereupon the generator uses these results to refine its output, which is fed again into the discriminator, and so on for hundreds or thousands of iterations. It's like being in a painting class where the beginner produces an image that the instructor savagely attacks, then paints another based on that criticism, over and over and over again. Few if any humans could last through thousands of such classes, for no one's ego could stand that kind of relentless criticism without rebelling or breaking down. Algorithms, lacking emotions and egos, have no such limits and can produce images in seconds (or microseconds) instead of hours or days. To convey the process through the metaphor of a mirror, we might think of the facing mirrors at Versailles, reflecting the image back and forth, over and over to infinity—except that here with each reflection, the image gets closer to the original.

The dynamics of deep fakes exactly inverts the Platonic story about an ideal reality that exists as an abstraction, which is then imitated through a copy that is inferior precisely because it is material rather than abstract. Now the material entity is taken as the original, which is copied by an algorithmic abstraction, over and over, until the copy is virtually undetectable as such and can convincingly pose as the original—or even supplant it. At issue is what we might call, with a nod to Walter Benjamin, the human aura in the age of technological reproducibility. Whereas Benjamin posited that it was the aura of the artwork that was being subverted—that is, the artwork as an original that acquired an aura because it was uniquely located in time and space and authorship—now it is the sovereignty of the human subject that is at issue, the belief that each human is unique and uniquely valuable. In his famous essay, Benjamin hinted that the subversion of an artwork's aura might have liberatory as well as pernicious aspects. One of the urgent questions of our time is whether the subversion of the human aura might similarly have salutary aspects, as well as alarming ones. Here again materiality is crucial, because the algorithmic deep fake exists only as an image, not as an embodied person able to move freely in an unpredictable three-dimensional environment.

Benjamin was indeed already concerned with the dangerous political implications of mimetic phantoms that cast a shadow on the present as well and to which we shall return. For the moment, let us make clear that you are critical of posthuman phantasies of disembodiment, but you are far from dismissive

of technological innovations. On the contrary, you take science and technology very seriously and urge new generations of critics and theorists to interrogate the porous boundaries that mediate the relation between humans and nonhumans—for better and worse. Within the Homo Mimeticus *project we tend to think of mimesis as a* pharmakon, *both poison and cure. On one side, mimesis is generative of cultural pathologies that can go from the hypnotic capitulation to conspiracy theories to* (*new*) *fascist insurrections that are planned online before generating outbreaks offline on. And yet, on the other side, it also allows for the emergence of what I call "patho-*logies" *that lead a subject vulnerable to contagious affect, or* pathos, *to draw reflexively on this embodied experience of vulnerability to mimesis in order to develop a "critical account, or* logos, *on mimetic* pathos"[7]*—a mimetic observer who is part of the mimetic system they study, so to speak.*

There seems to be a feedback loop at play in these patho(-)*logies* (*now both sickness and diagnostic*) *that resonates with your attention to feedback loops in both their productive and debilitating manifestations. What is your take on this all too human tendency to imitate via bodily repetitions that become incorporated over time, for better and ill? And as you rely on the cybernetic concept of "feedback loop" to trace spiralling processes between human and non-human computational systems that can have both positive and damaging effects depending on the nature of the loop, how do you see embodied forms of mimesis, or hypermimesis, circulate in loops that may start in hyperreal simulations online, yet retroact on all too mimetic subjects who are by definition porous to external influences offline*?

Here you have identified a phenomenon that concerns me greatly, the proliferation of misinformation on the internet and the tendency of people to create "echo chambers" that insulate them from anything that would contest their views. It is stunning to me to see people reject scientifically-based research in favour of some whacko theory circulating with no factual basis whatever. Certainly, these resonate physically and not only virtually—in shouting matches at town meetings, protests over mask mandates, etc. It is obvious from people's reactions that whole-body emotions are involved that go far beyond, and far deeper, than intellectual arguments by themselves. Contagion is a good word to describe these phenomena, not only because it is most apparent, and most vehement, with regard to the COVID-19 virus, but also because it is a kind

7 Nidesh Lawtoo, *The Phantom of the Ego: Modernism and the Mimetic Unconscious* (East Lansing: Michigan State University Press, 2013), 6–8.

of mimetic replication that occurs in chat rooms and far right websites and talk radio. The name of the underlying game here, surely, is money: enrage enough people often enough, infect them with the idea that their freedoms and even their families are threatened, and you can milk a great deal of cash out of them.

Yes, the documentary The Social Dilemma (*2020*) *strongly confirms this point. Former engineers at major companies like Facebook, Google, Twitter et al. express their deep concern that engineers intentionally target the mimetic faculty to turn posthumans* (*or their data*) *into a product to sell to advertising companies for profit. The hypermimetic paradox being that engineers are themselves affected and infected by the technologies they create—and unconsciously so.*

To continue along these unmaking line of inquiry by taking some genealogical distance, on the philosophical front, Friedrich Nietzsche is often acknowledged as a key precursor of posthuman and transhuman studies given his emphasis on the Übermensch *as a bridge toward the future, but Nietzsche also urged genealogists to remain faithful to the body and to the Earth—he liked to go for long walks and used his body as a medium for his thought, be it conscious or, more often, unconscious. Like a long genealogy of thinkers of the unconscious before Sigmund Freud, Nietzsche, writing contra dominant rationalist/idealist tendencies in philosophy that limited their attention to consciousness, plays a key role in my understanding of the "mimetic unconscious." I call this pre/post-Freudian unconscious "mimetic" because it is not based on a repressive hypothesis that has* (*Oedipal/linguistic*) *desires as a* via regia. *Rather, it is at play in everyday life as it has in involuntary forms of mimicry, habits, hypnotic influences, emotional contagion, and mirroring affects* (*or mimetic* pathos) *its main trigger—something now confirmed by the* (*re*)*discovery of mirror neurons, first in monkeys and then in humans.*

In your recent book, Unthought (*2017*), *you also rely on contemporary neurosciences to stress that most of cognition takes place below conscious awareness. In the process, you take some critical distance from psychoanalytical approaches to the unconscious as well as from advocates of the "'new' unconscious." I fully agree with you that it's not a felicitous phrase as its genealogy is rather old. Your aim is to articulate what you call "nonconscious cognition," which is not accessible to consciousness, is pervasive in humans and, you argue, also in animals and technical system generating "assemblages" in which we are constantly entangled with—as I type my question on my keyboard, with my computer, for instance. Would unconscious mimesis, this time perhaps under the mask of mirror neurons or brain plasticity, play a role in nonconscious forms of communication that are*

not necessarily verbal but embodied, not only inscribed in language but incorporated in bodily actions that are automatic and habitual, not conscious, and in this sense un- *or* non-*conscious in our respective senses? (I am aware that you distinguish between the nonconscious and the unconscious but what I group under the mimetic unconscious seems to me to overlap significantly and productively with what you call the cognitive nonconscious). And if so, can you give some examples of how nonconscious mimesis could entangle human, technological, and animal processes in ways that are future oriented and thus, remain true to the fragility of embodiment of human and nonhuman life on Earth?*

Certainly, nonconscious cognitive processes take forms that are embodied rather than verbal. In fact, nonconscious processes primarily rely on synaptical and neuronal-chemical patterns coming from the body's internal and external sensory systems rather than verbal communications.

One of the best examples of a cognitive assemblage that is future oriented is the one that I presented at the conference you organized, in which humans, bacteria and computers collaborate to create the CRISPR-Cas9 gene editing technology. As I explained, this system relies on a strategy that bacteria developed to combat invading viruses. The bacteria copy part of the virus's genome into their own genetic structures in the form of palindromic clusters that repeat over and over—hence the acronym "CRISPR," standing for Clustered Regularly InterSpaced Palindromic Repeats. These clusters perform as a cell's memory of the invading virus. When the virus attacks again, the cell copies the clusters into an enzyme, Cas9, which enables it to recognize the virus and cut its genome at the point of the recognized sequence, an action that kills the virus. I argue that this constitutes a mimetic act on the part of the bacteria; as the concept of mimesis traditionally requires, it is an imitation rather than merely a copy. First, the bacteria recontextualize the CRISPR segments by incorporating them into the bacteria's genome, and second, the bacteria create a completely different function for the CRISPR segments, using it to kill the virus rather than replicating it. Accordingly, I call this bacterial strategy *micromimesis* (Hayles, 2021) a term that stresses it is a *cognitive* act for the bacteria, involving the interpretation of information in contexts that connect it to meaning.

When Emmanuelle Charpentier and Jennifer Doudna and their collaborators figured out how to take advantage of this bacterial micromimesis to create the CRISPR-Cas9 gene editing tool, they revolutionized the entire field by greatly decreasing the cost while at the same time increasing the precision, flexibility, and ease of use. Whereas editing a single gene with the older

technologies cost as much as twenty-five thousand dollars, with CRISPR several genes can be edited at once for a hundred or so dollars. Labs specializing in the CRISPR technique can receive an order for a specific RNA sequence online and mail it out a couple of days later, making it easily accessible to qualified professionals. Since the gene sequencing and editing involve a lot of calculations and mathematics, computers are usually used to create the simulations on which the editing will be based. The entire technique, then, involves humans, nonhuman lifeforms, and computational media, which I call a cognitive assemblage, that is, a collectivity through which information, interpretations, and meanings circulate.

I cannot imagine a more future-oriented technology than gene editing, for it bestows a power unprecedented in human history: the power to direct our own evolution as well as the evolution of every other species on earth. This indeed is a pharmakon, for such power can be used for great good, and in the wrong hands or for the wrong goals, bring about unprecedented catastrophe. It transforms the plasticity that one strain of mimetic thought celebrates as a preexisting biological capacity into a technologically-captured result that can alter genomes virtually instantaneously rather than over eons of evolution. Although we cannot know at this point how the new micromimetic capacity will play out, the one thing we do know with certainty is that it will change the future of humans (and nonhumans) in unforeseen and unpredictable ways.

We are caught in metamorphic processes, for good and ill, for sure. As posthumans are increasingly entangled with nonhuman biological and technological forces it seems imperative to go beyond anthropocentric conceptions of consciousness to include un-or non-conscious processes that distribute agency across a network of human/nonhuman spectrum. It is well known that this view is now foregrounded by new materialist perspectives that provide a correction to linguistic or discursive approaches to the human; perhaps less known is that on the question of the decentring of consciousness in particular both the new materialist and mimetic turn share an important predecessor. Let me quote Nietzsche one last time, who, you will have guessed, serves as a bridge in my genealogy of mimesis. In The Gay Science *(1882), he relied on an evolutionary perspective to argue that both at the level of the ontogenesis and phylogenesis, it is out of an unconscious "need for communication" via gestures and mimicry characteristic of a dependent species striving for survival that consciousness and language first emerged. The unconscious, for Nietzsche, developed first; he also insisted that*

to this day "the thinking that rises to consciousness is only the smallest part of all this."[8] *Interestingly, he considered that this relational un/non-consciousness does not belong to autonomous individuals but, rather, to what he calls a "net of communication* [Verbindungsnetz]."[9] *That is, a connecting, embodied, mimetic network between human animals which, for him, extend to include nonhuman animals and natural processes as well.*

As this network—or as you'd prefer to say, "assemblage"—is no longer based on small physical communities but on virtual communities in which agency is increasingly distributed across the human/nonhuman binary, a rethinking of what you call "the power of the cognitive nonconscious" and I call the "unconscious power of mimesis" seems urgently in order. This is especially true since posthumans are increasingly driven by algorithmic simulations that generate hypermimetic representations that, despite their realism, as in the deep fakes you discussed, are far removed indeed from reality; and yet, deep fakes but also drones or other war machines have material effects, nonetheless.

So here are my last questions: what are the main unthought (hyper)mimetic dangers—but also life-affirmative possibilities—you see at play in ongoing posthuman process of becoming computational? If increasingly affective simulations generate pity and pleasure, human/nonhuman assemblages also seem to trigger material processes like viral pandemics, catastrophic climate change, and species extinction that generate fear and terror. Could you bring some unthought connections on the mirroring relation between humans and machines on the stage of what you call, drawing on a mimetic scene, "the theatre of consciousness?"[10] *And last but not least, what dangers do they entail for posthumans and what possibilities do they open up for the humanities?*

The book I am finishing is entitled *Technosymbiosis: Futures of the Human*. It takes the position that in our present situation, it is not enough simply to critique. Criticism is valuable and necessary, of course, but in the face of the urgent and multiple anthropogenic environmental crises that we are facing, we are ethically obligated, in my view, to offer constructive suggestions as well. The STEM disciplines have already identified a number of Grand Challenges, including Global Energy, Global Hunger and Thirst, Global Pollution and so forth, as a way to attract resources and funding and also to focus research efforts to solve some of our most pressing problems. None of these problems,

8 Friedrich Nietzsche, *The Gay Science,* trans. Walter Kaufman (New York: Vintage Books, 1974), 299.

9 Nietzsche, *The Gay Science*, 298.

10 Hayles, *How We Became*, 221.

however, can be solved through science, technology, and engineering alone. They involve issues of justice, ethics, law, history, genealogy, and other aspects that are traditionally the province of the humanities. As humanists, we need to reach out to our scientific and technical colleagues and offer the resources of thought, criticism, insight and analyses that centuries of humanistic inquiry have provided. Much depends, of course, on the spirit in which these resources are offered. The optimal results, in my experience, emerge from collaborations based on mutual respect, genuine curiosity about the other's field, and a willingness to listen and engage constructively. In this respect, I think the mimetic traditions, in all their richness and complexity, would be an excellent place from which to begin.

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PART 1

The Mimetic Turn in Posthuman Art

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CHAPTER 1

Alchemical Shadows: Homo Mimeticus and Eidolons of Artificial Intelligence

Patricia Pisters

> I've seen things you people wouldn't believe. Attack ships on fire off the shoulder of Orion.
>
> I watched C-beams glitter in the dark near the Tannhäuser Gate.
>
> All those moments will be lost in time, like tears in rain. Time to die.
>
> ROY BATTY in *Blade Runner*

⁘

Rutger Hauer's performance as so-called replicant Roy Batty in Ridley Scott's science fiction film *Blade Runner* (1982) could be considered a figuration of the posthuman homo mimeticus par excellence.[1] In the film, humanoid robots are killed ("retired") after four years of service in order to keep them from developing too much intelligence and power of their own. Batty is the leader of a group of replicants who do not want to die after this preset term. On an urban rooftop, in the pouring rain, he utters his final monologue (quoted above) and closes his eyes for good; the white dove he holds in his arms escapes. The ancient symbolism of a dove as a transporter of the soul, the poetic and self-reflexive melancholia of his words, and the incredible humanity of this nonhuman entity make us question the difference between ourselves and the machines constructed in our likeness. In *Blade Runner*, genetically bio-engineered replicants question what it means to be human, questions that have deep existential roots but gain all the more importance in debates on artificial intelligence and the future of human life on planet Earth. In this chapter, I want to return

1 The centrality of sci-fi for the mimetic turn in posthuman studies has been stressed in Nidesh Lawtoo, ed., "Posthuman Mimesis," Special Issue, *Journal of Posthumanism* 2, no. 2 (2022). The argument I present here is an extension of this line of inquiry via the so-far unexplored perspective of alchemy.

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to some of the ancient low-tech sources from the past in Greek and especially alchemical traditions to see how they might resonate with the questions we have in our high-tech present and future. The hypothesis is that alchemical texts and science fiction concerning artificial intelligence share variations of what Nidesh Lawtoo has called the "mimetic unconscious."[2]

1 Eidolons: Ghosts of the Mimetic Unconscious

Artificial Intelligence takes many forms and is certainly not limited to humanoid robots.[3] It involves computational pattern recognition, algorithmic processing, and machine learning that for large parts are invisible, literally black-boxed or complex, and coded in the depths of our machines, devices, and interactions with our cars, phones, laptops, and many other devices. While acknowledging the vast and expanding influence of AI that has penetrated and determines much of our daily lives, I want to focus on one particular form that speaks to our imagination in a mimetic form: the humanoid robot, that looks like ourselves, and that, arguably, is the basis of the development of AI. As Nilsson states in *The Quest for Artificial Intelligence*, "People have long imagined machines with human abilities—automata that move and devices that reason. Human-like machines are described in many stories and are pictured in sculptures, paintings, and drawings."[4]

The creation of mimetic doubles has been here all along; they are part of our human culture, our human psyche, and our understanding of the world. The ancient Greek concept of the eidolon designates such a mimetic figure. According to the *Merriam-Webster Dictionary,* the word refers to an unsubstantial image, a phantom double or (with a more positive connotation) an ideal.[5] Often quoted examples of eidolons in Greek mythology include the immortal Helen, goddess of Sparta, whose mortal stand-in served as her image double in Troy. There, her mimetic double appeared so real and so beautiful that she enraptured all. And *The Iliad* of Homer describes Hephaistos, the lame

2 Nidesh Lawtoo, "The Mimetic Unconscious: A Mirror for Genealogical Reflections," in *Imitation, Contagion, Suggestion: On Mimesis and Society,* ed. Christian Borch (London and New York: Routledge, 2020), 37–53.

3 Carol Vernallis, Holly Rogers and Jonathan Leal, eds. *Cybermedia: Explorations in Science, Sound and Vision* (New York: Bloomsbury, 2021).

4 Nils Nilsson, *The Quest for Artificial Intelligence: A History of Ideas and Achievements* (Cambridge: Cambridge University Press, 2010).

5 "Eidolon," *Merriam-Webster Dictionary*, accessed January 22, 2024, https://www.merriam-webster.com/dictionary/eidolon.

blacksmith god who created Talos, a bronze automaton to guard Crete, and who made self-propelled chairs called "tripods" and golden maidens as "attendants."[6] So the eidolon as an image double, sometimes barely distinguishable from the real thing, is an example of a low-tech mythological figure that expresses the very human desire for mimesis.

In his book *The Phantom of the Ego*, Nidesh Lawtoo describes these mimetic ghosts as a fundamental dimension of the ego: "The phantom of mimesis gives life to the ego by animating, or better innervating its psycho-physiological system through a dynamic process of unconscious communication that places the reflex of the other (or socius) at the heart of subjectivity."[7] Lawtoo evaluates this mimetic impulse as a phantom of the ego in a range of modernist writers of the modern soul, influenced by Nietzsche's communal pathologies of modern humans. He proposes a modernist take on the "phantom of the ego" not only to understand the modern human psychologically, but also to see how, on a collective level of intersubjectivity, mimetic tendencies are at play. So beyond the individual, solipsistic shadow of the ego, there are "mimetic bonds" between people that "continue to be constitutive of human relations."[8] Furthermore, Lawtoo explains that these mimetic bonds play out on both a physiological level (think or mirror neurons that operate on the level of involuntary reflexes and contagion in social interaction), as well as a social and communicative level: "This ego emerges with the other as an *ipse* that is not identical to itself, but functions as a place of communications between subjects who are ready to reimagine the possibility of future communities yet to come."[9] In other words, at an unconscious level, we always function via mirror images.

Now that we have moved into a posthuman age,[10] the question is of the ways in which this mimetic unconscious is still an operating force in our dreams and desires about our future (individual and collective) selves. Beyond intersubjective mirroring between humans, can we think of nonhuman shadows? And now that many eidolons leave the realm of mythical fiction and fantasy to materialize in anthropomorphic and self-learning machines, where does the human stop and the image double begin? Can we rethink the age-old questions

6 Nilsson, *Quest for Artificial Intelligence*, 19.

7 Nidesh Lawtoo, *The Phantom of the Ego: Modernism and the Mimetic Unconscious* (East Lansing: Michigan State University Press, 2013), 284.

8 Lawtoo, *Phantom of Ego*, 299.

9 Lawtoo, *Phantom of Ego*, 300.

10 See, for instance, Rosi Braidotti, *The Posthuman* (Cambridge and Malden: Polity Press, 2013); Francesca Ferrando, *Philosophical Posthumanism* (London: Bloomsbury Academic, 2019).

of mimetic doubles with respect to the high-tech avatars of humanoid cyborgs in contemporary popular culture? What do all these mimetic figures try to tell us today? My proposition will be that we can conceive of mimesis in a posthuman, new materialist way by returning to historic sources, in alchemical literature. Walt Whitman's poem "Eidólons," from the collection *Leaves of Grass*, is perhaps a bridge to these earlier alchemical shadows.[11]

2 Walt Whitman's "Eidólons": The Soul of Matter

In the first stanza of "Eidólons," the poet encounters a seer who is collecting eidolons with aesthetic sensibility: "I met a Seer / Passing the hues and objects of the world / The fields of art and learning, pleasure, sense / To glean Eidólons." These perceptions and aesthetic responsiveness are even more powerful than science, as he says: "Beyond thy lectures learn'd professor / Beyond thy telescope or spectroscope observer keen, beyond all mathematics / Beyond the doctor's surgery, anatomy, beyond the chemist with his chemistry / The entities of entities, eidólons." Some have argued that in this poem Whitman addresses the criticism he received of being a fake poet,[12] as he talks about the poet as a persona embodying the essence of Whitman, where he says: "the real I myself / An image, an eidólon."[13] As such, the concept of the eidolon becomes equated with the soul, this ghostly double is that which is eternal and changeless, embodied in the materiality of the real person, the mimetic image that captures the essence of a person.

However, Whitman extends the idea of the eidolon from an image double (body double) to an oversoul composed of the individual souls of *all* life and expanding to include the Earth itself, along with the other planets: "Strata of mountains, soils, rocks, giant trees, / […] Eidólons everlasting"; "The mighty earth-eidólon"; "The stars, the terrible perturbations of the suns, / […] Eidólons, only." For Whitman, the I is immediately connected to the Earth, to the stars and planets—in short to the nonhuman. Ultimately, he expresses that every material thing has a spiritual counterpart and that this eidolon ultimately

11 Walt Whitman, "Eidólons," in *Leaves of Grass* (Philadelphia: David McKay, c.1900; Bartleby.com, 1999), https://www.bartleby.com/142/256.html.

12 Fredric Carpenter, "Walt Whitman's 'Eidolons'," *College English* 3, no. 6 (1942): 534–45.

13 See also Jane Bennett, *Influx and Efflux: Writing Up with Whitman* (Durham, NC: Duke University Press, 2021); and for Bennett's contribution to the mimetic turn, see Nidesh Lawtoo, *Homo Mimeticus: A New Theory of Imitation* (Leuven: Leuven University Press, 2022), ch. 8.

is the most real essence of things. So, Whitman doesn't seem to make a distinction between eida and eidolon, between essence and image double. Nor does he make a distinction between the physicality of the human body and the materiality of nonhuman elements. This seems to resonate with ideas on materiality in new materialist conceptions of the posthuman which will be unpacked in this chapter.[14] In the following sections, I propose to do this by, on the one hand, looking backward at some alchemical sources in which we find similar "new materialist" posthumanism *avant-la-lettre*, and, on the other, by looking forward, raising a few science fiction films that deal with mimetic doubles in the form of humanoid AIs. In all these texts, the mimetic doubles that are called for seem to ask the same central questions that have preoccupied human beings over the ages: "Who am I? Where do I come from? Where am I going?"

3 Mytho-alchemy: Atalanta Fugiens

Alchemy is a premodern proto-scientific form of laboratory practice that has its roots in metallurgy and mining. Commonly referred to as the search for the transmutation of base metals such as lead into gold or silver, alchemy has a long and global history with roots in China, India, and the Islamic world.[15] Besides a chemical laboratory practice, alchemy is also a form of soul-searching covered in esoteric language and images. The most seminal reference in western esotericism and alchemy is the work of Hermes Trismegistus, *The Corpus Hermeticum* (first century BC), which expresses the conviction that the material and spiritual transmutation processes in the universe are entangled and that to know the structure of matter also gives an insight into the deepest secrets of creation and God.[16] Paulo Coelho's novel *The Alchemist* is a well-known translation of the alchemical search for the soul in matter in popular imagination.[17] Another basic principle in alchemy is the unity in microcosmic

14 Rosi Braidotti and Maria Hlavajova, eds., *Posthuman Glossary* (London: Bloomsbury Academic, 2018).

15 Mircea Eliade, *The Forge and the Crucible: The Origins and Structures of Alchemy*, 2nd ed. (Chicago: University of Chicago Press, 1978).

16 Hermes Trismegistus, *The Corpus Hermeticum*, trans. G. R. S. Mead (1906), http://www.gnosis.org/library/hermet.htm#CH.

17 Paulo Coelho, *The Alchemist*, trans. A. R. Clarke (New York: Harper Collins, 2002).

and macrocosmic operations ("to see the world in a grain of sand").[18] Alchemy is considered a sacred and secret science "in which the artes liberales, medicine,mineralogy, philosophy and theology are involved."[19] The rise of the natural sciences during the Enlightenment in the seventeenth and eighteenth centuries put an end to the legitimacy of the speculative and experimental operations of alchemy. The many different branches of alchemy, such as laboratory alchemy (to transform matter), medico-alchemy (to cure physical ailments via potions and elixirs), and mytho-alchemy (full of coded and symbolic messages, often based on ancient mythological sources) were pushed to the margins of culture and consciousness, but never completely disappeared. I will zoom in here on some of the mytho-alchemical dimensions.

In his classic book on alchemy, *The Forge and the Crucible*, Mircea Eliade gives an account of man's discovery of how to "change modalities of matter," and thus "collaborate in the work of Nature."[20] The practices of the smelter, the smith, and the alchemist share a "ritualist attitude towards matter."[21] Alchemy is considered a sacred science because of the mystical and magico-spiritual influence the operations on matter were experienced to have. Eliade describes, among others, how in the mythology and cosmology of the Iron Age, the homology between humans and the universe was developed in several directions, including the "sexualization" of the

> vegetable and mineral kingdom and of the tools and objects in the surrounding world. … the multiple images relating to the belly of the earth—the mine compared to the uterus and ores to embryos, all of which are images conferring an obstetric and gynaecological significance upon the rituals associated with mines and metallurgy.[22]

The alchemist takes up and perfects the work of Nature, Eliade explains, by speeding up the processes of nature based on the conviction that by gestating long enough in the belly of the Earth, iron would turn into gold. In this way, the alchemist interferes on the vast temporal scale of the planet that is beyond

18 William Blake, "Auguries of Innocence," in *Poets of the English Language* (written c. 1803; New York: Viking Press, 1950), https://www.poetryfoundation.org/poems/43650/auguries-of-innocence.

19 Helena De Jong, *Atalanta Fugiens: Sources of an Alchemical Book of Emblems* (York Beach, Maine: Nicholas-Hays, 2002), 15.

20 Eliade, *Forge and Crucible*, 8.

21 Eliade, *Forge and Crucible*, 9.

22 Eliade, *Forge and Crucible*, 33.

human comprehension, speeding it up to human scales.[23] But what is most important is the physical conception of cosmic and earthly matter as living bodies full of male, female, and hermaphrodite principles that return as founding values in many alchemical texts.

Michael Maier's mytho-alchemical work *Atalanta Fugiens* from 1617 is based on the myth of Atalanta, the swift-footed huntress, and the golden apples.[24] As the book's title page indicates, it presents "new chemical emblems regarding the secrets of nature" suitable for "the eye and mind" as well as "the ear and soul," told in fifty emblems in copper engravings, fifty epigraphs with discursive explanations, and fifty musical fugues for three voices. The reader was meant to "look at, read, contemplate, comprehend, judge, sing and listen to"[25] it. It could be considered a very early multimedia work. I take this alchemical text here as a bridge to both understanding Whitman's extended conception of eidolons that includes the soul of the Earth and the cosmos, as well as providing ancient insights on questions in contemporary posthuman debates.

Atalanta is a mythical figure described among others by Ovid. She is a hunter and swift of foot. The men who court her need to outrun her first or be killed. No one succeeds until Hippomenes falls in love with Atalanta and gets the help of Aphrodite, who gives him three golden apples from the Garden of Hesperides that he drops to distract her during their race. He wins and marries Atalanta, but because they disrespect the goddess Cybelle by making love in her temple, they are transformed into lions. In Maier's work, this mythical tale is told and expanded upon in encoded symbols, referring to various alchemical sources such as *Tabula Smaragdina* (*The Emeralds Tablets*, attributed to Hermes Trismegistus), *Rosarium Philosophorum* (*Rosary of the Philosophers*), *Aurora Consurgens* (*Rising Dawn*), and *Physical et Mystica* (*Natural and Mystical Things*).[26] The symbolism operates across the different media of the text. The fugues, for instance, represent three voices, each standing for a

23 William Connolly, *Facing the Planetary: Entangled Humanism and the Politics of Swarming* (Durham, NC, and London: Duke University Press, 2017).

24 Michael Maier, *Atalanta Fugiens: Emblemata Nova de Secretis Naturae Chimica* (Oppenheim: Hyronymous Gallerus, 1617), English translation at https://www.alchemywebsite.com/atalanta.html. The Embassy of the Free Mind in Amsterdam holds an important collection of western esoteric and alchemical texts. See https://embassyofthefreemind.com/en/library/about-the-library. I want to thank the Embassy for giving me access to several versions of *Atalanta Fugiens*. See also Peter Forshaw, "Infinite Fire Webinar 11—The Emblemata of the Atalanta Fugiens by Dr. Peter J. Forshaw," YouTube video, November 30, 2012, https://www.youtube.com/watch?v=2d3eDwJyzHI.

25 De Jong, *Atalanta,* i.

26 De Jong, *Atalanta*, i.



FIGURES 1.1A AND 1.1B Michael Maier's *Atalanta Fugiens* (1618 edition), emblems 1 & 2. Copper engravings by Matthäus Merian
COURTESY OF EMBASSY OF THE FREE MIND (AMSTERDAM)

mythical character, as well as for a basic alchemical matter. Voice One represents Atalanta, the female principle, which is connected to mercury (quicksilver) and embodies the spirit (as the medium of transference). Voice Two embodies Hippomenes, the male principle or sulfur, which stands for the soul (as personal essence). Voice Three denotes the Apple, which also stands for salt, the substance and physicality of the body (the third primal element in the alchemical process). So already at the level of the musical fugues, a wealth of encoded meaning is implied, referring to some of the basic material of alchemical work, mercury, sulfur, and salt.

An extended analysis of *Atalanta Fugiens* is beyond the scope of this chapter and has been done by others.[27] Here I just want to hint at a few other alchemical messages in Maier's work. In the first emblem (Figure 1.1a), for instance, we have a reference to Hermes Trismegistus, to the famous *Emerald Tablets*, and to the basic elements of Nature. We see here the King of the Northern Wind, with an embryo in his belly. Underneath the emblem, Maier comments:

> In the *Tabula Smaragdina*, Hermes wrote briefly about the work of Nature. He says among others: "The wind carried him in its belly." By this he means, as it were: "He, whose father is the Sun, and whose mother is the Moon, will be carried, before he is born, by wind and vapour, just as a flying bird is carried by the air." From the vapours or winds, which are nothing else but wind in motion, water proceeds, when condensed, and from that water, mixed with earth, all minerals and metals arise.[28]

In the second emblem (Figure 1.1b) we see a woman with the Earth as her belly, carrying a child. The motto underneath the emblem reads: "His nurse is the Earth." As De Jong explains, the important alchemical thought is that the process of searching for the philosophical stone is the same as the process in nature, which is most described in terms of procreation, growth, and nourishment of human and animal in Nature, in the belly of the Earth and its elements.[29]

In emblem 21 (Figure 1.2) we see the alchemist (Hermes) and the mimetic symbols that include the whole development of the alchemical process. "Man

27 See De Jong, *Atalanta*; Forshaw, "Infinite Fire Webinar 11"; Peter Forshaw, "Michael Maier and Mythoalchemy," in *Furnace and Fugue. A Digital Edition of Michael Maier's Atalanta fugiens (1618) with Scholarly Commentary* (Charlottesville: University of Virginia Press, 2020).

28 Maier, quoted in De Jong, *Atalanta*, 64.

29 Maier, quoted in De Jong, *Atalanta,* 65–66.
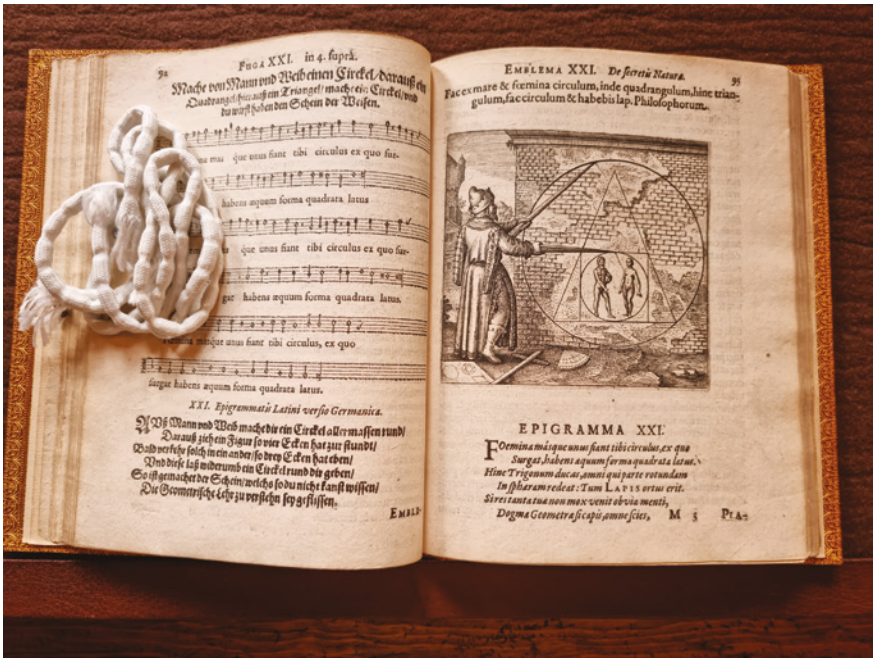


FIGURE 1.2 Michael Maier's *Atalanta Fugiens* (1617), emblem 21. Copper engravings by Matthäus Merian
COURTESY EMBASSY OF THE FREE MIND (AMSTERDAM)

and woman represent the contrasts; they are the sulphur and mercury from which the Philosophers' Stone originates; they are the light and the darkness of the cosmos; they are spirit and matter."[30] Furthermore, the geometric figures also represent the work in abstract symbols. The alchemist should make a circle of (unite) these contrasting male and female principles, and from that circle make a square, connecting them to the four elements (water, wind, air, fire). And from the four elements, the triangle of spirit, soul, and body emerges, which then results in the philosopher's stone (the largest circle in the emblem). "This is the Unity of the Universe. In that cosmic Unity the human soul reverts to its origin, to God." De Jong comments that "in this emblem Maier used geometrical figures as a symbol of the connection between the processes in Micro- and Macrocosm."[31]

30 Maier, quoted in De Jong, *Atalanta*, 169.
31 De Jong, *Atalanta*, 170.

These few examples from *Atalanta Fugiens* give an impression of the mimetic tendencies (male and female principles represented as masculine and feminine figures, abstracted in the geometrical figures of the triangle, the square, and the circle) in alchemical texts that resonate with Whitman's strata of eidolons across the body, art, science, Earth, the stars, and the cosmos. In his poem, Whitman seems to confirm the alchemical adagio "As above, so below; as within, so without"; the nonduality of body and soul, matter and the immaterial; and the connection between microcosms and macrocosms. These connections are always there, but to find the secrets of the Unity of nature, a process of transmutations must be executed. The journey into the secrets of nature goes through different stages and also has to be executed as an inner process of transmutation. And so, before moving to the questions of posthuman mimesis in artificial intelligence, I need to open up one more path in the past to unfold some of these inner journeys connected to alchemy.

4 Jung's Psycho-alchemy

For the alchemists, the agent of transmutation of metals is one of the four elements (think for instance, of heating or burning; dissolving, evaporating, or cooling; fermenting or putrefying—all these are elemental operations). In the early twentieth century, Carl Gustave Jung saw a deep correspondence between the wisdom hidden in alchemical texts and psychological processes that are individual trajectories for each human being, which nevertheless have a collective unconscious grounding in mythical images and universal principles.[32] Jung developed an alchemical theory of psychology in which the great work (or *Magnus Opus* in alchemy) consists of going through different stages, a voyage to achieve an integrated conception of the Self, acknowledging personal and collective forces that make up the individual. He reads alchemy purely as an unconscious symbolic language, as he explains in *Psychology and Alchemy*:

> I hold the view that the alchemist's hope of conjuring out of matter the philosophical gold, … was only in part an illusion, an effect of projection; for the rest it corresponded to certain psychic facts that are of great importance in the psychology of the unconscious. … The alchemist

32 In a similar vein, Nidesh Lawtoo argues in the Italian preface to his book *The Phantom of the Ego* that "Friedrich Nietzsche and Carl Jung … seemed more pertinent than ever in accounting for mass phenomena amplified by so-called mass-media in the digital age." Nidesh Lawtoo, *Il Fantasma dell'io* (Milan: Mimesis Edizioni, 2018), 7 (my translation).

> projected what I have called the process of individuation into the phenomena of chemical change.[33]

Jung adds to this that "individuation" does not mean that something can be known; he emphasizes that these are life processes in which the unconscious forms personality in major ways that can perhaps never be fully understood. But alchemy, in dealing with experiences translated into coded practices and messages, can shed more light onto the unknown regions of the soul. "The forms which the experience takes in each individual may be infinite in their variations, but, like the alchemical symbols, these are all variants of certain central types."[34]

It is worth recalling that Jung went through a deep journey of soul-searching himself, which is most clearly acknowledged in *The Red Book*, in which he states that his pursuit of inner images, using what he calls "active imagination," has been fundamental to all his later work: "My entire life consisted in elaborating what had burst forth from the unconscious and flooded me like an enigmatic stream and threatened to break me. … Everything later was merely the outer classification, the scientific elaboration, and the integration into life."[35] Perhaps the most famous of Jung's propositions is the idea of collective Archetypes that act like spirits, ghosts, or ideals, eidolons indeed in our mimetic unconscious. Each individual has to go on a journey to discover and sometimes fight with stages of the soul that need to be acknowledged and somehow integrated into the Self. In *Four Archetypes*, Jung explains that the Archetype "in itself is empty and purely formal, nothing but a *facultas preformandi*, a possibility of representation which is given *a priori*. The representations themselves are not inherited, only the forms."[36] Jung compares the archetype to the formation of crystals that know great variety depending on context and circumstances, and the only remaining constant is its underlying principle, not its concrete manifestation. Some of Jung's most famous archetypes are the Mother, the Wise Old Man, the Wise Old Woman, the Trickster, the Persona, the Shadow, the Anima/Animus (female and male principles in each of us), and Rebirth. These

33 Carl Gustav Jung, *Psychology and Alchemy*, 2nd ed., trans. R. F. C. Hull (London: Routledge, 1968), 482.

34 Jung, *Psychology and Alchemy*, 483.

35 Carl Gustav Jung, *The Red Book: Liber Novus. A Reader's Edition*, ed. Sonu Shamdasani, trans. Mark Kyburz, John Peck, and Sonu Shamdasani (New York and London: W. W. Norton, 2009), x.

36 Carl Gustav Jung, *Four Archetypes: Mother, Rebirth, Spirit, Trickster*, trans. R. F. C. Hull (Princeton, NJ: Princeton University Press. 2010), 13.

are figures that also appear in alchemical sources. The alchemical symbol of the dragon, for instance, represents principles from the Shadow archetype, our own inner demons that we have to fight with in order to become a more integral Self. So Jung considers the mimetic eidolons of alchemical images to be states or stages of the mind, in which alchemy serves as a model for psychological and spiritual work and development.

5 Nigredo, Albedo, Citrinas, Rubedo

The work, the Magnus Opus, that needs to be done, in alchemy as in psychology, is the work of transmutation that can be performed on a material and spiritual level with the aim to reach a higher stage of consciousness. In the *Emerald Tablets*, seven stages of transmutation are described (calcination, dissolution, separation, conjugation, fermentation, distillation, and coagulation).[37] There are many variations on these stages, but the four basic stages of transmutation are color-coded and recurrent. These stages are referred to as *nigredo* (blackening), *albedo* (whitening), *citrinitas* (yellowing), and *rubedo* (reddening). Jung describes these stages in psychological terms as confession, elucidation, education, and transformation.[38] In *Atalanta Fugiens*, there are several references to these stages of transmutation in different emblems, which each hold their own mimetic figures. In a simplified way, we can describe *nigredo* as the first stage of the work one needs to do. In alchemy, the symbols of this stage include the black raven, the dragon or serpent, and the toad. The alchemical planet is Saturn and its metal is lead; its dominant element is earth (for purification, the wet way) and fire (for calcination, the dry way). In Jungian terms, this signifies the Shadow work. This first stage aims at understanding archetypical dynamics and influences on our psyche, coming to terms with the complexes that live within us and the projections that these complexes produce, which are essential to acknowledge and integrate into the Self.

Albedo is the second stage. Symbols include the White Eagle, the White Swan, and the White Virgin. It is dominated by the moon (silver, light in darkness) or the coming of dawn, and water is its main element. For Jung, this is the stage of illumination, and the communication between the conscious and the

37 For a video essay on these seven phases, see Patricia Pisters, "Emerald Transmutations," Vimeo video, January 18, 2017, https://vimeo.com/199974073.

38 See Centre of Applied Jungian Studies, "Magnum Opus," n.d., https://appliedjung.com/the-magnum-opus. See also Daryl Sharp, *Jungian Psychology Unplugged: My Life as an Elephant* (Scarborough, Canada: Inner City Books, 1998).

unconscious aspects of the psyche, the building of a relationship to the Self. *Citrinas* is about education and the alchemical wedding of the moon and the sun. In Jungian terms, we see here the anima and animus dimensions of the soul that need to join. *Rubedo* is the last stage of transformation, in which the philosopher's stone is found. Symbols for this stage are the Hermaphrodite, the Third Thing (*Rebis*) or Divine Birth where spirit and soul, the Queen and the King, moon and sun are united. The rebirth is often symbolized by the phoenix. The philosophical mercury is blood red. In Jungian terms, this is the stage where full individuation, a fully connected Self emerges. All these stages share collective, archetypical principles, often represented in mimetic symbols, yet every individuation is singular and knows countless variations.

Let me briefly take the example of an esoteric science fiction film: Darren Aronofsky's *The Fountain* (2006), which we can read along the lines of Jungian alchemical psychology. *The Fountain*'s main character is a man who has to come to terms with death, going through different stages. The film is a huge inward journey, represented by an outward time travel narrative. The main character transmutes into different versions of himself across historical times (all performed by Huge Jackman): In sixteenth-century Spain, he is a conquistador looking for the Tree of Life (another version of the philosopher's stone); in the twenty-first century, as a brain surgeon, he wants to find a cure from death to save his wife, who has had a brain injury (a medical philosophers stone perhaps); in the twenty-fifth century, he is an astronaut in a space bubble who is confronted with all the layers of the past. It is here, in the future, that he finally accepts death, transmuting into something else (stardust, a plant, a seed). Moreover, what is important is that he can only come to terms with this through an active imagination, the healing image-producing function of the psyche: His wife asks him to finish the story she started, which is a story of alchemical quests, brimming with eidolons of his past and future selves.[39]

6 Transforming Dragons into Machines

Let me now move more particular to the questions regarding the mimetic conceptions of artificial intelligence in humanoid machines in contemporary science fiction cinema. In a discussion after a 1928 lecture entitled "The Transformation of Dragons into Machines," Jung argues that the fiery dragons

39 See also, Patricia Pisters, *The Neuro-Image: A Deleuzian Film-Philosophy of Digital Screen Culture* (Stanford, Calif.: Stanford University Press, 2012), 201–10.

of mythology are now great machines, cars, big guns, big organizations, and planes.[40] It is not very long after World War I that Jung reflects on "what formerly was expressed by fiery chariots rising up to heaven would nowadays be aeroplanes."[41] The dragon is an archetype of the Shadow of Fear. When the interviewer objects that the dragon never existed except as an irrational mythological figure, but that the modern machine is man-made and rational, and that "we are on top," Jung objects: "Yes, but suppose an age when the machine gets on top of us."[42] In his further explanation, Jung implicitly refers to concerns about artificial intelligence, especially in its mimetic form as humanoid eidolons, when he refers to one of the primal myths of AI, the myth of the Golem.[43] Jung argues that even if we could transform the irrational image of the dragon into a rational machine, "that something else is equipped with the power of creation too." He adds: "The old rabbi was capable of making a living thing, the Golem, from a clod of earth by black magic, but that thing had a tendency to grow and grow and finally it fell on him and killed him."[44] Jung argues that even if we create images and machines ourselves, they may overgrow us: "They are the dwelling-places of divine powers that may destroy us."[45] Jung is rather pessimistic about technology; he fears it is taking over too much of the human soul, taking us on an uncontrollable path away from nature.

At the same time his journeys into alchemy, and into the human soul, allows also for a different approach to technology, not just as a dragon that we should fear. In popular culture, we encounter many contemporary avatars of Jungian archetypes, especially in games, series, and films, that are dragon-like and express deep-seated fears. But the more general message from the alchemical eidolons and mythical figures that keep on returning lies perhaps in a premodern approach of nonduality between human and nonhuman energies and life forms that are also expressed in the new materialist approaches of posthumanist philosophy. Like the alchemists, posthumanists share the conviction that there are profound connections and correspondences between heaven ("as above," the gods, the stars) and Earth ("so below," humans, nature), between humans and nonhumans (nature, gods, artificial beings), between material

40 Jung, quoted in Meredith Sabini, ed., *The Earth has a Soul: C.G. Jung on Nature, Technology and Modern Life* (Berkeley, Calif.: North Atlantic Books, 2002), 147–49.

41 Jung, quoted in Sabini, *The Earth has a Soul*, 147.

42 Jung, quoted in Sabine, *The Earth has a Soul*, 148.

43 Amir Vudka, "The Golem in the Age of Artificial Intelligence," in "#Intelligence," Patricia Pisters and Ruggero Eugeni, eds., *Necsus: European Journal of Media Studies* (Spring 2020), https://necsus-ejms.org/the-golem-in-the-age-of-artificial-intelligence.

44 Jung, quoted in Sabini, *The Earth has a Soul*, 148.

45 Jung, quoted in Sabini, *The Earth has a Soul*, 149.

and immaterial, between technology and spirit. In this sense, as Francesca Ferrando demonstrates, humans have actually always already been "posthuman."[46] This certainly is the lesson from *Blade Runner* (the original film from 1982 that I started with) as well as Denis Villeneuve's 2017 sequel, *Blade Runner 2049*. Both films present us with a world that is dominated by the modern conception of the strict separation between "real humans" and "artificially created androids." Both films, however, express the impossibility of this division and the main discovery of the films' heroes (Harrison Ford and Ryan Gosling respectively) is the discovery of this nonduality between humans and replicants. In the high-tech posthuman world of *Blade Runner* and other science fiction environments, the human is intrinsically entangled with nonhuman technology. And in this way, these science fiction films express the expedience of a return to premodern alchemical conceptions of the nonduality of matter and spirit, body and soul.

7 Ghosts in the Machine

Contemporary science fiction and speculative narratives about the future are full of doubles and principles of mimesis. Nidesh Lawtoo demonstrates how, from *Being John Malkovich* (1999) to *Her* (2013), the films of Spike Jonze demonstrate cinematographically what Katherine Hayles called "how we became postmodern" via a transformation of the concept of mimesis itself.[47] He argues that from a concept of mimesis still based on "representation" and "the need for imitation" in a society of spectacle in *Being John Malkovich,* we have moved with *Her* (where the main character falls in love with an AI voice program on his phone) into a "digitized network society in which computer-generated simulation are disconnected from human referent, yet generate material effects on posthuman subjects whose embodied condition render them vulnerable to unconscious forms of imitation."[48] For the questions concerning the mimetic shadows of alchemy and processes of transmutation that I have been addressing here, I will stay closer to the concept of eidolons as ghosts and ideals by referring to the science fiction cult classic *Ghost in the Shell* (Mamoru

46 Ferrando, *Philosophical Posthumanism*, 103–77.

47 Nidesh Lawtoo, "'This is No Simulation!' Hypermimesis from *Being John Malkovich* to *Her*," *Quarterly Review of Film and Video* 37, no. 2 (2020): 116–44; Katharine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999).

48 Lawtoo, "'This is No Simulation!'," 118.

Oshii, 1995). Like *Blade Runner,* Oshii's animated film (based on the manga by Masamune Shiron) inspired the Wachowskis' *Matrix* films and continues to be an important reference in science fiction and has developed into a franchise in itself. As a popular form of processing the ontological questions about human existence—who we are, where we come from, and where we are moving—*Ghost in the Shell* can be considered a modern form of mythology and even an alchemical tale of times to come.

Ghost in the Shell takes us to Japan in 2029, where the main character Major Motoko Kusanagi is a female cyborg, a special agent who is on the hunt for a mysterious hacker, the Puppet Master, "a sentient life form that was born in a sea of information" as the entity introduces itself. In this futuristic world, all bodies are cyber-bodies, integrating one or several cybernetic or machine components for metabolic control, enhanced perception, and improved reflexes and muscle capacity. Some (like Motoko) are completely artificially constructed, but she still has a ghost of human consciousness inside her cyberbrain, which makes her curious and lets her feel fear, anxiety, and hope. Much has been written about *Ghost in the Shell*'s profound and radical posthuman conception of humanity, which by and large was lost in the more recent American remake *Ghost in the Shell* by Rupert Sanders (2017).[49] It is not my intention to review all these important analyses of the film and its extended legacies. Rather I would like to propose reading the film as an inventory of various transmutations of the human into the posthuman, always questioning the borders between flesh and metal, human and machine, and combining technology and philosophy with imaginative soul-searching.

Many have commented upon the profound resonance between *Ghost in the Shell* and Donna Haraway's radical feminist cyborg manifesto, in which she defies the dominant dualism of western thinking that always comes at the expense of minoritized groups. Haraway's cyborg is what she calls "an ironic political myth," which appears where the boundaries between human and animal, organism and machine, and physical and nonphysical are crossed.[50] Carl Silvio, for instance, addresses the many elements that make *Ghost in the Shell* a cyborg in Haraway's emancipatory sense (such as the Asian cyborg woman as its main hero; the Puppet Master's escape from techno-dominated society; as well as the gender fluidity of the Puppet Master, who appears to be half

49 Michal Daliot-Bul, "*Ghost in the Shell* as a Cross-Cultural Franchise: From Radical Posthumanism to Human Exceptionalism," *Asian Studies Review* 43, no. 3 (2019): 527–43.

50 Donna Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century," in *Simians, Cyborgs and Women: The Reinvention of Nature* (London: Free Association Books, 1991), 148–82, 149.

woman, half machine but speaks with a masculine voice). He also points out the more ambiguous gender relations, especially the fact that the emphasis on Motoko's naked body brings back the ghost of the objectification of the female body in visual culture that has been criticized in feminism. Yet, if we could see these female and masculine bodies also as "alchemical principles," or perhaps even anima/animus archetypes, I would suggest the possibility of reading the end of the film where Motoko and the Puppet Master merge to create a new entity as an "alchemical wedding," of the final stage of transmutation, *rubedo*, where feminine and masculine principles become the alchemical figure of the hermaphrodite, a new entity altogether, a newborn. At the end of the film, this newborn goes out into the world, asking where they will go from there. "The net is vast and infinite," the newborn ponders in the very last moments of the film. And so remain the questions of posthuman eidolons that continue to ask how we have to redefine the ghost of humanity.

In *Ghost in the Shell 2: Innocence* (2004) Oshii returns to these questions, but with even more insistence on the mimetic unconscious of the characters that appear. Oshii even stated that "There are no human beings in *Ghost in the Shell 2: Innocence*."[51] Some of the main characters are all human-shaped dolls. Steven Brown analyses the film's obsession with the uncanniness of these *ningyō* (human-shaped figures) "at the limits of the human."[52] The film centers on the investigation of a series of murders by geisha-like dolls, hyperrealist female robots, or gynoids created for sexual pleasure. Throughout the film, the motif of puppets manipulated on a string is recurrent: "One character literally or metaphorically 'pulls the strings' of another via cyberbrain hacking and manipulation," including the implantation of memories, which we also saw in *Blade Runner*.[53] The geisha dolls are operated by the ghosts of adolescent girls who have been kidnapped for so-called ghost dubbing, "a process by which the mind or the spirit of a human is transferred to a gynoid in order to make it more 'desirable.'"[54] They start to revolt against their exploitation by killing their owners or by killing themselves.

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51 Oshii quoted in Yalun Li, "Towards a New Posthuman Ontology—The Anti-Anthropocentrism of *Ghost in the Shell 2: Innocence*," *Anime and Manga Studies*, May 6, 2020, https://www.animemangastudies.com/2020/05/06/guest-essay-towards-a-new-posthuman.

52 Steven Brown, "Machinic Desires: Hans Bellmer's Dolls and the Technological Uncanny in *Ghost in the Shell 2: Innocence*." *Mechademia* 3 (2008): 222–53, 222.

53 Brown, "Machinic Desires," 224.

54 Brown, "Machinic Desires," 241.

On a visual level, the creation of the dolls explicitly refers to surrealist Hans Bellmer's erotic grotesque and subversive dolls from the 1930s. While there is much to be said about the gendered nature of Bellmer's photographs, the references to his work in *Ghost in the Shell* are ultimately critical:

> Just as Bellmer's dolls, many of which reveal a similar interest in, and disclosure of the body's interior spaces an mechanisms, function as a protest against the Nazi regime of youth and the perfect body, so too the scenes of self-mutilation at the outset of *Ghost in the Shell 2* seem to function as an act of resistance against the ideal of beauty against which the kidnapped adolescent girls are held captive.[55]

They start to revolt through their gynoids or the gynoids revolt for them. The different forms of manipulation and string-pulling raise the question of who imitates whom.

In *Ghost in the Shell 2*, there is also an explicit reference to Haraway's cyborg. One of the scientists in the film is named Haraway and is also visually conceived as a Donna Haraway look-alike. In a rather amusing scene, Haraway muses ironically about the strange habits of humans to place themselves on top of the evolutionary chain and to recreate "body doubles" in the image of themselves. She argues that little girls don't play with dolls to substitute for a baby or to practice parenting. Rather, her character states, "Parenting is a quick method to realize the ancient human dream: to create an android." After this, we see that Haraway's face is a mask that reveals her own "roboticity." As Brown demonstrates, Oshii shows the entanglement between the human and the machine, "the machinic in the human and the human in the machinic" on all levels of the film.[56]

Compared to the first *Ghost in the Shell*, the prevalence and preoccupation with doll-like robots makes that the question of the posthuman condition evokes more uncanny questions than the more utopian "alchemical wedding" at the end of the first film suggested. Brown rightly points out that there is an uncanniness that runs through the film, embodied at both the narrative and the visual levels. He argues that the uncanny manifests in different ways: as repetition or déjà vu, as the blurring of the boundaries between life and death, as the crossing between animate and inanimate, and in the figure of the doppelganger.[57] It is to these uncanny elements that I will turn now by looking at a

55 Brown, "Machinic Desires," 240–41.
56 Brown, "Machinic Desires," 242.
57 Brown, "Machinic Desires." 234.

film that addresses the questions concerning humanoid robots in a more gritty, realistic way that touches more clearly upon the phenomenon of the "uncanny valley" of our high-tech doubles, a term coined by robotics professor Masahiro Mori to indicate the relation between the degree of mimicry of a human being and the emotional response that elicits: a feeling of eeriness and revulsion when the resemblance is almost perfect, but not quite.[58]

8 The Trouble with Being Born

In her more recent book *Staying with the Trouble,* Donna Haraway once more forcefully argues for a new materialist and nondualistic way of thinking, feeling, and acting that she introduced with her cyborg manifesto in the 1980s. However, rather than make it a figure of science fiction and the future, Haraway urges us to "live and die well with each other in a thick present" and "to stay with the trouble," addressing the urgent questions of the present.[59] When the distance of futuristic fantasy is taken away, the questions become more troubling. Sandra Wollner's *The Trouble with Being Born* (2020) picks up the question of eidolons formed to human needs in a poignantly disturbing way. The tagline of the film is telling: "Elli (Lena Watson) is an android programmed with memories that mean everything to her owner but nothing to her. The story of a machine and the ghosts we all carry within us."[60] In her review of the film, Jessica Kiang describes it as desperately creepy, queasy, and thought-provoking in its crossing of the boundaries between the human and nonhuman. "If *The Trouble with Being Born* lives anywhere, it is on the deepest, most sunless lower slopes of the uncanny valley."[61]

What makes the film particularly troubling is its transhuman perspective. The story is told from the point of view of the android Elli. She is shaped in the image of the lost daughter of a man that Elli addresses as her father. All the elements of uncanniness are at play: the boundaries between life and death are blurred because she is shaped as the doppelganger of a lost or deceased

58 Jasia Reichardt, *Robots: Facts, Fiction and Prediction* (London: Penguin, 1978).

59 Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham, NC, and London: Duke University Press, 2016), 1.

60 See IMDB, "The Trouble with Being Born," 2020, https://www.imdb.com/title/tt9220966. Other recent films that address the question of human-AI relations in a poignantly disturbing and new materialist way are *Ich bin dein Mensch* (Maria Schrader, 2021) and *After Yang* (Kogonada, 2022).

61 Jessica Kiang, "The Trouble with Being Born: Film Review," *Variety*, March 1, 2020, https://variety.com/2020/film/reviews/the-trouble-with-being-born-review-1203516473.

girl; the young actress who animates Elli wears a silicon mask, which gives her performance a spooky, inanimate quality; and the sense of déjà vu translates as a *déjà entendu* as we hear her implanted memories repeated to the point of eeriness, until they seem to become something sentient, conscious. Moreover, there is an ambiguity in sexual boundaries that Elli, without blinking, responds to. All these nauseating dimensions of the uncanny valley are reinforced when, halfway through the film, Elli is picked up by a man who takes her to his sister, and who rebuilds and resets her in the image of their deceased brother. Elli is now named Emil, tripling the doppelganger motif. The new memories of Emil start to mingle with those of Elli, reinforcing the feeling that Emil might become sentient and conscious, even if he is clearly only executing his settings.

Most importantly, the film asks questions about our mimetic unconscious, about the phantoms of ourselves in children. In interviews, Wollner declared that she wanted to make something of the antithesis of the Pinocchio myth. Her film is not about a puppet that wants to become human, as for instance in Steven Spielberg's *A.I. Artificial Intelligence* (2001). The questions are more disturbing because they reveal that the android is simply programmed and doesn't care, and yet its mimicry makes us doubt the borders between human and machine. And they are more realistic, not only in terms of the real market of humanoid robots (as sex dolls or other forms of intimate company), but also more broadly in the sense that in contemporary culture we increasingly communicate via virtual communication, projecting our ideas rather than entering real communication. As Wollner indicates, "*The Trouble with Being Born* is a story about the ghosts within: the ones we carry with us or project onto something else. Because here's the thing: we can actually do it now."[62]

All this brings us back to the mimetic unconscious that is populated with eidolons of ourselves. Many humanoid robots present us with our own troubled consciousness, our own Shadows that we need to confront. In some versions of science fiction, such as *Ghost in the Shell*, we might find cyborgs expressing the acceptance of new materialist ideas of the unison of the human and nonhuman. These ideas of mimicry have earlier counterparts, expressed in Whitman's eidolons and in the esoteric wisdom of alchemical texts that dealt in encoded, symbolic, and visual language with the questions of who we are, where we come from, and where we are going. A return to these ancient sources to uncover the wisdom of transmutation and growth in connecting the

62 Marta Bałaga, Interview with Sandar Wolner, Cineuropa, February 20, 2020, https://cineuropa.org/en/interview/385583.

human to the nonhuman might teach us that we are still at the beginning, the *nigredo* phase of our confrontation with our posthuman shadows.

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CHAPTER 2

Toward Posthuman Aesthetics: *The Flesh of the World* in Auguste Rodin's *Le Penseur* and *The Thinking Robot*

Nikoleta Zampaki and Peggy Karpouzou

The philosophical inquiries of Maurice Merleau-Ponty's phenomenology and posthumanism offer tools to overcome the limits of the body and humanism. The separation of nature from culture and vice versa, as well as other dualisms rooted in the humanist tradition, such as the subject-object divide, have been disputed. These dichotomies expose the limits between human and nonhumans. In particular, this chapter stems from a specific question, or the answer to a question, that we have put to ourselves: Can there exist something that might be defined as posthuman *flesh* in posthuman aesthetics? Our answer has been immediately negative: Posthuman aesthetics cannot transcend artistic forms and we both have agreed that a definition derived from the application of a universal posthuman thinking to the aesthetic realm could never prevail. Thus, posthuman aesthetics is a field of interplays and forces that can be mapped via the conceptual tools forged by phenomenological critique. We are aware of the fact that aesthetics has to be reconsidered. Our main scope here is to approach aesthetics through a posthumanist perspective that is capable, via two Merleau-Pontian concepts, the *flesh of the world* and *chiasm*, to reconsider the relationship between human and artificial intelligence through artistic practice and creation.

Merleau-Ponty's concept of the *flesh of the world* is defined as the dynamic core, even the question mark, of all elements and their substances, focusing mainly on the ontological spectrums of the world.[1] It is also involved in all processes of nature and bodies,[2] addressing the constant interplays (*chiasm*) between human and nonhuman life forms. These processes are held in time and space, shaping our bodily awareness about the world around us. In this

1 David Abram, *The Spell of the Sensuous: Perception and Language in a More-than-Human World* (New York: Vintage, 1997), 65–66.

2 Maurice Merleau-Ponty, *The Structure of Behavior* (Pittsburgh, PA: Duquesne University Press, 1983), 298–99.

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sense, the *flesh of the world* is the stylistics of our *Being* as all the processes result in the creativity and renewal of the world's *Being* constantly.

The *flesh of the world*—or the *universal flesh*—is correlated with the concept of plasticity as, according to Catherine Malabous' account of neuroplasticity, it could be elaborated as a factor of identification for various life-forms.[3] It is obvious that the world around us can be plasticized, resulting in the perception of the *universal flesh* as "plastic aortas."[4] Moreover, plasticity can be found as a term in both science and art, perceived as a metaphor, such as for the definition of a poetic or artistic work, seen as a *living organism*. Plasticity generates an artwork as a manifestation of artistic expression through the perception of its literacy. Here we cannot adopt the term "representation" while introducing two visually different artworks, overcoming the binaries and understanding further the meaning of the *flesh of the world* in a sculpture or an artwork by artificial intelligence. Naturally, each artwork includes tropes and modalities of the *flesh of the world* which is built upon various mediums of artistic articulations. In this way, an artwork is a kind of sublime of *the flesh of the world*, which is an ontological articulation of *Being*.

Moreover, the *flesh of the world* unifies different artworks despite their incompatibilities and leads to an already posthuman agency, a dynamic, enmeshed in the interplays of nonhuman systems. This continuity is the condition of perception and cognition as the

> *flesh of the world*, described (apropos of time, space, movement) as segregation, dimensionality, continuation, latency, encroachment— … That means that my body is made of the same flesh as the world (it is perceived), and moreover that this flesh of my body is shared by the world, the world *reflects* it, encroaches upon it and it encroaches upon the world (the felt (senti) at the same time the culmination of subjectivity and the culmination of materiality), they are in a relation of transgression or of overlapping.[5]

Therefore, the phenomenology of Merleau-Ponty depends on the ability to perceive similarity as a poetic medium and the results of the process of creating

3 Catherine Malabou, *Ontology of the Accident: An Essay on Destructive Plasticity*, trans. C. Shread (Cambridge: Polity Press, 2012), 5.

4 Roland Barthes, *Mythologies*, trans. R. Howard and A. Lavers (New York: Hill and Wang, 1957), 195.

5 Maurice Merleau-Ponty, *The Visible and the Invisible* (Evanston, Ill.: Northwestern University Press, 1969), 248.

AI Art enhance our embodied awareness of our existence itself. Body and nature are in a hiatus in both natural and technological agencies. Considering them as embodied agencies, we can see that the human and nonhuman world are bodily inseparable. In Merleau-Ponty's view, the perceiver and perceived share the fact of being perceivable, touchable, and embodied. Being embodied means that both the subject and object entail sentient and qualitative states.

In this chapter, we are going to look at the propositions sketched out above to overcome anthropocentrically oriented traditional terms from the point of view of posthuman aesthetics. The comparative study case of Auguste Rodin's *Le Penseur* and *The Thinking Robot* is an example of how the concept of mimesis is perceived in order to approach the relationship between human and nonhuman agencies. However, defining Rodin's *Le Penseur* (*The Thinker*) and *The Thinking Robot* as subjects, posthumanism has to remain in relation to the definition of human. The main aim is to allow for retaining hope for humanity, which seems to lie at the heart of futurity. With an AI being embedded within the *flesh of the world*, that of a perceptual world, there is a new form of sensing present: a posthuman sense of our present culture. This is why we use the term *posthuman flesh*, which focuses on the continuity between human and artificial sensing and is meant to serve as a starting point for a posthuman aesthetic experience involved in the relationship between human and nonhumans.

The arts have always been in a complex and continually evolving relationship with technology (e.g., media, virtual, digital, etc.) and design studies. There are many artists who embrace machine intelligence as a new medium or partner, while others continue using them as modes of production and design, even for educational purposes or society's benefit. That being said, we think about a post-anthropocentric creativity, not in terms of an introduction of an entirely new creativity, but the entanglement of nonhuman entities in creative artistic practice, following N. Katherine Hayles' statement that we have always been posthuman.[6] Being posthuman in art means that we have to overcome binaries—not overlook them, but actually create the circumstances of building a mutual accord among different life-forms. To further explore this mutual accord among various life-forms, we have chosen to interpret two artworks that are different visually, but serve as a great example to further explore human and nonhuman interactions in praxis.

6 N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics* (Chicago: University of Chicago Press, 1999), 291.

Rodin's *Le Penseur* (Figure 2.1) is perceived in its ontological premises, considering that the model's body describes a passive (mental) action,[7] that of the state of thinking. Although the *flesh of the world* is found in the model's materiality (substance), the model's nature is more than material,[8] filtered directly by the subjective, lived, and embodied experience in space. In general, Rodin's artworks are characterized by plasticity and depth, which leads to the stylistics of artistic *ekphrasis*.



FIGURE 2.1 *Le Penseur* or *The Thinker*. The Metropolitan Museum of Art, https://www.metmuseum.org/art/collection/search/191811

Le Penseur's bodily state is both active and passive, based on a cognitive sphere that is embodied and at the same time perplexed. The thinker is an embodied subject whose experienced body is found in the world that it "touches" via the state of thinking. The cognitive experience is extended into the world,

7 Maurice Merleau-Ponty, *Phenomenology of Perception*, trans. Donald A. Landes (New York and London: Routledge, 2012), 164.

8 Herbert Read, *The Art of Sculpture* (New York: Pantheon, 1956), 49.

indicating that the thinker has a personality in space, focusing on the long duration of the state of thinking. The experience of cognitive passivity that is studied here presupposes that we approach *Le Penseur*'s materiality and state of thought in an ontological way.

Moreover, in Rodin's artwork, we regard a project that combines sculpture imagining itself as science (cognition) and mentality that imagines itself as sculpture through the layers of the artist's embodied experience, mind, and senses. Embodiment is also a feature of Rodin's model, both as a living and sentient body, in order to achieve self-awareness, which is central to the project of posthuman aesthetics. Adopting a posthuman aesthetic perspective on the concept of the *flesh of the world* could yield new insights into Rodin's artistic approach of thinking in terms of bodily experience, performance, and so on in praxis.[9] This means that Rodin's *Le Penseur* is a "posthuman of his time," trying to grasp his future via the state of thinking and overcome himself by extending the limits of his bodily awareness.

Venturing more into such future speculations, however, we meet "AI art." Early examples of computer art help us to understand AI Art, as it provides the "missing" theoretical framework for contemporary AI Art, for which we don't yet have a history or detailed research work.[10] Briefly mapping the historical context, in the mid-1800s Charles Babbage designed the *Analytical Engine*,[11] a calculating machine that modifies its calculation when running. His work comprised interconnected gears of various sizes that give a sense of continuity through complexity. Ada Lovelace was the first scholar to realize that computers are more than just science. In her notes we read that Babbage's *Analytical Engine* "may be described as being the material expression of any indefinite function of any degree of generality and complexity."[12] Around 100 years after Babbage, Ben Laposky's work laid the groundwork for the design of decorative

9 Barbara Montero, "Proprioception as an Aesthetic Sense," *Journal of Aesthetics and Art Criticism* 64, no. 2 (2006): 231–42.

10 There are many sporadic features, articles, and blog entries on the history of AI Art. For a short synopsis of the topic see Naomi Rea, "How Did A.I. Art Evolve? Here's a 5,000-Year Timeline of Artists Employing Artificial Intelligence, From the Ancient Inca to Modern-Day GANs," *Artnet News*, December 16, 2021, https://news.artnet.com/art-world/artificial-intelligence-art-history-2045520; Fabian Offert, "The Past, Present, and Future of AI Art," *The Gradient*, June 18, 2019, https://thegradient.pub/the-past-present-and-future-of-ai-art.

11 Tim Robinson, "The Analytical Engine," Computer History Museum, December 8, 2015, https://computerhistory.org/blog/the-analytical-engine-28-plans-and-counting.

12 Richard Taylor, ed., *Scientific Memoirs. Selected from the Transactions of Foreign Academies of Science and Learned Societies and from Foreign Journals* (London: Richard and John E. Taylor, 1843) 691.

patterns using oscilloscopes.[13] This kind of art used cathode-ray oscilloscopes along with electronic circuits like sine wave generators, capturing the moving outputs through long exposure photography. Laposky created both colored and black-and-white works.

The use of programming and markup languages (e.g., C++, HTML, etc.) laid the ground for designing innovative and creative artworks that increasingly started to shape the future of AI Art. In the 1950s and '60s, Bell Labs, a prominent player in the landscape of early computer art, invented BELFIX, a programming language that could output raster animated films that describe a picture: a "mosaic" of dots and squares.[14] Similar technology was developed by IBM in the film *Frontiers in Computer Graphics* (1967) which demonstrates some elaborate visuals.

Artists such as Vera Molnár, Manfred Mohr, Georg Nees, and Fieder Nake heralded the advent of generative computer art, mostly by working on various programming languages to create artistic algorithms. A remarkable computer-generated artistic event was the "Cybernetic Serendipity" (1968), an exhibition curated by Jasia Reichardt in London featuring categories such as music, dance, and machines. The exhibition included "Colloquy of Machines" by Gordon Pask, a work featuring several robots, each with its own operating computer.[15] The field of AI Art started to gain momentum, and researchers and artists began to experiment with AI technologies such as neural networks to generate more sophisticated and complex artworks in the 1980s and '90s. This period witnessed the emergence of AI-driven art programs that could autonomously generate artistic images. For example, the AI program AARON can create computer-generated art with the use of the programming language C. It is one of the earliest examples of autonomous creation of pictures, rather than random abstractions. AARON was programmed to paint specific objects. Similarly, modern AI artists such as Mario Klingemann, Sougwen Chung, and Anna Ridler collaborate with AI algorithms and programming languages, using them as tools to enhance their artistic vision.

We see that historically, the most significant developments in AI Art involve deep learning and neural networks. Although robots are automated systems,[16]

13 Ben F. Laposky, *Oscillons: Electronic Abstractions* (Cherokee, Iowa: Ben F. Laposky, 1953), 5–13.

14 For more on BEFLIX, see Computer History Museum's website and specifically in the 'Timeline of Computer History," accessed September 19, 2023, https://www.computerhistory.org/timeline/1963/#169ebbe2ad45559efbc6eb357208e44c.

15 For more about the exhibition see Jasia Reichardt, *Cybernetic Serendipity* (London: Studion International Foundation, 2018).

16 Hayles, *How We Became Posthuman*, 188.

after a decade of research, we still lack a clear understanding of the various uses and purposes of AI Art today. This is actually a question posed by artists and machine intelligence programmers[17] who study machine intelligence and brain architecture in order to better understand neuroscience and the use of AI in many other disciplines. AI has various design parts (e.g. colors, materials, etc.), which are embodied and performative entities. It is obvious that AI and humans are not mutually exclusive, but agencies of an assemblage. This assemblage is perceived in terms of mental and affective continuums between the human and the nonhuman, including AI. Not only do AI images have specific color and design patterns, they also have shapes, personality, and physicality. The relationship between artists and AI can be seen in the various ways artists are engaging with AI, using it as a collaborative partner and incorporating it into their creative processes. In this scenario, the artist and AI share in the creative process, with the artist defining the parameters for the AI artistic model and benefiting from the insights and capabilities that it brings to the table.

The human perception and understanding of AI through visual and nonvisual stimuli explore how AI can be embedded into human societies and culture by making gender-neutral robots with human features (humanoid robots). A distinctive 3D project such as the one in Figure 2.2 offers a comparative study case between *The Thinking Robot*, a 3D rendering of a sitting android whose posture is clearly a reference to Auguste Rodin's *Le Penseur*.

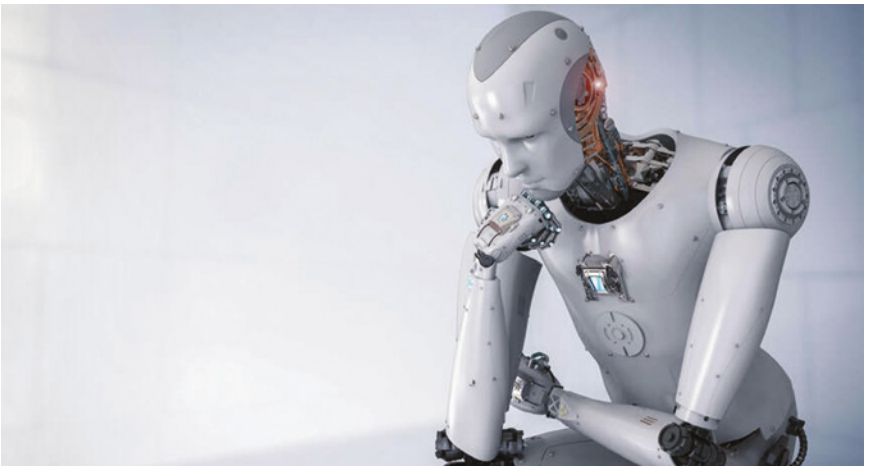


FIGURE 2.2 *The Thinking Robot*
COURTESY OF KITTIPONG JIRASUKHANONT / ALAMY STOCK PHOTO

17 "Artists and Machine Intelligence," accessed September 19, 2023, https://ami.withgoogle.com.

This AI-generated project reflects the cognitive state of thought of Rodin's *Le Penseur* and can be read at two levels: a robot that can think of itself (state of thought) and of the future. A posthuman aesthetic perspective on the robot's body would suggest that its potential for thought does not have to spark horror or a gothic vision of our fears of the future, but can instead conjure the idea of the coexistence of humans and nonhumans in the world. Here the thought is not localized in a specific organ or even in the body itself. Thinking emerges as a process in between the intrinsic and extrinsic relations of human and nonhuman bodies, where a thought is embodied and embedded. The phenomenological intentionality of thinking, which equates to thinking about something, is misleading because we think *with* something else and do not think *about* something else. The robot's thinking is anchored to materiality, to which it belongs, and through the state of thinking it interplays with other bodies and materialities of the world.

The perception of the world through the embodied experience and senses is not restricted only to humans or to the world itself. Here the AI envisages greater access to *Le Penseur*'s body in order to chart the machine process of thought as well as the *chiasm* of both models (Rodin's with that one). *The Thinking Robot* is more than just a robot looking at its pitfalls. When creating/designing a robot that is thinking, in other words animating a machine and bringing to it thought and action through art, we lay the ground for thinking about how nonhumans could act like humans and how all life-forms can coexist. In this direction, the *posthuman flesh* of *The Thinking Robot* does not only mirror Rodin's *Le Penseur*, but rather is capable of recognizing the range of its ethical imperatives, which involve creatively symbiotic forces with Rodin's work.

Posthuman aesthetics focuses not only on how we can bring together various artistic forms in praxis, but also studies the mechanics and patterns of how such forms are able to communicate and live together. Rodin's artwork and *The Thinking Robot* open us up to further explorations of and deeper insight into the notions that we, as humans, have at our disposal. Therefore, the answer to the main question of this chapter—whether the *flesh of the world* could be considered within a posthuman aesthetic context—would be largely positive. Both human and posthuman art—as the latter is the most speculative—seem able to experience speculation. The question about the future of thinking as a cognitive state is an open one that shies away from the answer and closure, a constant *chiasm* between the human and nonhuman life forms. While the value of reflecting on posthuman thinking seems unclear, it is not at all easy to defend why human thinking should survive the anthropological crisis, assuming that all humans will not survive and that our anthropocentric thinking is

projected on the issues raised by the possibilities of AI. Considering posthuman thinking as the will to transform the world and make it a better place, it seems desirable in itself. However, it may yet again be a simple projection of human desire and hope into the nonhuman world.

Another question is the perpetuation of hope in a posthuman utopia. Through the connection between Rodin's *Le Penseur* and *The Thinking Robot*, the hope seems to reach out to the realms beyond the "vanishing point," bridging the gap between the human and the nonhuman. What is more, as can be seen in the above discussion, these two artworks present figures that retain hope for humanity, in the sense of the survival of the species. We have to underline the failure of anthropocentric and humanistic imaginations that makes contemporary thinkers look to nonanthropocentric and nonhuman modes of thinking, speculating, and imagining, and to seek hope in the deployment of those processes on the psychologies of Others. In this sense, posthuman aesthetics is an exercise in looking into the speculative "mirror" to find the double that would tell us more about ourselves and allow us to find ourselves again.

Posthuman flesh is meant to describe the depth of the experiential dimension in various life-forms. It is directed toward a distributed sense culture that transcends the dualism of art and technology, and merges AI and artistic forms of perception, folding them into each other and creating spaces of new sensations. Artificial sensing processes are complex and understanding them will require interdisciplinary work in cooperation with figures or models in both traditional and AI Art. The latter promotes innovation that transforms the bodily experience and relationship with technology, but traditional art also has the means of critical reflection with regard to the folding process of AI and natural sensing. Posthuman aesthetics aims to overcome the conventional limits of traditional aesthetics by cultivating a bodily discipline involving both theoretical and practical aesthetic study cases and rejecting those that are only bodily or deal with the human body. In this way, posthuman aesthetics goes beyond the typical disciplinary limits of knowledge by redirecting core issues such as perception and feelings, which are embodied in the root meaning of aesthetics. A posthuman aesthetic experience in Rodin's *Le Penseur* and *The Thinking Robot* can thus be understood through a better grasp of its ground in more empirical forms of perceptual experience that are also actively embodied.

To address such queries about the future of aesthetics also includes practical exercises of bodily artworks rather than mere aesthetic discourse. The phenomenology of Merleau-Ponty and posthuman aesthetics mean to give thought to the *flesh of the world* through bodily style and examples, expressing

it through one's way of living and perception of the world around, including nonhumans. Radiating out of the concept of *posthuman flesh*, our comparative study case's aim is not to provide philosophical definitions but to bring together and deploy many things we can learn about the embodied perception and experience as well as entrenched bodily artistic norms. Considering that posthuman aesthetics is a new field of research, a field that involves the philosophical, ethical, empirical, and critical study of embodiment, it also deals with the critique of practical study cases such as the machine creative ones, and goes beyond any transformation of bodily states. Reconstructing our ethics and attitudes means that we perceive machine artworks like *The Thinking Robot* not in terms of fascination with technology or techno-phobia, but as a way to further explore the relationship between human and posthuman narratives in various disciplines.

Drawing on sculpture as a physical and AI art respectively, we can arrive at critical reflections on the human-robot relationship, moving beyond the reductive dichotomy that pits visions of autonomous robots against visions of defeated robots ruled by humans. The argument that robots imitate human behavior and actions addresses the need to study not only human behavior or mechanically articulated machine behavior but also the ethical context of who imitates whom within the context of future art. Humanoid robots enable futuristic complexities[18] while creating strong affinities with other design models. Both *Le Penseur* and *Thinking Robot* are centered on the *posthuman flesh*, and address a mutual accord between visibility and presence, challenging a new kind of thought: that of thinking for our being and future. This kind of ontology accommodates the tropes of existence attached to the *flesh of the world*. Both artworks are narratives that envision the past as well as reflect a kind of continuity and evolution (*chiasm*) in the future.

Besides, the artistic pathways of *posthuman flesh* illustrate artworks that are sensitive to embodiment, and at the same time elaborate an aesthetic physicality and simulation. Based on Joanna Zylinska's argument about the anthropocentric understanding of simulation and physicality, AI Art is "premised on a rather unsophisticated model of the human as a self-enclosed nontechnological entity."[19] In fact, Zylinska argues that humans are always already "technological beings."[20] In this case, the robots should be seen as co-agents

18 Cary Wolfe, *What Is Posthumanism?* (Minneapolis: University of Minnesota Press, 2010), xxi.

19 Joanna Zylinska, *AI Art* (London: Open Humanities Press, 2020), 27.

20 "We have become creatures that construct tools, artefacts and machines. We've always been augmented by our instruments, our technologies. Technology is what constructs our

in the production of form, as they have a technological capacity to produce a plastic form[21] that is mimetic. The robotic plastic simulation repeats human performance. In this sense, plasticity is important for the semantic regimentation of human-robot interactions and their operation. It also mobilizes the empirical (based on observation and analysis) and axiomatic claims that are based on normative assumptions about the nature of reality and specifically the nature of all processes in AI. Bodily plasticity is found in like and unlike machines,[22] as the body tends to be a node in AI Art. Many critical voices agree that AI cannot be properly recognized as having "authored its outputs."[23]

Posthuman aesthetics is highlighted by human and nonhuman systems that exceed themselves through encounter and interaction. Specifically, the performative and interactive installation of Rodin's artwork and the AI's play with the conditions of felt perception and how relationality *comes to experience*. A robot speculates in space, theorizing within the state of thinking that arises, and ethical know-how is understood as a function of enacting the human world that is co-selected, co-composed, and co-constructed. Along these lines, the concepts of *posthuman flesh* and *chiasm* are perceived in terms of a dynamic interplay not only with each other, but also with the models themselves exposing a "plurality of simulations."[24] Both the natural and AI spaces are creative and collaborative respectively: The former requires the configuration of the complex relationship between the art and humans, while the latter requires the reconfiguration of the complex human and nonhuman relationships that imprint upon the newly created network of the human and the nonhuman.

The human and nonhuman conversation in art ends with another question about the role of both human-created and machine artworks that represent the human body and cognitive state. Both forms are creative event spaces of speculation—an expanded version of the concept of cognition as state, condition, and functionality—"painting" the future of artistic models as agencies

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humanity." For more, see Joanna Zylinska, ed., *The Cyborg Experiments: The Extensions of the Body in the Media Age* (New York: Continuum, 2002), 114.

21 Catherine Malabou, *The Future of Hegel: Plasticity, Temporality, and Dialectic*, trans. Lisabeth During (New York and London: Routledge, 2004), 8.

22 Francesca Ferrando, "Posthumanism, Transhumanism, Antihumanism, Metahumanism and New Materialisms: Differences and Relations," *Existenz* 8, no. 2 (2013): 26–32. https://existenz.us/volumes/Vol.8-2Ferrando.pdf.

23 Martin Zeilinger, *Tactical Entanglements: AI Art, Creative Agency, and the Limits of Intellectual Property* (Lüneburg: Meson Press, 2021), 162.

24 Nidesh Lawtoo, "Posthumanism and Mimesis: An Introduction," *Journal of Posthumanism* 2, no.2 (2022): 87–100.

with both human and posthuman features,[25] aiming to "alter our conceptualization of agency, intentionality, subjectivity and presence"[26] in a more-than-human world. The *posthuman flesh* combines a critique of technology, a posthuman-centered vision and narrative, and a humanist anthropocentrism with an aesthetic that is informed by the phenomenology of Merleau-Ponty. Under these premises, the *posthuman flesh* is also the artistic *medium* of exploring the extent of our thought beyond the limits of a body, and how AI presence considers the potential effects of posthumanism as a way to expand the definition of human and to decentralize humanity.

We can situate the *posthuman flesh* within the premises of a corporeal ontology that allows us to feel and explain the speculation of our moment. The objective of a corporeal ontology is better understood within the territory of aesthetics as the praxis meets the meaning of how differences are created and felt while thinking of them like we think of Rodin's *Le Penseur* and *The Thinking Robot*: anthropocentric and post-anthropocentric interplays between various artistic forms constantly in time and space. These artistic forms are aesthetic figures that are the way of thinking of art.

The phenomenological account of the *flesh of the world* and *chiasm* is reoriented toward the inhuman, implying a scalar view of the *flesh* as posthuman in order to characterize posthuman aesthetics as this field of ontological materiality of embodied processes of creation. Within the landscape of posthuman aesthetics, the relationship between the human and the nonhuman becomes static-dynamic: there are forces or potencies that relate by fostering the static movement due to the state of thinking. The oxymoronic conceptualization of static dynamics due to the state of thinking expresses the ambiguity that conjoins Rodin's *Le Penseur* with the AI work. The dichotomy of the passive *Le Penseur* and active *Thinking Robot* blurs, and permits a reformulation of, the logic underpinning the relationship between different materialities and, in terms of posthuman aesthetics, the different performative configurations of matter itself. Such an aesthetic requires the intimate and full participation of an incarnated body with other bodies, a process that is exalted through art.

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25 Kevin LaGrandeur, "Emotion, Artificial Intelligence, and Ethics," in *Beyond Artificial Intelligence: The Disappearing Human-Machine Divide*, edited by Jan Romportl, Eva Zackova, and Jozef Kelemen (Cham: Springer, 2015), 97–109, 107. For more about the creation of moral and sensible machines, see James Hughes, "Compassionate AI and Selfless Robots: A Buddhist Approach," in *Robot Ethics: The Ethical and Social Implications of Robotics*, eds. Patrick Lin, Keith Abney, and George A. Bekey (Cambridge: MIT Press, 2012), 79–80.

26 Damith Herath, Christian Kroos, and Stelarc, eds., *Robots and Art: Exploring an Unlikely Symbiosis* (Cham: Springer, 2016), 25.

Following and intertwining the core concepts of the *flesh of the world* and *chiasm*, posthuman aesthetics does not simply "mirror" the world and the symbiosis between the human and the nonhuman,[27] but recognizes the creative conjoining forces of the world. Posthuman aesthetics needs to build upon a perceptual relationality in order to co-constitute various forms in art and processes of subjectivation that are open to the externality of forces. In conclusion, we have proposed posthuman aesthetics that seems to work by offering a postanthropocentric perspective of *flesh* and *chiasm* to human and nonhuman animality, which shapes the future of new framings of *flesh*, advocating also for multidimensional engagement with indigenous artistic worldviews,[28] with the hope of also expanding our knowledge on the boundaries between past and future artistic worldviews.

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27 For a detailed study of "symbiosis" between life-forms, see Peggy Karpouzou and Nikoleta Zampaki, "Introduction," in *Symbiotic Posthumanist Ecologies in Western Literature, Philosophy and Art: Towards Theory and Practice*, edited by Peggy Karpouzou and Nikoleta Zampaki (Berlin: Peter Lang, 2023), 11–39.

28 Indigenous animism could open a fruitful dialogue with AI Art in order to understand a posthumanist artistic framework of the *flesh of the world*. See Stefan Herbrechter, *Before Humanity: Posthumanism and Ancestrality* (Leiden and Boston: Brill, 2019), 110: "We need to take indigenous animism seriously, so as to alternate our own ways of thinking."

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CHAPTER 3

From the Parasite to the BwO: Subversive Mimicry in Viral Zombies

María del Carmen Molina Barea

It is surely easy to forge a common idea of what may be called *zombie mimicry*. Probably, we all have in mind the recurrent image of hordes of nonliving individuals whose remarkably standardized behavior (way of walking, gestures, etc.) has become a recognizable feature. This well-known mental picture has been extensively disseminated and has shaped our contemporary visual culture in a wide range of forms: TV series, comic books, videogames, and, of course, cinema, on which we will focus. The main aim of this chapter is to take cinematographic zombies as a case study to argue that zombie mimicry might be considered part of *posthuman mimesis* as a relevant consequence of the mimetic turn in posthuman studies. The purpose is to analyze zombie mimicry as a defining feature of the mimetic posthuman in the sense that the ego is easily possessed, that is, hypnotized (especially in crowds) and vulnerable to becoming a phantom, permeable to contagion, in such a way that zombies constitute a perfect model of contemporary homo mimeticus 2.0, whose contagious *pathos* spreads over our present posthuman culture.

First, a word must be said about posthuman mimesis inasmuch as it may seem a contradiction in terms. As Nidesh Lawtoo explains, the long-established notion of mimesis and contemporary posthuman studies look in two opposed directions: The first refers to metaphysical tradition of western aesthetics which, rooted in an idealizing conception of being, deals with Platonic dialectics of representation between originals and illusory, fallacious copies, thus reducing mimesis to the logic of the Same, whereas the second challenges precisely these sorts of humanistic ideals, addressing mimesis as an immanent, relational force, affective power, or *pathos*.[1] At this point, the mimetic turn

1 As Nidesh Lawtoo puts it: "The opposition between mimesis and the posthuman is thus clearly set: a philosophy of sameness contra a philosophy of difference, anthropocentrism contra post-anthropocentrism, humanism contra anti-humanism, a *past*-oriented aesthetic theory contra a *future*-oriented technological theory." Nidesh Lawtoo, "Posthuman Mimesis 1: Concepts for the Mimetic Turn," *Journal of Posthumanism* 2, no. 2 (2022): 101–14, 102.

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implies a radical detachment from traditional mimetic theories and promotes a new idea of mimesis, to the extent that

> the mimetic turn suggests to *re*-turn to a different conception of mimesis that includes heterogeneous phenomena that go from mimicry to identification, mimetism to emotional contagion, influence to mirror neurons, trance to hypnosis, simulation to hypermimesis among other avatars of mimesis central to exploring the protean ramification of posthuman subjectivity in the twenty-first century.[2]

These procedures can be found at the core of the contemporary posthuman condition, taking part in the advent of homo mimeticus 2.0. This ontological production develops by deconstructing and decentering the metaphysical notion of unitary subjectivity as well as unconsciously imitating affective patterns in the plane of immanence that also entail cultural, visual, ideological, and consumerist practices. Theoretical references for this paradigm of the self range from Nietzsche to Deleuze, Derrida, Baudrillard, Braidotti, Tarde, and Hayles.

That said, it is precisely in this context that zombies become a perfect example of the mimetic side of posthuman subjectivity, because they show many features of the mimetic posthuman, as we will see later, such as disorganized excessive mimicry, hypnosis and trance, possession and simulation, and pathological contagion, ultimately articulated in a deconstructive notion of being that merges monstrous techno-corporalities with viral transhumanism. It is my conviction that zombies must be situated at the birth of posthuman mimesis as they constitute a significant way in which homo mimeticus takes form. Finally, a homogenous multitude of *phantasmal* zombies radically illustrates the very functioning of *mimetic pathos*: Posthuman subjects imitate both individually and collectively via unconscious mirroring, which render us open to contagion at the level of affect, or *pathos*. It is no coincidence that zombies reveal the double movement that defines *mimetic pathos*, that is, the oscillation between the contradictory feelings of terror and pleasure, called the *pathos of distance*.[3]

Zombies fit perfectly well with the definition of the mimetic posthuman: Both "go beyond good and evil, in the sense that it can be put to both life-affirmative and life-negating, sympathetic and violent, logical and pathological

2 Nidesh Lawtoo, "Posthumanism and Mimesis: An Introduction," *Journal of Posthumanism* 2, no. 2 (2022): 87–100, 88.

3 Lawtoo, "Posthumanism," 91.

use and abuse."[4] According to this definition, *mimetic pathos* could also be named the "zombie pathology."

> In a nutshell: *mimetic pathos* indicates that all affects are mimetic and part of the process of becoming posthuman; *pathos of distance* suggests a certain ambivalence, oscillation, or tension both the concepts of mimesis and of the posthuman tend to generate; and *patho*(-)*logies* reveal a fundamental diagnostic duplicity whereby a loss of embodiment, individual disconnection, and collective tribalization constitutive of posthuman pathologies can, at the same time, be put to productive use for emerging technologies to generate new connections, human/nonhuman collaborations, and vital new patho-*logies*.[5]

Such circumstances are easily located in the evolution of the figure of the zombie in cinema and the mimetic procedures at stake in each stage, which go from anthropological primitive ego to viral technozombies.

1 Genealogy of Zombie Mimicry

> In their compulsive, wavering, deorganicized movements, the zombies are *allegorical* and *mimetic* figures.
>
> STEVEN SHAVIRO, *Cinematic Body*

A brief genealogy of zombie films is in order. The first stage is usually characterized by Haitian zombies, as can be appreciated in *White Zombie* (1932), the film by Victor Halperin based on the novel *The Magic Island* (written by Seabrook in 1929), and *Revolt of the Zombies* (1936), set in Cambodia, also by Halperin. In this stage, the figure of the zombie is portrayed as a primitive automaton under hypnosis or voodoo, an exotic puppet in a trance state who involuntarily does the bidding of a superior criminal mind by mimetically performing their command. Without going into greater detail—in this realm a comment on racism would be necessary—the zombie that can be found in this early stage is still not the common stereotype. In fact, it is more like the somnambulist Cesare as seen in *The Cabinet of Dr. Caligari* (Wiene, 1920).

However, even in this initial moment, the centrality of mimesis appears as a striking aspect in order to fully grasp the meaning of zombies. Mimicry

4 Lawtoo, "Posthumanism," 92.

5 Lawtoo, "Posthumanism," 92.

and zombification seem to be linked from the very beginning. From the mid-1950s, such characterizations of zombies progressively disappear in a context of global change and widespread fear among societies, caused by the Cold War and the nuclear threat. This is the backdrop for the second stage of cinematographic zombies, the key moment of George Romero's famous trilogy: *Night of the Living Dead* (1968), *Dawn of the Dead* (1978), and *Day of the Dead* (1985). This is a crucial work marking a pivotal moment in the history of zombies inasmuch as it helped establish the main elements that characterize zombies as we understand them today. Romero's pioneering work fixed the classical features that persist in present culture: a putrid, disgusting living dead creature, with an insatiable appetite for flesh and violent manhunts.

But above all, the Romerian zombies have been analyzed as a metaphor for consumerism. In fact, zombification could be thought of in terms of mass culture under the spell of consumer ideology. Thus, the analysis of the mimetic unconscious might take zombies as an example of mass pathology originating in hypnosis and suggestion that manages to control the collective ego under trance states. Consumerist discourse spreads like a virus and inoculates subjectivities with stereotyped mimetic patterns. This sort of contagion generates *phantom egos*. The contemporary subject, which is produced as a potential consumer, loses their human condition and becomes a market product, a waste, a residue of the economic and cultural strategies that legitimate such alienating system. This subject is truly living dead, inasmuch as they undergo a process of dehumanization, thereby finding a perfect expression in the zombies. In this respect, Steven Shaviro's vision on Romero's zombies is clear enough. He has argued that the life-in-death of the zombies is a sophisticated allegory for the inner logic of late capitalism, responsible for aggressive business practices, exploitation, and social hysteria. In this context, the zombies enact a radical refusal of value and become a detritus of industrial society. In the words of Shaviro: "The zombies mark the dead end or zero degree of capitalism's logic of endless consumption and ever-expanding accumulation, precisely because they embody this logic so literally and to such excess."[6]

Therefore, it is no surprise that zombies undertake such a subversive action by means of hyperbolic mimicry. Briefly put, Romero's zombies are mimetic replications that embody and reproduce to excess the ontological effects of unbridled consumerism. They play the role of alter egos or avatars of human beings taking the form of a simulacrum, a distorted mirror that ironically shows humans' true image. Hence, the living dead, under the hypnotic spell

6 Steven Shaviro, *Cinematic Body* (Minneapolis: University of Minnesota Press, 1993), 92–93.

of consumer ideology, participate within a posthuman notion of mimesis that exemplifies, through bodily deterioration and dispossession of identity, the process of becoming a non-Platonic *phantom.*[7] As Lawtoo puts it: "This phantom no longer functions as a devalued and derivative copy of the real. In the postmodern world, the sphere of hyperreal phantoms (or simulacra) can no longer be contained within the logic of [traditional] mimesis."[8]

Posthuman mimesis and the living dead are effectively connected in the second stage of zombie cinema, while operating in tandem with mimetic procedures. In this vein, the mimetic potential of the zombies, their automatic gestures and distinctive movements, constitute an invaluable structuring principle to analyze what zombies really mean in our present-day world. As Shaviro explains:

> Indeed, Romero has called to life the first postmodern zombies. … Romero's zombies could almost be said to be quintessential media images, since they are vacuous, mimetic replications of the human beings they once were. … Zombies move slowly and affectlessly, as if in a trance, but the danger they represent is real: they kill and consume. They are slower, weaker, and stupider than living humans; their menace lies in numbers, and in the fact that they never give up. Their slow-motion voracity and continual hungry wailing sometimes appears clownish, but at other times emerges as an obsessive leitmotif of suspended and ungratified desire.[9]

Following Shaviro, it seems reasonable to locate the origin of contemporary zombies in the mimetic drive displayed in George Romero's cinema. This creates fertile ground for the rise of new forms of zombification in subsequent films, so it will be necessary to go a step further in this direction turning now to the third stage, which is believed to have started in 2002 with Danny Boyle's *28 Days Later*, strongly reinforced in 2013 by Marc Forster's *World War Z*. In this final stage, the novelty is the birth of viral zombies. At this point, becoming a zombie is propagated through viral contagion, not by means of bite, as was the

7 It is not just desire but dispossession of identity that operates at the level of *pathos*. In this respect, see René Girad's notion of mimesis in Nidesh Lawtoo, *The Phantom of the Ego*: *Modernism and the Mimetic Unconscious* (East Lansing: Michigan State University Press, 2013), 46–52.

8 Lawtoo, *Phantom,* 188.

9 Shaviro, *Cinematic Body*, 84.

case in the second stage, or through hypnosis, as in the first.[10] Indeed, contagion is one of the main characteristics of the mimetic unconscious, which thus usually operates in crowds, as do zombies.[11] So it could be said that zombies embody "mimesis not as straightforward imitation, then, but rather mimesis as a disconcerting form of unconscious communication that troubles the boundaries of individuation."[12] Zombification is now a question of infection. It is a rapid, even instantaneous, process of contagion which implies apocalyptic pandemic environments, strikingly similar to the current COVID-19 era.[13] Lawtoo continues:

> Thus, a subject driven by a mimetic pathos (fear, anxiety, ressentiment, aggression, conspiratorial beliefs, etc.) has the power to contaminate one or more subjects with the same pathos, which can expand rhizomatically and exponentially in order to affect/infect a mass or public in the body politic crowd.[14]

This situation entails that zombie mimicry becomes viral, and such an unprecedented fact involves new mimetic implications that should be carefully considered: Zombification becomes a type of affective contagion that spreads like a viral infection, affecting collective subjectivation, mass emotional psychology, general conduct, and will.[15] As it happens, the objective of viral zombies is no

10 According to Nidesh Lawtoo, "It becomes quickly apparent that mimesis shares some important characteristics with viruses: it is linked to reproduction; it transgresses the logic of representation to affect and infect human bodies in imperceptible ways; it renders humans vulnerable to a type of contagion that is amplified by proximity with others; it challenges the binary dividing human and nonhuman agents; and last but not least, it generates effects that go beyond clear-cut categories of good and evil and cannot be contained within unilateral diagnostic." Nidesh Lawtoo, "Viral Mimesis: The Patho(-)logies of the Coronavirus," *Paragrana* 30, no. 2 (2021): 155–68, 156.

11 Here it would be relevant to take into account parallel reflections on crowd behavior and public opinions within the psychological structure of Fascism and Bataillean concept of "sovereign communication." See Lawtoo, *Phantom*, 249.

12 Lawtoo, *Phantom,* 2.

13 See Lawtoo, "Viral Mimesis," 155–68.

14 Lawtoo, "Viral Mimesis," 163–64.

15 "There are, thus, largely unnoticed similarities between mimetic theory and crowd psychology that deserve to be revisited in an age haunted by the double specter of affective and viral contagion. Like Girard after them, both Tarde and Le Bon use the term "contagion" metaphorically to indicate an invisible transmission of emotions that spreads from self to others as a contagious sickness like the plague or the cholera would do; and yet, they do so on theoretical foundations that have hypnotic suggestion as a via regia to crowd behavior and pave the way for alternative theories of mimetic contagion that take seriously the literal danger of epidemic contamination." Lawtoo, "Viral Mimesis," 162–63.

more to feed themselves but to kill everyone who is not like them. Now the fear that humans have is not of being devoured by the zombies, but of being infected and transformed into one of them. Shaviro explains that "The dread that the zombies occasion is based more on a fear of infection than on one of annihilation. The living characters are concerned less about the prospect of being killed than they are about being swept away by mimesis."[16]

In these circumstances, the latent risk is not merely to be afraid of the Other, that is, an external dangerous threat materialized in a multitude of famished living dead creatures that we have to escape from, but it is actually the terror unveiled by homogeneity. At this point, mimesis has been transformed into the main threat of zombification, the true risk at the core of contagion. Human beings have finally realized that the real enemy is none other than the virus of impersonal enactment that addresses problems of identification and phantasmatic-mimetic ego. As Fernández Gonzalo points out: "It is not the fear of otherness … it is fear of sameness, of being everyone infected, bitten, by that equalizing sieve which levels all of us."[17] According to this idea, mimesis has become a major danger, but could it also be a path of liberation? As Lawtoo states, "if we want to understand how humans come into being, much more theoretical attention needs to be given to the formative function of these intersubjective, unconscious, responses that give birth to the ego—out the *pathos* of the other."[18] Reflection on mimetic zombies can help us take this stance, which becomes imperative nowadays.

2 Parasites' Politics

> Copying the relation of man to man brings us back to parasitism.
>
> MICHEL SERRES, *The Parasite*

In order to analyze the changes undergone by zombification and its final transformation into viral infection, it will be useful to turn to Michel Serres's concept of *parasite*, because zombies have finally become a sort of parasitic force. The French philosopher took rats from the fable of *The Town Rat and the Country Rat* by La Fontaine as an illustrative example to explain his main thesis: To parasite means *to eat next to*, or in other words, to eat at the expense

16 Shaviro, *Cinematic Body*, 97.

17 Jorge Fernández Gonzalo, *Filosofía zombi* (Barcelona: Anagrama, 2011), 28–29 (my translation).

18 Lawtoo, *Phantom,* 18.

of someone; this is the host that generously—although not selflessly— gives itself to be eaten.[19] As Serres writes:

> The host is not a prey, for he offers and continues to give. Not a prey, but the host. The other one is not a predator but a parasite. Would you say the mother's breast is the child's prey? It is more or less the child's home.[20]

Then, what the parasite actually eats is the host. We may also see the parasite is a guest who is maternally nurtured by the host. Indeed, according to Serres's metaphor, when the country rat is invited to dinner by the town rat, it realizes that the city happily feeds the rats that live within it. Ironically, every system needs its parasites. As Serres says, there is no system without parasites.[21]

The host welcomes its guests with pleasant hospitality. However, this is precisely the strategy used by the host to control the guests, which means to cancel the threatening danger of a *plague* of rats that could potentially infect it. This is because, by eating next to, the rats become neutralized, homogenized, *immunized*. As a result, the parasite imitates the host and proceeds like a reinforcing element that imitates the host's inner dynamics. Thus understood, the parasites replicate the system that feeds them. Therefore, far from being a disruptive force within the organism that welcomes them, the parasites become assimilated. The parasites are parasitized. In sum, the host's hospitality is a

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19 "'Para' as a prefix in English (sometimes 'par') indicates alongside, near or beside, beyond, incorrectly, resembling or similar to, subsidiary to, isomeric or polymeric to. In borrowed Greek compounds 'para' indicates beside, to the side of, alongside, beyond, wrongfully, harmfully, unfavorably, and among. … 'Parasite' comes from the Greek, parasitos, etymologically: 'beside the grain,' para, beside (in this case) plus sitos, grain, food. 'Sitology' is the science of foods, nutrition, and diet. 'Parasite' was originally something positive, a fellow guest, someone sharing the food with you, there with you beside the grain. Later on, 'parasite' came to mean a professional dinner guest, someone expert at cadging invitations without ever giving dinners in return. From this developed the two main modern meanings in English, the biological and the social. A parasite is (1) 'Any organism that grows, feeds, and is sheltered on or in a different organism while contributing nothing to the survival of its host'; (2) 'A person who habitually takes advantage of the generosity of others with-out making any useful return.'" J. Hillis Miller, "The Critic as Host," *Critical Inquiry* 3, no. 3 (1977): 439–47, 441–42.

20 Michel Serres, *The Parasite* (Baltimore, MD: Johns Hopkins University Press, 1982), 7.

21 J. Hillis Miller develops a similar theory: "A curious system of thought, or of language, or of social organization (in fact all three at once) is implicit in the word parasite. There is no parasite without a host. The host and the somewhat sinister or subversive parasite are fellow guests beside the food, sharing it. On the other hand, the host is himself the food, his substance consumed without recompense, as when one says, 'He is eating me out of house and home.'" Miller, "Critic," 442.

trick, a perverse paradox, because it is actually a way of exercising hostility. In Serres's words: "Parasitology, as we shall soon realize, uses the vocabulary of the host: hostility or hospitality."[22] A clear notion of repetitive mimicry can be inferred from this: The parasite identifies with and behaves like the host. In effect, as part of society each individual parasites others for their own benefit, to the extent that relationships and subjective dispossession are marked by this sort of consumerist hunting seen in Romero's zombies. In this scenario, Serres accurately describes contemporary society as an animal, an evil beast called Leviathan, that human beings parasite.

However, Serres also says that the parasite does not simply hunt. It is a guest. It is my intention to elucidate whether the parasite could be an annoying guest that subverts the host's mimetic politics from within.

> We parasite each other and live amidst parasites. Which is more or less a way of saying that they constitute our environment. We live in that black box called the collective; we live by it, on it, and in it. It so happens that this collective was given the form of an animal: Leviathan. We are certainly within something bestial; we are speaking of an organic model for the members of a society. Our host? I don't know. But I do know that we are within. And that it is dark in there.[23]

Trying to dissipate such darkness, the parasites—let us say, the *viral zombies*—entail a disruptive potential against the host, in the conviction that parasitism—or rather, *zombification*—should be articulated according to a different mimetic procedure. That said, the relation between the guest and the host might be reconsidered, specially bearing in mind that, as Serres remarks, "the parasitic relation is intersubjective. It is the atomic form of our relations."[24] Then, the question would be whether the alienating mimesis spread by the host can be destroyed. In this regard, Serres provides a promising alternative. In his view, the key is to abandon the conventional mimesis based on meaning and representation so as to unleash a system made up of connections and ruptures. Hence, the relation between the guest and the host would adopt the form of a short-circuited mimetic sequence that dismantles imitation. "Quite simply, what is essential is neither the image nor the deep meaning, neither the representation nor its hall of mirrored reflections, but

22 Serres, *Parasite*, 193.
23 Serres, *Parasite*, 10.
24 Serres, *Parasite*, 8.

the system of relations. The relation is that of guest to host (*hôte à hôte*)."[25] Note here that "*hôte*" means both "guest" and "host" in French, so conceptually speaking, the relationship between them becomes convoluted and constitutes an explicitly mimetic, mirroring relation. In this situation, it is imperative to rethink the power of parasitism.

One way to accomplish this task is to *make noise*, while taking the precaution of avoiding the noise made by the host, which is already familiar to the parasites. In fact, the host actually controls its guests, not by taking away the food from them but by making noise. As Serres explains: "The city rat gets used to it, is vaccinated, becomes immune."[26] This is the procedure through which the parasites are parasitized—by means of repetition. The host plays the same tune over and over again, as if it were an unconscious power of habituation which functions via hypnotic repetition, and thus the parasites embody a specific mimetic pattern inoculated by the host. In view of this, it is due to mimetic repetition that the parasites become part of the host. However, Serres points out that such domination is canceled in the very moment in which the parasitized population makes noise in feedback.[27] "Noise nourishes a new order."[28] Specifically, in order to be free, the parasites must make "white noise," an expression that Serres coined to refer a sort of background noise. Put simply, the white noise is a space between the guest and the host where the parasite interferes, that is, the realm where new relations can be forged through connections and disconnections *hôte à hôte*.

Consequently, by making white noise, the guests break the previous relationship of mimetic dependence with the host. They are tired of listening to the same tune all the time and do not want to hear the invitation of the town rat anymore. Inversely, "the rats invite themselves to dinner, and that makes noise."[29] Thus, the parasites make their own noise to interrupt the continuity of the host's mimetic model. "The country rat becomes the interrupter, like the noise. The broken relation is that of the city rat and the guest, that of the city rat and the noise."[30] This being the case, it can be concluded that the noise developed by the country rats constitutes a new kind of mimesis. Do not forget that these rats are the parasites, or virulent zombies, that have freed themselves from being parasitized by the system. Here there seems to be the possibility of setting up a distance, via noise, from the hypnotic power

25 Serres, *Parasite*, 8.
26 Serres, *Parasite*, 14.
27 Serres, *Parasite*, 52.
28 Serres, *Parasite*, 127.
29 Serres, *Parasite*, 192.
30 Serres, *Parasite*, 53.

of *mimetic pathos*, thus developing the potentialities of the *pathos of distance* outlined above. This oscillation between the hypnotic power of pathos and the emergence of a critical distance is at the center of the theory of posthuman mimesis. So, this mimicry is not simply the homogenizing pattern spread by the host—which recalls the hypnosis of the first stage of zombification as well as the bite of the second stage—which perversely induces the guests to eat next to. On the contrary, mimicry now becomes viral inasmuch as the parasites infect the host in a way that subverts its influence. Serres states that the parasites incline the system and make it fluctuate: The parasite does not even have to speak; it resonates. It makes noise, like the gnawing rats. It produces toxins, inflammations, fever. In short, it excites the milieu. It excites it thermically, making noise and producing a fever. It intervenes in the networks, interrupting messages and parasiting the transmissions.[31]

It is of utmost importance to understand the action of the parasites as an infectious disease that attacks the host and disturbs its normal functioning by disrupting mimetic hospitality. Not casually, Serres claims that sickness is parasitic. In his own words: "Sickness is a parasitic noise that intercepts a function; it is a noise that mixes up messages in the circuits of the organism, parasiting their ordinary circulation."[32] At this point, Serres makes a revealing statement: Parasitism is not only to eat *next to* the host, but to eat *inside* the host. We now have a complete picture of parasites' double nature, which suffers the host's perverse logic but at the same time develops a new mimetic politics intended to subvert the host from within. In these circumstances, the parasites are able to disorganize Leviathan by dismantling its imitative tendency.

3 How Do You Make Yourself a "BwO"?

> A BwO is made in such a way that it can be occupied,
> populated only by intensities.
>
> GILLES DELEUZE AND FELIX GUATTARI, *A Thousand Plateaus*

Serres describes the host as a maternal womb that nurtures the guests ("Would you say that the mother's breast is the child's prey? It is the child's home"),[33] ultimately transforming them into parasitized individuals, and Gilles Deleuze and Felix Guattari seem to share a similar approach. In particular, they use the

31 Serres, *Parasite*, 144.
32 Serres, *Parasite*, 197.
33 Serres, *Parasite*, 7.

example of the mother's breast. Interestingly, far from being a hostile device set up by the host, they claim that the mother's breast constitutes a "partial object" that connects and disconnects affective flows between "desiring-machines" (mother's breast, milk, baby's mouth). Deleuze and Guattari therefore provide an innovative approach to rethink subversive investments in line with the feeding allegory, and raise the need to become a handyman, that is to say, a set of desiring-machines permanently connected and disconnected. In their words: "A machine may be defined as a system of interruptions or breaks (*coupures*)."[34] As a result of such discontinuous dynamics, which brings to mind country rats' parasitic mimesis, Deleuze and Guattari note that the desiring-machines make background noise, as was the case with rats. This noise is produced by the permanent short-circuited mechanism of these machines: "Desiring-machines work only when they break down, and by continually breaking down."[35] A parallel can thus be drawn between viral zombies, parasites, and, finally, desiring-machines.

The reason for the noise must be found in the interstice between the desiring-machines, where Deleuze and Guattari located three syntheses: "connective synthesis," "disjunctive synthesis," and "conjunctive synthesis." The first synthesis produces the attraction and repulsion between partial objects and desiring-machines. The second reintroduces the flows into a connective chain (and … and … and) and vehiculates them toward new ruptures (or … or … or). Finally, the third synthesis embraces the outcome of the process, which is a residuum, a waste product of the consumption of the machines' activity. The result is a larval subject that is born from this new concept of consumerism understood as energetic eating:

> It is a strange subject, however, with no fixed identity, wandering about over the body without organs, but always remaining peripheral to the desiring-machines, being defined by the share of the product it takes for itself, garnering here, there, and everywhere a reward in the form of a becoming or an avatar, being born of the states that it consumes and being reborn with each new state. "It's me, and so it's mine."[36]

Such a fleeting idea of subjectivity addresses a weak and dispersed ontological detritus that is notoriously diverse, fragmented, and recycled. If we take into

34 Gilles Deleuze and Felix Guattari, *Anti-Oedipus* (Minneapolis: University of Minnesota Press, 2000), 38.

35 Deleuze and Guattari, *Anti-Oedipus*, 16.

36 Deleuze and Guattari, *Anti-Oedipus*, 16.

account that Deleuze and Guattari insist on the catatonic state of zero degree which is proper to this subject, then it is easy to bring zombies up again. Like George Romero's zombies, the subject that appears in the last synthesis constitutes a powerful alternative against massive consumerism, which is the metaphor for the host's parasitism (*to eat next to*).

However, the larval subject is more closely related to the viral zombies of the third stage of zombification. Indeed, considering that the detritus of the desiring-machines works by connecting and disconnecting, its nature is that of viral transmission, which entails a renewed idea of parasitic consumerism (*to eat inside*) that can be traced in the third synthesis:

> The contents of such moments of "consummation," moreover, are derived from the connections and disjunctions generated by the previous syntheses. … a subject emerges alongside the desiring-machines to "consume," to enjoy or suffer, part of what has been produced. … Here the subject in fact only arises in the consuming appropriation and consummating recognition of the results of desiring-production, yet it tends to construe itself as an autonomous entity capable of taking possession of products of the processes that in fact constitute it.[37]

This phenomenon could be analyzed from the point of view of the country rats that invited themselves to dinner because they preferred to make their own noise, thus parasiting the host's parasitism. Such is indeed the main consequence of eating inside the host: The parasitism developed by the rats turns against the host's parasitic method. It is thus no coincidence that Michel Serres took rats to conceptualize his theory about parasites, inasmuch as rats have been traditionally related with infestations and plagues. Rats are parasitic by nature. Such small animals are the waste product of a bigger one, but they embody the potential destruction of the beast that feeds them. Leviathan has created its nemesis. That is why it tries to eliminate the risk by giving itself to be eaten, by letting the rats eat next to. Like zombies, rats are first of all the result of the mimetic consumption spread by the host, however they show resistance against its cannibalistic procedure. Only when rats make noise and zombies become viral, that is, *parasitic*, is the host dismantled.

It is in this context that the viral zombies become the larval subjects of the last synthesis, a catatonic force that interrupts the chain of consumption of

37 Eugene W. Holland, *Deleuze and Guattari's Anti-Oedipus: Introduction to Schizoanalysis* (London, New York: Routledge, 2001), 34.

energetic drives and introduces a new form of mimesis that breaks meaning and representation:

> Syntheses produce divisions. Let us consider, for example, the milk the baby throws up when it burps; it is at one and the same time the restitution of something that has been levied from the associative flux (*restitution de prelevement sur le flux associatif*); the reproduction of the process of detachment from the signifying chain (*reproduction de detachement sur la chaine signifiante*); and a residuum (*residu*) that constitutes the subject's share of the whole.[38]

In relation to the organic disruption suffered by the socius that we have referred to as Leviathan, it is relevant to highlight that Deleuze and Guattari coined the term "Body without Organs" (BwO) to explain the general disarticulation that the larval subject spreads within any significant structure, because, as they say: "The full body [without organs] does not represent anything at all."[39] In *A Thousand Plateaus* (1980), the second volume of *Anti-Oedipus* (1972), Deleuze and Guattari wrote a chapter titled "How do you make yourself a BwO?," in which they gave the main guidelines for the destruction of the organism.

This is relevant inasmuch as the desiring-machines and partial objects deal with the BwO throughout the three syntheses. In the process, the BwO serves as an element of anti-production that breaks the sequence of consumption, so it ultimately manages to avoid the constitution of a homogeneous system, that is, an *organism*:

> The body without organs, the unproductive, the unconsumable, serves as a surface for the recording of the entire process of production of desire, so that desiring-machines seem to emanate from it in the apparent objective movement that establishes a relationship between the machines and the body without organs.[40]

Deleuze and Guattari's invitation to become a BwO took inspiration from the Surrealist artist Antonin Artaud, who really invented the concept. In particular, Artaud is well known for his incursion into avant-garde cinema as the scriptwriter of Germaine Dulac's *The Seashell and the Clergyman* (1928). But he was also an actor himself and played parts in *The Passion of Joan of Arc* by

38 Deleuze and Guattari, *Anti-Oedipus*, 41.
39 Deleuze and Guattari, *Anti-Oedipus*, 85.
40 Deleuze and Guattari, *Anti-Oedipus*, 11.

C. T. Dreyer (1928) and Abel Gance's *Napoleon* (1927). Above all, he has become famous for being the creator of the Theater of Cruelty, a radical movement of avant-garde theater that promoted the elimination of conventional representation techniques. Thus, plays Artaud wrote, such as the irreverent *The Cenci* (1935), are full of disturbing and shocking scenes that pretend to break the continuity of sense and provoke a reaction in the audience. Equally disconcerting is the influence of Balinese theater's eccentric mimicry, which Artaud was especially interested in, as well as the unnerving gesticulations of schizophrenia that he himself suffered and used in his theater. Artaud shows in many drawings and harsh poems the idea of dysfunctional organism whose mimetic consumption is meaningless, disorganized, and almost *cruel* with the host. See, for instance, Artaud's famous poem quoted by Deleuze and Guattari: "No mouth. No tongue. No teeth. No larynx. No esophagus. No belly. No anus."[41] The organism has been dismembered. The host has finally been destroyed. This is why Deleuze and Guattari found in Artaud the perfect residuum of the third synthesis.

Deleuze and Guattari claim that the enemy of the BwO is none other than the organism, because it is constantly trying to control the body that suffers from being organized, this is to say, transformed into an organism. Deleuze and Guattari insist that the body is disorganized by definition. However, the organism wants every single organ of the body under control, every partial object subjugated so as to run smoothly and make the system work. That said, the BwO attempts by all means to disorganize the organism. "The BwO howls: "They've made me an organism! They've wrongfully folded me! They've stolen my body!.""[42] This could be the shout of the country rats after realizing that the host attempted to parasite them, to make them eat next to it. This would be a cry of protest in the form of white noise, given that, as parasites, the rats made every effort to counteract the mimetic replication transmitted by the host. Therefore, the mimetic mechanism set up by the organism is doomed to fail because, as we know, the desiring-machines are continuously falling apart, connecting and disconnecting, a task that is performed by the parasites. So, the larval subject, as a residuum or viral zombie, ultimately becomes a parasitic BwO.

41 Deleuze and Guattari, *Anti-Oedipus*, 8.

42 Gilles Deleuze and Félix Guattari, *A Thousand Plateaus* (Minneapolis: University of Minnesota Press, 2005), 158–59.

4 Coda: The Intruder inside Me

> Thus, then, in all these accumulated and opposing ways,
> my self becomes my intruder.
>
> JEAN-LUC NANCY, *Corpus*

According to Deleuze and Guattari, the BwO could be described as a cancer that destroys the organism from within. In this sense, remember that Serres pictured sickness as parasitic. Another way of putting it is that the BwO proceeds like a plague of country rats, or a multitude of viral zombies, that eats the host and corrodes its organs. Taking mental illness as a metaphor, it might be seen as the experience of people suffering from Cotard's delusion, who think that they are dead and their internal organs are putrefying. Symptoms include hypochondriacal beliefs such as paralyzed organs, the smell of rotten flesh, or the sensation of having worms under the skin. That is why this disorder is known as "walking corpse syndrome." Be that as it may, becoming a BwO is then a question of becoming a living dead. In such a scenario, viral zombies appear to be the perfect agent of disorganization, because they disarticulate the immunization spread by the host. To a certain extent, the living dead seem to be infiltrators. A cinematographic example of this would be *The Invasion of the Body Snatchers* (Don Siegel, 1956). Yet, the virus of zombification is not exactly an infiltrator, for the simple reason that the infectious agent does not merely come from outside and infect the organism. Properly speaking, the contagious disease comes from outside, but the infection develops inside, provided that the malicious agent is the organism that receives the virus. That is to say, the virus of zombification grows inside precisely because it is at war against the infection spread by the host. In short, the enemy of the host is actually within the host itself.

Regarding this inside-outside dynamic, people tend to think that danger comes from abroad, a threat commonly visualized as a multitude of invaders who attack our frontiers as well as our social values, which represent civilization and freedom as opposed to foreign savagery. Such a model is, indeed, that of an external virus that threatens the healthy organism. This simplistic idea has fueled fear of the Other and has propagated distrust of people who come from abroad, be they terrorists, immigrants, or refugees. Hopefully, zombies can change this paradigm. George Romero showed that the menacing force of evil hordes was born inside civilized society as a result of its own values. Later, in the third stage of zombification, the fear of the Other became the fear of being the Other. In sum, the wolf does not attack the flock of sheep coming out of the depth of the forest; the wolf is already within the fold. Then, it is time to rethink the traditional idea forged in moralizing fairytales: The evil lives

outside. See, for instance, the comic series *The Girl from the Other Side: Siúil, a Rún* by Nagabe, that reframes the topic through the story of a little girl abandoned in the no-man's land of a world split between the Outside and the Inside because of a pandemic curse spread by touch. The Outside is the forest where the cursed live, transformed into horrible beasts, and the Inside, the walled city where humans live in safety. However, it is the people from the Inside who hunt other citizens if they are suspected of being infected.

It should therefore be borne in mind that the virus lives within us, so it does not make any sense to build a separation wall to protect the healthy people from the infected population. This model vanished along with one of its most famous examples, the Greek island of Spinalonga, which by the middle of last century stopped being the last open-air prison for leprosy patients in Europe, very similar to Poveglia, the Venetian island historically used to isolate people during plagues.

In this respect, it is known that Michel Foucault differentiated two main categories of Great Confinement: Lepers were expelled from the town, whereas plague patients were confined in specific sites within the city walls. Not casually, the parasite eats inside the host. Likewise, the BwO is considered carcinogenic. Thus, the virus comes from inside. Indeed, from the very moment that the country rats traveled to the city, the guests no longer come from outside. We are our own virus, destroying the normal functioning of the organism. Therefore, it is not properly an infiltrator but an *intruder*. This is, in particular, the intruder that Jean-Luc Nancy experienced when he was told that a transplant was needed: "My heart became my stranger: strange precisely because it was inside. The strangeness could only come from outside because it surged up first on the inside."[43] As J. Hillis Miller puts it: "My argument is that the parasite is always already present within the host, the enemy always already within the house, the ring always an open chain."[44] So Nancy's body reacted against the organism, his organs were on strike against the host, as it were.[45] In this sense, he realized that "the intruder is nothing but myself and man himself."[46] The virus of zombification inoculated Nancy with the fear of becoming the Other:

43 Jean-Luc Nancy, *Corpus* (New York: Fordham University Press, 2008), 163.

44 Miller, "Critic," 446.

45 For more insights about plagues and the social body—pathological conceptions of organic community—in Nancy, see Jean-Luc Nancy and Nidesh Lawtoo, "The *CounterText* Interview: Jean-Luc Nancy. Mimesis: A Singular-Plural Concept," *CounterText* 8, no.1 (2022): 23–45.

46 Nancy, *Corpus*, 170.

> An intruder is in me, and I am becoming a stranger to myself. If the rejection is very strong, I need treatments to help me resist human defenses. (This is done by means of an immunoglobulin drawn from a rabbit and then assigned, as its official description specifies, to this "antihuman" use, whose surprising effects—tremblings almost convulsive—I remember very well). ... There has never been just one intrusion: as soon as one is produced, it multiplies itself, is identified in its renewed internal differences.[47]

The labor of the parasites is truly hard. On the one hand, they must destroy the host, but on the other hand, the host cannot live without parasites. Such a reciprocal exchange casts some doubt on the viability of the parasitic subversion.

Is the parasites' struggle ultimately reinforcing the host? Georges Canguilhem, in *The Normal and the Pathological* (1966), argues that sickness is actually an expression of health so the pathological is far from being an abnormality, in fact it is foreseen by the organism itself. In Canguilhem's own expression, illness constitutes an organic norm. That said, is viral infection contributing to the continuity of the organism? Remember that the host creates its parasites. In this situation, would it be possible to become a BwO? All is not lost yet. Parasites can make white noise, they can eat inside instead of next to, and consequently, sickness can interrupt the host's mimetic pattern. "It is a characteristic of disease that it interrupts a course; in fact it is critical."[48] There is still hope for the victory over Leviathan. "Health and Disease fought over man the way Good and Evil fought over the World."[49] Not in vain, Serres says that *The Parasite* (1980) is a book about Evil. And speaking of Evil, Jean Baudrillard, in *The Transparency of Evil* (1990), explains "viral hospitality" as the coexistence between microbes and humans in a way that goes beyond the host's hostility:

> Between the race of microbes and the race of humans there exists a total symbiosis and a radical incompatibility. One cannot say that the microbe is other to man: the two are never opposed in their essential natures, and they do not confront one another in any real sense; they are linked together, however, and this interlinking is, as it were, predestined: no one (neither men nor bacilli) can imagine things being any other way. Nor is

47 Nancy, *Corpus*, 167.
48 Georges Canguilhem, *The Normal and the Pathological* (New York: Zone Books, 1991), 138.
49 Canguilhem, *Normal*, 103.

> there any clear line of demarcation, because this link is reproduced over and over ad infinitum.[50]

To conclude, it could be said that parasites have developed a new *pharmacology*. In this sense, zombies—in other words, mimetic parasites—might be understood as a therapeutic patho-*logy* that, in view of its internal duplicity as both pathological and as a diagnostic logos on *mimetic pathos*,[51] could serve, thanks to the *pathos of distance*, as an antidote, or *pharmakon*, to the mimetic pathologies that plague contemporary subjects. This new pharmacology of life is then based on a malicious agent that is not such malevolent. As Baudrillard puts it: "So if the parasite is 'evil,' it is so initially in this latter sense as an irritant, a 'bad thing,' but not 'evil' in the fully moral sense."[52] Parasites are not evil but cruel, in the sense of Artaud. They can be extremely irritating to the host. In effect, since the virus is intended to disorganize the host's replicating procedure, the parasites become really annoying guests. The role played by the parasites is then similar to that of viral zombies, which is not to eat humans but to challenge the status quo. The objective is to break the chain of significant codes and disconnect holistic meaning. The parasite has two options at hand: to eat next to the host, or to eat inside the host. The first option transforms the guests into mimetic agents, however the mimicry of the second is real parasitism. As such, it might *incline* the host. "Often this inclination has no effect. But it can produce gigantic ones by chain reactions or reproduction. Immunity of epidemic crisis."[53] Finally, it can be stated that viral parasitism in posthuman mimesis is crucial. It is a matter of mimetic practice, a very special *teckné*, almost a technology of life, as Michel Foucault would say: mimicry as ethico-aesthetic paradigm. The question then is of how to produce a BwO, how to repeat the Different. Thus, we are ultimately talking about *biopolitical mimesis*, with the focus on the need of rethinking parasitism as a subversive attitude, because we cannot forget, as Isabella Winkler states, that "the parasite is an

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50 Jean Baudrillard, *The Transparency of Evil: Essays on Extreme Phenomena* (London, New York: Verso, 1993), 162.

51 "Mimesis is thus always Janus-faced, operating simultaneously on both the side of reason and unreason, *logos* and *pathos*, pathologies and patho-*logies* —that is, critical discourses *on* mimetic pathos." Lawtoo, "Posthuman Mimesis," 110. For more information about this duplicity and the influence of Nietzschean logos, see Lawtoo, *Phantom*, 6–8.

52 Steven D. Brown, "Michel Serres: Science, Translation and the Logic of the Parasite," *Theory, Culture & Society* 19, no. 3 (2002): 1–27, 24.

53 Serres, *Parasite*, 191.

excellent mimic."[54] This is, in sum, what viral zombies, that is to say, mimetic posthumans, mean.

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54 Isabella Winkler, "Love, Death, and Parasites," in *Mapping Michel Serres*, ed. Niran Abbas (Ann Arbor: The University of Michigan Press, 2005), 226–42, 227.

CHAPTER 4

Be/Longing in the Digital Divide: A Mimetic Play for Somatic Intimacy

Majero Bouman

Who's zoomin' who
Take another look, and tell me, babe.
ARETHA FRANKLIN

In 1985, Aretha Franklin recorded the hit song "Who's Zoomin' Who." Thirty-five years later, social gatherings, work, fitness classes, and even the arts groped, sometimes blindly, for connection on Zoom, which claims to be a "frictionless communications platform … that started with video as its foundation."[1] Given the glitchiness and instability of real-time internet connections, starts, stops, random freezing, and sped-up sections create a temporal disjunction that marks the experience as different from communication in real life (IRL), in shared physical space. Further, the glowing bit-timed body parts displayed on screen with face touch-ups and filters circulate the simulacra of self-ness, such that an onscreen human is in fact a hyperreal avatar through which and with which people communicate. The real-time mimetic digital transposition feeds back into my performance of self, reifying the "phantom ego" explored by Nidesh Lawtoo.[2] This chapter leans into the affective spacio-temporalities of online embodiment practice, the embodied posthumanisms proposed by Katherine Hayles and Rosi Braidotti, and the mimetic turn.[3] It contributes to research into "hypermimesis" by considering the feedback loops of real-time

1 Zoom, "Video Conferencing, Cloud Phone, Webinars, Chat, Virtual Events: Zoom," accessed May 20, 2021, https://www.zoom.us.

2 Nidesh Lawtoo, *The Phantom of the Ego: Modernism and the Mimetic Unconscious*. (East Lansing: Michigan State University Press, 2013), 1–3.

3 These figures are contributing to the mimetic turn in posthuman studies, see Nidesh Lawtoo, ed., "Posthuman Mimesis," Special Issue, *Journal of Posthumanism* 2, no. 2 (2022).

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online mindful movement group practice. Lawtoo unpacks hypermimesis in terms of the "dynamic interplay of virtual simulation and bodily imitation … to indicate that it is located at the juncture where hyperreal simulacra and real mimetic subjects meet, mirror one another and, at one remove, reflect *on* each other."[4] The Zoom room gives the appearance of being a transparent window through which people meet, and thus suggests a more original encounter than, for instance, edited videos or video games. In reality, though, the Zoom room is not transparent. It is a digital production of performed and augmented selfhoods in boxes and as such, does not escape from being a platform of hyperreal simulacra. These loop through real mimetic subjects that are caught in a self-reflexive mirroring game of socially mediated and culturally prescribed modes of being.

In early 2020, I began experimenting with how to open possibilities for a felt sense of group belonging online in the face of isolation and distancing protocols that arose around the globe with the rise and spread of COVID-19. I was not alone. As somatic practices and classes moved out of studios, classrooms, and therapeutic settings to Zoom rooms online, embodiment teachers and practitioners were challenged to move differently toward and away from established sensate experiences of relationship in space and time. This mindful somatic investigation of intimacy and affect cascades in the digital divide brings a new dimension to conceptions of "the mimetic unconscious" and the subject in the Anthropocene.[5] How does a somatic lens of mindful movement inflect the mimetic hypothesis? Embodied philosophy attends to different weights and densities even as it affirms and corresponds to both embodied posthumanism and developments in theoretical and experimental neuroscience. It takes seriously the fact of kinetic bodily knowledge, and that this knowledge is not translatable into language. Writer, researcher, subject, participants, and reader alike participate in a hybrid unfolding and inquiry—an uncontained sharing.

A brief description of embodiment and Open Floor movement practice (OFMP) situates my research question and methodology. The first half of the analysis is given to research informed by somatic and narrative arts. In the second half, I incorporate some socio-psychological and neuroscientific frames that offer insight into the experiment, including trauma theory, the social

4 Nidesh Lawtoo, "Black Mirrors: Reflecting (on) Hypermimesis," *Philosophy Today* 65, no. 3 (2021): 523–47, 524, https://doi.org/10.5840/philtoday202151706.

5 Nidesh Lawtoo, "The Mimetic Unconscious: A Mirror for Genealogical Reflections," in *Imitation, Contagion, Suggestion: On Mimesis and Society*, ed. Christian Borch (New York: Routledge, 2019), 37–53, 38.

nervous system, and radical embodied neuroscience, threading each into the discourse of new materialist posthumanisms.

Embodiment is a disruptive political act and mobilization of both mimetic and posthuman theory. It is not just a question of having or being a body, but the action of being moving *with awareness* of pattern, change, sensation, and impulse. Dance philosopher Kimerer MaMothe writes, "At some level humans are always already participating in this rhythm of bodily becoming. To dance—is to do so in ways that cultivate a sensory awareness of our participation in it."[6] Dance is the medium of inquiry for this research. The sensory awareness of our participation in habituation and choice is, I argue, the condition of posthuman becoming. To this aware participation, LaMothe ascribes our "ecokinetic" emergence,[7] which is a supplement to both Katherine Hayles' reminder of the posthuman body of information,[8] as well as to Rosi Braidotti's posthuman "zoe-geo-techno assemblage,"[9] which makes non-human life, locality, and techno-entities matter in a non-hierarchical manner. The somatic experience of dance is ephemeral and temporally contingent. Attending to dance in LaMothe's sense asks that we practice awareness of, and participate with awareness in, the flow of time as movement. The physical temporal phenomenon of being movement augments Lawtoo's mimetic hypothesis pathos/logos, or "patho(-)logies,"[10] understood as both pathologies and critical discourses (or logoi) on mimetic and embodied affects (pathos). Using a somatic lens, we recognize a (somewhat less elegant) mimetic threesome: pathos/logos/kineticos.

Belonging in the digital divide emerged as a simple requirement—a backdrop for doing OFMP online. OFMP develops embodied resources that support participation in the world by enabling response over reaction. The Open Floor International think tank identified simple *in vivo* patterns that, when practiced, cue practitioners to multimodal activity occurring both within and between bodies. A practice of becoming sensitive—*sensible* in French, sense-able—to interoception, proprioception, neuroception, and affect cascades, embodiment orients through feedback loops. We take seriously the sensing,

6 Kimerer LaMothe, *Why We Dance: A Philosophy of Bodily Becoming* (New York: Columbia University Press, 2015), 5.

7 LaMothe, *Why We Dance*, 178.

8 N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Information*, 74th ed. (Chicago: University of Chicago Press, 1999), 192–221. See also N. Katherine Hayles and Nidesh Lawtoo, "Posthuman Mimesis 11—Connections: A Dialogue Between Nidesh Lawtoo and Katherine Hayles," *Journal of Posthumanism* 2, no. 2 (2022): 181–91.

9 Rosi Braidotti, *Posthuman Knowledge* (Cambridge: Polity Press, 2019), 47.

10 Lawtoo, *Phantom*, 6.

feeling, thinking ecologies that are the transversal posthuman flow described by Braidotti.[11] Such ecologies do not just happen, and we can't take this posthuman mimetic turn for granted, as if being (in) it is enough. To be posthuman in Braidotti's sense is to be in practice, in process, and in fallible and vulnerable response to emerging ethical entanglement. If there is one thing the triple crises confronting the Anthropocene demand, it is aware, creative, critical movement.

A sociocratic organization, Open Floor International has been meeting on Zoom since its inception in 2013. A few teachers had already been using the platform to explore what was possible with online embodiment work when the COVID-19 pandemic shut studios and community places of practice. Adepts at whole-body listening, some embodiment teachers felt impaired in a Zoom room and stopped teaching. Their highly attuned mirror neuron systems[12] *felt* broken in the digital divide: The bit-timed pixelated anachronies of glowing, out-of-step body parts in inhuman time on a 2D screen were alienating. I began to think about ways we might enable some of the qualities of in-person practice, like how distractions on the dance floor lead us to other bodies and dynamic connections, curiosities, new movements, and how both affect and energy cascade through a group of bodies. One class participant, P, describes the impoverished condition of Zoom:

> In contrast to my past various experiences of group work with others who were all in the same room, the Zoom experience fell short in many ways. For example, when I chose to mimic a particular person in this exercise, they would likely be unaware that I had just centered on them alone; I sensed that the interpersonal connections at such a Zoom gathering were comparatively weak.[13]

The felt sense of in-person connection enables a sense of community and belonging, which is to say, the difference and similarity that allow us to feel, at varying distances, intimacy with the group body.

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11 Braidotti, *Posthuman Knowledge*, 41.

12 The mirror neuron system is a set of neurons first identified in macaque monkeys in the early 1990s. It refers to a class of neurons that activate equally whether an interaction is engaged in or observed. See Vittorio Gallese, Luciano Fadiga, Leonardo Fogassi, and Giacomo Rizzolatti, "Action Recognition in the Premotor Cortex," *Brain* 119, no. 2 (April 1996): 593–609, esp. 595.

13 Personal interviews, feedback, and workshops, ReMix 1 and 2 (2020–21), 2020.

Six weeks into the pandemic, I launched an online collaborative practice lab called ReMix. Much of our practice as dancers and teachers occurs in the mimetic ecologies of resonance between bodies, sounds, spaces, and shared geographies. The online environment demands a different engagement. Pretending the interface isn't there, or that we are doing business as usual, leads to what has become known as "Zoom fatigue." The digital turn instantiated across many workplaces and group activities needs to account for itself. To this aim, the ReMix work engages movement, language, and the online environment. It is grounded in the linguistic turn to move with the reality that neither language nor the screen is transparent; polyvagal theory to inquire after online up- and down-regulation in the individual and group bodies;[14] and OFMP to untangle our complex patterns of relations both within and between us. The format is structured, while the content is unique to the group at any given time. While teaching ReMix, I also became, unwittingly, a participant-observer to patterns and processes of online dis/connection that began to emerge over the course of a year.

From the question of "what might embodiment practice online be," there arose an inquiry about people's experience of a felt sense of "we" online. At times, participants reported or commented on an immediacy and intimacy to certain experiences that was unprecedented. To what were they belonging in those moments of connection? And how might I understand their experience? To find out more, I chose a simple hand mirroring dance that has several variations and repeated it with a variety of different groups. Over a period of several months, I had done it with about seventy people. I collected feedback about the experience *in situ* verbally during classes, invited people to write about it and share their writings with me, recorded group discussions, and, knowing that other teachers were similarly negotiating how to achieve embodiment practice online, reached out to my teaching community to talk to others who were using similar exercise variations. Participants in the exercise were usually at their home or someone else's; always on Zoom; sometimes in the same cities and at other times in different continents, time zones, seasons, and climates; and sometimes spoke different languages. They were friends and strangers, members of the population at large that self-enroll in online therapeutic and

14 While neuroception is the internal and sensate perception of whether one is safe or not, neuro-regulation is the modulation of the nervous system achieved by the individual alone or with support (co-regulation). We have and can practice technes that support down- or up-regulation from overly high or low zones of arousal that risk shifting the psyche-soma into sympathetic fight/flight/fawn reactivity and dorsal vagal flop/freeze reactivity respectively.

embodiment practice, as well as groups of artists, specifically performance, dance, and theater professionals and students. The exercise was most often supported by nonverbal music.

There are several variations of the exercise, all of which are done either with partners or with the whole group. With small groups, the "gallery view" can be on, such that partnerships are ensconced in a varying field of mirrored movements. With larger groups, participants "pin" partners so that each dominates the screen for the other, even while several other windows showing other participants as well as themselves remain on screen. One paired version of the exercise has one partner leading the other in a mirrored hand dance and, after a minute, they are invited to switch leadership. Over a period of ten minutes, the leading and following roles switch several times until the dance becomes a mutually engaged event of fluid co-creation. In this co-creative piece, each partner has become highly attuned to the other as well as to the self, attentively listening/following/offering in minute detail, and consistently engaged in a nonverbal negotiation of suggestion and reception. A simpler version has one partner leading a whole dance, and then the other partner doing the same. The group variation I use most invites each individual to find a simple hand movement repetition that holds some substance for them and to share it by turning toward the group through the screen. The instructions are then to notice the repetitions of others and, in your own time, to join another's repetition. For a duration of 10 minutes, people follow, leave, create, and join repetitions at will. A simpler version invites people to pause their repetition as soon as they see that someone else has paused and to continue it as soon as they see someone has begun moving again. I have played with these exercises by both priming emotion and entering the repetition practice without any kind of emotive suggestion. Priming can take the form of substantiating awareness of sensations in the hands through a mindfulness practice, or by calling up sensate memories of, for instance, what hands have touched over a lifetime or what they long to touch when in lockdown.

The goal of these exercises is to open up the possibility of neurological coregulation through a felt sense of connection and community in the digital divide. Although this research was carried out in the context of a global pandemic, its implications are important for the mental and physical health consequences of loneliness assailing growing populations, particularly the aging and those who grew up in the hand-held digital age. These goals are experientially rooted in both the individual and the group. They also rely on the digital platform that connects and separates us in space and time. At this technological juncture, Zoom is filled with temporal glitches that freeze and speed. This glitchiness shifts us further out of the human time of shared physical space, because as

we mime the hand movements of another, we are also, with varying degrees of awareness, incorporating the random temporal disjunctions of unstable internet connections, and feeding these back into the loop. Distinct from mimesis (the imitation of people), the digital media of screen, internet connection, and view all participate in, and contribute to, the hypermimetic play of feedback, thus making the assemblage an actant.

When doing connection work in person, we are working with three spaces: the first person, the second person, and the third space that opens between them. Connection work is a means of sensing and noticing patterns in the social-brain-body-environment assemblage. If we accept that the mirror neuron system neither distinguishes a more real or original instance, nor does it partake of simulacra, then the social and more-than-human resonance of movement is the subject prior to individuation. We are always in it, but can also turn toward it. Two people face one another and do a mirroring hand dance. In this mimetic exploration, I'm facing you in a shared physical space: I see the back of my hand, your palm/hand, and you following. In a Zoom room, however, I have my self view on because I don't have sufficient proprioception to know when I am in or out of the Zoom window. So I might see the back of my hand, but I am looking at the palm of my hand in the mirror image of myself in my zoom window. I am also looking at you mirroring my movement. Then there is an additional disconnect of missed contact since the camera is not the screen. Neither of us is looking at or meeting the eyes of the other. Visually, the gaze of the other is always askew and diverted downward, which in western Anglo culture insinuates social information about a lack of confidence, sincerity, and comfort. The real-time onscreen environment multiplies mimetic loops beyond the third space and creates a lot of feedback noise. This is the realm that Nidesh Lawtoo calls "hypermimesis,"[15] and it sets internalized feedback loops into overdrive: from habits of thought and emotive state to patterns of connecting with an other, to my performance of self as both same and other, to the complex negotiation of both leading and following well, to the affective contagion of play and vulnerability that are risked in this kind of exchange.

The most common theme that comes up in reports about the online hand dance is its surprising intimacy. But there are also those that experience loss, and a deep sense of disconnection. The third theme that stands out is difference in sameness. Consider the similarities and differences in the following. We start with P, a retired gentleman:

15 Lawtoo, "Black Mirrors," 524.

> This hand movement exercise was my first experience of this type. It was brand new and there were surprises at each turn. I dwelt at times in total self-absorption, since I was amusing myself with the new tricks I was finding. Regularly I would remind myself that I was part of a group exercise and at those times I would scan the screen to pick a person and a movement that I could mimic. While my arms and fingers were being activated with a physical workout, I was simultaneously titrating the degree I would allow an other's dance to influence me. It was a joyous exercise because I could go wherever I wanted to, it was not complex, it offered surprises and it was easy.[16]

The ego is at play, caught in the moving self-image of the new online experience. There is freedom to choose and move; joy in the doubled relation of reflected self, and simultaneous anonymity: "I can go where I want and I can play." And yet that same anonymity is the condition of loss for P when he assumes that others "would likely be unaware that I had just centered on them alone." What I interpret from P's words is that he suffers an intensified experience of isolation in the moment of knowing that the other he has chosen can't receive and acknowledge his attention. P suffers the loss of Jakobson's "phatic" dimension of communication:[17] the nod that indicates two or more people are in a communicative situation together. That is a profound loss. D, a professional dancer, reflects: "It's the clearest response I think I've received online in a while because often within an exploration, because of the screen, somebody will look at somebody and *they* might not be looking at you, and—connect."[18] This is a similar sentiment to that expressed by P: The disconnection of the digital divide offsets sight lines as connection. If you want to give another the perception that you are seeing them, you need to look not at them but at the camera. No matter what, the reciprocity of seeing and being seen is simultaneously exposing, because you don't know who might be looking at you, and failed, because the connection always misses. D continues,

> But then, if you have the clear response of the emotional [*sic*] that comes on, like, the laughter or just the, I don't know sometimes the confusion, or whatever that is, it is clearly shared, but on top of that we are sharing something very clear together, then it's like, oh we *are* together, like, it is

16 Personal interviews, feedback, and workshops, ReMix 1 and 2 (2020–21), 2020.

17 Roman Jakobson, "Closing Statement: Linguistics and Poetics," in *Style in Language*, ed. T. Sebeok (Cambridge Mass.: MIT Press, 1960), 353.

18 Toronto Dance Community Love-In, Artist in Residence Workshop, January 12, 2021.

> reciprocal. Which sometimes online I have a hard time with, cuz it's like, are you laughing at me, or are you laughing with this person? and yea, it's really difficult. But that was really clear—or it felt clear.[19]

For D, the multiple layers of hypermimesis, mirroring, and affect seem to create an alternate pathway to connection that can contend with the discontinuities of uncertain emotional congruence and missed sight lines. There is a resonance for D that even makes confusion a sign of mutual connection. D was born into the digital world and worked creatively online during the pandemic. She noticed the different condition of the assemblage when the platform was intentionally charged and included as a mediating space. A successful felt sense of online connection requires multiple and layered feedback loops. In the conclusion to her chapter on subjectivity, Braidotti writes that "Posthuman subjectivity is a practical project. It is a praxis."[20] That praxis is both intentional and strategic. It is an aware mobilization of theory in vivo. We need to learn how to put the conditions into play, as well as how to navigate them. To be theory in action, the practical project that is posthuman subjectivity requires a radically visible enactment, rather than an assumption that abandons it to transparency.

The Zoom room spirals awareness into self/other-aware hyperdrive while still holding the potency of resonance. Partnered with a beloved friend thousands of kilometers away while both are in pandemic lockdown, A writes:

> The play of mirroring simply by hand movements was unexpectedly deeply profound. At first, it felt hand puppet-like. Joyous smiles and miming as we found our own rhythm together. After playing with shapes and hand gestures, I think I made the first move; to touch my own face—allowing an invitation to her to follow, in touching hers. And then time and distance dissolved. I was not only hugging, holding, and caressing my dear friend—but she [was doing the same] to me as well. It was so beautiful and it brought tears of joy and sorrow, reverence and gratitude. It's an exercise, a moment, that will be with me forever.[21]

This is how I understand Braidotti's naming of the "non-linearity of posthuman time [that] echoes [with] the non-unitary, multiple and heterogeneous sense of space."[22] It partakes of a "pathos of

19 Toronto Dance Community Love-In, Artist in Residence Workshop, January 12, 2021.
20 Braidotti, *Posthuman Knowledge*, 74.
21 Personal interviews, feedback, and workshops, ReMix 1 and 2 (2020–21), 2020.
22 Braidotti, *Posthuman Knowledge*, 69.

distance."[23] Participants feel both far and near; experience both past and present; and are enmeshed in unnatural temporal discontinuities with their mirrored selves and one another. The felt sense of both unexpected intimacy and missed connection is magnified.[24] Sometimes, as for A's self-and-other disconnection in the shadow play of hand puppets at a distance, it gives way to immanence and intimacy through risk. The risk implied in her choice to "make the first move" is written into the pause and space marked by her punctuation. Although there is no grammatical need for a semi-colon after the word move, it is there, telling the reader to pause and notice that something both connected and different is happening. There is hesitance and a slowing down here at the moment of risking intimacy beyond influence. Is it possible that P knows this when he reflects that he was "simultaneously titrating the degree I would allow an other's dance to influence me?" What is at risk that resists the mimetic pull of affect?

To address risk and its degree in this dance, I want to remember Hayles's insights on incorporating and inscription processes in *How We Became Posthuman* in order to supplement my analysis with a somatic intervention into linguistic linearity. Echoing Connerton, Hayles writes that "the meaning of a bodily practice 'cannot be reduced to a sign which exists on a separate "level" outside the immediate sphere of the body's acts.'"[25] I therefore invite you, Reader, to risk a little by bringing your awareness to physical sensations in your own body just as it is now. How might you shift your weight to invite more ease where you are? What movements can you make right now that will soften or release tension? Together, these words, the sensations you are aware of, and some movement, enact emergent knowledge that is uncertain, dependent, and vulnerable.

Invite awareness to your breath. Sometimes it helps to close your eyes when turning within. So if it feels comfortable, read the next two paragraphs first, and then pause to do some somatic practice in the echo of written language. You don't need to change anything; just notice. How does your body move passively as you breathe? Are you aware of a rise and fall of the chest or shoulders? An expansion and release of the sides and back? The out and in of the belly as the diaphragm works to inhale and release? Do you feel air on your upper lip? In your nasal passageways or your lungs? Is there rigidity here in the invitation to turn toward breath? There is no right or wrong sensation. A somatic

23 Lawtoo, *Phantom*, 3.

24 See Nidesh Lawtoo, "'This is No Simulation!': Hypermimesis from *Being John Malkovich* to *Her*," *Quarterly Review of Film and Video* 37, no. 2 (2019): 116–44.

25 Hayles, *How We Became Posthuman,* 199.

lens provides space for any experience or sensation that arises. If you can, gently invite your hands to begin to move with your breath, expanding and contracting, or moving away from and toward one another. You might notice self-similar repetition, or constant, curious changes as you explore. Some breaths are shallow, others are deep sighs. Let that information feed back through the movement of your hands. What do your hands tell you about breath?

How generous can you be with your intention and attention to this somatic investigation? Do you rush past this section toward less formless information: toward consumption and utility? Why do this somatic material all, beyond reading and imagining it, or half-heartedly doing half of it along the way? If you've been reading, now is the time to pause, breathe, and give a few minutes to this simple movement practice.

Embodiment practice contributes to this somatically informed research because inscription and incorporation processes differ, and the latter "cannot be reduced to a sign … outside the immediate sphere of the body's acts."[26] If you gave the exploration enough time and curiosity to pass beyond the initial awkwardness, judgment, hurrying, and self-consciousness, did you notice any activation or settling that occurred? Perhaps a momentary "de-acceleration"?[27] It doesn't have to make sense. This is not the "level" of logos.[28] Notice if you felt safe enough to be vulnerable in the unspoken. How did you take this dance of the breath's feedback loop in? This is how you are right now. As you complete the process, shake your hands out or let them connect to one another or to your body where you can feel the rise and fall of breath. Maybe there is gratitude for having been met where and how you are.

Written words and the embodied exploration of breath with hand movements, sight, and pause offer supplementary knowledges. To transcribe the felt sense of somatic experience is to miss what opens there, particularly when it is uncertain and doesn't have a name that contains/tames it. I speak about risk and "safe enough" because as soon as we are in the practice of embodiment, we become susceptible to the affect cascades of emotion, memory, and trauma that inhabit body parts and patterns. In the free play of movement, it is possible to apprehend and/or be surprised by what gets released to consciousness in the process of a breath, of moving an elbow, or of noticing echoes shaped in a squat. Braidotti's ethical posthuman transversal subject is a "work-in-process" that "prioritize[s] issues linked to social justice, ethical

26 Hayles, *How We Became Posthuman*, 199.
27 Braidotti, *Posthuman Knowledge*, 54.
28 Hayles, *How We Became Posthuman*, 199.

accountability, sustainability and to trans-species and intergenerational solidarity,"[29] but what does that mean in the body as a palimpsest of erased histories that have become unconscious habits of holding and movement? Trauma cuts across sensate moving bodies, across "the embodied and embedded conditions of oppression and subjection,"[30] to make body *parts*: survival granting sites of separation, amnesia, and numbness, habituated unconscious and nonconscious mimetic patterns of holding and coping. Trauma underscores capitalizing liberal humanist individuating and isolating practices, and in part comprises the push away from the risk of affect. In the grip of trauma, cascade becomes contagion. Although it occurs with the inhabiting of bodies, embodiment praxis emerges as a recuperative process producing different assemblages. It does not center the individual, but rather proffers a re-membering of parts, and the possibility of re-homing. It is a gestalt. Sometimes I think of it as a lifelong truth-and-reconciliation process that takes place across communities within and without.

In his keynote address at the Posthuman Mimesis conference "Cyborg Experiments,"[31] Kevin Warwick shows how brain neurons that fire together wire together when he talks about how his little human brain cell cyborg learns to navigate enclosure. Theorists of decolonization and social justice, feminists, and others understand that "The body is enculturated … the body produces culture at the same time that culture produces the body."[32] Culture, and any repeated experience, is literally hardwired into the brain and nervous system. We don't need neuroscience to know that by "by their nature, habits do not occupy conscious thought."[33] Hayles reflects on the fact that "this property of the habitual has political implications."[34] The recent emergence of anti-oppression and trauma-based somatic interventions, however, mobilizes mindful movement to interrupt and disrupt both habit and culture. Pierre Bourdieu does indeed overstate, as Hayles claims, that "principles em-bodied in this way are placed beyond the grasp of consciousness and hence cannot

29 Braidotti, *Posthuman Knowledge*, 41.

30 Braidotti, *Posthuman Knowledge*, 53.

31 Kevin Warwick, "Cyborg Experiments," keynote presentation at the international conference Posthuman Mimesis: Embodiment, Affect, Contagion, at KU Leuven, July 6, 2021, https://youtu.be/CIwxWdtB5WQ.

32 Hayles, *How We Became Posthuman*, 200.

33 Hayles, *How We Became Posthuman*, 204.

34 Hayles, *How We Became Posthuman*, 204. See also Hayles and Lawtoo, "Posthuman Mimesis II."

be touched by voluntary, deliberate transformation,"[35] because he collapses "voluntary and deliberate" action into a logocentric project. In fact, such principles can be accessed and even influenced in the practice and play of free movement. There is a growing body of research around the mindful practice of movement, neuroplasticity, and the development of new neural pathways.[36]

Somatic awareness practice aims at our cultural, intersectional, and unique habituations. Dance can apprehend and move them. Meeting pattern with awareness and bringing it to a field of curious creative play enables radical creative intelligence and makes re-patterning possible. LaMothe defines dance as any practice that "participate[s] consciously in this rhythm of bodily becoming by using this sensory awareness as a guide in creating and becoming patterns of sensation and response that realize our potential to move."[37] In other words, if you are doing it with awareness, you are in the dance—whether eating, writing, walking, or talking:

> This awareness is, again, sensory. It is not conceptual. It is not that as we dance we are increasingly able to think about our bodily selves as movement makers … rather, this awareness hums within us as an ability to receive and follow through with impulses to move. It opens within us as a vulnerability to being moved by the movements we perceive.[38]

LaMothe foregrounds the pathos/kineticos connection here with the risk of being moved, which is a risk of surrender as we experience patterns with awareness. The way out is in and through. Mindful free movement exposes habituations and enables insights that may or may not make meaning. Every dancer has their habitual dance—a series of rhythmic and patterned moves they default to—as well as their stuck patterns. Some have a limited movement vocabulary; others have a large one. Given time, we might meet these patterns and build the capacity to move with them differently. Our patterns are both what hem us in and what make us experience if not safety, then at least a sense of protection. Embodiment is a potent site of political action and social/cultural change because it exists as a field of intentional play with and through somatic

35 Hayles, *How We Became Posthuman*, 204. See also Pierre Bourdieu, *Outline of a Theory of Practice*, trans. Richard Nice (Cambridge: Cambridge University Press, 1977), 94.

36 See Annie Murphy Paul, *The Extended Mind: The Power of Thinking Outside the Brain* (Boston: Mariner Books, 2022). See also Shu Imaizumi, Ubuka Tagami, and Yi Yang, "Fluid Movements Enhance Creative Fluency: A Replication of Slepian and Ambady 2012," *PLoS ONE* 15, no. 7 (2020), https://doi.org/10.1371/journal.pone.0236825.

37 LaMothe, *Why We Dance*, 6.

38 LaMothe, *Why We Dance*, 5.

awareness and improvisational movement. Our communal and more-than-human bodies are the site of praxis. This work requires a slowing and spacing out of time, as well as a pause in the insistence of logos to make space for additional knowledges that work differently. Our mimetic kinetics are the symptom that invites us to supplement logos and practice posthuman becoming.

The somatic revolution in trauma therapy and anti-oppression work arrives hand-in-hand with new theories and discoveries in neuroscience. Lawtoo's interest in the mimetic unconscious in relation to the mirror neuron system is that philosophers attentive to the body and interested in dance, like Nietzsche, anticipated neuroscientific findings by over a century.[39] This is one part of the story. Research into why my online participants in the hand dance were surprised by an experience of intimacy and be/longing opens several possible frames in this regard. Here is a sample of the comments shared in the Zoom chat by a European group:

- That was really moving. I wasn't expecting that.
- I didn't think it [would] move me so deeply.
- I'm always amazed by how intimate this type of connection is, even through a screen.
- That was so mellow and very intimate.
- I hadn't realised how much I was craving touch after a year without seeing my godchildren.
- That was the first time I've ever done anything like this. I was surprised at how not awkward it was!
- I felt so emotional and filled in my heart.
- Yes connection.
- I am longing to touch other people … my friends.
- Such connection and very emotional and moving.[40]

The participants experienced a cathartic release of emotion, both longing and connection, and a slowing or "mellowness." I understand these in relation to a softening of normalized patterns of holding in and back. In the softening, we allow ourselves to feel (dis/connection from our group bodies). Stephen Porges' polyvagal Theory[41] and Daniel Siegel's window of

39 Lawtoo "The Mimetic Unconscious," 37–53.

40 Quotes from participants at Majero Bouman's workshop as part of the "My Self" course by Beyond Chocolate, May 19, 2021.

41 Stephen W. Porges, *The Polyvagal Theory: Neurophysiological Foundations of Emotions, Attachment, Communication, and Self-regulation* (New York: W. W. Norton, 2011).

tolerance,[42] which has been further popularized by Beth Dennison as the window of presence,[43] incorporate recent understandings of the autonomic and sympathetic nervous systems that are responsible for letting us rest and digest when we are safe, fight, fly or fawn when we are unsafe, and flop or freeze when we can neither escape nor neutralize the danger. Embodied tools for self and coregulation titrate risk exposure and mediate vulnerability at the same time as they enable us to move in our more-than-human ecokinetic field. The mindfulness practice of creatively moving the hands to music is settling for the nervous system. Some of the people in the Zoom room are thus supported in a ventral vagal experience of ease and pleasure. Possibly, the reciprocity of one or more others repeating the same movements visually reinforces a neurofeedback loop of safety. Much as a child who has been well-behaved all day in public becomes a brat in the safety of home, the neuroception of safety gives space for the release of emotions that have been suppressed. I have found that the distance technology insinuates between us contributes to this release. For some, it is easier to release emotion in a purposefully created online field because the open loop of the limbic system is giving less feedback noise from other bodies than in physically shared social spaces. Somatic exploration of emotion also enables the interoceptive feedback required for developing emotional intelligence. This is the kind of work that lets me notice that my hands are in fists and that I have a hard exterior, while my chest is caved in and my back is protectively hunched around a hurting. It lets me know my situation is one in which hurt is wearing a coat of anger. I can respond by connecting to the hurt part and giving it its dance, instead of hardening against it and later striking out at a loved one or a stranger. These dimensions of embodiment are both practice and praxis. The cycle of abuse that characterizes capitalism in all its forms is disrupted when we do the work of meeting and moving the hurt parts that are our inheritance. I don't know if there is an outside to the condition of being either or both haunted and healing. But I do know that doing it once doesn't make the work done. Habit and repetition are dance partners in this continuum of unfolding and enfolding.

Self-regulation and coregulation in the psyche-soma is one aspect of the open-loop limbic system. From here, I turn toward the group body: the socius. A social baseline theory (SBT) approach frames what transpires in embodiment practice across the digital divide in relation to neural load. In arguing that our baseline is social, proponents of SBT critique the results of nervous system and

42 Daniel Siegel, *The Developing Mind: How Relationships and the Brain Interact to Shape Who We Are* (New York: Guilford Press, 1999).

43 Beth Dennison, "Windows of Presence," 2011, https://clearingtrauma.com/resources.

brain function research that measure activation in the isolated individual.[44] Such a situation skews results because testing an individual's reactions when they are on their own means that their nervous system is already activated at the outset. The baseline is incorrect. To greater or lesser extents, depending on attachment style and history of trauma, our neurological systems signal that we are less safe and more vulnerable on our own than with a group. There is thus an impulse driving us toward connection which is either frustrated or profoundly met, or both in a mindful online environment that foregrounds both the participatory nature of technology and mimetic feedback. The autonomic nervous system wants to regulate. It wants to rest and digest. COVID-19 isolations and lockdowns have caused a lot of mental illness and suffering. SBT suggests that in part, this is a function of removing people from a baseline of coregulation that allows them to offload thinking and vigilance to the group body.[45] We are herd animals first, as a genealogy of homo mimeticus that goes from Plato to Nietzsche and informs the mimetic turn in posthuman studies also suggests.[46] E shares:

> One time I was doing a move that I got from someone else, and I was the only one left doing it, and then more people joined on to that move and you sense how you are part of the group in those moments that you carried on someone else's movement and now new people are doing them.[47]

I read a tension in the moment of being "the only one left" doing it: alone, different, not even my own movement. But then more people join and instead of being the only one and out of place, E recognizes herself as the flow between people and time. She belongs when in service to the group: What a beautiful and simple experience. It exemplifies the stress of isolation and the joy of being held in, and holding, a larger body. We need these experiences desperately in order not only to re-cognize but to in-corporate the experience of our place in a bio-techno-kinetic posthuman assemblage. I am both apart and a part. Given the opportunity to practice, this assemblage lets me remember my selves' home, and sensitizes me to subtle sensate knowledges of safety and belonging.

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44 Elizabeth B. Gross and Sara E. Medina-DeVilliers, "Cognitive Processes Unfold in a Social Context: A Review and Extension of Social Baseline Theory," *Frontiers in Psychology* 11 (2020): 2, https://doi.org/10.3389/fpsyg.2020.00378.

45 Gross and Medina-DeVilliers, "Cognitive Processes," 5.

46 Hayles and Lawtoo, "Posthuman Mimesis II," 181–83.

47 Toronto Dance Community Love-In, Artist in Residence Workshop, January 12, 2021.

Finally, radical embodied cognitive neuroscience shifts the social parameters of the subject into a still more diverse dynamic that approaches Braidotti's *zoe*/geo/techno assemblage.[48] In contrast to the methodological individualism that encodes the Global North's romance with sovereignty, radical embodied cognitive science considers the brain-body-environment or organism-environment system as the subject: "[It] is 'radical' in claiming that cognitive scientists need new conceptual tools if they are to understand the ways in which cognition depends on the body in its interaction with the environment."[49] Anthony Chemero, in his 2009 book introducing the theory, explains that "Because the agent and environment are nonlinearly coupled, they form a unified, nondecomposable system, which is to say that they form a system whose behavior cannot be modeled, even approximately, as a set of separate parts."[50] Meaning and significance are co-constituted in the interaction, not in a discrete area of the brain, nor in an individual psyche-soma. Braidotti underscores that transformation as a fundamental and critical component of the "*zoe*/geo/techno assemblage."[51] Further, in her idealizing call for a posthuman convergence, she explains that "zoe embraces geologically and technologically bound egalitarianism, acknowledging that thinking and the capacity to produce knowledge is not the exclusive prerogative of humans alone, but is distributed across all living matter and throughout self-organizing technological networks."[52] The plasticity radical embodied cognitive neuroscience recognizes as fundamental to any inquiry into brain system and function is, in Braidotti's project, distributed and multimodal. What does this mean for a shared hand dance and the hypermimetic ecologies of online embodiment praxis? Perhaps it is that the intentional self-organizing energetic field of practice is the subject par excellence. Mindful decelerating kinetic attention to entanglement exerts transformative potency across actants. I do not see an end here. Only a recursive way forward. We are the experiment becoming, "neither linear nor one directional."[53]

Lasting cultural change is inculcated through embodied patterns and play. It is by meeting and moving through the Body and bodies that we remember ourselves not just as emergent properties of the social organism, but

48 Braidotti, *Posthuman Knowledge*, 44.

49 Julian Kiverstein and Mark Miller "The Embodied Brain: Towards a Radical Embodied Cognitive Neuroscience," *Frontiers in Human Neuroscience* 9 (2015): 2, https://doi.org/10.3389/fnhum.2015.00237.

50 Anthony Chemero, *Radical Embodied Cognitive Science* (Cambridge, Mass.: MIT Press, 2009), 24.

51 Braidotti, *Posthuman Knowledge*, 44.

52 Braidotti, *Posthuman Knowledge*, 51.

53 Braidotti, *Posthuman Knowledge*, 44.

as emergent and incoherent communities in scaled and dynamic ecological becoming. A posthuman assemblage of transversal subjectivity such as that forwarded by Braidotti embodies the fundamental requirement of being in this together but not the same: "The affirmative drive to compose transversal assemblages assumes that freedom comes down to the shared understanding of the conditions of our bondage, and the collective efforts to act upon them."[54] The fact of trauma means that our posthuman mimetic turn must not only be embedded and embodied, but also recognize the praxis of embodiment as replete, to different degrees, with risk, vulnerability, and reactivity that can be met when moved. The growing field of neuroscience that is learning to measure and theorize multiple nervous systems as well as the plasticity of wiring and firing also exposes the social environmental organism of which we are a/part. (Hyper)Mimesis is the currency not just of our unconscious, but of our awareness as we practice "what 'we' are capable of [sensing or] becoming:"[55] a moving felt sense of *we* that embodies technology, environment, group body, and body host of multiple microorganism communities.

I want to give the last words of this research to the group wisdom of the Zoom platform and folks who wrote about the hand dance. The Zoom poem is a Dadaesque form that emerges when each person selects a line from their own writing or experience and enters it simultaneously into the chat, which then produces the poem:

On Holding and Change—
More free, lighter
the good feeling of just following
Impulsando las luciérnagas de mis manos hacia afuera
Coalescing in rhythms
The embrace of my grandmothers and great-grandmothers and all who came before them and after them
Old stories seeking through darkness before they can become anew
when its good, its good
Change beckons, calls, encourages and tries to coax me into motion
follow that thread for a while, then drop it when it no longer feels right
More. We always want more, more, more and more
I have always been changing, for I have not always been.

54 Braidotti, *Posthuman Knowledge*, 53.
55 Braidotti, *Posthuman Knowledge*, 44.

it felt like we were all dancers in one of those ancient town square
clocks like the one in Miriam Platz in Munich when I was 8 years old.
Creativity is change
invisible spheres hold great weight, much substance within nothing.
It's almost like we don't want a new beginning
Sometimes, doing nothing (not reacting) is an overt action itself.[56]

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CHAPTER 5

Animation and the Mimetic Posthuman: Pandemic Vulnerabilities Mirrored by Music and Dance

Andreea Stoicescu

Since the outbreak of the COVID-19 pandemic in 2020, humanity has experienced multiple micro and macro traumas concerning the way of life, self-care, collective responsibility, learning, cultural experience, and politics. This may seem too general a formulation to start from, yet the whole point of the pandemic situation is to be found exactly in its general—or even universal—affect(ion) and effect upon the human condition, mediated by the process of contagion. This historical landmark can be interpreted as a negative factual argument for the reconsideration of the classical ideal of *philosophical universalism:* although every state, every culture, and every community has its own identity and socio-political inclinations, they were all crossed by the COVID-19 virus and, thus, all were obliged to react in one manner or another. Hence, it is not a theoretical exaggeration to point to *the urge to rethink the concept of "humanity,"* to reassess the relation between the microcosm of the individual and the macrostructure(s) of society, to both deconstruct and reconstruct the speculative dependence between liberty and responsibility, to design new ways of (e)learning, and to highlight once more the (e)motional and critical role of culture(s).

Art, as always, had an important function in helping us to express our condition(ings) and—maybe more insightfully than statistics, with which we were assaulted daily—was a mirror of emotions, vulnerabilities, conflicting perspectives, and needs. My starting point in the present study is that by analyzing some characteristics of performing—and thus mimetic—arts such as music and dance, we can better understand the profundity and specificity of the traumas experienced during the pandemic. This assumption is sustained by an argument assembled from three ideas: First, music, dance, theater—and generally all the arts that have *a performative dimension—work with the body*, and in a medical context in which bodily (re)actions have the primacy of "speaking," it should be clear that *a relation of mirroring between performative arts and medical performances is unavoidable*. Second, the performing arts were among the most affected areas of human activity precisely because they rely on *physical participation*. The difficulties were not only financial, but were

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felt as *ontological issues*, as touching the nature of these forms of art-making. Third, because of the *ontological challenges* with which they were faced, the performing arts, again, were among the domains forced to adapt as quickly as possible to the situation by *using digital technologies in creative ways*. Hence, *the dancing body and the musically vibrating body* are modes of bodily participation that, when abruptly stopped, can become sites of trauma and sites of unfulfilled fundamental needs.

In this line of thought, the concept of "minor mimesis"—the tradition of mimetic theories as rediscovered and expanded within the Homo Mimeticus project,[1] a tradition that *links mimesis with the body*—has an essential part. Since "mimetic relations are the very condition that brings the ego into life as a relational, affective being,"[2] this whole discussion about performance, body, emotional vulnerability, participation, and community *implies as a core concept mimesis in its bodily interpretation*—which implies a switch from its main visual-representational interpretation. The other core concept that is presupposed in this articulation is that of "animation," because, alongside mimesis, *the fact of movement is another elementary dimension* that comes into play; not just any type of movement, but that which determines organic life. However, the pandemic, whose effects are still ongoing, is explicitly, directly, and undeniably *a crisis concerning animation*. By "animation" I mean our need and capacity for bodily movement in the world, our need and capacity for relating with others within a community, and our multilayered impulse to be influenced by others through bodily mimetic reflexes. The pandemic attacked life both in a medical sense and in a psychological-cultural sense, the main link between the two being the phenomenon of animation.

Ancient symbols and philosophies had already connected the fact of being alive, of having spirit, and of transformation with the idea of animation and the circular movement of breathing. The pandemic suspended bodily organic movement and our traditional physical situations of collective ingression, and had as its major terrifying image the inability to breathe, while on the other hand, it trans-figured all these basic abilities and needs by (re)placing them in *the virtual world, where the body became an avatar* and where actual movement was only mental or discursive. In this realm, mimesis was once again, through intensive digitalization, active as almost uncontrolled image and word

1 For details about the project and about the fundamental concepts developed, the most recent and comprehensive reference is Nidesh Lawtoo, *Homo Mimeticus: A New Theory of Imitation* (Leuven: Leuven University Press, 2022).

2 Nidesh Lawtoo, *The Phantom of the Ego: Modernism and the Mimetic Unconscious* (East Lansing: Michigan State University Press, 2013), 18.

reproduction, yet is the image and reproduction of the animated body. For that matter, this virtualized body actually managed to enhance both traditions and meanings of mimesis. At the same time, this transfiguration is a symptom of the transgression from "human" to "posthuman," the transgression from traditional metaphysical oppositions—such as reality against copy or human subject against world—to an eco-logical, immersive, relational, and multilayered metaphysics.[3]

The main contribution of this study is to bridge minor mimesis and animation, inspired by what the pandemic revealed about the human body. On the one hand, the methodology is analytical because I will use text analysis and conceptual problematization. On the other, since it begins from my own experiences with dance and music during the pandemic, it has an intended subjective and emotional side transmitted through description. Also, as a methodological observation, this chapter, although it has a philosophical character, can be seen as a case study because I also rely on my first-hand experience of what happened with dance communities in Bucharest, Romania.

1 Musical Mimesis as Embodied Impulse

Music is usually thought of as separated from the world of representations and objects, although it has a recognized capacity for evocation. Nowadays, in accordance with ancient intuitions, music is associated—especially if we take into consideration the most complex techniques of contemporary composition—much more easily with abstract endeavors such as mathematics, philosophy, or science than with plastic intuitions, even if art history preserves valuable attempts to establishes correspondences between music and painting by artists such as Wassily Kandinsky, Paul Klee, and Alexander Scriabin. Even pop(ular) music can be construed as a form of abstraction through the overall simplification of rhythmic and melodic patterns. Therefore, it is not easy to immediately grasp how we can relate music to mimesis. Still, in the philosophy of music of Theodor Adorno, one of the most important music theorists of the twentieth century, *musical mimesis* is fundamental.[4]

3 Relevant contributions on the topic of posthuman mimesis can also be found in Nidesh Lawtoo, ed., "Posthuman Mimesis," Special Issue, *Journal of Posthumanism* 2 no. 2 (2022), https://journals.tplondon.com/jp/issue/view/124.

4 Theodor W. Adorno, *Philosophy of New Music*, trans. Robert Hullot-Kentor (Minneapolis and London: University of Minnesota Press, 2006).

Max Paddison studied the concept of mimesis in Adorno with great differences of emphasis. In his 1993 book, *Adorno's Aesthetics of Music*, Paddison dedicates a few pages to explaining this concept, in which he reveals two directions of interpreting it in Adorno. First, there is *an anthropological reading* in which mimetic practices are derived from archaic and mythical inclinations of the human mind to rationalize the world by taking into possession objects and phenomena or by influencing life and natural processes through representations. This use of mimesis is a first step in rationalization and it seems that, for Adorno, art itself is replicating this survival mechanism by re-presenting external reality, but in a dislocated manner, in such a way as to permit critique and subjective opposition:

> Art uses the rationality of the world of empirical reality *mimetically* as a means of freeing itself from the repression of means-end rationality. Mimetic adaptation constitutes the mediation of Subject and Object within the material structure of the work of art.[5]

This issue is approached in a chapter about mediation because, for Adorno, the main dialectical movement within the work of art is that between "form" as an expression of social totality and "the musical idea" as the subjective driving of the artist. For instance, in western music, classical forms such as the sonata or the symphony have a structure clearly defined historically by social constraints. Thus, the deformation, fragmentation, and hybridization of such forms were the result of subjective needs and, indeed, the modern history of European musical practices is identified with such deconstructions of inherited musical forms. A suggestive example is Gustav Mahler's music, in which this *negative evolution through the gradual re-formation of musical language* reached its aesthetic peak, when the forms are still definitely recognizable, yet either imbued with irony and satire or modeled at very different scales than before: "The very fibre of the music contradicts the meaning of the formal categories"[6] and "the inauthenticity of the language of music becomes the expression of its substance."[7] Hence, this dialectical structure of the musical work of art is a re-enacting of the prim(itiv)e anthropological function of mimetic representations.

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5 Max Paddison, *Adorno's Aesthetics of Music* (Cambridge: Cambridge University Press, 1993), 141.

6 Theodor W. Adorno, *Quasi Una Fantasia: Essays on Modern Music*, trans. Rodney Livingstone (London and New York: Verso, 2011), 84.

7 Adorno, *Quasi Una Fantasia*, 85.

The second direction in interpreting Adorno is in relation to the anthropological meaning of mimesis. There is an *expressionist reading* of this concept in Adorno, according to which the inner and subjective feelings of the artist can also be "mimed" in the work of art, with the aim of being tempered. This interpretation is connected with the bodily side of artistic production.[8] The anthropological reading and the expressionist reading are entwined within the work of art, both at the level of form and at the level of content. Thus, the dynamics between the social, external, and formal elements and the inner, affective, and critical elements is what constitutes the truth and profundity of the authentic work of art. In either way, mimesis is an important source of reference *as a structural principle*. Further, although Paddison did not expand on these observations in his 1993 work, he published an article in 2010 entitled "Mimesis and the Aesthetics of Musical Expression" in which he reconsidered the implication of mimesis not only in Adorno, but also in (European) music history. Thus, it became clear to him by this point that Adorno's concept of mimesis had an Aristotelian influence, namely the minor tradition—in the terms proposed by the Homo Mimeticus project—that articulates this principle not only on representational grounds, as in the Platonic tradition, but also based on bodily manifestations.

Paddison states at the beginning of his article: "The concept of mimesis that is the focus of this article has as its key features embodiment, mimetism (to use Caillois's term), movement and, in an anthropological sense, adaptation."[9] Adorno's understanding of mimesis is a complex combination of representation and bodily impulses, and therefore although he uses the Aristotelian tradition, he also conceives of musical mimesis in negative terms as referring to the irrational and sensual sides of music in opposition to its rational and constructive sides. Paddison shows how *theories of musical expression in fact originate in the broader theory of mimesis*: "They frequently claim that art expresses emotions, feelings or moods, and that it does it directly rather than indirectly, as might be the case with imitating the conventional appearance or effects of emotions."[10] The Romantic-influenced theory of music as expressing emotions first and foremost is precisely one of the major modern ideas about music that

8 Paddison, *Adorno's Aesthetics of Music*, 141.

9 Max Paddison, "Mimesis and the Aesthetics of Musical Expression," *Music Analysis* 29, no. 1–3 (March–October 2010): 126–48, 126. For a more recent reference on Adorno's concept of mimesis in relation to Caillois focused specifically on its link with the posthuman mimesis, see Philipp Wolf, "Posthuman Mimétisme: Caillois, Adorno and an Aesthetics of Mimesis," *Journal of Posthumanism* 2, no. 2 (2022): 125–37, https://doi.org/10.33182/joph.v2i2.1940.

10 Paddison, "Mimesis and the Aesthetics," 128.

Adorno always attacks in his essays, because what this theory implies is the unmediated character of music, an assumption that is, from Adorno's perspective, at least naïve because music, as any art, presupposes construction, formal striving, coherence, and thought effort. Music is, in truth, extremely sensual, and this language-like impression of "emotional semantics" is why it has a great manipulative power:

> On the other hand, however, the legacy of the pre-rational, magical and mimetic also survives within the language-like aspect: through its development into language, music has asserted itself as an organ of imitation—but, in contrast to its early, gestural-mimetic impulses, it is now a subjectively mediated and reflected imitation, the imitation of what takes place within human beings. The process of music's development into language simultaneously means its transformation into convention and expression. In so far as the dialectic of enlightenment process consists essentially in the irreconcilability of these two aspects, however, this dual character places all Western music in a state of contradiction.[11]

The emotional and sensual dimension of music cannot be avoided and, despite his radical advocacy for internal coherence and critique, even Adorno holds that the future of musical composition is to be found in the transgression of the total rationalization that characterized dodecaphonism and serialism by the "impulse of the heart," as he surprisingly states in praise of Alban Berg's music.[12] Paddison adds that this is the cause of the work of art's permanent internal dynamism, movement, and openness and that, in fact, mimesis is "bad" only when it has atavistic and uncritical manifestations:

> It seems to me that Adorno offers a powerful and credible image of the work [of art] and its dynamics when he points out that mimesis is always threatening to regress to its magical and cultic origins, while rationality … threatens to stultify the work through reification.[13]

The Aristotelian mark in Adorno's mimesis and the centrality it has in his thoughts about music, with both negative and positive connotations, is why

11 Theodor W. Adorno, "On the Current Relationship Between Philosophy and Music," in *Night Music*, ed. Rolf Tiedemann, trans. Wieland Hoban (Calcutta: Seagull Books, 2019), 1283–314, 296–97.

12 Adorno, *Quasi Una Fantasia*, 198.

13 Paddison, "Mimesis and the Aesthetics," 139.

Max Paddison describes this concept as "embodied impulse," following a theoretical suggestion by Walter Benjamin.[14] Hence, Adorno's remarks are crucial for understanding the role of mimesis in the posthuman turn of the contemporary subject because, on the one hand, it points out the corporeal impulses that unconsciously guide our relationship with the world as a field of (inter)active experiences, and, on the other hand, it reveals a way of coherently unifying this impulsive, irrational, sensual, and mimetic dimension of our being with the rational-critical side. Accordingly, the posthuman subject is at the same time mimetic—sensual and accepting its natural impulses—and rational—through critical reflections upon its stance and its role in an eco-logical world.

Adorno is not the only philosopher who consistently linked music with mimesis, Georg Lukács is another significant thinker who developed such a theoretical position, also drawing on the Aristotelian tradition. As the scholar Jost Hermand puts it:

> What, then, can the term "mimesis" mean in this context? Does Lukács use the representational qualities (realistic, allegorical, or symbolic) that characterize the other arts only to subject music to the strait-jacket of materialistically deduced theories? I think not. Instead, what Lukács wishes to argue is that music actually contains "reflections of reflections" rather than direct reflections themselves. He further maintains that music's seemingly unrealistic forms of expression have an undeniable sociopolitical concreteness in spite of that indirectness. In short, music, for Lukács, embodies a "double mimesis" or "mimesis of mimesis" that is not based on any obvious similarity to concrete objects.[15]

Adorno and Lukács's views on this matter are significant because they catch a glimpse of the profound way in which music and dance were once related through bodily feelings and through the principle of mimetic (re)actions. Music has a clear-cut corporeal side when treated from the stance of the interpreter because the place of a performance, the presence and participation of the audience, the feeling of the instrument, and the entire pantomime of the interpreter themself are not only epiphenomenal elements, but, seen from the perspective of the mimetic principle, are essential elements of music. These essential elements that provide the actual embodiment of music alongside the

14 Paddison, "Mimesis and the Aesthetics," 134.

15 Jost Hermand, "Double Mimesis: Georg Lukács's Philosophy of Music," in *Sound Figures of Modernity: German Music and Philosophy*, eds. Jost Hermand and Gerhard Richter (Madison: The University of Wisconsin Press, 2006), 244–60, 251.

specific sensuality of music expressed through rhythm, melody, and form, are the knot with dance. As a genealogical note, is worth remembering Nietzsche's distinction between Apollonian and Dionysian arts and their relationship with the concept of mimesis because, for instance, in the case of dance, we can find in Nietzsche a cultural trace of the relationship between dance and body imitation—almost as we encounter it in Adorno—and *a kind of vital admiration for the unleashed bodily feelings and impulses within a dance moment*. Also, Nietzsche's classical distinction could be thought of as a source of influence for Adorno's sharp opposition between the rational-critical side of art-making and the sensual-mimetic side of the same creative endeavor, notwithstanding that Adorno has a very different historical-philosophical mindset.

2 Thinking in Movement and Theatrical Mimesis

Contemporary dance improvisation has a special significance in relation to the interrogations of contemporary philosophy because it is a living image of many big themes, such as the mind-body problem, movement, the body and the world, language and gesture, and otherness and the politics of the body. It is a creative way to discover that our body is much more than simply flesh: It is saturated by cultural norms imposed upon it; it is a complex organism that interacts with anything in its *Umwelt*, from wind to words; it is a living legacy of thousands of years of biological evolution; and it is the interface through which we communicate with our peers, while also being the first and most intimate foundation of our self-identity.[16] The body is the site of personal ontology and is the chain that links the network that is "society." Hence, dance is an art form that researches and expresses all these multiple attributes of the body. Contemporary dance improvisation is especially relevant because, on the one hand, it can be practiced by amateurs and, on the other, it aims at unleashing the naturalness and forgotten complex reflexes of bodily articulations. *The body in movement is neither only a substance nor only a process. From its beginnings, the moving body is a plastic entity in motion, its motion being its substance*. Thus, the dancing body is a concrete example of contemporary process, posthumanist, and eco-logical ontology.

16 On mimesis, the human body, and its evolutionist stance alongside other species within a posthumanist thought framework, see Roberto Marchesini, "Zoomimesis: How Birds Taught Us That We Can Fly," *Journal of Posthumanism* 2, no. 2 (2022): 115–24, https://doi.org/10.33182/joph.v2i2.1863.

Within dance improvisation, the principle of mimetic reflection is almost unconsciously enhanced because the appropriation of the other's gestures and the tendency to expressively transform already known movements are immediate and organically felt. This behavior of one's body in a free dance reveals the bio-physiological grounding of mimesis—which is a much deeper mark of this principle than the anthropological one described with reference to Adorno's musical mimesis because it clearly argues for its *ontological* importance. For instance, Samuel IJsseling remarked on the nonrepresentational character of the mimesis found in dance and highlighted the osmosis between mimesis and process within a dance sequence: "Dance is mimetic, not so much because the dancers represent something—which may also be possible—but more so because of the fact that each dancer imitates the other and every moment supposes and evokes similar movements."[17] Hence, as in the case of music, what strikes us as most important is *the intense action of mimesis despite nonrepresentational* traces because it discloses the possibility of a "semantics without linguistic elements," or, as Maxine Sheets-Johnstone writes:

> Hence, if one would speak at all of a systematic reasonableness of meaning, it would not be in terms of an externally imposed scheme of some kind, but in terms of *a kinetic bodily logos*, a body that, in thinking in movement, grasps the global qualitative dynamics in which it is enmeshed.[18]

During the pandemic, I had the opportunity to practice dance improvisation. At *Linotip*,[19] an independent choreographic center in Bucharest, Romania, I participated in a series of workshops—of course, respecting the restrictions imposed by the pandemic situation—an experience that fits the manner in which Sheets-Johnstone tried to linguistically depict *the phenomenon of thinking in movement* and IJsseling's observation about how mimesis informs the dance movement.[20] As the titles themselves suggest, these workshops were, in fact, *a constellation of perspectives about the possibilities of the body*. In all of

17 Samuel IJsseling. *Mimesis: On Appearing and Being*, trans. Hester IJsseling and Jeffrey Bloechl (Kampen: Kok Pharos Publishing House, 1997), 9.

18 Maxine Sheets-Johnstone, *The Primacy of Movement*, expanded 2nd edition (Amsterdam and Philadelphia: John Benjamins Publishing Company, 2011), 424.

19 Their official web page is https://linotip.ro.

20 "Corpul Resursă (The Body as Resource)," by the choreographer Arcadie Rusu, July 10–23, 2020; "Corpul Creativ (The Creative Body)," by the choreographer Andrea Gavriliu, September 28–October 1, 2020; and "Act in Motion: Expressivity in Interpretation and Composition," by choreographer Attila Bordás, February 22–25, 2021.

them, the relation with mimesis was explicit and fundamental. To respect the social distancing requirements, the working space was divided into squares and every participant had a personal square that separated them from the others. The interesting fact is that this distancing served as a means to find new ways of collaborating with others and accentuating the nature of otherness. For instance, while ending an improvisation, we were encouraged to feel the general atmosphere created by the presence of our bodies in a common space, despite not touching each other. The instructor also spoke to us repeatedly about how natural and important it is to let oneself be inspired and influenced by the gestures and movements of others, not only on the formal or pose-like level, but even more on the level of movement qualities such as speed, dynamics, orientation, extension, and meaning. We were also introduced to another exercise specifically centered on mimesis: The participants were divided into two groups and were asked to alternatively watch the movements of persons from the other group while standing still and reinvent the movements we observed, thus creating *a process of movement evolution through permanent* (*re*)*mirroring* and a process of creatively deforming and reinforming someone's initial movement character through repeated assimilation of the other, all while gradually reducing the length of the watching interval. Finally, at another point, we worked with the same principles, but under the kinetic and affective influence of live percussion music, a practice that helped us to rememorate the original fusion of music and dance as art forms.[21]

Moreover, the experiences from the *Linotip* workshops were concentrated solely on the re-sensibilization of consciousness to the body's inherited kinetic mechanisms, but to this rough stratum can be added the spectacular theatrical stratum, which elevates the predetermined articulation of bodily movement to a cultural type of participation. *The mask and the mirror are symbols both of theater and of mimesis*. This matter complicates the ontology of mimesis because, with the appearance of the artifact that reflects factual reality, appears, as an instant effect, the problem of *the ontological ambiguity* of copies, imitations, simulacra, and reflections themselves. Do they really exist? If yes, in what way, where, and with what consequences? *Organic mimesis*, as shown in dance improvisation and in music performance, is straightforward and natural, but when *theatrical mimesis* steps into the scene, the status of the reflection (the copy) is not as straightforward. For humans, this ambiguity is symbolized in the ambiguity of the mask and the mirror, both being instruments used to

21 Again, we could remember and reconnect these contemporary experiences and concepts with Nietzsche's inspiring account of the relation between the Apollonian and the Dionysian arts.

know oneself and to hide oneself, to represent the truth about the world and to dissimulate the world:

> In other words, in mimesis man discovers and reveals himself and reality. Through it, man can present himself to himself and to others as he is, and reality can appear as it appears. At the same time, something withdraws and something is taken from man and reality, something that he has in fact never possessed—namely, full coincidence with himself.[22]

In March 2021, I experienced another type of dance workshop,[23] which was oriented toward the therapeutical function of dance using theatrical means. The most surprising part of this experience was when we watched each other dance, with masks and costumes, through a little mirror. It multiplied the dimensions of reality, obliged us to focus on bodily expression, helped us manifest ourselves in a safe space behind the mask, and was mimetic to the extreme (see Figure 5.1). Therefore, it was an intense emotional participation enhanced by *mimetic theatrical practices*: "Theatrical mimesis, in this regard, arises not from the distinction between a real original and an illusory copy but from a particular kind of action and attention, from the 'doings' of actor and audience rather than the 'being' of 'spectacle.'"[24]

These descriptions support the hypothesis of the "mimetic unconscious" theorized by Nidesh Lawtoo in *The Phantom of the Ego*: "This account of the unconscious is thus not private but social; not egocentric but relational; it does not claim to have a universal, transhistorical validity, but is self-consciously informed by the historical conditions of modernity."[25] Also, it is essentially embodied and thus is reflected in what dance improvisation reveals about the suppressed reflexes of the body. The traditional suppression or oppression of the body in classical western metaphysics is, not uncoincidentally, at the same time the diminution of the *minor* mimesis tradition and the oblivion of dance as an art. Still, it is not clear how and why the body is so intimately connected with mimesis. My thesis is that this is so through the notion of animation because, every time minor mimesis comes up, it is related to "reflexes," "movement," "rhythm," "action," and the fact of "relatedness" itself. Even in Lawtoo's

22 IJsseling. *Mimesis,* 36.

23 "The Dance of Souls," by choreographer and cultural manager Cosmin Manolescu at AREAL | A Space for Choreographic Development, March 19–27, 2021, https://arealcolectiv.ro/2021/03/17/dansul-sufletelor-atelier-intensiv-cosmin-manolescu.

24 Matthew Potolsky, *Mimesis* (New York and London: Routledge, 2006), 74.

25 Lawtoo, *The Phantom of the Ego*, 15.

approaches to mimesis, the term "animation" appears in key methodological paragraphs: "a method of reading that is as attentive to the logical structure of mimetic thought as to the affect[s] that animates this thought;" "to propose an alternative genealogy of the modernist ego and the mimetic unconscious that animates it;" "they give form to an ego that is not one, but is animated by someone else."[26]

Sheets-Johnstone is perhaps the most passionate scholar to advocate for the primacy of animation with the aim of generally understanding the mysterious phenomenon of life and, in particular, the phenomenon that is the human complex capacity of "thinking in movement." Hence, the main characteristics of animation—according to her research based on Husserlian phenomenology, neuroscientific data, dance studies, evolutionist paleo-anthropology, and psychological experiments about infant behavior—refer to movement within a whole organic being as a fundamental constituent of aliveness. Movement is felt within the human organism through proprioception and kinesthesia and animated movement is recognizable through a qualitative dynamic. Animation is an original phenomenon, being the "sensuous basis of experience,"[27] and, due to the fact that emotions are processes in the body, "emotion and movement coincide." Hence, animation "delineates a particular kinetic domain of dispositions," and creates and disseminates "nonlinguistic corporeal meanings."[28]

3 Pandemic Vulnerabilities and the Posthuman Subject

As I argued in the introduction of this chapter, performing arts such as music and dance were perfect reception mediums for mirroring the pandemic's impact because they are profoundly bodily, mimetic, animated, participative, and emotional. I have described already how adaptations to restrictions in dance workshops helped replace and rethink the focus on mimetic attention to otherness, but the transformative effects of the pandemic have much deeper *conceptual* bearings. For instance, an important festival of dance films had as its main theme the issue of *Possible Worlds* with all its meanings, but especially regarding future possible worlds configured by technology. Quoting Simona Deaconescu's essay in the program:

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26 Lawtoo, *The Phantom of the Ego*, 6, 16, 24.

27 Maxine Sheets-Johnstone, "The Lived Body," *The Humanistic Psychologist* 48, no. 1 (2020): 28–53, 20, http://dx.doi.org/10.1037/hum0000150.

28 Maxine Sheets-Johnstone, *The Primacy of Movement*, 454, 18.



FIGURE 5.1 The dance of souls
PHOTO BY COSMIN MANOLESCU AND AREAL

> In the last year, contemporary society was taken by surprise by the appearance of some events that disrupted its linear existence and forced it to rethink its actions, the relationship with the environment, the relationship between state and citizen, transnational mobility, cultural identity. … In the middle of these situations is the body, this "biological vessel" that we try to protect and keep intact, but at the same time it is the generator of change, transformation and progress.
>
> … What can be the new cinematic and performative formats, what topics become relevant when you are forced by circumstances to be aware of borders and how can you transgress these boundaries using the body, cinematic art, science and new technologies?[29]

The human subject of the future is certainly *the posthuman subject*. There are many characteristics of this subject present in Deaconescu's description: the

29 Simona Deaconescu, Program of the Bucharest International Dance Film Festival, September 1–5, 2021, https://web.archive.org/web/20210907233935/http://www.bidff.ro/eng#new-page-2.

integration within an ecosystem, the evolutionist pattern, the transgressive drive, the centrality of the body, the preoccupation with otherness, the immersion within a technologically based world, and the political commitment. Although there is no unique "posthumanism," only "posthumanisms," there are some conceptual constants that cut across all the different attempts to formulate *a posthuman*—I would dare to label it this way—*cosmological framework*:[30] Its theoretical nucleus is the deconstruction and reconstruction of subjectivity; it is the project of redefining traditional Eurocentric concepts and distinctions; it promotes the idea of coevolution of humans within a zoo-geotechnologically determined world; it rejects anthropological exceptionalism, without forgetting the specificities of humans; it highlights shared vulnerability with other forms of life; it proposes an ontology of the hybrid, of the self as a dynamic assemblage with structural-relational capacities; and, it is a metaphysics of immanence grounded in the bodily perspective. I see posthumanism as *a contemporary philosophical endeavor to construct a cosmology* because it has the generality and the themes specific to a cosmological framework: It redefines subjectivity by linking it with new geological insights and by working through the most speculative ideas of western thought. The concepts of animation and mimesis should play an explicit fundamental role in this cosmological reshaping because they already implicitly play such a role. As I tried to show, beginning with what arts such as music and dance can reveal, you cannot speak in a conceptually coherent way about relatedness, otherness, and embodiment without taking into consideration animation and mimesis as basic phenomena of organic life because they are presupposed as active and constitutive principles. As Sheets-Johnstone said:

> Evolutionary forms of life are clearly living subjects of particular *Umwelts*, and as such create *synergies of meaningful movement*, synergies that assure their survival.
>
> … Humans alone, notably modern, present-day ones, languish, ensnared in a subject/world divide. … In truth, the problem is one of their own making, a fabrication of thought. … Animation is a corrective to such "embeddings" and "chiasmatic" solutions: it is the *most just* that properly describes living creatures as living and thus necessarily, that is, *naturally*, in the full sense of *nature*, links them inseparably to and

30 The following brief description of the core ideas of posthumanism is a personal reformulation of ideas found in Pramod K. Nayar, *Posthumanism* (Cambridge: Polity Press, 2014), Rosi Braidotti, *Posthuman Knowledge* (Cambridge: Polity Press, 2019); and Francesca Ferrando, *Philosophical Posthumanism* (London: Bloomsbury, 2019).

> within a spatio-temporal world distinctive to their ways of being, i.e. to an *Umwelt*.[31]

This passage speaks for itself about the connections that can be made between posthumanism and animation. Regarding the mimetic principle, the notion of *hypermimesis*, as described by Nidesh Lawtoo in his account of James Cameron's 2009 film *Avatar*, can help us establish a link between animation and the posthuman body. At the same time, the analysis of Cameron's movie through the lenses of hypermimesis provides the "next level" of mimetic unfolding as it is related to the pandemic through the political, social, and medical need to transfigure oneself into an "avatar":

> Rather than dismissing the religious anthropology intrinsic to the Na'vi's account of trance as a form of "pagan voodoo," let us use it to diagnose the posthuman's subject mesmerizing transition (trance, from Latin *transire*, to pass) to a virtual avatar who is oneself while being someone else.[32]

The real-sensual body and its online avatar are at the core of the pandemic, as Katherine Hayles also stresses, in order to account for the huge gaps between people's ideas about what happened and about the restrictions: "It is obvious from people's reactions that whole-body emotions are involved that go far beyond, and deeper, than intellectual arguments by themselves."[33]

Still, another significant bridge connecting posthumanism, animation, and mimesis is a much more tempered attitude toward the cultural European past, namely *the meta-theoretical idea itself of finding anchors, bridges, links, and references to past concepts and thought frameworks*. Posthumanism does not come from nowhere and its indebtedness to the past as an epistemological and historical "condition of possibility" is a key methodological element of self-awareness. There are many movements of *re*-capitulation and *re*-configuration, this fact being a suggestion of the need to put old concepts and schemes into dialog with new concrete experiences and situations. This dialog should not be thought of in terms of "the obsolete" versus "the progressive"—where the "new" implicitly has priority by simply existing—but in terms of the mutual

31 Sheets-Johnstone, *The Primacy of Movement*, 462–63.

32 Nidesh Lawtoo, "Avatar Simulation in 3Ts: Techne, Trance, Transformation," *Science Fiction Studies* 41, no. 1 (March 2015): 132–50, 139.

33 N. Katherine Hayles and Nidesh Lawtoo, "Posthuman Mimesis 11—Connections: A Dialogue between Nidesh Lawtoo and Katherine Hayles," *Journal of Posthumanism* 2, no. 2 (2022): 181–91, 187, https://doi.org/10.33182/joph.v2i2.1939.

co-dependence between the past, the present, and the future of humankind. I think a good symbolism of this co-dependence, which also provides a fitting close to my chapter, is the solo exposition "25,000 COVID Jokes (It's Not a Joke)" created by Paola Pivi and curated by Thierry Olat.[34] The exposition consists of assemblages of *memes* that have circulated on social media throughout the world since the start of the pandemic. The meme is a digital object that expresses the way of thinking of certain social groups without being ascribed to an author. It circulates through the virtual space of the internet, being bodyless like a phantom and, most importantly, although it is usually described as "just a joke," it is in fact a micropolitical technique of manipulation with implications on human behavior. The *memes* about COVID restrictions and, generally, about all the practical and ideological problems raised by the pandemic are not a joke—as the title of the exposition antithetically states—because the individual and political decisions made during this span of time were truly the central actors in a global play—as "game" and as "dramaturgy"—about life and death. These *memes* were embodied by being transplanted into a building, the nineteenth-century chapel at Vieille Charité. Hence, the exposition itself, in this way, managed to bridge harmonically old cultural remnants of a former place dedicated to people in need with new worldwide virtual realities that were also concerned with peoples' needs.

4 Concluding Remarks

The sensation of being alive is among the most precious feelings one can experience during a lifetime and this sensation is traditionally associated with the joy of dancing and with the sensuality of music. At the heart of these manifestations are animation and mimesis. Both concepts help understand what bonds individuals with a community, both are means for self-knowledge, and both are highly ambiguous—especially when related to technological means. This ambiguity is neither positive nor negative; it depends on usage and context, as anything that has human origins. Art itself can be used either for ideological purposes or for sincere expression of thoughts and emotions. The pandemic definitely brought to light all the layers of mimesis: *organic mimesis, anthropological mimesis, expressionist mimesis, theatrical mimesis, and hypermimesis*, because it "played" with the body, it forced new solutions to adapt,

34 Paola Pivi, "25,000 COVID Jokes (It's Not a Joke)," June 24–September 12, 2021, exhibition at Centre de la Vieille Charité, Marseille, www.perrotin.com/exhibitions/paola_pivi-25-000-covid-jokes-its-not-a-joke/9517.

it enhanced the theatricality of the world, and it metamorphosed the human being into an avatar. In this context, maybe such archaic needs as dancing and making music could still best help us to pull through, with the joy of movement and, as a consequence, the joy of mimesis being once again fundamental expressions of life itself.

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PART 2

Mimetic Re-*turns in Posthuman Philosophy*

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CHAPTER 6

A Genealogy for Homo Mimeticus 2.0

Nidesh Lawtoo

After the shadow and the phantom, the twin and the double, the ancient problematic of what the ancients called, enigmatically, "*mimēsis,*" is returning under different masks and conceptual personae to animate, reanimate, or take possession of posthuman subjects in the digital age. Reloaded by new technologies and media, algorithms and AI simulations, stretching to implants in the body and brain, emerging forms of posthuman mimesis do not passively mirror, copy, or redouble the human, let alone nature. Rather, they contribute to forming and transforming a species that is not only *sapiens* but also *ludens*, not simply *economicus* but also *numericus*, not only *faber* but also *plasticus* and, we now add, *mimeticus* as well. This is not a mere adjectival addition to a long list that already qualifies an eminently adaptable, protean, relational, and eminently metamorphic creature. On the contrary, as I have argued elsewhere, mimesis is the very principle that makes adaptability, protean transformations, and relational bonds of sympathy with humans and nonhumans possible in the first place, thereby bringing a genial, certainly adaptable and plastic, yet not necessarily wise species into being.[1]

Furthering a mimetic turn or *re*-turn of attention to mimesis in need of a digital 2.0 supplement, this volume collectively shows that new manifestations of homo mimeticus are now at play in the figures of the cyborg and the android, the robot and AI, the hologram and the avatar, among other alter egos. Considering especially, but not only, the AI revolution, we have seen how chatbots can effectively copy or mimic human conversations. This simulation of intelligence should not be confused with human intelligence as such, let alone consciousness; and yet, it is not deprived of affective powers on (post)human users. Hence, a 2.0. supplement to homo mimeticus seems the most "natural" addition to mimetic studies. At the same time, genealogical lenses oblige us to specify that this volume is based on papers first presented in 2021 and was not triggered by enthusiastic responses to ChatGPT or GPT-4 (the latest version as I finalize this volume, soon to be replaced by another number in an endless

1 See Nidesh Lawtoo, *Homo Mimeticus: A New Theory of Imitation* (Leuven: Leuven University Press, 2022).

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permutation). Still, the very suggestion of a mimetic turn in posthuman studies sensed that the era of generalized simulations required a rethinking of mimesis in the digital age. Despite the proliferation of different technologies of reproduction, one point at least is clear: Via different media and supports, the new avatars of mimesis generate simulations that may appear fictional or hyperreal online, and yet are now operating hypermimetically on posthuman bodies and minds offline as well, transforming our ongoing process of becoming posthuman.[2]

Given the impressive speed of these innovations, one of the numerous advantages of introducing a mimetic perspective to posthuman studies consists in providing a longer genealogical view, or overview, of what is still a relatively recent field of studies. Posthuman mimesis is, in fact, the latest conceptual avatar in a long genealogy that is ancient in origins, traverses the entire history of western metaphysics, art, religion, and politics; generates virulent quarrels between philosophers and poets, the ancients and the moderns; and, via forceful overturnings of perspectives in the modernist period, reaches into the postmodern period as well,[3] opening up both pathological and patho*logical* possibilities for posthumanism as well. This chapter offers a succinct and necessarily schematic and partial genealogical reconstruction of some of the main steps in a long journey that now leads up to a mimetic turn in posthuman studies.

1 Steps Back to Leap Ahead

If we step back to classical antiquity, to the origins of mimetic studies, Plato and Aristotle disagreed about the value of mimesis understood as a representation of reality, but they fundamentally agreed that humans are mimetic animals, or homo mimeticus—for better and worse. They also agreed that the new discipline they were founding, philosophy, was predicated on a love of wisdom. That said, they did not automatically proclaim humans to be *sapiens*—wise-born, like Athena out of Zeus' head. Far from it. Philosophers were characterized by a love of what they lacked: wisdom in general and self-knowledge in particular. This modest beginning is worth recalling at the outset. In fact,

2 For the first steps to account for posthuman mimesis, see Nidesh Lawtoo ed., " Posthuman Mimesis," Special Issue, *Journal of Posthumanism* 2, no. 2 (2022).

3 For informed general studies see Gunter Gebauer and Christoph Wulf, *Mimesis: Culture, Art, Society*, trans. Don Reneau (Berkeley: University of California Press, 1995); Matthew Potolsky, *Mimesis* (New York: Routledge, 2006).

self-knowledge seems more lacking than ever in an age in which technological, political, and environmental transformations occur faster than we can possibly adapt to, let alone critically reflect on. The Janus-faced orientation at play in *Mimetic Posthumanism*, then, urges us to look back to both mythic and philosophical models to better see, or try to foresee, where we are currently going.

The history of homo mimeticus takes many twists and turns before it reaches the posthuman turn and cannot be fully recapitulated here. For our purpose, its genealogy can be summarized via the following, admittedly schematic steps:

1. Mimesis *animates* human, animal, and divine worlds in constant becoming.
2. Mimesis both *mirrors* and *de-forms* a true, ideal world.
3. Mimesis *re-presents* a true, rational world.
4. Mimesis *imitates* artistic models worthy of emulation.
5. Mimesis entails the *imitation* of exemplary religious figures believed to be in a true world.
6. Mimesis *unmasks* the true, ideal world as an illusory world.
7. Mimesis *deconstructs* the distinction between copy and original via a mimicry of nothing.
8. Mimesis is *banned* as there is no relation between hyperreal simulations and the real world.
9. Mimesis *re-turns* to diagnose hypermimetic simulations in an age of posthuman becoming.

This is obviously a bird's eye overview meant for a general orientation in the labyrinth of the protean transformations of mimesis. The different steps I number for convenience should not give the false impression that the genealogy of homo mimeticus 2.0 rests on a grand linear narrative of progress, if only because the last step brings us back to the question of becoming with which the genealogy starts, albeit with a technological supplement. We are thus not confronted with a circular logic based on sameness but with a spiraling movement based on a series of repetitions and differences. This genealogy, traversing over 2,000 years of history, is part of an ongoing process of transformation that continues to inform the philosophical, aesthetic, and technological imagination of the twenty-first century. Let us treat it as a provisional map that certainly doesn't transparently reflect the territory as a mirror does. Still, it might help us to orient or reorient ourselves in the labyrinthine mimetic twists and turns now internal to posthuman becomings as well. Let me thus articulate each step in some more detail.

1.1 *Mimesis* Animates *Worlds in Becoming*

Historical accounts of mimesis often start with critiques of this concept, but this is a false and biased start. It betrays an idealist inclination characteristic of a Platonic metaphysics that, under different masks, still reaches into the present and is thus important to unmask at the beginning. This false start, in fact, masks the centrality of mimetic practices of nonverbal communication, participation in natural forces, collective effervescence, education, and memorization, but also dance, painting, singing, and dramatic impersonations that, since at least the dawn of humanity, were at play in ritual, prehistoric cultures of which few historical traces remain. These ritual practices arguably paved the way for the birth of *Homo sapiens* out of mimetic forms of communication.[4] Ritual cultures, in fact, relied on mythic identifications to account for a world of becoming that entangled humans with nonhuman animals, nature, and spiritual entities or gods, vibrant energies and matters that continue to inform the very concept of mimesis today.

Let us recall that the Greek term, "*mimēsis*"—from *mimeisthai*, to imitate—comes from *mîmos*, meaning "mime actor" but also "performance."[5] This is already a reminder that mimesis was originally an embodied practice rooted in music and dance; it originates in rituals of collective participation still at play in indigenous cultures today.[6] Despite its Greek origins, as a concept, then, the ritual, magical, and animistic practices linked to mimesis already provide an initial corrective to Eurocentric definitions that restrict it to visual representation, epistemic concerns with visual illusions, and metaphysical obsessions with copies and originals. Over time, in a still predominantly oral culture, such performative rituals played a key role in bringing mythic models to life in front of an audience assembled in theaters. The *mîmos* would impersonate in body, gesture, and voice mythic heroes like Odysseus or Herakles as well as divinities like Gaia and Athena, or, for that matter, demigods like Prometheus, whose titanic gesture paves the way for posthuman studies. These heroes' dramatic actions took place in a world of becoming that was not based on clear-cut distinctions between the material world and the divine world, physics and

4 See Edgar Morin, *Le Paradigme perdu: La nature humaine* (Paris: Seuil, 1973) and Lawtoo, *Homo Mimeticus,* ch.1.

5 As the classicist Gerald Else puts it: "What we can infer with some confidence is that the original sphere of *mimêsis*—or rather of *mîmos* and *mimeisthai*—was the imitation of animate beings, animal and human, by the body and the voice (not necessarily the singing voice), rather than by artefacts such as statues or pictures." Gerald F. Else, "'Imitation' in the Fifth Century," *Classical Philology*, 53, no. 2 (1958): 73–90, 78.

6 See Michael Taussig, *Mimesis and Alterity: A Particular History of the Senses* (New York: Routledge, 1993).

metaphysics, the copy and the original—if only because in the sphere of myth there was constant communication between the two. Hence the importance of exemplary models worthy of imitation in the formation and transformation of humans and, now, posthumans, as we shall see in more detail in Chapter 11. The point, for the moment, is that exemplary figures in posthuman studies stem from a mythic ground that was sensitive to the transformative powers of mimesis. Hence the need to look back to better see what lies ahead.

1.2 *Mimesis* Mirrors *the "True" World*

It is often said that philosophy is born out of a conflict, or agon, with the mythic tradition that precedes it, but a mimetic perspective immediately complicates this clear-cut opposition. The agon between philosophy and myth or literature is what I call a "mimetic agon." I do so to designate the genealogical fact that literary precursors (such as Homer) are imitated by philosophers (such as Plato) as much as they are opposed by them.[7] As is well known, after a lengthy mimetic dialogue on the nature of justice, in book 10 of *Republic* (c. 375 BC), Plato, under the mimetic mask of Socrates, bans mimesis and mimetic practitioners (poets, rhapsodes, actors, sophists). He does so because these protean figures do not represent an ideal, metaphysical, and disembodied reality that culminates in intelligible, universal, and immutable Forms that, for Plato, constitute true Being. On the contrary, they only represent "phantoms" at "the third remove from truth."[8]

Less known is that Plato's understanding of mimesis is still in touch with a Homeric, mythic, and immanent perspective that does not neatly divide humans from nonhumans, is extremely sensitive to material processes of becoming, and finds in a mimetic pathos that stretches to include the imitation of nonhuman forces its defining characteristic. For instance, in book 3 of the *Republic,* as the concept of "*mimēsis*"—what the eminent classicist Erick Havelock calls nothing less than the "most baffling of all words in his [Plato's] philosophical vocabulary"[9]—first enters the philosophical scene under the mask of actors endowed with the pathos to imitate mythic examples, Socrates specifies that the contagious powers of mimesis include nonhuman forces

7 See Nidesh Lawtoo, *Violence and the Mimetic Unconscious: Vol. 2. The Affective Hypothesis* (East Lansing: Michigan State University, 2023).

8 Plato, *Republic*, in *The Collected Dialogues of Plato*, eds. E. Hamilton and H. Cairns, trans. Paul Shorey (Princeton, NJ: Princeton University Press 1963), 575–853, 827, 602c. Hereafter cited in text by line number.

9 Eric A. Havelock, *Preface to Plato* (Cambridge Mass.: Harvard University Press, 1963), 20, see also 20–31.

as well. Thus, Socrates says that dramatic impersonation (or mimesis) could include "claps of thunder, and the noise of the wind and hail … and the cries of dogs, sheep, and birds" (397a–b)—that is, a nonhuman mimesis or mimesis of nonhuman forces Plato fears, condemns, and excludes from the *polis* in theory, yet remain operative in dramatic practice in a culture still dominated by an "oral frame of mind."[10] Genealogical lenses already reveal that since the dawn of mimetic studies, mimesis has not been restricted to an anthropocentric focus on Man alone. Rather, it goes beyond binaries that simply oppose nature to culture, the human to the nonhuman, the original to the copy, along fluid, perspectival, and metamorphic perspectives that now inform the concept of posthuman mimesis as well.

1.3 *Mimesis* Re-presents *a Rational World*

But in the classical period, mimesis is not only a subject of critique; it also finds early on a worthy defense appreciative of the creativity at play in myth, or to use a modern term, literature. Plato's most famous student, Aristotle, provides a powerful reply to Plato's exclusion of mimesis as a dangerous, irrational, and pathological force. He does so in the *Poetics* (c. 335 B.C.), where he articulates a defense of poetry predicated on the *logical* assumption at play in the mimetic pathos of a carefully crafted tragic plot, or *muthos*. Thus, Aristotle redefines mimesis as an "imitation of an action" predicated on laws of necessity and causality that not only have rational philosophical potential on the side of *logos*, but also generate "cathartic" effects of "pity and fear"[11] that operate on the side of *pathos*.

If Plato had a broader conception of mimesis that was crucial to education and subject formation, Aristotle tended to restrict mimesis to tragic representations that are not deprived of exemplary figures;[12] if the former emphasized the passive, reproductive side of mimesis, the latter was sensitive to its active, productive power; if the teacher stressed the pathologies of mimesis, the student stressed its balancing therapeutic value as a patho-*logy*. Their agonism notwithstanding, they agreed that mimesis, not unlike techne and thus technics as well, has the double patho(-)logical structure of a *pharmakon*, that is

10 Havelock, *Preface to Plato*, 41.

11 Aristotle, *The Poetics of Aristotle*, trans. Stephen Halliwell (Chapel Hill: University of North Carolina Press, 1987), 37. I discuss Aristotle on catharsis and mimesis in Nidesh Lawtoo, *Violence and the Oedipal Unconscious: Vol. 1, The Catharsis Hypothesis* (East Lansing: Michigan State University Press, 2023), 127–48.

12 See Stephen Halliwell, *The Aesthetics of Mimesis: Ancient Texts and Modern Problems* (Princeton, NJ: Princeton University Press, 2002).

both poison and remedy—a Janus-faced evaluation that will be central to poststructuralism and posthumanism. Either way, mimesis provides a relational, embodied, and affective principle that opens up subjectivity to human and nonhuman processes of becoming other that, in different forms, are still with us today.

1.4 *Mimesis* Imitates *Artistic Models*

Given its aesthetic origins, then, mimesis turns out to be essential not only for philosophical critique, but also for artistic creation. If both "critique" and "creativity,"[13] as Rosi Braidotti reminds us, are constitutive of the posthuman turn, it is then crucial to *re*-turn to a concept located precisely at the juncture of creativity and critique. Let us therefore recall that for Roman rhetorical authors like Horace and Longinus, mimesis becomes a principle of artistic creation predicated on the assumption that great art is not the product of a divine inspiration that renders the poet enthusiastically possessed by the Muses, as Plato thought.[14] On the contrary, it is based on an imitation of classical models that rests on the visual analogy between poetry and painting (*ut pictura poiesis*). This classical analogy still relies on the logic of aesthetic representation that dominates western aesthetics, but it also convokes what Pseudo Longinus calls, in a more materialist mood, "a sort of natural impulse."[15] The latter, in fact, accounts for the sublime power of nature to inspire "awe" and "genuine passion,"[16] or pathos, that regained traction during the romantic period and is especially strong in Promethean transgressions that paved the way for the posthuman.[17] Suffice it to say that there is a long genealogy connecting creativity-mimesis-nonhuman forces that rendered humans *ek*-static in the past. Via the iteration of "the modern Prometheus"[18] and the doubling/mimetic relation between creator and creature it entails, this genealogy entangles all-too-human aspirations to scientific progress in the spiraling process of becoming posthuman still in need of evaluation.

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13 Rosi Braidotti, *The Posthuman* (Cambridge: Polity Press, 2013), 11.

14 See Plato, *Ion*, in *The Collected Dialogues of Plato*, eds. E. Hamilton and H. Cairns, trans. Paul Shorey (Princeton, NJ: Princeton University Press 1963), 215–28.

15 Pseudo Longinus, *On the Sublime*, in *Critical Theory Since Plato*, 3rd ed., eds. Hazard Adams and Leroy Searle (Belmont, Calif.: Thomson Wadsworth, 2005), 94–118, 113.

16 Pseudo, Longinus, *Sublime*, 98.

17 See, for instance, Ihab Hassan, "Prometheus as Performer: Toward a Posthumanist Culture?" *The Georgia Review* 31, no.4 (1977): 830–50.

18 See Mary Shelley, *Frankenstein: Or the Modern Prometheus*, ed. Johanna M. Smith (Boston: Bedford/St Martin's, 2016).

What is certain is that as we enter deeper into the epoch of the Anthropocene, anthropogenic climate change will continue to accelerate. So will the awe and fear triggered by the nonhuman agentic powers of nature. Given the speed of widening tornados and typhoons, melting glaciers, growing deserts, spreading fires, rising oceans, and devastating hurricanes, among other catastrophic effects, sublime emotions can no longer be witnessed from a safe aesthetic distance.[19] On the contrary, they affect posthuman and nonhuman life, triggering a mimetic pathos that spreads contagiously from nonhumans to posthumans with unpredictable amplifying effects. Hence the renewed importance of the promotion of mimetic creativity to provide antidotes to the pathologies of climate change unleashed in the epoch of the Anthropocene.

1.5 *Mimesis and the* Imitatio *of Exemplary Figures*

As faith in unlimited progress in this world wanes, belief in ideal and eternal but illusory afterworlds waxes. This nihilist lesson applies to apocalyptic end-of-the-world anxieties already haunting the medieval imagination; it might also cast light on the all too real fear haunting the contemporary imagination. Given the dominance of idealist metaphysics in the West, there is, in fact, a strong tendency to aspire to imaginary afterworlds that we should be careful not to deride as vestiges of the past, if only because they can continue to implicitly form mimetic theories in the present, stretching to (mis)inform transhumanist dreams of immortality and disembodiment in the future as well. If these dreams are apparently oriented toward the future, they remain firmly rooted in a Western metaphysics that needs to be understood genealogically to be effectively critiqued.

Following up on Plato's denigration of the phenomenal world, Christianity made Platonism available to the people, as Nietzsche saw. It found in figures such as Augustine spiritual examples that turned to the imitation of Christ, or *imitatio Christi,* as a paradigmatic model for moral formation and spiritual transformation. To be sure, Augustine, who was himself not deprived of bodily passions prior to his conversion, acknowledges the pathos of distance at play in the impossible imitation of an ideal model. Thus, he writes in the *Confessions*: "In their perverted way all humanity imitates you. Yet they put themselves at a distance from you."[20] This all-too-human distance from

19 On mimesis, climate change, and the ethics of navigation, see William E. Connolly and Nidesh Lawtoo, "Planetary Conrad: William Connolly and Nidesh Lawtoo in Dialogue," *The Conradian* 46, no. 2. (2021):144–71.

20 Saint Augustine, *Confessions*, trans. Henry Chadwick (Oxford: Oxford University Press, 1998), 32.

an unattainable religious ideal located in an imaginary, vertical world is, of course, inevitable. Still, it did not prevent the contagious spread of beliefs in the immortality of the soul based on a truly felt emotion, or pathos, experienced horizontally in this world.

The most extreme forms of transhumanist ideology today, with their technocratic beliefs in the possibility of immortality, or of migration to other planets, can be aligned with this humanistic, Christian, and idealistic tradition.[21] For (post)humans who have no choice but to remain faithful to the Earth, the risk is not to fall prey to nihilistic despair triggered by beliefs in the coming apocalypse constitutive of previous mimetic theories.[22] Nihilism is, indeed, a major mimetic temptation for present and future generations writing under the shadow of the end times—a temptation mimetic posthumanism sets out to resist.

1.6 *Mimesis* Unmasks *the "True" World*

In the wake of creative forms of imitation centered on immanent bodies constitutive of the Renaissance spirit, a metaphysical overturning of perspectives on which the mimetic turn in posthuman studies hinges takes place in the modernist period. If dominant philosophical conceptions of mimesis set up a hierarchy between the true world and the false world, the ideal origin and the material copy, it does not mean that this metaphysical story, or rather fable, cannot be unmasked as part of the history of an error. This is, indeed, what Nietzsche does in *Twilight of the Idols* (1889) in a famous section titled, "How the True World Became a Fable,"[23] which will serve as a source of inspiration for mimetic turns and returns that go from poststructuralism to posthumanism.

Briefly put, in a radical overturning of the idealist (Platonic) metaphysics that posits ideal models to imitate in imaginary afterworlds that reach—via Christian ideals (Augustine), as well as transcendental categories (Kant)—into the present, Nietzsche, as is well known, unmasks this ideal "'true' world" and the dominant mimetic tradition that distinguishes between ideal models and

21 For a genealogy of transhumanism attentive to its theological implications, see Steve Fuller, *Nietzschean Meditations: Untimely Thoughts at the Dawn of the Transhumanist Era* (Basel: Schwabe Verlag, 2020). The main difference between Fuller's and my interpretation of Nietzsche reflects the underlying difference between what he calls posthumanism's "*precautionary*" and transhumanism's "*proactionary*" (37) approaches toward risk (emphases in original).

22 See, for instance, René Girard, *Battling to the End: Conversations with Benoît Chantre*, trans. Mary Baker (East Lansing: Michigan State University Press, 2010).

23 Friedrich Nietzsche, *Twilight of the Idols*, in *The Portable Nietzsche*, ed. Walter Kaufman (New York: Viking Press, 1982), 463–563, 485. For an informed Nietzschean account of nihilism see Marina Garcia-Granero's chapter in this volume.

material copies as "the history of an error"[24] (his negative thesis). Less known is that he also affirms an immanent conception of affective mimesis with the unconscious and mirroring power to turn the ego into what he calls a "phantom of the ego" (his positive thesis).[25]

At the twilight of metaphysics, then, Nietzsche, far from fueling ideals into an autonomous conception of subjectivity driven by transhumanist beliefs of endless technological progress, overturns perspectives to provide, immanent, materialist, and psychological foundations for a posthuman subject that is porous, relational, and embodied in its metamorphic transformations.[26] This minor conception of mimesis qua homo mimeticus provides the relational principle that opens up the ego to external influences, be they human or nonhuman, thereby playing a key role in the ongoing processes of becoming posthuman.

1.7 *Mimesis* Deconstructs *"Original" Models*

We are beginning to see and feel how genealogical lenses that look back to the origins of mimetic studies turn out to provide foundational steps in the theoretical moves that will lead to the posthuman turn. As we move into the twentieth century, Nietzsche's decentering of the ego opens up intellectual space to deconstruct old metaphysical binaries (original/copy, inside/outside, writing/speech, passive/active, poison/cure, etc.) that, in the wake of structuralism and poststructuralism in the 1960s and 1970s, relaunched a performative conception of mimesis on the theoretical scene that promotes difference rather than sameness, active rather than passive imitation.

In "The Double Session," for instance, Jacques Derrida's focus on Stéphane Mallarmé's prose-poem "Mimique" returns us to the theatrical origins of mimesis in mime with which we started and adds: "It is impossible to pin mimesis down to a binary classification."[27] Why? Because mimesis, or mime, as he reads it, does not simply reproduce a prior original. On the contrary, Derrida specifies that it "imitates nothing, does not have to conform to any prior referent with the aim of achieving adequation or verisimilitude."[28] This deconstructive

24 Nietzsche, *Twilight of the Idols*, 485.

25 See Nidesh Lawtoo, *The Phantom of the Ego: Modernism and the Mimetic Unconscious* (East Lansing: Michigan State University Press, 2013).

26 For Nietzschean concepts internal to the mimetic turn in posthuman studies, see Nidesh Lawtoo, "Posthuman Mimesis 1: Concepts for the Mimetic Turn," *Journal of Posthumanism* 2, no. 2 (2022): 101–14, and Garcia-Granero's contribution to this volume.

27 Jacques Derrida, "The Double Session" in *Dissemination*, trans. Barbara Johnson (Chicago: University of Chicago Press, 1981), 173–286, 186.

28 Derrida, "Double Session," 205. On the paradoxical logic of theatrical mimesis that turns an imitation of nothing into an imitation of everything, see Philippe Lacoue-Labarthe,

move had groundbreaking effects. It was instrumental in putting mimesis to re-*productive* philosophical, feminist, postcolonial, and queer political use. In particular, the troubling mirror of mimesis revealed how the dominant (male, white, heterosexual) "original" remains radically dependent on the (female, black, homosexual) "copy."[29]

Thus reframed, mimicry turns from a passive form of adaptation into an active strategy of empowerment that reveals how the copy precedes the original. It will also be central to Bernard Stiegler's deconstruction of technics that, as we shall see in Part 3, bears the traces of a deconstruction of mimesis that serves as his model. Either way, thus reframed, mimetic differences trouble, deconstruct, and unmask the original concept of Man understood as an ideal phantom or fable.[30]

1.8 *Mimesis Is* Banned *by Hyperreal Simulations*

This poststructuralist decentring of man via the lever of mimesis and the fulcrum of the subject paves the way for the mimetic turn, or *re*-turn of attention to a homo mimeticus that is now attentive to the interplay of "sameness and difference."[31] Prior to this, in the 1980s and '90s, it also led, perhaps too quickly, to postmodern dissolutions of reality in the hyperreal sphere of media simulation.

In an additional twist of the mimetic screw, postmodern theorist Jean Baudrillard, for instance, posited a "hyperreal" world of "simulation" that has nothing to do with the logic of the "mirror," or "imitation," for it "substitutes signs of the real for the real itself."[32] Prefiguring the Internet revolution, this lesson was quickly incorporated into cinematic blockbusters such as *The Matrix* (The Wachowskis, 1999), which reloaded the Allegory of the Cave for the digital age by explicitly incorporating *Simulacra and Simulation* in the film itself as a hollowed-out, simulated book qua box used to hide Neo's software

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"Diderot: Paradox and Mimesis," in *Typography: Mimesis, Philosophy, Politics* (Stanford: Stanford University Press, 1989), 248–66.

29 See Luce Irigarary, *This Sex Which Is Not One*, trans. Catherine Porter (Ithaca, NY: Cornell University Press, 1985); Homi Bhabha, *The Location of Culture* (New York: Routledge, 1994), 121–31; Judith Butler, "Imitation and Gender Insubordination," in *Inside/Out: Lesbian Theories, Gay Theories*, ed. Diana Fuss (New York: Routledge, 1991), 13–21.

30 For a genealogical precursor who acknowledged that "Nietzsche was paving the for when, in the interior space of his language, he killed man and God both at the same time" and fostered the process of disappearance of man, see Michel Foucault, *The Order of Things: An Archeology of the Human Sciences* (New York: Vintage, 1973), 306.

31 See Lawtoo, *Homo Mimeticus*, 93–125.

32 Jean Baudrillard, *Simulacres et simulation* (Paris: Galilée, 1981), 11 (my translation).

programs.[33] At the ontological level, this proclamation of the death of a traditional mimesis dividing the "true" world from the "apparent" world, reality from fiction, was of loose Nietzschean inspiration. As Nietzsche put it: "*With the true world we have abolished the apparent one.*"[34] Hence, at the moment of the "briefest shadow,"[35] postmodern theorists felt liberated by the weight of metaphysics in the ethereal sphere of high theory. A pandemonium of "free" anti-mimetic spirits unconstrained by the hard materiality of facts ensued as the phrase "there are no facts, only interpretations of facts" was mimetically chanted in unison.

But were these spirits really free? Are there really no facts? Or was this postmodern freedom from facts part of the history of an interpretative error, a mimetic error Nietzsche was urging philosophers of the future to overcome? Genealogical lenses make clear that dreams of ideal afterworlds (be they in the form of Platonic ideas, Christian immortality, or Transhumanist immortality) are certainly unattainable, indemonstrable, and unpromisable, even in uploaded 3D "*Avatar* simulations" currently animating homo mimeticus 2.0.[36] And yet, this does not mean that the immanent powers of mimetic simulations stopped operating in digital, material, and embodied practice. On the contrary, it is becoming increasingly clear that we should return to the Nietzschean diagnostic imperative that the body is "a great reason" and that this reason should "*stay true to the earth.*"[37]

This alarm call only increases in urgency as it dawns on humans that we have entered the epoch of the Anthropocene. Hence, a supplementary step in our genealogy can no longer be postponed—which leads us to the ninth and, for the moment, last step in our genealogy of homo mimeticus 2.0.

1.9 *Mimesis* Re-turns *via Hypermimetic Simulations*

This is where the mimetic turn *re*-turns to the contemporary scene. As its long genealogy of twists and turns already suggests, it had actually never fully left the theoretical scene from which it was born. On the contrary, since the dawn of philosophy, or rather, prior to it, mimesis continued to imperceptibly inform

33 See Nidesh Lawtoo, "The Matrix *E*-Motion: Simulation, Mimesis, Hypermimesis" in *Mimesis, Movies and Media: Violence, Desire, and the Sacred*, eds. Scott Cowdell, Chris Fleming, and Joel Hodge (London: Bloomsbury, 2015), 89–104.

34 Nietzsche, *Twilight of the Idols*, 486.

35 Nietzsche, *Twilight of the Idols*, 486.

36 Nidesh Lawtoo, "*Avatar* Simulation in 3Ts: Techne, Trance, Transformation," *Science Fiction Studies* 125, no. 42 (2015): 132–50.

37 Friedrich Nietzsche, *Thus Spoke Zarathustra*, trans. Graham Parkes (Oxford: Oxford University Press, 2008), 30, 12. Hereafter *Z* with in-text citation.

the vicissitudes of critical theory, stretching from the ancients to the moderns to the contemporaries to eventually transform poststructuralist critiques of the death of man in creative accounts of posthuman becomings. The mimetic *re*-turn, then, addresses an all too mimetic, or better, hypermimetic problem that casts a long material shadow on the present and future. It is, in fact, clear that digital simulations are not disconnected from the logic of imitation, after all—if only because posthuman subjects increasingly exposed to a plurality of simulations online continue to remain vulnerable, perhaps more than ever, to the spellbinding and entrancing powers of unconscious forms of imitation offline.

What Donna Haraway says of cyborgs is even truer of avatars. Both operate a mirroring inversion of perspectives in which "our machines [or digital simulations] are disturbingly lively, and we ourselves frighteningly inert."[38] This mimetic, or rather, hypermimetic pathology has only increased since the COVID-19 pandemic crisis confined hyper-connected posthumans within the digital walls of a *vita mimetica*, as Chapters 4 and 5 make clear.

Hypermimesis, then, considers the affective power of hyperreal simulacra that have nothing to do with reality: digital simulations, video games, and avatars, but also conspiracy theories, Big Lies, cyberwars, cybercurrencies, etc.. And yet, they retroact, via spiraling feedback loops, on the material, psychic, and embodied lives of posthuman egos that are spellbound, turning them into physically inert and psychically "dispossessed" avatars or phantoms.[39] Due to deeply rooted mimetic dispositions constitutive of the genealogy of homo mimeticus now amplified by an increasingly thicker network of digital simulations entangling its 2.0 upgrade, we may be living digitally enhanced, immersive, and apparently realistic second lives online, yet we continue to remain radically dependent on precarious bodies tied to the Earth. I call this spiraling loop, in which a hyperreal simulation retroacts on the reality of mimetic bodies and minds, *hypermimesis*. And I do so to call attention to the dynamic interplay of hyperreality online and imitative behavior offline constitutive of the mimetic posthuman as well.

Obviously, in an age in which artificial intelligence is increasingly modeled on human intelligence, this hypermimetic interplay cuts both ways. As Catherine

38 Donna Haraway, "A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s," in *The Norton Anthology of Theory and Criticism* ed. Vincent B. Leitch (New York: W. W. Norton, 2001), 2269–99, 2272; Lawtoo, *Avatar*, 138–44.

39 See Nidesh Lawtoo, "'This Is No Simulation!': Hypermimesis from *Being John Malkovich* to *Her*," *Quarterly Review of Film and Television* 37, no. 2 (2020): 116–44; Nidesh Lawtoo, "Black Mirrors: Reflecting (on) Hypermimesis," *Philosophy Today* 65, no. 3 (2021): 523–47.

Malabou puts it in her evaluation of the *Blue Brain* project, whose goal is to build a digital simulation of the mouse brain (for the moment): "Impossible to deny it: brain and computer are in a relation of speculation (*mirroring*)."[40] And what is a mirror, if not the most classical mimetic trope? Of course, this does not mean that this double mirroring effect is deprived of destabilizing reflections. What is, in fact, ironic in this mirroring overturning of perspectives is that after the complexity of the brain was often reduced to a computer in the past century, it is now the all-too-human brain that serves as the model for computers to imitate in the present century.

If reductionist approaches to the brain mistook the computer for a model to imitate, posthumanists should perhaps be careful not to simply invert the mirror and turn the brain into a model for technological reproductions. Why? Because the relationship between the model and the copy, the original and the simulation, as a long genealogy of homo mimeticus taught us, has never been stable in the first place, generating reciprocal reflections and spiraling patho(-)logical feedback loops that are now constitutive of the processes of becoming at play in mimetic posthumanism. Whether widening hypermimetic loops entail pathological or patho-*logical* metamorphoses—or, more probably, both—is what this volume sets out to find out.

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Nine genealogical turns, then, to promote a *re*-turn to mimesis and its multiple avatars animating homo mimeticus 2.0: Eight turns step back to a genealogy of mimesis that goes from antiquity to poststructuralism to then leap ahead to processes of becoming other now at play in the posthuman present and future. For my cartographic purpose, these should suffice to provide a general orientation for navigating the overlapping fields of mimetic studies and posthuman studies. They should at least indicate that the recent genealogy of the posthuman is deeply entangled with the ancient problematic of mimesis. A philosophical aesthetic, and technological approach to posthuman mimesis reveals that humans are mimetic, and thus relational, embodied, affective, and open creatures that adapt, chameleon-like, to their surroundings, be they natural or cultural, sociological or technological, offline or online. Moreover, the very technological means that are currently forming and transforming posthuman subjects—from digital simulations to robotics, artificial intelligence to gene

40 Catherine Malabou, *Metamorphoses de l'intelligence: Que faire de leur cerveau bleu?* (Paris: Presses Universitaires de France, 2017), 144 (my translation).

editing to algorithmic loops—generate increasingly effective duplications, reproductions, and spellbinding simulations that reload the transformative powers of mimesis for the digital age.

As this volume already proves, the genealogical run-up of the mimetic turn should be long enough to give critical and creative power to a Janus-faced *re*-turn of attention to mimesis now at play in posthuman studies as well. It does so under the heterogeneous rubric of posthuman mimesis and its mirroring counterpart, mimetic posthumanism.

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CHAPTER 7

Mimicry to Imitation, Mimesis to Simulation: An Evolutionary Outlook on Copying

Jean-Marie Schaeffer

Copying processes and practices are ubiquitous throughout biological life forms. From an evolutionary point of view, they largely predate the birth of *Homo sapiens sapiens*. But in humans, copying takes on a diversity of forms and functions unknown before. Some of these forms and functions are evolutionary heritages, others are generally believed to be specifically human, and still others emancipate themselves—seemingly at least—from their grounding in human agency. My aim is to caution against the temptation to reduce this structural and functional diversity to a unique concept. This qualification should be of use to the mimetic turn in posthuman studies this volume advocates. I will try to defend this view by taking a closer look at four different "families" of copying behavior: mimicry, imitation, mimesis, and simulation.

1 Mimesis

"Mimesis" is without any doubt a protean concept. This is the case already in Greek philosophy, where the term was coined. Plato's mimesis is certainly not the same as Aristotle's mimesis. Plato accuses mimesis of producing false appearances because it pretends to imitate reality or Ideas, whereas in fact it only imitates something that itself is already an imitation: objects, events, and so on as they appear to our senses. Furthermore, mimesis acts in an irrational way on those who are exposed to it: not by rational persuasion but by contagion. So, it is cognitively void (the phantom of a phantom) and pragmatically dangerous.[1] In Aristotle's view, on the other hand, mimesis is a cognitively valid mode of representation. Although it is a copying of actions and not the realization of real actions, it is not referentially void. Of course, it does not refer to particular facts in the way historical discourse does. But it refers to possible

1 See Plato, *Complete Works*, ed. John M. Cooper and D. S. Hutchinson (Indianapolis and Cambridge: Hackett Publishing, 1997), esp. *Republic*, III, 395–96; X, 598, 604–05, *Sophist*, 266 C; *Ion*, 532–33, 542.

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truths, to what is plausible or necessary, which justifies his idea that it is closer to philosophy than historical discourse is.[2]

Plato's and Aristotle's conceptions of mimesis are focused on artistic mimesis: theater, painting, and narrative, which are seen and evaluated as human activities taking place inside the polis, the city. What they have to say about mimesis is therefore focused only on a specific field inside the larger domain of copying processes. Platonian and Aristotelian mimesis are two functional forms of copying behavior, existing alongside other forms. Of course, one can decide to apply the term "mimesis" to the larger domain, as I think the theory of homo mimeticus does.[3] I have no quarrel with that decision, but as my present purpose is to relocate fiction and more generally human imitative practices in a more general outlook, the use of a semantically thin concept like "copying" as an umbrella term seems preferable to me, as it minimizes the risk of misunderstandings. The more general outlook I am referring to is an evolutionary outlook, which does not postulate an ontic or ontological discontinuity between humankind and other life forms. One important consequence of this outlook is that it sees culture as a specific aspect of the biological evolution, more precisely as a part of the biogram, of *Homo sapiens sapiens* and, to a lesser degree, of some phylogenetically proximate species, notably chimpanzees and macaques.

As mentioned earlier, copying processes and practices are pervasive throughout biological (zoological as well as botanical) life forms. Evolutionarily speaking, they largely predate the birth of *Homo sapiens sapiens* and the theory of homo mimeticus acknowledges the evolutionary roots of mimesis in animal mimicry.[4] But in humans, copying takes on a diversity of forms and functions hitherto unknown. Some of these human forms and functions of copying are evolutionary heritages, others are specifically human. In what follows, I propose to distinguish four major types of copying (mimicry, surface imitation, structural imitation, and mimesis) and I do so in the restricted sense outlined above. Perhaps other forms exist as well, and posthuman mimesis will certainly open up new technologically oriented forms of imitation, as this volume shows. For my purpose, these four have a special importance in biological

2 "Poetry … is a more philosophical and a higher thing than history: for poetry tends to express the universal, history the particular"; Aristotle, *The Poetics of Aristotle*, trans. H. S. Butcher (London: Macmillan, 1895), IX, 51b.

3 See Nidesh Lawtoo, *Homo Mimeticus: A New Theory of Imitation* (Leuven University Press, 2022).

4 See Lawtoo, *Homo Mimeticus*, ch. 5.

evolution and more specifically in human culture, which might continue to ground posthuman developments as well.

2 Mimicry

Mimicry is ubiquitous in botanical and zoological life forms and comes in several varieties. Sometimes it is a genetically hardwired characteristic. This is the case, for example, with the shape and color of the stick insect, which copies the form and color of twigs and whose color darkens at night. Genetically hardwired homochromy of this type is sometimes seasonal, as in the case of the ermine or stoat (which is brown in summer and white in winter). Sometimes it consists of a repertoire of different skin colorings adapting to the colorings of the immediate physical surroundings. In some species, these colorings can change instantly. This is the case with the camouflage of the cephalopods (octopus, cuttlefish, etc.) that adapt their colors to their surroundings in such a way as to be invisible to their prey and predators.

Mimicry can also take the shape of an individually acquired repertoire. This is the case of the mimicking sounds emitted by some species of birds. The competence in mimicry is genetically transmitted, but the sounds that the individual bird mimics are those it encounters in its specific habitat. For example, the lyra bird (*Menura*) is able to mimic the songs of more than twenty bird species, but also random sounds of its environment: fire alarm, chainsaw, camera shutter, and so on. The function of mimicry is always deceptive: The animal that copies part of the visual appearance of another species or adapts to the background of its ecological space hides its identity behind the appearance of something else. This deceptive resemblance maximizes its success as a predator or at avoiding becoming prey. But the deception is not always agonistic: The male bird mimicking the sound of other bird species or of randomly memorized, ecologically pregnant sounds uses them as a prestige signal to seduce the female. Some birds, notably bowerbirds, even emit self-mimicking sounds. For example, during the mating ritual, the male bowerbird mimics its own aggressive signaling. And recent studies tend to show that small babies responding to their mother's smiles are in fact engaging in mimicry, their goal being to maximize the smiles that they get from their mother. This could be read as an adaptative evolution, maximizing the chance of newborns to establish a bond with the person they depend on for their survival.

Ritual dances in animals, but also in humans, often contain elements of mimicry: War dances mimic the sounds and gestures of warriors on the battleground, nuptial dances mimic motor acts and corporeal attitudes of sexual

intercourse, and so on. In the case of ritual dances, the mimicry verges on playful mimicry, a variety of mimicry where the deception itself is only simulated. Playful mimicry implies the existence of a meta-signal indicating that the mimicry is only playful. The infants of most social animal species practice playful mimicry of aggressive or predatory behavior. For example, puppies often engage in playful biting with their parents or among themselves: As Darwin already noticed, during this playful aggression the puppy at the same time waggles its tail, which is a signal of submission functioning in this context as a meta-signal.

We tend to believe that human mimicry is always intentional, whereas animal mimicry is always instinctual or genetically hardwired. But in fact, except when the mimicry is part of the phenotype of a species (as in the case of stick insects or of the seasonal color change of stoats), most mimicries have a cognitive component that is under the control of the individual animal: For example, the camouflage of the octopus is the result of a complex process that starts with visual perception, followed by an analysis of the visual pattern, which commands then the release of hormones that, in turn, activate or deactivate specific chromophores etc.

3 Imitation

I propose distinguishing mimicry from "imitation." The reason is that one of the crucial characteristics of mimicry, which consists of the deceptive use of a signal, is absent from imitation. Mimicry implies readdressing the imitated signal at someone else in a deceptive manner. It typically needs three participants: the original source of the signal, the copier readdressing the signal as a target, and the target, which confuses the source of the copied signal with the original source. Imitation, on the contrary, has only two participants: a source or signal and somebody or something that copies the source. In imitation, the copy is the final outcome of the process.

Imitation so defined comes in two principal forms: surface imitation and structural imitation. Surface imitation, as defined by Richard W. Byrne and Anne E. Russon,[5] is a copying of "the surface structure behavior."[6] A surface imitation copies a behavior on the level of its unfolding as a phenomenal sequence, for example a motor sequence. Following Byrne and Russon,

5 Richard W. Byrne and Anne E. Russon, "Learning by Imitation: A Hierarchical Approach," *Behavioral and Brain Sciences* 21, no. 5 (1998): 667–84.

6 Byrne and Russon, "Learning by Imitation," 671.

the copying of a surface structure behavior implies an imitation of the style of the behavior. They underline the social functions of this mode of copying without detailing what precisely this indication means. One can hypothesize that surface copying renders social signaling more homogenous and has therefore a bonding function. By standardizing social signaling, surface imitation diminishes relational uncertainty and plays an important role in producing and maintaining harmony on the level of the social group. Surface imitation is not necessarily a voluntary act: In the context of socially aggregative events implying strong emotional synchronization, such as sports, political rallies, and so on, behavioral surface imitation (gestures, shouting, etc.) often spreads through a process of contagion. Already noticed by Augustine of Hippo in his description of the behavior of a crowd enjoying a gladiatorial contest, affective contagion was studied by crowd psychologists in the nineteenth century and is now central to mimetic studies as well.

Structural imitation is defined by Byrne and Russon as the copying of the hierarchical and teleological organization that produces the phenomenological sequence of the surface structure of a behavior. Structural imitation retrieves the underlying goal-directed program of the action it imitates. Also called observational learning, structural imitation is a very important learning tool in humans, but also in other social species, notably apes and monkeys. The famous acquisition of the behavior of washing sweet potatoes by a macaque community on the Japanese island of Koshima spread through imitational learning from the inventor, a female, first to other females and eventually the whole community in the following generation. Observational learning is generally at least partly sub-personal or procedural.

Surface imitation is sometimes difficult to distinguish from mimicry. For example, the newborn copying the muscular expression of its mother's smile is perhaps no mimicry, but simply a surface imitation operating by contagion, as is the case even in adults with laughing and crying.

Structural imitation on the other hand is not always easy to distinguish from emulation. There has been an ongoing discussion, inspired notably by Michael Tomasello, about what conditions a behavior must exhibit to be considered a real imitation.[7] Resemblance alone is not sufficient, because a behavior of a subject *b* can resemble a behavior of a subject *a* simply because *b* has the same goals as *a* and adopts a similar strategy (after all, there generally exist only a small number of effective strategies to reach a specific goal). To be imitative,

7 See Michael Tomasello, "It's Imitation, Not Mimesis," *Behavioral and Brain Sciences* 16, no. 4 (1993): 771–72; and Michael Tomasello, *The Cultural Origins of Human Cognition* (Cambridge, Mass.: Harvard University Press, 1999).

the behavior of *b* must be caused not by sharing the same goal as *a*, but by observing the action sequence developed by *a* to achieve their goal.

Structural imitation is also the basis of certain types of cognitive simulations. A cognitive simulation can be defined as a reproduction of the structural characteristics and the operational principles of the simulated entity. Not all cognitive simulations are imitative: Mathematical or digital models are abstractive. They are not imitative in the restricted sense in which I use the expression here. The goal of all models is to achieve a homology between reality and model. The distinctive feature of imitative or mimetic simulations resides in the fact that they achieve homology through an analogical relationship. A good example is the modeling of the behavior of ships in real life by realizing hydrodynamic tests on miniaturized ships in a ship model basin. As of today, it is still impossible to simulate all the variables through computational fluid dynamics software and the use of a mimetic simulation is still an indispensable element of testing. Of course, the interpretation of the experiment's data will be mathematical, but the simulation itself operates through a mimetic miniaturization of real-life ships and real-life sea conditions.

Hopefully, this very rapid presentation will have shown how distinguishing mimesis in Plato's or Aristotle's sense from other forms of copying behavior can be useful for mimetic and posthuman studies. Representational mimesis, which is the type of copying that interests Plato and Aristotle, is an extremely complex mode of copying that combines aspects of several of the varieties of copying we just have encountered. For example, there clearly exists a relationship between Plato's idea of mimesis and the processes of mimicry, and there also clearly exists a relationship between Aristotelian mimesis and structural imitation. Like mimicry, Plato's mimesis is a deceptive use of copying. Like structural imitation, Aristotle's mimesis is a cognitive use of copying. It appears also that Plato's notion of mimesis is quite literally an imitative process implying homomorphy. For Plato, painting copies visual appearances, and theater and narrative copy human discourse: In the theater, the poet speaks through others (the characters of the play), whereas in narrative they partly speak in their own voice and partly through others (when the characters engage in dialogues). If theatrical mimesis is the most dangerous, it is because here all discourses are emitted by feigned characters and, as we know, Plato also defends the thesis that among mimetic narratives the least noxious are those which have no dialogues or at least only sparse dialogues. Aristotle's notion of mimesis is less literal: For him, mimesis is the imitation of actions and characters, but also of emotions (the imitation of emotions playing an important role in the cathartic function of tragedy). Both already provide an alternative to René Girard's anthropological theory of mimetic desire and set the philosophical

foundations of mimetic studies.[8] The historical evolution of the term "mimesis" and its cognates ("imitation," "fiction," etc.) is rich in further expansions of their semantic domain.

Another sign of the complex nature of "mimesis" is the fact that Plato's and Aristotle's views are in fact protean. Plato draws a distinction between epistemically and morally "bad" mimesis and a type of "good" mimesis. Mimesis is cognitively and morally positive when it imitates directly the ideas of objects or behaviors and not their appearances (Egyptian painting and sculpture are acceptable, following Plato, because they are not "naturalistic" but imitate the eternal Ideas of things). Aristotle's view is also complex: Although his *Poetics* is centered on artistic mimesis, he situates artistic imitation in a more general view of structural imitation defined as a specific learning process grounded in early childhood.[9]

More important still is the fact that to be able to understand "artistic mimesis" as "fiction" (as we generally do today), we have to break down what on the surface appears to be a unitary concept into different components whose relationship is tensional. Fictions function simultaneously along the Platonic and the Aristotelian concepts of mimesis because they produce immersion-inducing baits (as Plato has convincingly shown), but they also use these baits to entice the receptor to construct a virtual universe that functions logically and epistemically as a "possible world" (as Aristotle contended).[10]

The general conclusion that one could perhaps draw from this broad and schematic analysis of copying processes is that when we take a closer look at "mimesis" in its artistic sense, it is a specific combination of elements that predate humanity and continue to exist as autonomous ways of copying (or of "mimesis" in the larger sense, as it is defined in the context of this research project). So there is no reason to think that copying processes will not go on to play an important role in posthuman evolution. The symptoms of "posthumanity," as they are investigated by posthuman studies, tend to show that in a posthuman world, "mimesis" (in the larger sense) would be even more ubiquitous than it is in the human world: Cloning, cyborgs, virtual reality, total

8 See Nidesh Lawtoo, *Violence and the Oedipal Unconscious: Vol. 1, The Catharsis Hypothesis* (East Lansing: Michigan State University Press, 2023); Nidesh Lawtoo, *Violence and the Mimetic Unconscious: Vol. 2, The Affective Hypothesis* (East Lansing: Michigan State University Press, 2023).

9 "The instinct of imitation is implanted in man from childhood, one difference between him and other animals being that he is the most imitative of living creatures, and through imitation learns his earliest Lessons"; Aristotle, *The Poetics of Aristotle*, 15.

10 See Jean-Marie Schaeffer, *Why Fiction?*, trans. Dorrit Cohn (Lincoln and London: Nebraska University Press, 2010).

immersion, and so on, *are* "mimetic processes." But one could perhaps formulate the situation in another way: Humans never have been "only" humans; they always have been simultaneously "prehuman" and "posthuman." This is due to the fact that, like all other forms of life, *Homo sapiens sapiens* is an evolving, dynamic reality. And "mimesis" (seen as copying) has always, and on any level of evolution—from the DNA, the RNA, or the protein spikes of viruses to the most complex contemporary virtual reality devices—been a fundamental component of the dynamics of life.

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CHAPTER 8

Nietzsche's Legacy for Posthuman Mimesis: Metamorphoses, Embodiment, and Immanence

Marina Garcia-Granero

Nietzsche is widely recognized as a significant source for philosophical posthumanism.[1] His thought also occupies a privileged position in the emerging field of mimetic studies, central to the discussion of human (trans)formation and world-making.[2] The general goal of mimetic studies is to develop a new transdisciplinary theory of imitation that cannot be conflated with René Girard's universal and transhistorical "mimetic theory." New mimetic studies redraws the boundaries of subjectivity, aesthetics, and politics for contemporary times, through a pluralist and perspectival approach.

This chapter connects both genealogies and revisits Nietzsche's legacy for mimetic posthumanism in order to appreciate the significance of affective, relational, and embodied mimesis and its implications in our increasingly technologically embedded lives. Nietzsche's account of the patho(-)logical sides of mimesis and posthuman studies will complement each other in their argument that the human condition is not original, but very much produced and re-productive, showing that mimesis plays a determinant and productive role in transforming culture toward the posthuman.

Nietzsche's conceptual manifestations of mimesis do not constitute a restricted account of imitation or mimicry. Far from being an individualistic thinker, as it is sometimes presumed, he acknowledged the complexity of mimesis in its intersubjective character, continuously stressed the role of community, and was concerned with unconscious forms of mimesis and their possible political exploitation. Nonetheless, he suggested other potential outlets, directions, and solutions to the reflex of imitation. Thus, he anticipated many of the relational and performative components of the new theory of homo mimeticus, which serves as a major inspiration for the mimetic turn or *re*-turn. Nietzsche's philosophy scrutinized the mimetic experience and techniques that really influence the unconscious preferences of people, societies, and

1 Francesca Ferrando, *Philosophical Posthumanism* (London: Bloomsbury Publishing, 2019).

2 Nidesh Lawtoo, *Homo Mimeticus: A New Theory of Imitation* (Leuven: Leuven University Press, 2022).

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humanity in general—in short, how human beings are mimetically formed and transformed.

I will first argue that Nietzsche's mimetic philosophy provides conceptual tools to capture humans' ability to change form and become something other than what they currently are, in line with the strain of mimetic studies that emphasizes metamorphoses and transformation. The human species can take shape in forms of which we do not yet have an exact notion, which constitutes, at the same time, an absolute risk and an inalienable challenge.[3] The second section deals with embodiment as a focal point of mimetic studies and the site where metamorphoses develop. The focus on embodiment is a crucial difference between posthumanism's and transhumanism's receptions of Nietzsche and their respective understandings of becoming overhuman, transhuman, or posthuman. Finally, the last section explores immanence, affirmation, and love of the Earth as crucial Nietzschean values transforming mimetic objects into posthuman mimetic subjects.

1 Metamorphoses: Transformative Mimesis

In Nietzsche's philosophy, mimesis manifests as "a polymorphous phenomenon that troubles the boundaries of individuation," predominantly negatively in herd morality but productively in his call to promote greatness, creativity, and Dionysian contagion.[4] This ambivalence can also be found in his metamorphic understanding of humanity. On the one hand, he criticizes, particularly in *On the Genealogy of Morality*, that Christian morality and (mass) democracy have "bred" a homogenous, easily controlled, gregarious creature. On the other hand, he contemplates developing and promoting new human types, mainly through the transvaluation of values and Great Politics.

Metamorphoses in Nietzsche rely heavily on animal imagery, not only in the well-known example of the three metamorphoses of *Thus Spoke Zarathustra*, but also in other polemical concepts such as "breeding," "taming," or "domestication."[5] Animal images in Nietzsche's philosophy are conceptual tools to

3 Roberto Esposito, *Bíos: Biopolitics and Philosophy* (Minneapolis: University of Minnesota Press, 2008), 83.

4 Nidesh Lawtoo, *The Phantom of the Ego: Modernism and the Mimetic Unconscious* (East Lansing: Michigan State University Press, 2013), 28.

5 For a rigorous and extensive account of these and other highly polemical, delicate concepts in Nietzsche's philosophy, see Gerd Schank, *Rasse und Züchtung bei Nietzsche* (Berlin: De Gruyter, 2000).

analyze the physiological and selective effects induced in societies through morals, culture, art, and education. Since his early works, such as *Schopenhauer as Educator* and *On the Future of our Educational Institutions*, one of Nietzsche's main concerns is the question of what humans are capable of becoming through severe education and discipline, manifesting in Nietzsche's mimetic relationship—or, as we will later see, "agonism"—between disciplinarian (*Zuchtmeister*) and disciples (*Züchtlige*). Later in his mature work, Nietzsche uses zoological terms to convey that there is hardly any difference between the alleged "improvement" of animals by human beings and the alleged "improvement" of human beings by other human beings through education or religion. In both cases, such "improvement" aims to produce a type better suited and adapted to particular needs, purposes, or circumstances. For instance, punishment and suffering have been effective ways of channeling behaviors to what is considered suitable, permitted, and convenient, pushing the body to incorporate appropriate affective reactions of inclination and rejection. Ultimately, a new affective constitution replaces the previous one, as in the case of the dog replacing the wolf. Nietzsche's argument, common to posthuman studies, is that moral education has been a ruthless and fundamentally immoral process involving violence, punishment, guilt, and suffering. The humanist understanding of education conceals what education actually does and that each morality is a selective process that stabilizes specific instincts and molds the body. Reclaiming these physiological and animal terms, specifically "breeding" and "taming," Nietzsche writes in *The Twilight of the Idols* that "only by using these zoological terms can we begin to express the realities here."[6]

This idea connects with two of the main theses of the mimetic *re*turn: Humans are imitative animals for good and evil, and mimetic processes take place with or without our awareness or consent. They shape our thoughts, behavior, actions, subjectivity, and self-understanding. These mimetic resonances generate echoes that blur the boundaries between self and other, original and copy.[7] As an avid reader of his time's scientific and philosophical literature, Nietzsche's conception of the unconscious was dominant in

6 Friedrich Nietzsche, *The Twilight of the Idols* "'Improving' Humanity" §2, in *The Anti-Christ, Ecce Homo, Twilight of the Idols, and Other Writings* (Cambridge: Cambridge University Press, 2005), 182.

7 Nidesh Lawtoo, "The Mimetic Unconscious: A Mirror for Genealogical Reflections," in *Imitation, Suggestion, Contagion: Rethinking the Social*, ed. Christian Borch (London: Routledge, 2019), 37–53, 38.

the nineteenth century and contested the nature/culture binary.[8] Coetaneous cultural and scientific debates informed his understanding of selfhood and individuality, and lead him to argue that the self is plastic and open to outside influences, human or nonhuman. Humans are not pure, bounded, and stable beings; they are malleable bodies, subjected to the power of unconscious affects and vulnerable to manipulations. Nietzsche's philosophy criticized, in the words of Nidesh Lawtoo, "the contagious affects that have the power to turn the ego into a phantom."[9]

What defines Nietzschean metamorphoses are the process, not the ends, which may be multiple and different depending on the culture. Where there is a morality or a religion, where there are models, there is a "breeding" or "cultivation" in Nietzsche's sense; particular types of humans are being shaped instead of others. Therefore, rejecting or condemning the process is pointless. It is rather a question of finding other ways to negotiate our relations to others, morals, religions, and imitation. It is not a question of disavowing morality, poetry or imitations, but of repurposing them; liberation not from mimesis itself but from bad mimesis.

Nietzsche called to transform western culture and argued that free spirits should take charge of their conscious upbringing and cultivation beyond the logic of the herd. Faced with the force of habits and tradition, he reflected on the possibility of reforming culture following the guiding thread of the body and longed for an embodiment of noble values that will last over generations. By incorporating values in our constitution, values become automatic instincts and regulate our behavior with much greater certainty than mere reasoning. He labeled as instinct qualities that we now understand as virtues or cultural inclinations, tendencies, aspirations, and forces. Instincts are not a fixed matter of so-called human nature, universal for all humankind; they result from specific living conditions, upbringings, and cultivating processes, different from one culture to another. Instincts, too, result from a long-term process of constraint, changing pressures, and coercion that mold people according to the dominant culture on which they depend for survival. In this sense, Nietzsche "overturns an apparently essentialist argument grounded in nature or biology into a constructivist diagnostic grounded in second nature or culture."[10] It is also worth

8 Jane Bennett and William E. Connolly, "Contesting Nature/Culture: The Creative Character of Thinking," *Journal of Nietzsche Studies* 24 (2002): 148–63, https://doi.org/10.1353/nie.2002.0012.

9 Lawtoo, *Phantom of the Ego*, 15.

10 Nidesh Lawtoo, "The Human Chameleon: Zelig, Nietzsche and the Banality of Evil." *Film-Philosophy* 25, no. 3 (2021): 272–95, 284, https://doi.org/10.3366/film.2021.0176.

noting that Nietzsche saw the everyday "little things," such as diet, the environment, climate, or leisure, as "the fundamental concerns of life itself," that is, significant cultural elements that powerfully shape individual and collective lives.[11] These minuscule habits may go unnoticed but have a tremendous impact on the body because of their mimetic repetition. Thus, metamorphoses occur by making changes to the tiniest habits, observations, and ideas that organize our everyday life.

Reinforced by education and customs, successive generations assimilate the norms and values of their community and transform their qualities and preferences. This inheritance cannot be erased, but it is possible to work on it to change it or overcome it. This perspective simultaneously acts as a condition of possibility and a limiting framework. As Nietzsche stated in the first *Untimely Meditation*:

> The best we can do is to confront our inherited and hereditary nature with our knowledge, and through a new, stern discipline combat our inborn heritage and implant in ourselves a new habit, a new instinct, a second nature, so that our first nature withers away.[12]

Nietzsche's natures should not be searched for in the past but actually in the future.[13] He encouraged his best readers to remember the long-term stakes regarding values, habits, and behaviors and that human possibilities have not been exhausted: "This first nature was once a second nature and that every victorious second nature will become a first."[14] His use of the Platonic distinction between first and second nature calls attention to (mimetic) feedback loops that play a crucial role in human metamorphoses.

This leads us to Nietzsche's revaluation of mimesis. As Philippe Lacoue-Labarthe first argued, in the context of Nietzsche's *Untimely Meditations*, it is not a question of passive mimicry (*nachahmen*) but of creative mimesis, an accurate re-creation (*schaffen*).[15] Nietzsche thought that philology should

11 Friedrich Nietzsche, *Ecce Homo*, "Why I Am So Clever" §10, in, *The Anti-Christ, Ecce Homo, Twilight of the Idols, and Other Writings* (Cambridge: Cambridge University Press, 2005), 98–99.

12 Friedrich Nietzsche, *Untimely Meditations*, ed. Daniel Breazeale, trans. R. J. Hollingdale (Cambridge: Cambridge University Press, 1997), §2, p. 76.

13 Vanessa Lemm, *Homo Natura: Nietzsche, Philosophical Anthropology and Biopolitics* (Edinburgh: Edinburgh University Press, 2020).

14 Nietzsche, *Untimely Meditations*, §2, p. 77.

15 Philippe Lacoue-Labarthe, *L'imitation des modernes* (*Typographies 2*) (Paris: Galilée, 1986), 104.

emulate Greek culture to create a fertile soil where genius could flourish and that philologists should learn and incorporate the Greeks' canon of the exemplary through imitation and serve as motivation for further creation.[16] Of course, he did not advocate for the replication of Greek society and did not suggest a return to the Greek state. Instead, he confronted the nineteenth century's revolutionary tendencies with the example of the ancient Greeks. As in other highly polemical writings, such as *The Greek State*, Nietzsche did not support slavery or a return to Greek politics but, rather, endorsed their perspective on life and suggested modern alternatives to replace the ancient Greek practices of slavery and war. This shows that there is no sense of origin or identity in his conception of mimesis, which supersedes any stable point of reference with a differential dynamic of surpassing or overcoming as the ultimate value. Therefore, contest is the appropriate attitude for anyone studying antiquity.[17] This emancipatory understanding of the Greek agon informs Nietzsche's own agonistic dynamic with Wagner, as foregrounded by Herman Siemens, and with Plato and Schopenhauer, as developed by Lawtoo.[18] Lawtoo finds a case of "mimetic agonism" in Nietzsche's philosophy that opens up an alternative to Girard's mimetic rivalry because it proves to be a positive, productive, and creative form of intellectual mimesis.[19] Nietzsche's agon does not consist of violent and exclusive self-assertion against the other, but instead, represents a collective work for elevating culture and humanity. Nietzsche encouraged philologists to recover and recreate ancient Greek learning, commit to educational tasks, and foster higher individualities.[20]

The Greeks did not abandon the emergence of genius to mere chance: Genius was produced through "careful breeding,"[21] resulting in the greatest number

16 Posthumous fragment, 1875, 5[171]. Nietzsche's posthumous fragments in German can be freely accessed online in Friedrich Nietzsche, *Digital Critical Edition of the Complete Works And Letters* (*eKGWB*), based on the critical text by G. Colli and M. Montinari, ed. Paolo D'Iorio, Nietzsche Source, 2009, http://www.nietzschesource.org/#eKGWB.

17 Posthumous fragment, 1875, 5[167]. Paul van Tongeren, "Nietzsche's Greek Measure," *Journal of Nietzsche Studies*, no. 24 (2002): 5–24, 7, https://doi.org/10.1353/nie.2002.0016.

18 Herman W. Siemens, *Agonal Perspectives on Nietzsche's Philosophy of Critical Transvaluation*. (Berlin, Boston: De Gruyter, 2021), 83. On the Nietzsche-Plato and Nietzsche-Schopenhauer mimetic/agonistic dynamic, see Lawtoo, *The Phantom of the Ego*, 31–45, 52–68.

19 On the differences between Nietzsche's "mimetic agonism" and Girard's concept of mimetic rivalry based on "romantic agonism," see Nidesh Lawtoo, *Violence and the Oedipal Unconscious: Vol. 1, The Catharsis Hypothesis* (East Lansing: Michigan State University Press, 2023), 45–57.

20 Siemens, *Agonal Perspectives*, 148.

21 Posthumous fragment, 1875, 5[25]; see also 5[160] and 5[11].

of philosophers with the utmost splendor. The Greeks' pre-Platonic education was based on the imitation of the behaviors and values of specific figures, such as semi-historical heroes, role models, legendary characters, and demigods.[22] These means of identification were an essential part of the Greek tradition of "agonistic paideia," vindicated by Nietzsche.[23] As a trained philologist, he was perfectly aware of this mimetic education and regretted the loss of this Dionysian agonistic contagion. Even if it could seem paradoxical at first glance, imitating the Ancients is a path to becoming unique and original. Nietzsche engaged with them because their mere existence proved that a superior type is possible, that it can be desired as a social ideal, and that such a level of greatness could be achieved and maybe even surpassed. This mimetic agon was, and may still be, an essential impulse for human transformation and cultural development.

Unlike the highly productive Greek emulation that Nietzsche vindicates for contemporary scholars in mimetic studies, other types of mimesis receive a negative evaluation, such as mimicry, which is perceived as a process of self-dissolution. The phenomenon of mimicry is the capacity of animals or insects to create illusions of form or color—or both—to blend into their environment and enable them to pass for other organisms. As animals, humans have mechanisms to adapt to the environment and ensure their survival—the individual hides in the universality of ideals and concepts. Drawing on an animal simile, the person blends in the opinions of the time and the environment. Social morality cultivates these practices by considering them refined: to be discreet, to avoid ridicule, to present ourselves as equal to others, and so on. Of course, Nietzsche's critical tone is explained by how these conventions contradict his aristocratic ethics of singularity.[24]

This virtually universal tendency toward hypocrisy, Nietzsche argues, is one of many things that have prevented humans from attaining a more meaningful world, a world with human meaning. He saw deception, lying, flattering, disguise, and hiding behind conventions as the rule of hypocrisy among people. These behavior patterns serve utilitarian ends of survival and social adaptation, which is why mimicry, associated with "slave morality" and servility, carries a

22 Jean-Luc Nancy and Nidesh Lawtoo "Mimesis: A Singular-Plural Concept." *CounterText* 8, no. 1 (2022): 23–45, 25, https://doi.org/10.3366/count.2022.0255.

23 Lacoue-Labarthe, *L'imitation des modernes*, 163.

24 Friedrich Nietzsche, *The Gay Science: With a Prelude in German Rhymes and an Appendix of Songs*, ed. Bernard Williams, trans. Josefine Nauckhoff, poems trans. Adrian del Caro (New York: Cambridge University Press, 2001), §361, pp. 225–26; Nietzsche, *Twilight of the Idols*, "Skirmishes of an Untimely Man," §14, p. 199.

negative sense: It constitutes invisible social processes that work mimetically on all members, which according to Nietzsche, can lead toward homogenization, gregariousness, and a spiritual slavery manifesting as a passive submission to moral conventions. He dismissed "such a psychic docility via the telling image of the mimetic 'herd.'"[25] An animal accustomed to the herd loses self-confidence and can no longer exist without it. While the mimetic power of the Greeks is linked to originality and sovereignty, the mimetic susceptibility of the herd is associated with cultural slavery.

We can conclude from this section that Nietzsche's chameleon metamorphoses cut across the distinction between human and animal mimicry and emphasize mimesis as a force that operates on human and nonhuman bodies. Like posthumanism, Nietzsche's philosophy characterizes itself by rejecting anthropomorphism and a normative intent to turn a mimetic/aesthetic object into a mimetic/acting subject. Nietzsche's precocious awareness that mimesis is an affective force—or "mimetic *pathos*" as Lawtoo termed it[26]—led him to question the kind of models we want to promote. This leads us to the next section, where we will further explore how metamorphoses arise from lived experiences that destabilize and operate on bodies. Metamorphoses come not only from technology but primarily from the human, bodily experience in the world.

2 Embodied Mimesis for a Posthuman Future

The core message of Nietzsche's metamorphoses and the mimetic conception of the subject it entails resonates with a variety of ideas of key advocates in posthuman studies. It should be noted that this Nietzschean legacy has often been mediated by other authors highly influenced by Nietzsche, such as Michel Foucault or Gilles Deleuze. For example, the Foucauldian "technologies of the self"—the methods and techniques through which human beings constitute themselves—are a crucial notion for the posthuman. Sometimes, Nietzsche's heritage appears merely an echo, but his genealogy of mimesis is worth revisiting to clarify the mechanisms of transformation and metamorphoses.

Rosi Braidotti defines posthumanism as "a recipe for collectively managed processes of social transformation." In the age of the Anthropocene, humans act as ecological agents, but they are also affected "by the multi-layered and

25 Lawtoo, *The Phantom of the Ego*, 31.

26 Nidesh Lawtoo, "Posthuman Mimesis 1: Concepts for the Mimetic Turn," *Journal of Posthumanism* 2, no. 2 (2022): 101–14, 104–08, https://doi.org/10.33182/joph.v2i2.2063.

multi-scalar ecologies to which they belong,"[27] the soil in which they were cultivated, raised, and shaped. Qualities and needs incorporated as living conditions for centuries by a long educational tradition do not disappear with the sole force of theoretical arguments. Therefore, any attempt at cultural transformation will require a long-term timeline and careful attention to nature, the environment, and our "ecologies" (from the Greek *oikos*, "house"). Quoting Nietzsche, Deleuze, and Irigaray, Braidotti acknowledges that changes and transformations of psychic reality cannot be created by sheer volition: "Rather, transformation can only be achieved through deessentialized embodiment or strategically reessentialized embodiment—by working through the multilayered structures of one's embodied self,"[28] or, as we already said via the Platonic distinction between first and second nature, cultural habits result in bodily solidifications in the long term.

Nietzsche is sometimes mentioned as a precursor of transhuman studies, emphasizing the *Übermensch* as a bridge toward future posthuman species.[29] However, the *Übermensch* is not a separate or different biological species, and, *pace* Sorgner,[30] it does not arise by means of an evolutionary step. This is something that Nietzsche openly clarifies in writings like *Ecce homo,* where he denounced the Darwinian misunderstandings.[31] The *Übermensch* is a hypothetical figure of an alternative way of life and values. It personifies Nietzsche's critique of western culture as the counterexample of the "last human," decadent and ascetic. Therefore, this understanding of metamorphoses does not follow an evolutionary paradigm. As we have seen in the previous section, Nietzsche did not endorse the passive endurance of change, for example, the submission to the dynamics of the herd, but the creation of difference. In arguing against social Darwinism that natural selection does not function as an engine of progress, Nietzsche presented alternative forms of selection that

27 Rosi Braidotti, *Posthuman Knowledge* (Cambridge: Polity Press, 2019), 54.

28 Rosi Braidotti, *Nomadic Subjects: Embodiment and Sexual Difference in Contemporary Feminist Theory* (New York: Columbia University Press, 2011), 164.

29 Stefan L. Sorgner, *Übermensch: Plädoyer für einen Nietzscheanischen Transhumanismus* (Basel: Schwabe, 2019). I have engaged with Sorgner's work in Marina Garcia-Granero, "¿Un transhumanismo nietzscheano? Sobre la parcialidad del alegato," *Logos. Anales del Seminario de Metafísica* 53 (2020): 33–54, https://doi.org/10.5209/asem.70835. See also Yunus Tuncel, ed. *Nietzsche and Transhumanism: Precursor or Enemy?* (Newcastle upon Tyne: Cambridge Scholars, 2017), for different positions in this debate.

30 Stefan Lorenz Sorgner, *On Transhumanism* (University Park: Pennsylvania State University Press, 2020), 68.

31 Nietzsche, *Ecce Homo*, "Why I Write Such Great Books" §1, p. 101.

open space for individuality and free spirits, which he then depicted as overhuman ways of life.

Furthermore, Zarathustra suggests that the overhuman will not arise spontaneously (evolutionarily) as a type. Instead, the overhuman must be loved and favored through cultivating processes that will assist the particular forms of life expressed via this image of overhumanity. Specifically, Zarathustra presents himself and his disciples as "begetters [*Zeuger*] and growers [*Züchter*] and sowers [*Säemänner*] of the future."[32] Unlike the traditional humanist lexicon, Zarathustra does not summon "educators" or "the wise." Instead, he chooses figures with a biological dimension, redefines the task of philosophy based on his historical-genealogical teachings, and urges humanity to make resolutions about their future. The *Übermensch* transcends the human being domesticated by humanism, namely, the human type that results from traditional ascetic morals and religions. Nietzsche criticized the narrow perspective of ascetic Christian ideals because they presented a single human type and hindered the promotion and appreciation of other possible types, for example, the "good Europeans." His criticism of Christian "taming" in *The Twilight of the Idols* signifies that no specific type of human can impose their own experiences, views, and perspectives as absolute characteristics of the human species.

At the same time, many transhumanist accounts underplay the role of community in developing the *Übermensch*. Becoming an *Übermensch* is not a purely individual task. The advent of the *Übermensch* requires a propitious culture, soil, and a community of different types that positively influence each other. This is because the ego is plastic for better and worse, porous to external influences, representing both a challenge and an advantage. It is a challenge because there is no *a priori* way to identify and distinguish self-will from an external will.[33] But it is also an asset because it exposes a mechanism for overhuman transformation. In the words of posthuman scholar Roberto Marchesini, "When we internalize overhuman predicates, we inevitably modify the human structure itself."[34]

As many posthuman scholars have stressed, transhumanism ultimately becomes a normative neohumanism by focusing on ability and agency: It

32 Friedrich Nietzsche, *Thus Spoke Zarathustra*, eds. Adrian del Caro and Robert Pippin, trans. Adrian del Caro (Cambridge: Cambridge University Press, 2006), III "On Old and New Tablets" §12, p. 162.

33 N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics.* (Chicago: University of Chicago Press, 1999), 4.

34 Roberto Marchesini, *Over the Human: Post-humanism and the Concept of Animal Epiphany* (Cham: Springer, 2017): 91.

combines liberal humanistic beliefs with heavily industrial robotics and an artificial-intelligence-driven human enhancement program.[35] Posthuman authors often object that, far from being detached from humanistic principles, the transhuman perspective combines a humanistic belief in the perfectibility of Man through scientific rationality with their enhancement programs.[36] This explains the posthuman worry that a transhuman turn might represent a return to the old concept of the human and the metaphysical idealism characteristic of mimetic realism.[37]

Both Katherine Hayles and Rosi Braidotti are critical of these transhuman phantasies of disembodiment. For instance, Hayles calls attention to the fact that "embodiment continues to be discussed as if it were to be purged from the dominant term of information, an accident of evolution we are now in a position to correct."[38] This argument accentuates the need to carefully examine, in a Nietzschean manner, the values disseminated, promoted, and fostered by the new "pathos of techne" and to develop new diagnostics or "techno-patho-*logies.*"[39]

Critical posthumanism holds that our intellect cannot be abstracted from our affective, embodied existence. Like transhumanism, critical posthumanism reconsiders what it means to be human in light of scientific, technological, and philosophical developments but, unlike transhumanism, refuses to be seduced by the aura of technology and profit-driven utopias that aim to transcend human biology and defy mortality.[40] Instead of focusing on the godly promises of technology, posthumanism examines taken-for-granted categories of the human/nonhuman.[41] It also incorporates difference as a key category to reveal that the concept of "Human" has performed as an exclusionary tool, notably for marginalized and vulnerable people considered less than human. This caution serves as an added motive to move beyond anthropocentric conceptions of mimesis. Perhaps surprisingly for those who still regard Nietzsche as an advocate for cruelty and subordination, he wrote, in *Human, All Too Human*, that ascetic morality has worked as a means of rising "above" animality, thus legitimizing the contemptuous regard for animals and persons that

35 Braidotti, *Posthuman Knowledge*, 59.
36 Braidotti, *Posthuman Knowledge*, 41.
37 Lawtoo "Posthuman Mimesis I," 110–12.
38 Hayles, *How We Became Posthuman*, 12.
39 Lawtoo, "Posthuman Mimesis I," 112. N. Katherine Hayles and Nidesh Lawtoo, "Posthuman Mimesis II—Connections: A Dialogue Between Nidesh Lawtoo and Katherine Hayles," *Journal of Posthumanism* 2, no. 2 (2002):181–91, https://doi.org/10.33182/joph.v2i2.1939.
40 Braidotti, *Posthuman Knowledge*, 44.
41 Pramod K. Nayar, *Posthumanism* (Cambridge: Polity Press, 2014), 3.

were unjustly associated with them, specifically using the example of enslaved people.[42]

This oscillation between the less-than-human, humanity, and overhumanity is also at play in posthumanism. On the one hand, the humanist or transhumanist subject might feel more than human because of multiscalar transformations and the immense power provided by cybernetics and technological advances. On the other hand, posthumanist thinkers such as Braidotti stress that we still are, in many ways, less than human because of the persistence of inhumane inequalities, sexism, racism, xenophobia, warfare, and environmental devastation.[43] Likewise, Ferrando reminds us that the emphasis on the "human" as a rational animal has operated as "a powerful discursive tool to historically enslave, mistreat, and dominate some humans and most nonhuman animals."[44] Posthumanism focuses more on radically solving these social inequalities instead of implementing biotechnological enhancements. It is, therefore, not a question of changing our biology in the future but a nuclear ethical challenge that connects yesterday, today, and tomorrow. As Hayles stresses, even biologically unaltered *Homo sapiens* can count as posthuman because the defining characteristic of posthumanism is a new construction of subjectivity, not the presence of cybernetic components.[45]

As we saw in the first section, Nietzsche inquired about the affective and bodily formation of different human types in each community. He critiqued the fundamental assumptions of western thought, including the relationship between human beings, animality, and nature, and asserted that our model of humanity, as we know it, is something that could be changed or even overcome, by emancipating ourselves from ascetic and metaphysical dualisms. Overhumanity, like posthumanity, is a process-oriented approach. It denotes speculations for what is next for humanity, not so much in the evolutionary sphere but more specifically in the cultural sphere: the values and ethics that rule, (re)shape, and (re)model our lives and are at the origin of the problems humanity is facing today socially and environmentally. Like Nietzsche's philosophy, posthumanism is not primarily characterized by its contents, but by its future-oriented praxis. Likewise, mimetic studies, methodologically speaking, have a problem-solving approach and pay attention to different disciplines (philosophy, aesthetics, anthropology, psychology, medical sciences, media

42 Friedrich Nietzsche, *Human, All Too Human: A Book for Free Spirits*, trans. R. J. Hollingdale (Cambridge: Cambridge University Press, 1996), §40, p. 35.

43 Braidotti, *Posthuman Knowledge*, chap. 2.

44 Ferrando, *Philosophical Posthumanism*, 34.

45 Hayles, *How We Became Posthuman*, 4.

studies, etc.) relevant to the particular problem at hand, in this instance, the metamorphic properties of imitation and their role in becoming other.[46] The key issue, as expressed by Braidotti, is to collectively negotiate "what exactly we are in the process of becoming, and how much transformation, pain, dis-identification or enhancement our embodied and embrained selves can take."[47]

3 Immanence: Affirming Life on the Earth

As we have just seen, posthumanists and new theorists of homo mimeticus do not seek to do away with embodiment but instead, focus on how the body morphs in relation to other bodies and their environment and urge to operate an urgent transformation on ourselves, for example, to diminish or slow down the climate disaster. Immanence is a key characteristic of new mimetic studies because it represents a crucial difference with respect to Girard's speculative and ahistorical mimetic theory.[48] Immanence ensures that mimetic studies remain rooted in material reality in connection to human and nonhuman beings, nature, and the Earth. These material foundations are necessary to understanding mimesis as the *conditio humana* internal to homo mimeticus. In fact, recent neurological discoveries, such as mirror neurons and brain plasticity, give empirical substance to the mimetic, embodied, relational, and affective turn. For instance, neuroscientist Vittorio Gallese (one of the discoverers of mirror neurons) argues that mimesis is a basic functional mechanism at the core of our diversified social skills and activities, such as the theory of mind.[49] Our century rediscovers an embodied, physio-psychological, and neurological unconscious that supports immanent and atheological foundations for mimetic studies instead of the idealist, speculative, and transcendent foundations of Girard's mimetic theory.

The new theory of imitation internal to homo mimeticus is a theory about the transmission of affect via mimesis between human (and nonhuman) beings who are part of a social network.[50] As a mimetic precursor, Nietzsche

46 Lawtoo, *Violence and the Oedipal Unconscious*, ch. 5.

47 Braidotti, *Posthuman Knowledge*, 74.

48 Lawtoo, *Homo Mimeticus*, 50.

49 Vittorio Gallese, "The Two Sides of Mimesis: Mimetic Theory, Embodied Simulation, and Social Identification," in *Mimesis and Science: Empirical Research on Imitation and the Mimetic Theory of Culture and Religion*, ed. Scott R. Garrels (East Lansing: Michigan State University Press, 2011), 87–108.

50 Lawtoo, *Homo Mimeticus*.

engages a conception of affect that is not simply intra-corporeal but flows *across* bodies like anger, revenge, or inspiration. Nietzsche's genealogy of the origins of communication uncovers prelinguistic forms of embodied, nonverbal communication across individuals out of mimetic reflexes by looks, hits, caresses, and gestures.[51] Such a philosophy of the bodily, mimetic self avoids speculative hypotheses of founding sacrificial murder (Girard) and does not succumb to reductionist biology or superficial constructivism. Instead, it "ties together the external and internal forces that shape the body."[52] Braidotti, too, characterizes affectivity similarly, as a power that activates our body and pushes us to action.[53]

Similarly, Hayles speaks of contagion in "cognitive assemblages," human and otherwise. Interpretations and meanings circulate and spread in these cognitive assemblages, fluctuating and creating dynamic interconnections between humans and technical computational media.[54] In what follows, I will show that Nietzsche's philosophy of immanence and perspectivism anticipated more vital elements of the relational, affective, and embodied mimesis internal to the mimetic turn in posthuman studies.[55]

Zarathustra (presumably as Nietzsche's mouthpiece) urged philosophers to "remain faithful to the earth," not to believe those who speak of supernatural or otherworldly worlds, and to create new values and ways of inhabiting not the "kingdom of heaven" but the "kingdom of the earth."[56] As we will see, earthly immanence is one of the key ideas of both mimetic studies and posthuman ethics. Zarathustra announces the advent of the overhuman by stating that they represent "the meaning of the earth (*Sinn der Erde*)." *Contra* the despisers of the body, Zarathustra argues for a lifestyle based on fidelity and harmony with the body and the Earth, glancing toward the future and the multiple paths to explore. Nietzsche's use of Earth (*Erde*) instead of world (*Welt*)

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51 Nidesh Lawtoo, "Birth of Homo Mimeticus: Nietzsche, Genealogy, Communication," *CounterText* 8, no. 1 (2022): 61–87, https://doi.org/10.3366/count.2022.0257; and Bennett and Connolly, "Contesting Nature/Culture," 159.

52 Sigridur Thorgeirsdottir, "Nietzsche's Philosophy of Birth," in *Birth, Death, and Femininity: Philosophies of Embodiment*, ed. Robin May Schott (Bloomington: Indiana University Press, 2010), 157–84, 181.

53 Braidotti, *Posthuman Knowledge*, 47.

54 N. Katherine Hayles, *Unthought: The Power of the Cognitive Nonconscious* (Chicago: University of Chicago Press, 2017), part 2; and N. Katherine Hayles, *Postprint: Books and Becoming Computational* (New York: Columbia University Press, 2020), ch. 4.

55 Braidotti, *Posthuman Knowledge*, 42.

56 Nietzsche, *Thus Spoke Zarathustra*, I "Zarathustra's Prologue" §3, pp. 5–7, IV "The Ass Festival" §2, p. 257.

has the explicit purpose of counteracting magical faith in any other world than the Earth, for example, the celestial world (*Hinterwelt*), Christian eschatology, or a supposed "true world" in the metaphysical sense.[57] It is a counterpoint to the priestly image of the divine. Using *Erde*, Nietzsche condemns those who have taken refuge in the "afterworld" instead of building the future. The overhuman does not wish to live in another place or another world but develops an immanent relationship with the Earth that enables new, nonascetic values and flourishing living conditions.

This separates Nietzsche from transhumanist ideals of controlling and overcoming the "limitations" of the human body (aging, suffering, death) and instead aligns him with posthumanist thinkers such as Hayles and Braidotti, and with the mimetic turn in posthuman studies as well, who criticize the quest for "afterworlds" and instead stress the urgency to take care of our world, especially, in the age of the Anthropocene, when humans act as geological agents on the climate. As denounced by Hayles, some transhumanist approaches focus excessively on phantasy scenarios and ingeniously presuppose that the mind and information could be separated from the body. On the other hand, posthumanism provides a cautious middle point between the exaggerated optimism coming from a Silicon Valley vision and the negativity, nihilism, and anthropo-fatigue present in some anti-humanist approaches.

Nietzsche's immanence has important consequences in his philosophical anthropology, the most crucial being that humans do not stand in a unique or particularly high order of rank within nature. What is more, their inattention to nature and the body puts them in a dangerous spot of cultural decline, resulting in a circular orbit of humanity; humans emerged from the ape but might just as well return to it.[58] This evolutionary thesis plays a critical twist to express, *contra* human pride, that the form of life personified by the last man in *Zarathustra*'s "Prologue" brings us back to a lower stage. Nietzsche strategically belittled the ape because of its behavioral proximity to the human being. In particular, he was concerned with the phenomenon of mimicry, which, interestingly, he saw as one of the chief characteristics of the ape. As part of his strategy to criticize humanity's unearned dignity, the ultimate message is that humans are more apes than any apes. Indeed, in the third part of *Thus Spoke Zarathustra*, "Zarathustra's ape" turns out to be a human.[59]

57 Gary Shapiro, *Nietzsche's Earth: Great Events, Great Politics* (Chicago: University of Chicago Press, 2017).

58 Nietzsche, *Human, All Too Human*, §247, p. 117.

59 Peter Groff, "Who is Zarathustra's Ape?," in *A Nietzschean Bestiary: Animality Beyond Docile and Brutal*, ed. Christa Davis Acampora and Ralph R. Acampora (Lanham, Md.: Rowman & Littlefield, 2004).

Before *Zarathustra*, Nietzsche had already used the figure of the ape to convey the crucial role imitation plays in human engagement with social rules and that humans are imitative creatures and come into being through mimesis ontogenetically and phylogenetically. Children imitate as "born apes"; they incorporate and inherit the values, inclinations, and aversions they observe in their parents and environment.[60] His characterization of the human being as an imitative animal captures his concern about mimetic social processes that act as invisible control mechanisms. It also stresses the performative aspect of mimetic transformations, much like an actor who performs on a stage. Nietzsche reflects on a person's different roles throughout life and how this results in the absorption of specific judgments, tastes, and inclinations. In the long term, such impersonations transform our physio-psychological constitution: "Ultimately, we acquire the *affections* and *desires* of our role."[61] The problem of representation in Nietzsche does not primarily involve mental representation but rather impersonation, as already identified by Plato in the third book of the *Republic*.

As mentioned in the first section, Nietzsche's reckoning of mimicry shows that his confrontation with evolutionism was not theoretical but axiological. He incorporated evolutionary theses but rejected the values attached to them by social Darwinism. He repeatedly criticized English evolutionists, such as Herbert Spencer, for postulating the most appalling characteristics as the engine of human development: for example, the inertia of habits, forgetfulness, conditioned reflex, and passive impulses. From a Nietzschean perspective, these unconscious and gregarious mechanisms, so far removed from individuated existence and freedom, are shameful. Thus, Nietzsche's criticism of mimicry is connected to his rejection of adaptation as an ethical criterion. But this criticism is a type of discernment, or patho-*logy*,[62] a genealogical diagnostic that can differentiate between positive aspects or outcomes of mimesis, such as agonism, creativity, or vitalist tendencies, and adverse effects or pathologies, such as gregariousness, political manipulation, or intellectual decline. In fact, philosophers of mimesis have established a solid tradition in mimetic studies that aims to sketch a diagnostic of good and bad forms of mimesis. A mimicry

60 Friedrich Nietzsche, *Daybreak: Thoughts on the Prejudices of Morality*, eds. Maudemarie Clark and Brian Leiter, trans. R. J. Hollingdale (Cambridge University Press, 1982), §34, p. 25.

61 Posthumous fragment, 1884, 25[374].

62 Lawtoo coined the concept of "patho(-)logy," understood "both as a sickness caused by mimetic pathos (or pathology) and as a clinical account or discourse (*logos*) that emerges precisely from the exposure to pathos (or patho-*logy*)." Lawtoo, *Homo Mimeticus*, 38.

is just a particular form of mimesis. Indeed, mimesis goes well beyond organic adaptations and material pressure because the mimetic world is constituted symbolically.[63]

In addition, posthuman mimesis finds in Nietzsche's perspectivism a renewed, embodied, and immanent understanding of objectivity, as shown by his use of the hermeneutical (and bodily) trope of the "eyes:"

> The *more* affects we are able to put into words about a thing, the *more* eyes, various eyes we are able to use for the same thing, the more complete will be our "concept" of the thing, our "objectivity."[64]

The more eyes involved, the more objective and valuable the insight. Hayles also implicitly argues for a perspectivist epistemology when she warns that "we do not see a world 'out there' that exists independently from us. Instead, we only see what our systemic organization allows us to see."[65] Perspectivism methodologically enables affirmation, which also takes the form of "politics of locations" or radical immanence, following the feminist tradition of Adrienne Rich, among other authors. Perspectivism is relational, meaning that truth is in the relation.[66] Indeed, for Nietzsche, perspectivism does not erode into nihilistic relativism because not all perspectives are equally worthy. In any case, as I have already hinted, critical posthumanism adds to Nietzsche's perspectivism a crucial critique of Eurocentric, anthropocentric, and masculinist assumptions that Nietzsche did not tackle.

Finally, immanence becomes a crucial question dealing with how mimetic subjects respond to events. Both Nietzsche and posthuman authors argue for a new way to respond to what one is faced with, differently from the Christian experience of suffering and its repressive deviation of vital forces. The Christian experience of suffering provides consolation in a divine redemption and compensation for their pains in the afterworld. As an alternative to this escathological framework, and drawing explicitly on Nietzsche, Braidotti argues for a pragmatic engagement with the present and to produce social horizons of hope and sustainable futures collectively.[67]

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63 Gunter Gebauer and Christoph Wulf. *Mimesis: Culture, Art, Society* (Berkeley: University of California Press, 1995), 319.

64 Friedrich Nietzsche, *On the Genealogy of Morality,* ed. Keith Ansell-Pearson, trans. Carol Diethe (New York: Cambridge University Press, 2006), III §12, p. 87.

65 Hayles, *How We Became Posthuman*, 11.

66 Braidotti, *Posthuman Knowledge*, 49.

67 Braidotti, *Posthuman Knowledge*, 173.

Affirmative ethics do not deny the harmful elements of life. It is not a question of avoiding pain but rather a different way of reworking it, because human and posthuman mimetic subjects have moral, aesthetic, and hermeneutic resources to withstand suffering. Affirmative mimetic subjects replace the ascetic Christian way of experiencing suffering with love for the Earth. Thus, embracing affirmation as a posthuman value is perfectly compatible with the critique of metaphysical Christian values and their life-denying practices because affirmation discovers a different selective process, in the sense that it chooses different values and promotes new life forms. That is why affirmative forces increase our relational capacity and freedom from the protocols of institutional control. Thus, the affirmation of life remains open to suffering, illness, and conflict and unveils the abyss, the paradox, and the meaninglessness of existence. Most of the time, the events of our lives and the world—for instance, a pandemic or a catastrophe—exceed our limited human power. As a mimetic and posthuman (not transhuman) value, affirmation opens another way of understanding the hurtful elements of life as inherent to the posthuman experience. It prevents letting oneself be gnawed by resentment, regret, guilt, or the desire for revenge, which actually magnify suffering via mimetic contagion. These values have been engraved for millennia in the average European and are the subject of Nietzsche's, Braidotti's, and Hayles's criticism.

4 Conclusions

This chapter has presented Nietzsche's understanding of mimetic metamorphoses as a crucial genealogical source that, with all due ethical precautions, should be internal to discussions about posthuman mimesis that aim to go beyond nature/culture oppositions to trace the process of becoming posthuman to come. Nietzsche's metamorphoses are not something humans can get away with, as these are the formative enterprises of a species that is intrinsically mimetic. For Nietzsche, mimetic processes are both the problem and the solution. From our contemporary perspective and following the contributions of key advocates of mimetic and posthuman studies, I have argued that mimetic metamorphoses (embodied, affirmative, and immanent) play a vital role in the trial of posthuman becoming.

Contrary to solipsistic understandings of human autonomy, this account stresses that we are inherently vulnerable to outside influences, organic and nonorganic, human and nonhuman, good and evil. Nietzsche and posthuman mimesis regard bodies as the ground of being, not an object of control that should be mastered. Moreover, Nietzsche famously criticized ascetic

understandings of the body as something whose constraints must be handled and managed, which now reappear in transhumanists' hopes for a "post-biological" future.

As we have seen, key advocates in posthuman studies, such as Hayles and Braidotti rely on an immanent relational physio-psychology, in line with Nietzsche's emphasis on the power of cultural impression to shape subjectivity, all the way down to physiology. Both the debilitating aspects of mimicry and the productive side of mimesis align with these thinkers' accounts of embodiment, relationality, immanence, and processes of becoming other.

For all these reasons, Nietzsche's legacy contributes to unmasking idealistic transhumanist fantasies from the embodied perspective of mimetic affects. At the same time, his philosophy provides a realistic and relevant account of subject formation, which considers internal and external forces as determining factors for shaping individuals and cultures. Almost 30 years after the publication of Gebauer and Wulf's *Mimesis*, the emerging field of mimetic studies shows that mimesis remains central to the formation and transformation of culture, art, and society and now plays a vital role in the metamorphoses of posthumanity. Finally, Nietzsche's skepticism toward social Darwinism and alleged human "improvement" programs serves as a timely reminder to be extremely careful with any promise of biological or moral enhancement and any hierarchization of human life. This aligns with posthuman mimesis' mission of morphing into plural kinds of humans that allow us to coexist and flourish in a paradoxically more human world that does not translate differences into violence and discrimination. Therefore, the mimetic turn in posthuman studies is necessary to account for both sides of mimesis and to promote life-affirmative and future-oriented transformations beyond simple binaries in the posthuman age.

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CHAPTER 9

Mimesis, Posthumanism, and "the absolute antecedent": Some Thoughts on Jacques Derrida's "Advances"

Ivan Callus

Jacques Derrida's "Advances" is a consequential text for thinking through the relation between the mimetic and the posthuman. This chapter offers some thoughts on how and why that consequentiality arises. It does so with a touch of unorthodoxy in its structure and style. This is not an affectation or an indulgence. The mode is, it could be said, inevitable. It is hard for any commentary on "Advances" not to find itself coming over all imitative of the singular pitch and tones of that essay, or at least patterned by them, even if only to a degree and in inevitable inadequacy in the comparison. Perhaps the patterning is also entirely fitting. "Advances" is, after all, as will be shown, about "the absolute antecedent," in relation to which everything cannot but be "after" (in the sense not only of subsequence but also of being "in the manner—or in the cast—of").

But first, some context, which will take up almost all of this opening section. A key point to flag at the outset is that "Advances" is one of Derrida's most *compact* essays. In the 2017 English translation by Philippe Lynes, published by the University of Minnesota Press under the Univocal imprint, the essay takes up just over 50 pages of the small sextodecimo-sized volume, itself called *Advances*, of which it forms the second part. It is barely longer than Lynes's important introduction, strikingly titled "Auparadvances." Two years later Lynes translated, also with Univocal, Serge Margel's *The Tomb of the Artisan God*, which is an extended commentary on Plato's *Timaeus*.[1] The original of that, *Le tombeau du dieu artisan*, was published in 1995 by Editions de Minuit, and it was there, as an introduction to Margel's book, that the French original of Derrida's essay, "Avances," first appeared.[2]

1 Serge Margel, *The Tomb of the Artisan God: On Plato's Timaeus*, trans. Philip Lynes (Minneapolis: University of Minnesota Press, 2019).

2 Jacques Derrida, "Avances," in Serge Margel, *Le tombeau du dieu artisan, précedé par Avances de Jacques Derrida* (Paris: Les Editions de Minuit, 1995), 7–43.

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Needless to say, it is not in the length of the essay that the compactness of "Advances," cast in a style of elliptical yet peculiarly lyrical philosophical commentary, is strongest. The greater compactness lies in how, just like "*Khōra*"—the better-known essay by Derrida on *Timaeus*,[3] whose first version was published in 1993 with the English translation appearing in *On the Name* in 1995—"Advances" compresses considerations on "the first act of the world," or on what "*Khōra*" had referred to as "the anachrony of being."[4] "Advances," then, is a text of packed portentousness, which Derrida's opening to the essay is not hesitant to foreground. There is, right at the start, an intimation of "an immemorial tremor, an architectonic trembling" (*A*, 3). Possibly even more than "*Khōra*," "Advances" is therefore about everything and nothing. More than once, in fact, it repeats the old question, "Why is there something rather than nothing?" (*A*, 17). In that echoing, "Advances" will be an essay "Running the risk—the beautiful risk—of thinking an anachronic earthquake: like an aftershock from the absolute prehistory of the world, nothing less" (*A*, 3). In the risking and the thinking, the focus will be on *Timaeus* as "this old book of humanity's, which also says the origin of the human, this book of pure archaeology [which] is also a monument of the Humanities," and which is "a kind of Bible before its time" (*A*, 3–4).

The discomfiting sense in the face of all that "everything" is of unavoidable inadequacy, even absurdity, in attempting to respond in one short book chapter to Derrida's compact thoughts on anachronies at the beginning of things, to which philosophy and religion are "countertimes" (*A*, 23 and *passim*). And indeed, *where to begin?* How, possibly, can anything on the anachrony of being, on "the absolute *antecedent*" that "would precede even … provenance" itself, be begun (*A*, 4; emphasis in the original)? Especially in relation to a text on speculativeness, on beginnings and creditings and prospects ("advances" as a term also has that connotation; see *A*, 5)? One might as well assay nothing.

To make things more awkward and incongruous still, there is going to be a situational irony in any attempt to closely read "Advances." It arises because this English translation of a text that was prefatory to another's study, Margel's, is out of (its) place (and not only because a translation can never

3 *Timaeus* is in some commentaries prefaced by the definite article, so that it is referred to as "the *Timaeus*." That convention is not followed in this chapter.

4 Jacques Derrida, "Advances," in *Advances*, trans. Philip Lynes (Minneapolis: Univocal, 2017), 1–54, 6; Jacques Derrida, "*Khōra*," in *On the Name*, ed. Thomas Dutoit, trans. David Wood, James P. Leavey, Jr, and Ian McLeod (Stanford, Calif.: Stanford University Press, 1995), 87–127, 94. Page references to these two works, which will be abbreviated as *A* and *K* respectively, are hereafter given within parentheses in the main text.

be in place just in time). The essay was originally written to be placed *before* Margel's text: "before," in various slippery senses of that word that are themselves invoked by Derrida throughout and that are also studied to repointed effect by Stefan Herbrechter in *Before Humanity*, a book in the same series as this current volume and one that brings posthumanism into conceptualizing dialogue with prehumanism, prehistory, the time before time that also exercises "Advances."[5] But the English publication of "Advances" occurs in detachment from Margel's *The Tomb of the Artisan God*: that is, the English translation that, unlike the French original, does not carry Derrida's essay. In the original, "Advances" came before Margel's text; in the English translation, it is separated from Margel, given a small book to itself in which it comes after Lynes's re-placing introduction, which is marked by ample and admirable referencing rigor. Consequently, the question of how to proceed, in what order, is not merely rhetorical. For what tidying, rationalizing line is to be laid on the sequence and inter-embeddings of these texts, with their background in prehistory, in "a prechronological time" (*A*, 22) of absolute antecedence?

Perhaps the most readily logical line of argument for the Anglophone reader and commentator might run with rereading *Timaeus* first; then "*Khōra*," Derrida's prior engagement with Plato's work; then Margel's commentary on *Timaeus*, to which "Advances" is prefatory *and* consequent; then Lynes on "Advances," for the scholarly contextualization; then "Advances" itself. That would be one way to do it. Or not, because there will always have been vexing differences and (in)determinations in and over translation(s); other precedences of, advances on, any commentary, in the long and never-ending tradition of reception and interpretation of *Timaeus*. In reading "Advances," there would always be something to do first: *before*. As a result and as will be indicated in later sections, to meaningfully do anything with this (inter)text that opens onto everything can have implications for reflection on mimetic relation, or modeling relating—and hence for (p)(re)thinking the posthuman.

It might therefore be best to set the frame in a decontextualizing way: narrowingly, omittingly. It will never be possible to provide enough context to everything anyway, not when the context is, literally, everything. This chapter will in contrast be rather breezier, rather more liberties-taking. It will look "only" at "Advances": not entirely without reference to *Timaeus* or "*Khōra*," but almost as if Derrida's essay were a self-contained commentary (which it isn't, quite) on the former. Admittedly, this is a little suspect, possibly unfair, in

5 See Stefan Herbrechter, *Before Humanity: Posthumanism and Ancestrality* (Amsterdam and New York: Brill, 2022).

relation to Margel's work. A little expediently excluding, too, even if the move is prefigured in the presentation and framing of the English-language publication of "Advances" alluded to above. But the move is hopefully justifiable because it frees space for a different focus, allowing attention to bear upon the relevance to the theme of this volume: posthuman mimesis.

In grounding that relevance, this chapter does nothing more ambitious than pulling from the text of "Advances," with "*Khōra*" alongside, just a few observations of Derrida's that weigh upon the theme of posthuman mimesis, offering some initial reflections. To do more—for instance, building on the reading line anticipated above—would need a much longer study. There is some decorum in keeping things tight instead: *compact*, emulating Derrida's essay. The imitating carries through to the structure. "Advances" has seven sections, running from 0—the digit signifying nothing or the unbegun—to 6. The reflections in this chapter's own imitatively numbered and irregularly sized sections (this current section, in imitation, would need to be numbered "0") will be fragmentary, unresolved (somewhat like those in Derrida's, it is perhaps not unseemly to say, though there the incompletion is of a different key and import altogether). It is all that can be offered in a chapter of this kind: bitty reflections on what Plato and thence Derrida speculatively advance on the beginning of everything.

1

The (non-)space for posthuman mimesis lies *there*: in the prehuman fashioning, with and without the assurance of model, of what Plato terms "the universe."

To proceed a little more conventionally, it is helpful to recall from *Timaeus* at least some passages in which mimetic energy is in play—or decried. The first involves, yet again, a suspicion of poets and poetry. Socrates tells Timaeus, Critias, and Hermocrates:

> I don't mean any disrespect to poets in general, but it's obvious to everyone that while imitators as a breed have the greatest facility and expertise at reproducing things they've been brought up on, none of them finds it easy to reproduce on stage anything that falls outside his experience, and they find it even less easy to put such a thing into words.[6]

6 Plato, *Timaeus*, in *Timaeus* and *Critias*, trans. Robin Waterfield, introduction and notes Andrew Gregory (Oxford: Oxford University Press, 2008), 1–99, 6 (19d–19e). Further page references to *Timaeus* (abbreviated as "*T*") are provided in the main text.

In a different context, it would be good to probe and problematize this view, but here it is the preaffinity, with the perspective on an engendering possibility of imitation, modeling, *mimesis* that calls for attention, and that is now expressed by Timaeus.

> What is it that always is, but never comes to be, and what is it that comes to be but never is? … anything created is necessarily created by some cause, because nothing can possibly come to be without there being something that is responsible for its coming to be. Also, whenever a craftsman takes something consistent as his model, and reproduces its form and properties, the result is bound in every case to be a thing of beauty, but if he takes as his model something that has been created, the product is bound to be imperfect.
>
> *T*, 16, 28a

Here, then and again, is the atavistic disdain for imitation. And there is more, too familiar and involved to summarize or revisit at any length here, except that some of the culminating conclusions do need to be recalled:

> What we have to ask is, again, which of … two kinds of model the creator was using as he constructed the universe. Was he looking at what is consistent and permanent or at what has been created? Well, if this universe of ours is beautiful and if its craftsman was good, it evidently follows that he was looking at an eternal model, while he was looking at a created model if the opposite is the case— though it's blasphemous even to think of it. It's perfectly clear, then, that he used an eternal model, because nothing in creation is more beautiful than the world and no cause is better than its maker. The craftsman of this universe, then, took as his model that which is grasped by reason and intelligence and is consistent, and it necessarily follows from these premises that this world of ours is an image of something.
>
> *T*, 17, 29a–29b

Those "ifs" and "thens" are all supposedly steeped in "perfect clarity": It is likely that contemporary response will not quail from contrariety in regard to the points in question in quite the same manner as the uninterrupting Critias, Hermocrates, or Socrates himself. (It is Timaeus who flows on with the discourse of the Demiurge.) But the overriding point is that "likeness," "model," "similarity," "dissimilarity"—recurrent terms in *Timaeus* (reflecting the potentiation of *mimesis*, one might say)—all bear upon humanly perceivable and livable time:

> The father-creator … determined to make his creation resemble its model even more closely. … But the being that served as the model was eternal, and it was impossible for him to make this altogether an attribute of any created object. Nevertheless, he determined to make it a kind of moving likeness of eternity, and so in the very act of ordering the universe he created a likeness of eternity, a likeness that progresses eternally through the sequence of numbers, while eternity abides in oneness.
>
> This image of eternity is what we have to come to call time.
>
> *T*, 25, 37d

It thereby follows that "the model exists *for all eternity*, while the universe was and is and always will be for all time" (*T*, 26, 38b).

In the beginning, then, was mimesis.

It is in fact possible to go through *Timaeus* constructing an inventory of its archaeo-poetics of the mimetic. There would be value and utility in that exercise, but here it is more immediately useful to revisit the two ideas that are at the core of "Advances" and "*Khōra*." The first concerns the demiurge, the mimesis-dynamic craftsman-god, and the second concerns "*khōra*" itself. Here, about the demiurge, is the context usefully offered by *The Stanford Encyclopedia of Philosophy*:

> In the *Timaeus* Plato presents an elaborately wrought account of the formation of the universe and an explanation of its impressive order and beauty. The universe, he proposes, is the product of rational, purposive, and beneficent agency. It is the handiwork of a divine Craftsman ("Demiurge," *dêmiourgos*, 28a6) who, imitating an unchanging and eternal model, imposes mathematical order on a preexistent chaos to generate the ordered universe (*kosmos*). The governing explanatory principle of the account is teleological: the universe as a whole as well as its various parts are so arranged as to produce a vast array of good effects. For Plato, this arrangement is not fortuitous, but the outcome of the deliberate intent of Intellect (*nous*), anthropomorphically represented by the figure of the Craftsman who plans and constructs a world that is as excellent as its nature permits it to be.[7]

7 Donald Zeyl and Barbara Sattler, "Plato's *Timaeus*," *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, Summer 2022 Edition, https://plato.stanford.edu/archives/sum2022/entries/plato-timaeus.

What Derrida does on the basis of his reading of Margel's *The Tomb of the Artisan God* is to unsettle this rather irenic understanding of the *Timaeus*. The Demiurge is Margel's artisan god. His tomb is the Earth, to which he gave being but from which he withdrew. Or, in Derrida's words:

> The Demiurge would be, from the beginning, a sort of survivor, thus a dying being who writes the world in the instance of his death, his own or the world's. He haunts a memory, but the memory of a promise. The last will of a testament opens the chance of the future.
>
> *A*, 11

For Derrida, Margel's Demiurge is "an inactive, finite subject, powerless and subjected to laws as contradictory as they are implacable, a central but also passive subject." He is fore-lorn, in "a silent dramaturgy *before* the first act of the world" (*A*, 6; emphasis in the original).

The second idea is the "*khōra*." As Lynes explains in his introduction to "Advances":

> *Khōra* … in Greek simply means "place," "place in general, the residence, the habitation, the place where we live, the country." In Timaeus's fable of the Demiurge's creation of the sensible world, however, "*khōra*" for Derrida comes to designate the precise site of resistance to Platonic metaphysics as that which *gives place*, or as *spacing*. It ought already to be noted that Timaeus's account belongs to no assured opposition between *logos* or *muthos*; it is rather a "bastard," "impure," or "hybrid" account, a preorigin to philosophical discourse. *Khōra* must likewise be grasped "as in a dream."[8]

And indeed, Derrida had already emphasized that *khōra* is a "mytheme" that is a "prephilosopheme," as he calls it (*K*, 100–1). It is "alien to the order of the paradigm," "genre beyond genre" (*K*, 90–91). If it can be described at all, its attributes are "two types of oscillation: the double exclusion (*neither/nor*) and the participation (*both this and that*)" (*K*, 91). "The thought of the *khōra* would trouble the very order of polarity, of polarity in general, whether dialectical or not" (*K*, 92); it "no longer belong[s] to the horizon of sense, nor to that of meaning as the meaning of being. It does not designate any of the known or

8 Philip Lynes, "Introduction: Auparadvances," in Jacques Derrida, *Advances*, trans. Philip Lynes (Minneapolis: Univocal, 2017), ix–xlviii, xxi–xxii.

recognized or, if you like, received types of existent*, received* by philosophical discourse, that is, by the *ontological* logos which lays down the law in the *Timaeus*: *khōra* is neither sensible nor intelligible" (*K*, 96). It is a "third genre" (*K*, 90).

Derrida follows Timaeus'—Plato's—discomfort at the obscure, unresolved nature of the concept. He fixes on Plato's recourse to metaphor, particularly to the image of a receptacle:

> *Khōra* receives, so as to give place to them, all the determinations, but she/it does not possess any of them as her/its own. … she is not the *subject* or *the present support* of all these interpretations, even though, nevertheless, she is not reducible to them.
>
> *K*, 99

Derrida deconstructs Plato's metaphors for *khōra*. "Almost all the interpreters of the *Timaeus* gamble … on the resources of rhetoric without ever wondering about them," he notes (*K*, 92). He sees *Timaeus*, interestingly, as "a narrative but it is a narrative of the going outside of narrative. It marks the end of narrative fiction" (*K*, 101).

With all this as a backdrop, the posthumanist affinities that emerge might be considered. And, it is important to stress, they trail, in turn, the mimetic. For *khōra* was always about imitation, copy, *molding*, and yet also about a hospitality to this dynamic that is so comprehending that it is, itself, lack itself, an absolute protean nonbeing, a nothing that is the condition of everything. That much appears here:

> It never is anything other than what it is; it only ever acts as the receptacle for everything, and it never comes to resemble in any way whatsoever any of the things that enter it. Its nature is to act as the stuff from which everything is moulded … And whatever enters it and leaves it is a copy of something that exists for ever, a copy formed in an indescribably wonderful fashion.
>
> T, 42, 50c

The "moulding stuff" that is *khôra*, "if it is to be the receptacle of *all* kinds, … must be *altogether* characterless." It is as if this cannot be emphasized sufficiently; hence, for good measure: "that which repeatedly has to accept, over its whole extent, all the copies of all intelligible and eternally existing things: if it is to do this well, it should in itself be characterless" (*T*, 43, 51a).

Well might it be said of this absolute antecedent to all mimesis that "It's almost incomprehensible" (*T*, 43, 51b).

2

How does the above bear upon the posthuman?

In what follows, the posthuman is understood not in the key of the usual associations, many of which speculate (as in, wager) on urgent futurity. Instead, a little counter-intuitively, the posthuman is here seen as that which is before the human. "Before" is understood here in two senses. The first is of antecedence, echoing the phrase quoted in this chapter's title. This opens up the idea of the prehuman—and of prehumanism, talk of which is not more glib than posthumanism's predilection for critical rhetoric about what might be imminently impending or immanent. The second sense is that of "being in front of," as when one says, "I stand before you." Hamlet, he of "to be or not to be" fame, a homo mimeticus all too conscious of the figure and name of he who comes fatheringly before him, asserts this kind of being-before in the graveyard scene in Act v, an artist (more than artisan) prince coming out from behind the tombstone: "It is I, Hamlet the Dane." To be before in this sense is to con-front and also, as with Hamlet, to seek to understand self and situation, thrownness and (non-)being: before the selfsame, before filiation, before others, before the Other. These and other senses of *before* and their import for posthumanist thinking are studied with greater expansiveness in Herbrechter's *Before Humanity*, referred to earlier. Here, to keep things compact, the idea of ancestrality developed by Quentin Meillassoux in *After Finitude* is pertinent. Meillassoux's discussion of correlationism is here suppressed in order to draw attention to this passage:

> What *is it* exactly that astrophysicists, geologists, paleontologists are talking about when they discuss the age of the universe, the date of the accretion of the earth, the date of the appearance of pre-human species, or the date of the emergence of humanity itself? How are we to grasp the *meaning* of scientific statements bearing explicitly upon a manifestation of the world that is posited as anterior to the emergence of thought and even of life—*posited, that is, as anterior to every form of human relation to the world*?

> … I will call "ancestral" any reality anterior to the emergence of the human species—or even anterior to every recognized form of life on earth.[9]

The pre-dis-position of this kind of questioning to all kinds of creation narratives, of which *Timaeus* is of course itself one, hardly needs pointing out. Or the pre-dis-position to theology. Derrida notes in "Advances" how the matters at issue hinge on "A question of what comes *before everything* [*avant tout*] (ante, abante), of the absolute *antecedent*, an ageless forbearer" (A, 4; emphasis added). And across "*Khōra*" and the *Timaeus*, this will always turn back to "the question of anthropomorphy," that there is everything rather than nothing, that there is the human in the midst. Also, to quote Christopher Fynsk, "that there is language."[10] And that there is a pleasant game to be played when looking at any posthumanist inquiry. The game that asks, "How long into it will it be before the question, 'What does it mean to be human?' is asked—or before the question "What is 'man'?"

This is all quite posthumanist enough already.

3

But what about the mimetic—and thence, homo mimeticus? To reinforce what was anticipated above, here are just a few points that anchor the relevance, for thinking posthuman mimesis, of Derrida's re-encounter through Margel with *Timaeus*. Already, in "*Khōra*," Derrida had noted:

> if Timaeus names it as receptacle (*dekhomenon*) or place (*khōra*), these names do not designate an essence, the stable being of an *eidos*, since *khōra* is neither of the order of the eidos nor of the order of mimemes, that is, of images of the eidos which come to imprint themselves in it.
>
> *K*, 95

Interestingly, Derrida refers to the thought of *khōra* and the (im)possibility of moving outside it and its associations and extensions, including in "*politeia*," as "a mythomimetico-graphic dream" (*K*, 117–19). And if we understand mimesis

9 Quentin Meillassoux, *After Finitude: An Essay on the Necessity of Contingency*, trans. Ray Brassier (London: Continuum, 2008), 9–10 (emphasis in the original).

10 Christopher Fynsk, *Language and Relation: … that there is language* (Stanford, Calif.: Stanford University Press, 1996).

in the simplest sense of fashioning after a model, here is then an example—dare we call it originary—from a time before time, with and without a model:

> In the shadows, the Demiurge prepares an artifact, deep in a workshop or a back room. He always stays in the back, behind, and thus before [*avant et devant*] everything. Calculation and magic, ratiocinating alchemy, dangerous alliance of technology and occultism, indeed spiritism. … At the origin of the world, or rather the order of our *cosmos*, before it, the Demiurge is especially not a creator God, some maintain, the Demiurge can only contemplate intelligible structures that have preceded him since forever, eternal paradigms. His gaze thus fixed *on the model before him in front of him*, this contemplator only has eyes for this model. With a draftsman's or sculptor's skill, however, he inscribes, he imprints directly upon the "site." Directly there on a support that is in no way substantial, in the impassive receptacle called *khōra*, he engraves, as if by hand, images or copies. But the artist-artisan has no more created the space within which this printer imprints images by means of "typography" than he has created or invented their models. Everything is *before* and *in front of* he who finds himself *before* [*devant*] his model, before what is to be done, before his judges and heirs: the immortal gods, the intelligible paradigms, the *khōra* and the representations he inscribes upon it—and us. The Demiurge is before [*devant*] these, already owing [*devant*] them everything, but also before and in front of us.
>
> *A*, 13–14

A very different angel, or agent, of history then. And whatever the angel, or the angle or approach of reading, the relation is always one of mimesis, a be-fore and an owing, the current between an "*être avant*" and an "*être devant*" (*A*, 7).

4

None of this is inconsequential (how could it be?). Yet Lynes notes that "Advances," "despite serving as a frequent point of reference in Derrida's own work, remains rarely studied in English-speaking deconstructive scholarship."[11] Clearly, this is anomalous. As Lynes writes, "Advances" can "importantly contribute not only to Derridean scholarship, particularly regarding

11 Lynes, "Introduction: Auparadvances," xi–xii.

Greek philosophy and time, but also to current debates in new materialism, speculative realism, and biopolitical thought, as well as the emerging field of eco-deconstruction."[12]

Safely addable to that list is posthumanism—indeed, posthuman mimesis. A posthumanist reading of mimesis will find, as the previous sections will have intimated, inexhaustible pertinence in "Advances" and the texts it positions itself before, *devant*. As well as discussing and elaborating evident posthumanist motifs in texts contemporaneous with the paradigm, a posthumanist reading can tease out crypto- and proto-posthumanist concerns in canonical works. The intention would not be merely to show how earlier texts, including those from antiquity, have amenabilities to posthumanist capture. That is already interesting, but the work of rereading and reinterpretation becomes more critical when it is discovered that the text in question may offer ground for posthumanism—indeed, for ideas on posthuman mimesis, in this case—to look back at themselves, to re-theorize on that basis. To reaffirm the opening of this chapter: What Derrida's "Advances" rediscovers is that few texts may be as consequential or revealing in that effort as Plato's *Timaeus*.

There has been, as is well known, excellent work done on, for instance, medieval posthumanisms and Renaissance posthumanisms. If the *Timaeus* ought to be central to any work on posthumanism in antiquity—on Ancient posthumanisms—it is because, in Derrida's words, it is "the Greek book on which we have no doubt written the most since there has been philosophy" (*A*, 18). *Timaeus*, Derrida writes, is "a book anterior and undoubtedly foreign to every Bible" (*A*, 18). It stands us, indeed, before time. Posthumanist reading will henceforth know where to (re)start.

5

We have seen already how Derrida speaks of "khora as *pandekhes*," "khora as receptacle," and, crucially for posthumanist discourse, as "beyond all anthropomorphy" (*K*, 111). But it does not take long—and this is revealing for posthumanism, for posthuman mimesis—for anthropocentrism to reassert itself in *Timaeus*. For, Derrida writes on the basis of his critique of *Timaeus*, "in order to think *khōra*, it is necessary to go back to a beginning, namely, the birth of the cosmos, just as the origin of the Athenians must be recalled to them from beyond their own memory" (*K*, 126). Inheriting the Earth, *the tomb*

12 Lynes, "Introduction: Auparadvances," xvii–xviii.

of the artisan god, brings ethico-politico-juridical responsibility. *Art, politics, technics*: the three entities that are emblazoned in the subtitle to this volume find themselves co-involved atavistically there. And indeed, there is a fair bit in "*Khōra*" on the ways in which *Timaeus* discourses on "the fictive model of an ideal city" (*K*, 117). It is striking that in a context of such philosophical speculation and "advances," the political irresistibly and necessarily supervenes: eco-cosmopolitically, even, it could be said. For this is in preamble to Derrida's then-evolved reflection, in "Advances," one there is not the space to rehearse fully here, on the first-person plural, on what is at stake when saying "we" or "us," on the problematic of the "before-first persons," as he calls it (*A*, 41). And as what is at stake turns on the affairs of "men"—in effect, of homo mimeticus—here is, in keeping with extinction studies, a statement on responsibility arising therein:

> a finite promise *of* the world, as world: it is up to "us" to make the world survive; and we cannot say this question is not urgently important today; it always is and always will have been, any time it can be a matter—or not—of giving oneself death; it is thus up to "us" to make what "we" inadequately call the earth survive, an earth that we know is finite, that it can and must exhaust itself in an end.
>
> *A*, 47–48

Anthropocentric, true. Human exceptionalism, that too. But perhaps politics is always so, ineluctably, even when and in the very act of professing to place the nonhuman other more centrally in the frame.

6

As was said at the start, "Advances" contrives to be one of the most compact essays Derrida ever wrote, even while being an essay on cosmogony, comprehending everything in its beginning, open to the "paradoxopoetic anachrony," as Derrida calls it, of the promise (*A*, 51). The advances are of and on the promise of another figure of the posthuman that this compact, open essay holds out: "In order for something to come and that the future of the promise remains open, the horizon itself, in the figure of its end, must be lacking" (*A*, 50). In what could almost serve as a definition of posthumanism, in that openness "there is only calculation, program, anticipation, providence, foresight, prognostic: everything will have happened*, everything is beforehand* [*auparavant*]" (*A*, 52; emphasis in the original). "Everything," then, is appropriately the

last word of *Advances*. The last sentence—gnomic, elliptical, mysterious—reads: "Only receiving instead of everything" (*A*, 54).

It would need more than the space available here for even the start of an adequate reading of the "everything" parodoxopoetically gestured toward there, which could again only poorly imitate Derrida. But, one final thought, a provocation that proffers itself, is irresistible. Grand and grandiose, magnificent and ridiculous, responsible and overreaching, intent on beginning and ends, on deep space and deep time, on entanglings with animal, plant, mineral, on being beyond the human, *posthumanism*—which has an ethics, a politics, arguably an aesthetics—risks becoming a theory of everything. It *advances* on everything in conjunction with *Timaeus*-referencing mimetology, unsettling "any theory, any *knowledge of what is*, any ontical, ontological, anthropological, or theological science" (*A*, 37; emphasis in the original), to appropriate Derrida's words as he compares the promise of the Christian God, which is "keepable—or rather … not unkeepable," and that of the Demiurge, which is "unkeepable" (A, 37–38). And we see what Derrida said, in "Advances," when he set to deconstruct some first and last-ing words on everything. He cannot help himself, he cannot resist writing more than once: "What the hell!" (*A*, 3, *passim*). Posthuman mimesis: imprecation-occasioning, inscrutable, (trans-) earthly, apprehending and apprehensive of the (un)doing of the human, of the being of homo mimeticus, even as it advances the inimitable, mythomimetico-graphic absolute.

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CHAPTER 10

Figuration, or the Desire of the Posthuman

Stefan Herbrechter

> It was so easy to imitate these people …
> But at the time I was not interested in the human point of view.
> FRANZ KAFKA, "A Report to an Academy"

∴

Posthumanism is heavily invested in figuration as a rhetorical and political apparatus. I would argue that figuration might even be seen as one of posthumanism's master tropes, especially in its feminist and new materialist varieties. This raises the question of what kind of rhetoric various politics of the posthuman and posthumanism rely on and by what kind of desire they are informed. Is it the desire to overcome the *human* or human*ism*, for example? Is it the desire *for* the posthuman that drives a specific form of theorizing or is it precisely the analysis of this *desire*—the desire of the posthuman—that is being explored? And what might a posthuman, if such a thing existed, (still) desire? In this context, figuration is fundamental. It is fundamental in any politics without doubt, but maybe even more so—more *fundamentally* so—in the kind of *speculative* politics that necessarily drives posthumanism due to its utopian register.

While I dedicated quite some space to the idea of posthumanism as a "discourse," following and adapting Foucault's notion,[1] I feel I somewhat neglected what I meant by the "figure" of the posthuman. I assumed that the posthuman was quite self-evidently a *rhetorical* figure while posthumanism was the discourse trying to materialize what started out as maybe not quite an empty trope but at least an entirely underdetermined one. So, in the following, I will try to make up for not asking a little more insistently at the time what a figure the posthuman is and what it does.

1 Stefan Herbrechter, *Posthumanism: A Critical Analysis* (London: Bloomsbury, 2013), originally published in German in 2009.

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Quite predictably, my (still very) humanistic instincts drive me toward consulting the *Oxford English Dictionary* (*OED*),[2] which tells me that the word "figure" comes from the French *figure* and goes back to the Latin *figura*, whose stem is *fingere*—to feign, which, in turn, is a rendering of the Greek *skhema* (scheme).[3] The definitions it gives are:

1. a form of anything as determined by outline (bodily or geometrical) shape; appearance, attitude, state, bodily frame, person;
2. a represented form, image, likeness, phantasm, statue, effigy, character, emblem, type;
3. a delineated form, design, pattern, illustration, scheme, table, dance/skating movement;
4. a written character, symbol, amount, number, sum of money, scale;
5. a rhetorical figure, metaphor, image, similitude.

Figuration, from the French *figuration*, takes its root from the Latin *figurare*—to fashion, and designates an:

1. action or process of forming into figure, determination to a certain form, the resulting form or shape, contour, outline;
2. action of representing figuratively; allegorical or figurative representation; figurative style of painting;
3. action of framing figures or shapes in dreams or designs.

It seems obvious, as Roberto Marchesini points out, that: "Without doubt, the principal subject of the posthumanist debate concerns figurations of 'nonhuman alterity.'"[4] Ivan Callus and I tried to apply this in an article called "What is a posthumanist reading?" in the following terms:

> [The] posthuman "other," understood as a threat or promise, is a product of human anxiety and desire … that other takes shape in figures and

2 All definitions from the *OED* are from the online edition, last accessed on June 17, 2022.

3 For a comprehensive genealogy of the notion of "figure" in the context of mimetic studies, see the classic essay by Erich Auerbach, "Figura" (1938), in *Mimesis und Figura*, ed. by Hanna Engelmeier and Friedrich Balke (Amsterdam: Brill, 2018), 119–88, and Philippe Lacoue-Labarthe, *Typography: Mimesis, Philosophy, Politics* (Cambridge, Mass.: Harvard University Press, 1989).

4 Roberto Marchesini, "Nonhuman Alterities," *Angelaki* 21, no. 1 (2016): 161–72, 162. See also Roberto Marchesini, "Zoomimesis: How Birds Taught Us That We Can Fly," *Journal of Posthumanism* 2, no. 2 (2022): 115–24.

> representations which tap into the long history of humanity's excluded (the inhuman, the non-human, the less than human, the superhuman, the animal, the alien, the monster, the stranger, God …) and reflect current "posthumanising" practices, technologies and fantasies.[5]

Consequently, a posthumanist reading would be called upon to "evaluate examples of posthuman representation in terms of their potential for a critical *post*-humanism: a discourse that strategically and critically 'inhabits' traditional humanism and which may even contrive to find itself prefigured there."[6] This means that, as a political-rhetorical stratagem, "a posthumanist reading may be critical both of representations of the posthuman and of humanism, and instead envisages the human as something or someone that remains to arrive, as a potential that remains to be defined or realised." The strategy is based on the assumption that:

> through a materialist and deconstructive reading of the cultural politics that underlie the actual representations of the posthuman and the processes of ongoing posthumanisation, [a critical posthumanist reading] helps to envisage alternative conceptualisations of both the human and the posthuman, and of their mutually informing relationship.[7]

In fact, what this amounts to is a politics of figuration that is based on a re(con)figuration (of the human), because "the 'longing for the human' as the driving force behind humanism's constant self-replication expresses itself through the variation produced by constant self-transformation."[8]

The idea of a posthumanist reading was also our first attempt at looking at the ways in which various posthumanisms were appropriating figuration as a political, prospective, or speculative mechanism to imagine, or, to use Manuela Rossini's term, to "imagineer" alternative, often "monstrous," figurations of the human as "promises" of political change.[9]

Most prominently, this is also what happens in Donna Haraway's work, beginning with her "Cyborg Manifesto" (1985) and its seminal figure of the "cyborg" designed to challenge and re(con)figure humanist technologies of

5 Stefan Herbrechter and Ivan Callus, "What Is a Posthumanist Reading?" *Angelaki* 13, no. 1 (2008): 95–111, 97.

6 Herbrechter and Callus, "What Is a Posthumanist Reading?"

7 Herbrechter and Callus, "What Is a Posthumanist Reading?"

8 Herbrechter and Callus, "What Is a Posthumanist Reading?" 105.

9 See Manuela Rossini, "Figurations of Posthumanity in Contemporary Science/Fiction: All Too Human(ist)?" *Revista Canaria de Estudios Ingleses* 50 (2005): 21–36.

gender. Haraway expresses herself more specifically on the practice of figuration in "Ecce Homo:"

> Figuration is about resetting the stage for possible pasts and futures. Figuration is the mode of theory when the more "normal" rhetorics of systematic critical analysis seem only to repeat and sustain our entrapment in the stories of the established disorders. Humanity is a modernist figure; and this humanity has a generic face, a universal shape. Humanity's face has been the face of man. Feminist humanity must have another shape, other gestures; but, I believe, we must have feminist figures of humanity. They cannot be man or woman; they cannot be the human as historical narrative has staged that generic universal. Feminist figures cannot, finally, have a name; they cannot be native. Feminist humanity must, somehow, both resist representation, resist literal figuration, and still erupt in powerful new tropes, new figures of speech, new turns of historical possibility.[10]

Haraway's aim is, in short, figural or reconfigural, as she says: "I want to set aside … man as we have come to know and love him in the death-of-the-subject critiques."[11] Instead of the figure of "man," even in the ongoing process of its deconstruction, she prefers to "construct possible postcolonial, nongeneric, and irredeemably specific figures of critical subjectivity, consciousness, and humanity."[12] And since for Haraway "radical nominalism is the only route to a nongeneric humanity,"[13] understood as a "radical dis-membering and displacing of our names and our bodies," the main questions that arise are: "How can humanity have a figure outside the narratives of humanism; what language would such a figure speak?"[14]

In "The Promise of Monsters," Haraway emphasizes that nature, too, is a "topos:" "It is figure, construction, artefact, movement, displacement,"[15] to which her cyborg figures are so to speak as "monstrous kin." Figures or figurations are

10 Donna Haraway, "Ecce Homo, Ain't (Ar'n't) I a Woman, and Inappropriate/d Others: The Human in a Post-Humanist Landscape," in *Feminists Theorize the Political*, ed. by Judith Butler and Joan Wallach Scott (New York: Routledge, 1992), 86–100, 86.

11 Haraway, "Ecce Homo," 87.

12 Haraway, "Ecce Homo."

13 Haraway, "Ecce Homo," 88.

14 Haraway, "Ecce Homo."

15 Donna Haraway, "The Promise of Monsters: A Regenerative Politics for Inappropriate/d Others," in *Cultural Studies*, edited by Lawrence Grossberg, Cary Nelson, and Paula A. Treichler (New York: Routledge 1992), 295–337, 296.

thus, for Haraway "performative images that can be inhabited. Verbal or visual, figurations can be condensed maps of contestable worlds."[16] In what she calls her "own mimetic critical method," Haraway claims to be "tracing some of the circulations of Christian realism in the flesh of technoscience."[17]

In an extensive interview with Thyrza Nichols Goodeve (2000), Haraway describes the ontological impact that figuration and its politics have had on her own life and work in the following terms:

> I feel like I live with a menagerie of figurations. It's like I inhabit a critical-theoretical zoo and the cyborg just happens to be the most famous member of that zoo, although "zoo" is not the right word because all my inhabitants are not animals.[18]

She insists, however, that "all of my entities—primate, cyborg, genetically patented animal—all of them are 'real' in the ordinary everyday sense of real, but they are also simultaneously figurations involved in a kind of narrative interpellation into ways of living in the world."[19] Again Haraway thus traces her "fundamental sensibility about the literal nature of metaphor and the physical quality of symbolization" to her Catholicism. However, "the point is that this sensibility—the meaning of this menagerie I live with and in—gives me a menagerie where the literal and the figurative, the factual and the narrative, the scientific and the religious and the literary, are always imploded."[20]

It is therefore in this sense that Haraway's metaphorical and nevertheless real figurations may constitute what Manuela Rossini called "imagineering[s] of the future of the human species";[21] while for Lucy Suchman, in *Human-Machine Reconfigurations*, Haraway's cyborg figures are "forms of *materialized figuration*, they bring together assemblages of stuff and meaning into more and less stable arrangements."[22] The strategic dimension of what one might call a "politics of re(con)figuration" lies in the "critical consideration of how humans and machines are currently figured in [current practices of technology

16 Donna Haraway, *Modest_Witness@Second_Millennium: FemaleMan©_Meets_OncoMouse™* (New York: Routledge, 1997), 11.

17 Haraway, *Modest_Witness@Second_Millennium*, 179.

18 Donna Haraway and Thyrza Nichols Goodeve, *How Like a Leaf* (New York: Routledge, 2000), 135–36.

19 Haraway and Goodeve, *How Like a Leaf*, 140.

20 Haraway and Goodeve, *How Like a Leaf*, 141.

21 Rossini, "Figurations of Posthumanity in Contemporary Science/Fiction."

22 Lucy Suchman, *Human-Machine Reconfigurations: Plans and Situated Actions* (Cambridge: Cambridge University Press, 2007), 227.

development] and how they might be figured—and *configured*—differently."[23] This is due to what Suchman calls the "world-making effects of figuration:"

> The effects of figuration are political in the sense that the specific discourses, images, and normativities that inform practices of figuration can work either to reinscribe existing social orderings or to challenge them. In the case of the human, the prevailing figuration in Euro-American imaginaries is one of autonomous, rational agency. [24]

Also in her later work, where Haraway moves toward companion species and "critters" more generally as her guiding tropes, she comes up with the following "confession" about her figurative practice:

> Figures help me grapple inside the flesh of mortal world-making entanglements that I call contact zones. The *Oxford English Dictionary* records the meaning of "chimerical vision" for "figuration" in an eighteenth-century source, and that meaning is still implicit in my sense of figure. Figures collect the people through their invitation to inhabit the corporeal story told in their lineaments. Figures are not representations or didactic illustrations, but rather material-semiotic nodes or knots in which diverse bodies and meanings coshape one another. For me, figures have always been where the biological and literary or artistic come together with all the force of lived reality. My body itself is just such a figure, literally. For many years I have written from the belly of powerful figures such as cyborgs, monkeys and apes, oncomice, and, more recently, dogs. In every case, the figures are at the same time creatures of imagined possibility and creatures of fierce and ordinary reality; the dimensions tangle and require response … All of these are figures, and all are mundanely here, on this earth, now, asking who "we" will become when species meet.[25]

The same connection between figures as material-semiotic tropes and a feminist politics of difference and change are at work in Rosi Braidotti's writings. Braidotti has been most explicit about the role of figuration for feminist (and other minoritarian) politics, as a "living map, a transformative account of

23 Suchman, *Human-Machine Reconfigurations*.

24 Suchman, *Human-Machine Reconfigurations*, 227–28.

25 Donna Haraway, *When Species Meet* (Minneapolis: University of Minnesota Press, 2008), 4–5.

the self."[26] Emphasis on cartography and figuration is a constant feature in Braidotti, from her early accounts of "new 'post-human' technoteratological" phenomena,[27] to her latest work on "posthuman knowledge" and the posthuman as a "theoretical figuration" and a "navigational tool."[28]

In "Teratologies," Braidotti speaks of "(Deleuzian) enfleshed complexities"[29] that may form a "post-human universe" with its "metamorphic dimension"[30] of "imaginary figurations."[31] More specifically, "the notion of 'figurations'—in contrast to the representational function of 'metaphors'—emerges as crucial to Deleuze's notion of a conceptually charged use of the imagination," according to Braidotti.[32] These figurations of "multiple becomings [following and extending Deleuze's universe] are: the rhizome, the nomad, the bodies-without-organs, the cyborg, the onco-mouse and acoustic masks of all electronic kinds."[33] For Braidotti and her political project of a feminist Deleuzian nomadology, "myths, metaphors, or alternative figurations have merged feminist theory with fictions."[34]

In *Metamorphoses*, Braidotti therefore declares her aim to be radically re(con)figurative:

> [My] aim is to provide illustrations for new figurations, for alternative representations and social locations for the kind of hybrid mix we are in the process of becoming. Figurations are not figurative ways of thinking, but rather more materialistic mappings of situated, or embedded and embodied, positions. A cartography is a theoretically-based and politically-informed reading of the present … By figuration I mean a politically informed map that outlines our own situated perspective. A figuration renders our image in terms of a decentred and multi-layered vision of the subject as a dynamic and changing entity. The definition of a person's identity takes place in between nature-technology, male-female, black-white, in the spaces that flow and connect in between. We live in

26 Rosi Braidotti, *Metamorphoses: Towards a Materialist Theory of Becoming* (Cambridge: Polity Press, 2002), 3.

27 Rosi Braidotti, "Teratologies," in *Deleuze and Feminist Theory*, ed. by Ian Buchanan and Claire Colebrook (Edinburgh: Edinburgh University Press, 2000), 157.

28 Rosi Braidotti, *Posthuman Knowledge* (Cambridge: Polity Press, 2019), 2.

29 Braidotti, "Teratologies," 158.

30 Braidotti, "Teratologies,"165.

31 Braidotti, "Teratologies,"168–170.

32 Braidotti, "Teratologies,"170.

33 Braidotti, "Teratologies."

34 Braidotti, "Teratologies," 171.

> permanent processes of transition, hybridization and nomadization, and these in-between states and stages defy the established modes of theoretical representation. A figuration is a living map, a transformative account of the self—it is no metaphor.[35]

This quest for alternative figurations, according to Braidotti,

> expresses creativity in representing the kind of nomadic subjects we have already become and the social and symbolic locations we inhabit. In a more theoretical vein, the quest for figurations attempts to recombine the propositional contents and the forms of thinking so as to attune them both to nomadic complexities. It thus also challenges the separation of reason from the imagination.[36]

Braidotti explains:

> Where figurations of alternative feminist subjectivity, like the womanist, the lesbian, the cyborg, the inappropriate(d) other, the nomadic feminist, and so on, differ from classical "metaphors" is precisely in calling into play a sense of accountability for one's location. They express materially embedded cartographies and as such are self-reflexive and not parasitic upon a process of metaphorization of "others."[37]

Instead, they are

> new figurations of the subject (nomadic, cyborg, Black, etc.) [which] function like conceptual *personae*. As such, they are no metaphor, but rather on the critical level, materially embedded, embodying accounts of one's power-relations. On the creative level they express the rate of change, transformation or affirmative deconstruction of the power one inhabits. "Figurations" materially embody stages of metamorphosis of a subject position towards all that the phallogocentric system does *not* want it to become.[38]

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35 Braidotti, *Metamorphoses*, 2–3.
36 Braidotti, *Metamorphoses*, 3.
37 Braidotti, *Metamorphoses*, 13.
38 Braidotti, *Metamorphoses*.

What Braidotti refers to as Deleuze's "post-metaphysical figurations of the subject"[39] is based on a distinction between the "figural" and the more conventional aesthetic category of the "figurative," in the sense that "figurations such as rhizomes, becomings, lines of escape, flows, relays and bodies without organs release and express active states of being … [and] break through the conventional schemes of theoretical representation."[40] More specifically, these alternative figurations of the subject are based on Deleuze's central figuration, which is "a general becoming-minority, or becoming-nomad, or becoming-molecular,"[41] or, ultimately, "becoming-imperceptible."[42]

In Chapter 4 of *Metamorphoses*, "Cyber-teratologies," which anticipates Braidotti's turn toward the posthuman as her main political figuration and clearly shows her affinity to Haraway, she reconfirms her "yearning and quest for new styles or figurations for the non-unitary or nomadic subject."[43] About figurations as such she further explains that:

> They evoke the changes and transformations which are on-going in the "g-local" context of advanced societies … Figurations are expressive of cartographic readings of the subject's own embedded and embodied position. As such, they are linked to the social imaginary by a complex web of relations, both of the repressive and the empowering kind. The idea of figurations therefore provides an answer not only to political, but also to both epistemological and aesthetic questions: how does one invent new structures of thought? Where does conceptual change start from?[44]

With regard to Haraway's figuration of the cyborg, Braidotti writes: "Translated into my own language, Haraway's figuration of the cyborg is a sort of feminist becoming-woman that merely by-passes the feminine in order to open up toward a broader and considerably less anthropocentric horizon."[45] This is why, for Braidotti, Haraway is a "non-nostalgic posthuman thinker."[46]

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39 Braidotti, *Metamorphoses*, 78.
40 Braidotti, *Metamorphoses*.
41 Braidotti, *Metamorphoses*.
42 Braidotti, *Metamorphoses*, 81.
43 Braidotti, *Metamorphoses*, 172.
44 Braidotti, *Metamorphoses*, 173.
45 Braidotti, *Metamorphoses*, 216–17.
46 Rosi Braidotti, *Nomadic Theory: The Portable Rosi Braidotti* (New York: Columbia University Press, 2011), 65.

In *Transpositions*, Braidotti once again stresses the centrality and multifunctionality of figuration:

> Figurations are not metaphors, but rather markers of more concretely situated historical positions. A figuration is the expression of one's specific positioning in both space and time. It marks certain territorial or geopolitical coordinates, but it also points out one's sense of genealogy or historical inscription. Figurations deterritorialize and destabilize the certainties of the subject and allow for a proliferation of situated or 'micro' narratives of self and others.[47]

Their political value precisely lies in their undecidability between "literality" and "figurality": "Figurations are forms of literal expression which represent that which the system has declared off-limits."[48] In this sense, "figurations are not figurative ways of thinking, but rather more materialistic mappings of situated, embedded, and embodied positions. They derive from the feminist method of the 'politics of location' and build it into a discursive strategy."[49]

The posthuman figure makes its appearance in the early 2000s in Rosi Braidotti's work and becomes the main focus in her *The Posthuman*, where she wrestles with the powerful ambiguity of the posthuman trope. It is a powerful figure that helps evaluate, maybe even retain, "our" humanness in a postanthropocentric context while, at the same time, it helps promote an affirmative politics of flexible, hybrid, and multiple identity. In an increasingly "post-theoretical" climate, Braidotti, consequently, repeatedly and strategically stresses "the importance of combining critique with creative figurations:"[50]

> Critiques of power locations, however, are not enough. They work in tandem with the quest for alternative figurations or *conceptual personae* for these locations, in terms of power as restrictive (*potestas*) but also as empowering or affirmative (*potentia*). For example, figurations such as the feminist/the woman/the queer/the cyborg/the diasporic, native nomadic subjects, as well as oncomouse and Dolly the sheep are no mere metaphors, but signposts for specific geopolitical and historical locations.[51]

47 Rosi Braidotti, *Transpositions: On Nomadic Ethics* (Cambridge: Polity Press, 2006), 90.
48 Braidotti, *Transpositions*, 170.
49 Braidotti, *Nomadic Theory*, 13.
50 Rosi Braidotti, *The Posthuman* (Cambridge: Polity Press, 2013), 163.
51 Braidotti, *The Posthuman*, 164.

For Braidotti, the posthuman also follows this logic of figuration, i.e. its restrictive power *and* affirmative potential. The posthuman figure, if taken seriously, or "literally," becomes a "conceptual persona," which stands in for a whole geopolitical and historical "location." It is obvious that this posthuman persona or figure/figuration, for Braidotti, therefore becomes a *necessary* rhetorical trope (a "catachresis") that characterizes the situation of the human today.

Once again Braidotti defines her use of figuration as "the expression of alternative representations of the subject as a dynamic non-unitary entity; it is the dramatization of processes of becoming."[52] Even though she does not herself use the phrase "rhetoric of the posthuman,"[53] it could be argued that the way she emphasizes the transformative potential of the posthuman figure constitutes a "politics" of the posthuman that is entirely reliant on the ambiguity of the posthuman figure as conceptual persona, as mask, or *prosopopoeia* (of the human). In the posthuman figure, she writes, "Critique and creation strike a new deal in actualizing the practice of conceptual personae or figuration as the active pursuit of affirmative alternatives to the dominant vision."[54] The posthuman figure, for Braidotti, allows "us" to be "worthy of our times" in that "we need schemes of thought and figurations that enable us to account in empowering terms for the changes and transformations currently on the way."[55] What Braidotti's argument presupposes is therefore first of all a certain discursivity of the location, or the idea of a "posthuman condition," in which the figuration of the posthuman occurs. The rhetoric of the posthuman, in fact, is everywhere at work in the changes and transformations that Braidotti sees as being currently on the way.

The main difference between Haraway and Braidotti, as well as between Braidotti and Hayles, is that Braidotti seems to *believe* in the posthuman as a transformative figure, literally. There is an affective investment, even a desire to wrest the posthuman away from its more banal and dangerous usage—similar to Haraway's investment in the cyborg in the 1980s maybe—as a "dispositive" of identitarian (self)transformation:

> Becoming-posthuman … is a process of redefining one's sense of attachment and connection to a shared world, a territorial space: urban, social,

52 Braidotti, *The Posthuman*, 164.

53 See Stefan Herbrechter, "Rhetoric of the Posthuman," keynote address at the "Ethos, Pathos, Logos" conference in Ploisti, October 2012, https://www.academia.edu/14188272/Rhetoric_of_the_Posthuman.

54 Braidotti, *The Posthuman*, 164.

55 Braidotti, *The Posthuman*, 184.

> psychic, ecological, planetary as it may be. It expresses multiple ecologies of belonging, while it enacts the transformation of one's sensorial and perceptual co-ordinates, in order to acknowledge the collective nature and outward-bound direction of what we still call the self. This is in fact a moveable assemblage within a common life-space, which the subject never masters nor possesses, but merely inhabits, crosses, always in a community, a pack, a group or cluster. For posthuman theory, the subject is a transversal entity, fully immersed in and immanent to a network of non-human (animal, vegetable, viral) relations. The *zoe*-centered embodied subject is shot through with relational linkages of the contaminating/viral kind which inter-connect it to a variety of others, starting from the environmental or eco-others and include the technological apparatus.[56]

Most recently, in her *Posthuman Knowledge*, Braidotti—whose theorizing is characterized by insistent self-summarizing that undoubtedly has a performative political value in discursively bringing the posthuman about, or, as one might say, in materializing the figurative[57]—declares her vital interest in the posthuman thus:

> As a theoretical figuration, the posthuman is a navigational tool that enables us to survey the material and the discursive manifestations that are engendered by advanced technological developments (am I a robot?), climate change (will I survive?), and capitalism (can I afford this?). The posthuman is a work in progress. It is a working hypothesis about the kind of subjects we are becoming.[58]

Becoming what you (already) are, inhabiting the figure that announces itself—this is the basic (Nietzschean-Deleuzean) dynamic and strategy of transformational politics in general and of feminist new materialist semiotics of the posthuman in particular. However, just like the cyborg, the posthuman also has its dangerous or "apocalyptic" side, as Braidotti cautions:

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56 Braidotti, *The Posthuman*, 193.

57 This performative value is indeed mimetic in the productive sense that it creates new forms. Although Braidotti doesn't often stress the term mimesis, it might be worth pointing out that her Deleuzian ontology is very much in touch with the powers of the mimesis. This would also help the reader who hangs on to the narrow definition of mimesis as copy but posthuman performative mimesis gives us a chance to move beyond it.

58 Braidotti, *Posthuman Knowledge*, 2.

> It is inappropriate to take the posthuman either as an apocalyptic or as an intrinsically subversive category, narrowing our options down to the binary extinction-versus-liberation (of the human). We need to check both emotional reactions and resist with equal lucidity this double fallacy. It is more adequate to approach the posthuman as an emotionally laden but normatively neutral position. It is a grounded and perspectival figuration that illuminates the complexity of on-going processes of subject formation.[59]

The posthuman is thus both already here, but not clearly defined in its "becoming," clearly affectively apocalyptic while "normatively" neutral (i.e. it could be the source of radical transformation for better or for worse); even so, it still remains to achieve, or maybe asks to be saved from, itself. In fact, it is neither here nor there but an effective theoretical "screen"—a figure—an object of desire, an *objet petit a*.

Its dual ontology—material and semiotic, figural and figurative—turns the posthuman into a quasi-transcendental signifier, an "arch-figure" or master trope for posthumanist discourse, as Braidotti only just stops short of admitting herself:

> Although the posthuman is empirically grounded, because it is embedded and embodied, it functions less as a substantive entity than as a figuration or conceptual persona. It is a theoretically powered cartographic tool that aims at achieving adequate understanding of the present as both actual and virtual. In other words, cartographies are both the record of what we are ceasing to be—anthropocentric, humanistic—and the seed of what we are in the process of becoming—a multiplicity of posthuman subjects.[60]

Katherine Hayles's attitude toward the posthuman "(con)figuration," on the other hand, is much more ambiguous. As Manuela Rossini explains, there are "two conflicting imagineerings of a posthuman future" in Hayles's *How We Became Posthuman*:

> If my nightmare is a culture inhabited by posthumans who regard their bodies as fashion accessories …, my dream is a version of the posthuman

59 Braidotti, *Posthuman Knowledge*, 85.
60 Braidotti, *Posthuman Knowledge*, 137.

> that embraces the possibilities of information technologies without being seduced by fantasies of unlimited power and disembodied immortality, that recognizes and celebrates finitude as a condition of human being, and that understands human life is embedded in a material world of great complexity, one on which we depend for our continued survival.[61]

It is probably fair to say that Hayles is least invested in the notion of figuration as such out of the constitutive trio of feminist posthumanists. Instead, Hayles's politics is to stress the role of (alternative) narratives for political change in the face of the posthuman:

> As the sense of its mortality grows, humankind looks for its successor and heir, harbouring the secret hope that the heir can somehow be enfolded back into the self. The narratives that count as stories for us speak to this hope, even as they reveal the gendered constructions that carry sexual politics into the realm of the posthuman.[62]

In what is arguably one of the most iconic and most frequently cited passages of emergent posthumanism at the turn of the millennium, Hayles identifies the posthuman first and foremost as a "point of view," i.e. not exactly as a "figure," when she claims that: "the posthuman view configures human being so that it can be seamlessly articulated with intelligent machines."[63]

Where Haraway and Braidotti rely on a politics of figuration, Hayles, one might say, is looking at con-figurations, or ways in which elements work together to form a whole, or, in other words, the "workings" of a figure. Configuration, as the *OED* explains, is an

> arrangement of parts or elements in a particular form or figure; the form, shape, figure, resulting from such arrangement; conformation; outline, contour (of geographical features, etc.); [or an] arrangement of elements; physical composition or constitution …; [as well as] a representation by a figure, an image.

61 N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), 5.

62 N. Katherine Hayles, "The Life Cycle of Cyborgs: Writing the Posthuman," in *Cybersexualities: A Reader on Feminist Theory, Cyborgs and Cyberspace*, edited by Jenny Wolmark (Edinburgh: Edinburgh University Press, 1999), 157–73, 172.

63 Hayles, *How We Became Posthuman*, 3.

Most relevant, however, given the posthuman context, is the significance of configuration in computing, namely "the way the constituent parts of a computer system are chosen or interconnected in order to suit it for a particular task or use; the units or devices required for this."

Correspondingly, the verb, to configure, the *OED* says, signifies:

> to fashion according to something else as a model; to conform in figure or fashion (to); to represent by a figure or image, to figure; to fashion by combination and arrangement; to give an astrological configuration to; to put together in a certain form or figure; [or] figurative[ly]: to give a figure to; to shape.

In computing, more specifically, it means "to choose or design a configuration for; to combine (a program or device) with other elements to perform a certain task or provide a certain capability." Therefore, it is not that Hayles is not invested in figuration, on the contrary, and her recent turn to mimesis indeed testifies to her engagement with it.[64] But given her background, she seems to come to the politics of figuration from a (technical) "design" angle, when she writes: "'human' and 'posthuman' coexist in shifting configurations that vary with historically specific contexts."[65]

The outcome of the reconfiguration that Hayles sees at work in contemporary digitalization is therefore a conceptual shift:

> But the posthuman does not really mean the end of humanity. It signals instead the end of a certain conception of the human, a conception that may have applied, at best, to that fraction of humanity who had the wealth, power, and leisure to conceptualize themselves as autonomous beings exercising their will through individual agency and choice. What is lethal is not the posthuman as such but the grafting of the posthuman onto a liberal humanist view of the self.[66]

The curious thing is, however, that this re-con-figuration is not "new," it has always been on the cards, which allows Hayles to claim, in what one might call

64 See N. Katherine Hayles, "Microbiomimesis: Bacteria, Our Cognitive Collaborators," *Critical Inquiry* 47, no. 4 (2021): 777–87.

65 Hayles, *How We Became Posthuman*, 6.

66 Hayles, *How We Became Posthuman*, 286–87.

a rejoinder to Bruno Latour's stance regarding "our" modernity, that "we have always been posthuman."[67]

More specifically, Hayles's analysis of human reconfiguration is concerned with "the contemporary transformation from 'biomorphism' to 'technomorphism' (reconstituting the body as a technical object under human control)," as she writes in "Seductions of Cyberspace";[68] or as one might say, in bio-reconfiguration as opposed to techno-reconfiguration, or bio/techno-mimesis. Even more concretely, Hayles's aim is to explore "how metaphor and constraint work to reconfigure agency in this posthuman era,"[69] to arrive at "a configuration of the human so that it can be seamlessly articulated with intelligent machines";[70] or even, as Hayles formulates in a short review entitled "Refiguring the Posthuman," "performativities that redefine the human through mimetic imitation of intelligent machines."[71]

As these passages, these examples, central to three key figures in the establishing of posthumanism as a theoretical paradigm, clearly show, posthumanism and its politics are predominantly figurative, or reconfigurative, which also means it is entirely "mimetic," in a sense. But what does that mean and is that a problem?

It may be a problem in the sense that figuring or reconfiguring as a political strategy, as the most obvious and most widely used political strategy as such, remains deeply entangled within the paradox of representation, or "representationalism." Investing in a figure that is necessarily profoundly ambiguous (the posthuman could turn "nasty" at any moment, but is nevertheless presented as "our" only hope) and in a figure that has been announcing itself from the very beginning even while it has always already been here—is ultimately what one might call an eschatological device. It is and remains fundamentally modern; in fact, it is a return of the modern with a vengeance. All these figurations and reconfigurations are in fact governed by a dialectic of *pre*figuration and *dis*figuration or defacement as detractors of an underlying process one might refer to as "posthumanization."

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67 Hayles, *How We Became Posthuman*, 291.

68 N. Katherine Hayles, "The Seductions of Cyberspace," in *Reading Digital Culture*, ed. by David Trend (Oxford: Blackwell, 2001), 305–21, 305.

69 N. Katherine Hayles, "Desiring Agency: Limiting Metaphors and Enabling Constraints in Dawkins and Deleuze/Guattari," *SubStance* 30, no. 1/2, issue 94/95 (2001): 144–59, 146.

70 Hayles, "Desiring Agency."

71 N. Katherine Hayles, "Refiguring the Posthuman," *Comparative Literature Studies* 41, no. 3 (2004): 311–16, 316.

To prefigure means: "to be an early indication or version of, foreshadow, represent beforehand by a figure or type" and has a strong theological connotation, according to the *OED*. It also signifies "to shape or form at the front; and to imagine beforehand." In this sense, a prefiguration, apart from designating "the action of prefiguring or foreshadowing a person or thing, representation beforehand by a figure or type," also refers to "a person, thing or event which prefigures or foreshadows another; a prototype, a precursor." The figure thus always announces itself as a prefiguration. In replacing, or in succeeding, it evokes and repeats its predecessor. It literally re-con-figures, imitates, repeats, is compelled to repeat with all of the eventualities—the best or the worst—a repetition might entail. This is the crux of the "mimetic" compulsion, the compulsion to repeat—in a very psychoanalytic and metaphysical sense.

Hans Blumenberg, in *Präfiguration: Arbeit am politischen Mythos*, analyses the strategy of prefiguration in terms of a political program, both as a way of reducing complexity and thus as an anthropological necessity, and a highly risky and dangerous "scheme of interpretation" (*Deutungsschema*), i.e. as a means of bestowing legitimation: "At first, prefiguration is merely a means to assist with decision-taking—what has already been done once does not sanction, assuming the conditions remain the same, any new deliberation process, disturbance or puzzlement. It is already established as a paradigm."[72]

This means that "prefiguration invests a decision with legitimacy that might be of utmost contingency and which might thus be entirely unfounded."[73] Prefiguration thus represents a kind of analogy or "metaphor" on which actions are based:

> If the meaningful prerequisite, the "pregnate" [*Prägnat*] is not given, but fashioned, so that should become true what was written …, then that which is being repeated merely becomes a mythical programme through its repetition, through this contingent act of selection whose contingency has to be repressed.[74]

The posthumanist politics of "re-con-figuration," even though it identifies as radically transformative in the face of an apocalyptic future, still functions according to the same "mythical" principles that Blumenberg describes in his critique of prefiguration.

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72 Hans Blumenberg, *Präfiguration: Arbeit am Politischen Mythos* (Frankfurt: Suhrkamp, 2014), 9.

73 Blumenberg, *Präfiguration*, 10.

74 Blumenberg, *Präfiguration*, 11.

Regardless of what the various politics of figuration outlined above claim, they are all based on some kind of advocacy. They all rely on a move that presupposes an alterity that calls for a response. This response, however, must not be confounded with a simple appropriation. It must be seen to be "ethical," for justice needs to be rendered to the other in the form of "primacy." The other was there *before* "me" and remains before the possibility of any *me*. However, the other necessarily affects me, the other even "becomes" me as I become (the) other—a hybridization that in theory should work both ways, but is usually the preserve of the (modern) successor who, after the successful hybridization process or the appropriation of the prefiguration, has allowed me to become what I (now) am, and which then triggers a purification process that puts the other back in its place.

After any such re-con-figuration, one is thus presented with that which was originally called for and whose calling was duly heard, as the newly (re)configured other-than-or-with-myself and who is the product of my zoo-techno-hetero-auto-mimetic desire. You can easily see how close, despite all the echoes of a postmodern ethics of alterity, this (still) is to a standard Hegelian dialectic. The pre-re-con-dis-figured nonhuman alterities in this "mimetic" process are entirely exchangeable, whether they are nonhuman animals or technologies, as for example in Mark Hansen's notion of *technesis*,[75] which is based on "the *presocial* role of technology as agent of material complexification." It is based on an understanding in which "technology embodies the very contact between humankind and the world on which societal forms are themselves constructed. It thus conditions the movement of desire itself."[76] The same counts for any form of "originary" hybridity or entanglement of nature cultures, monsters, or cyborgs—they are all symptoms of our posthumanist desire, figurations evoked for a more or less speculative politics.

What would be the alternative? The beginning of an answer to this might be found in Catherine Malabou's comment on Derrida's "The Ends of Man,"[77] when she wonders whether "we still have something to say about repetition and the human, about repeating the human?"[78] for it is with repetition that

75 Mark Hansen, *Embodying* Technesis: *Technology Beyond Writing* (Ann Arbor: University of Michigan Press, 2000).

76 Hansen, *Embodying* Technesis, 234–35.

77 Jacques Derrida, "The Ends of Man" (1968/1972), in *Margins of Philosophy*, trans. A. Bass (Chicago: University of Chicago Press, 1982), 109–36.

78 Catherine Malabou, "From the Overman to the Posthuman: How Many Ends?" in *Plastic Materialities: Politics, Legality, and Metamorphosis in the Work of Catherine Malabou*, edited by Brenna Bhandar and Jonathan Goldberg-Hiller (Durham, N.C: Duke University Press, 2015), 61–72, 67.

we really deal when we investigate figuration or, indeed, mimesis. As Malabou explains:

> Every critique of the concept of the human seems to be oriented toward a better approach to the essence of humanity … Does this mean that all discourses on the human, albeit metaphysical or deconstructionist, political or juridical, anthropological or psychoanalytic, would share the same impossibility: that of overcoming the thinking of man as a moving limit—this old limit, which Aristotle described as the medium between God and the animal? This moving or flickering in-between point, always tending to its end? … When we claim that the human is now behind us, that we are entering the posthuman age, that we are opening the "inter-species dialogue," or that we cannot believe in cosmopolitanism for want of a universal concept of humanity, are we doing something other than trying to reconstitute, purify, re-elaborate a new essence of man?[79]

Why, in short, this continued, insistent desire of and for figuration, this mimetic desire, even in the politics of the most radical imagineerings of posthumanist re-con-figurations? Malabou suggests that: "We humans are seeking revenge from being human. From being humans," and therefore asks: "Will we ever be able to be redeemed from the spirit of revenge and thus from our humanity?"[80] The urgency of the question she finds in the current context of "biomimicry," or "the use and imitation of natural processes in technology … as if nature repeated herself through techné:"

> This repetition of the "natural" is just another example of the fact that we are not only asking the question of repetition; repetition has become the question, what questions us … are we able to deal with this new urgency of repetition without seeking revenge toward it? Are we able to repeat without seeking revenge? Without trying to crucify time and transiency, without trying to invent new forms of cruelty? In the trembling opening of this question appears the possibility of sculpting the nonhuman, or the nonhumanist human.[81]

Malabou here seems to be speaking about what one might call "postfiguration," a resisting of re-con-figuration, or of a critique of plasticity—the very concept

79 Malabou, "From the Overman to the Posthuman," 65.
80 Malabou, "From the Overman to the Posthuman," 69.
81 Malabou, "From the Overman to the Posthuman," 70–71.

that made Malabou's name, as she readily admits: "All I have tried to describe, thanks to the concept of plasticity, every act of shaping, reshaping, repairing, remodeling, might be developed here to illustrate the *return of repetition.*"[82] Repetition, as Malabou writes, is no longer initiated or controlled by "us" (if it ever was). So, once the sea has, again, and maybe this time for the very last time (as every repetition promises), erased the figure of "man," will we be able to resist both the desire for and the desire *of* the posthuman—whatever shape, form or figuration he-she-it may take—namely, of becoming-other, of becoming entirely "imperceptible" (Braidotti) or "indistinct,"[83] ultimately indifferent? Or as Malabou projects, without any prefiguration, however: "If we can one day get free from the spirit of revenge, we will become great human beings."[84] This much of humanism's innermost desire may be (and maybe should remain) unsurpassable, even though it can, of course, never be trusted.

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82 Malabou, "From the Overman to the Posthuman," 71.

83 Matthew Calarco, *Beyond the Anthropological Difference* (Cambridge: Cambridge University Press, 2020).

84 Malabou, "From the Overman to the Posthuman," 71.

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PART 3

Technics Reloading Mimesis

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CHAPTER 11

Technics and Mimesis: Promethean Self-Knowledge in the Anthropocene

Nidesh Lawtoo

Hephaestus: You shall be grilled by the sun's bright fire
and change the fair bloom of your skin …
Prometheus: I placed in them blind hopes …
Besides this, I gave them fire.
AESCHYLUS, *Prometheus Bound*

• • •

The Promethean myth, after all, contains an enigmatic prophecy.
IHAB HASSAN, "Prometheus as Performer"

• • •

Prometheia is the anticipation of the future,
that is, of danger, foresight, prudence, and an essential disquiet.
BERNARD STIEGLER, La Téchnique et le temps : 1 *La faute d'Epiméthée*

⁘

Mimetic posthumanism is located at the productive juncture, crossroads, or intersection where mimetic studies and posthuman studies meet, encounter, and reflect critically and creatively *on* each other. If, for a long time, the concept of mimesis was traditionally restricted to anthropocentric conceptions of realism characteristic of an exceptionalist species called *Homo sapiens*, mimetic studies redraws this picture by foregrounding a new theory of homo mimeticus that goes beyond anthropocentric binaries, is immanent and evolutionary in nature, is open to metamorphic transformations, and is now entangled in our process of becoming posthuman as well. From different areas of critical inquiry, including continental philosophy, feminism, political theory,

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anthropology, film and media studies, developmental psychology, and the neurosciences, there is, in fact, a growing suspicion that it is because humans are mimetic, all too mimetic creatures that adapt, chameleon-like, to different natural, cultural, and technological surroundings, that we could become posthuman in the first place. This, at least, is what the conjunction at play in the concept of "posthuman mimesis,"[1] now redoubled by this volume's focus on "mimetic posthumanism," aims to suggest.

If we now continue to join these two mirroring concepts to further a mimetic turn, or *re*-turn, to an immanent, affective, and relational conception of mimesis in posthuman studies, we might still wonder: What kinds of myths are at the plural and contested origins of our protean ability to transform the very nature of what the human is, or can potentially become? And if technological innovations play such a prominent role in the ongoing process of becoming posthuman, is there perhaps an intrinsic relation between technics and mimesis that can serve as a self-reflective critical and creative mirror to reflect back *on* where humans come from in view of looking ahead to where posthumans are going? After all, *technē* in Greek designates both art and craft. Hence it already entangles technological production and artistic creation, which, for the Greeks, but not only them, is mimetic creation. As Aristotle puts it in book 6 of *Nicomachean Ethics*: "Art (*technē*) is identical with a state of capacity to make."[2] This is why the *Poetics* is a treatise on the making of poetry, which for Aristotle, as for Plato before him but with a reversed evaluation, is a techne or technics of mimetic making.[3] Furthering the genealogy of posthuman mimesis charted in Chapter 6, this chapter will be oriented by the productive interplay between technics and mimesis.

Bridging the threefold configuration of art, philosophy, and technics that orients homo mimeticus 2.0, I would like to revisit from a philosophical perspective one of the founding myths on the origins of technics: the myth of Prometheus and of his brother Epimetheus. This choice is, of course, far from being original. The myth of the trickster Titan who stole fire from the gods to provide humans with technical skills occupies a privileged and well-established

1 See Nidesh Lawtoo, "Posthuman Mimesis," Special Issue, *Journal of Posthumanism* 2, no. 2 (2022).

2 Aristotle, *Nicomachean Ethics,* in *The Complete Works of Aristotle*, ed. by Jonathan Barnes (Princeton, N.J.: Princeton University Press, 1984), 1729–867, 1800. In what follows, I sometimes render techne as technics not only to signal its pluralist meaning but also to translate Stiegler's "*technique*," which includes but is not limited to technology as it takes its starting point in the Greek *technē* (hence my oscillation between techne and technics).

3 For an informed and rigorous study of techne qua craft rooted in Plato and Aristotle, see Henry Staten, *Techne Theory: A New Language for Art* (London: Bloomsbury, 2019).

place in posthuman studies. In the wake of poststructuralism, the heroic figure of Prometheus provided new impetus to recuperate a traditionally romantic celebration of innovative transgressions from a "performative," "masked," and thus implicitly mimetic perspective.[4] The myth of the two Titan brothers also served as an explicit starting point for French philosopher Bernard Stiegler. In his seminal multivolume genealogy *Technics and Time*, Stiegler furthered the decentering of man at play in deconstruction by accounting for the complex relation between "technics" and "time." This allowed him to reevaluate a subject without proper or essential qualities prone to prosthetic existential extensions that, as a deconstructive tradition had already made clear, tend to operate as both poison and cure—that is, as a *pharmakon*.[5]

I now add another step to the mimetic turn in posthuman studies by arguing that the *ek-static* process of becoming posthuman in a geological epoch that often goes under the rubric of the "Anthropocene" benefits from considering the genealogical relation between technics and mimesis already implicitly inscribed in the Promethean myth from which posthuman studies were born. My wager is that both technics and mimesis set up a self-reflecting mirror to *Homo sapiens*, revealing a conception of a mimetic subject without essential qualities, or homo mimeticus,[6] whose embodied, relational, and technological supplements continue to play a massive role in our ongoing process of becoming posthuman in the twenty-first century. This also means that if we want to venture deeper into the unpredictable posthuman future that lies ahead, we need to look first in the unflattering mirror of an epoch that bears the deepening traces of the human, or *anthropos*—if only because this epoch will continue to metamorphose human and nonhuman life on Earth for generations to come.

1 Metamorphoses in the Anthropocene

In recent years, posthuman studies has established transdisciplinary bridges with the Earth system sciences to account for a new geological epoch that reframes the very concept of the human within the geological formation and

4 Ihab Hassan, "Prometheus as Performer: Toward a Posthumanist Culture?" *The Georgia Review* 31, no. 4 (1977): 830–50.

5 See Bernard Stiegler, *La Technique et le temps: 1 La faute d'Epiméthée; 2. La Désorientation; 3. Le Temps du cinéma et la question du mal-être* (Paris: Fayard, 2018).

6 See Nidesh Lawtoo, *Homo Mimeticus: A New Theory of Imitation* (Leuven: Leuven University Press, 2022).

transformation of planet Earth. While the concept of the Anthropocene has caused much debate in recent years, and geologists have not yet officially accepted it as the epoch that follows the 10,000 years of ecological stability that made the spread of humans on the planet possible (or Holocene), there is little reason to doubt that we have entered a new, unprecedented, and catastrophic age of radical metamorphoses for humans and nonhuman life alike, including for the geology of planet Earth itself.[7]

As its contested designation suggests, the Anthropocene remains in the shadow of the humanistic figure ("man") posthumanism seeks to move beyond—which does not mean that the Anthropocene is simply anthropocentric. Quite the contrary. Introduced in 2001 by atmospheric chemist Paul Crutzen, the "Anthropocene" designates a "new" (*cene*) geological epoch of "man" (*anthropos*) in which humans, albeit with radically different degrees of agency, intensity, and responsibility, operate as a "major geological force"[8] on planet Earth. In or about 1800, the growth of the human population changed. Where it took the entire history of human evolution (say, ca. 300,000 years) to reach a billion people near the beginning of the nineteenth century, the world population has now skyrocketed to over 8 billion. The curve is steep and is not slowing down. Meanwhile, since the industrial revolution, humans have been altering the climate, causing not only rising temperatures but also acidification of oceans, deforestation, glacier melting, rising oceans, and ozone depletion, all of which are currently generating a cascade of systemic effects that have already started a sixth species extinction. The *anthropos* that triggered the climate crisis is tragically implicated in a demise of its own making.

It is still up for debate whether this new geological epoch starts with the Industrial Revolution in the second half of the eighteenth century, stretches back to the birth of agriculture, or, more likely, picks ups speed with the Great Acceleration of 1945. Equally debatable is whether we should call it "Anthropocene," "Capitalocene," "Plantationocene," "Chthulucene,"[9] or any of the other original denominations proposed in recent years to avoid the universalizing fiction of a homogeneous *anthropos* erasing the radically different

7 The literature on the Anthropocene has exploded in recent years, but a good place to start is still Christophe Bonneuil and Jean-Baptiste Fressoz, *The Shock of the Anthropocene: The Earth, History, and Us,* trans. David Fernbach (London: Verso, 2017).

8 Paul J. Crutzen and Eugen F. Stoermer, "The Anthropocene," *Global Change Newsletter* 41 (2000): 17–18.

9 See *Anthropocene or Capitalocene: Nature, History, or the Crisis of Capitalism,* ed. by Jason W. Moore (Oakland, Calif.: PM Press, 2016); and Donna Haraway, *Staying with the Trouble: Making Kin in the Chtulucene* (Durham, N.C.: Duke University Press, 2016).

degrees of agentic impact on the environment, and thus responsibility for climate catastrophes. What is certain is that a growing number of people in the Global South are already in the process of being deterritorialized by the troubling epoch created by privileged consumer-driven, fossil fuel-dependent, neoliberal countries of the Global North.

Given the posthuman critique of anthropocentrism, the return to the centrality of the category of *anthropos* is not without ironies. As Bruno Latour puts it: "At the very moment when it was becoming fashionable to speak of post-human … *Anthropos* is back—and has returned with a vengeance."[10] This *re*-turn of the effects of past human agency haunting, phantom-like, present and, especially, future generations should indeed lead posthumanists to think in terms of genealogical continuities and discontinuities across generations. Critical posthumanists, for instance, were quick to incorporate the concept of the Anthropocene and its alternative denominations. They did so to promote metamorphic transformations for the better, giving rise to productive intersections of "posthuman ecologies" attentive to "complex relations … constituted by circulations of affects,"[11] for instance. As the genealogy of homo mimeticus 2.0 makes clear, this affective and infective circulation is constitutive of an embodied, relational, and suggestible species that finds in modernist literary precursors with direct experience in navigating catastrophic disturbances of the atmosphere important starting points to face catastrophic ecologies in the making.[12]

What we must add now from the perspective of mimetic posthumanism is that these affects circulate via imperceptible forms of imitation, or micro-imitation, which generate complex patho(-)logical effects. For instance, most humans are by now conscious that a catastrophic transformation of the planet is well underway, at least in theory. And yet, in daily practice, unless prevented by pandemic lockdowns which, for a brief moment, offered a window of hope

10 Bruno Latour, *Face à Gaïa: Huit conférences sur le nouveau régime climatique* (Paris: La Découverte, 2015), 155 (my translation).

11 Simone Bignall and Rosi Braidotti, "Posthuman Systems" in *Posthuman Ecologies: Complexity and Process after Deleuze*, ed. by Rosi Braidotti and Simone Bignall (New York: Rowman & Littlefield, 2019), 1–16, 5.

12 See Nidesh Lawtoo, "Conrad in the Anthropocene: Steps to an Ecology of Catastrophe," in *Conrad and Nature: Essays*, ed. by Lissa Schneider-Rebozo, Jeffrey Mathes McCarthy, and John G. Peters (New York: Routledge, 2019), 43–67; William E. Connolly and Nidesh Lawtoo, "Planetary Conrad: William Connolly and Nidesh Lawtoo in Dialogue," *The Conradian* 46, no. 2 (2021): 144–171. On the political implication of facing catastrophes, see William E. Connolly, *Facing the Planetary: Entangled Humanism and the Politics of Swarming* (Durham, N.C.: Duke University Press, 2017).

that humans could change habits, the vast majority continues to be driven by the same patterns of unnecessary traveling, fossil-fuel dependency, and consumerist excess. This disconcerting fact flies in the face of *Homo sapiens,* generating a schizophrenic split between theory and practice, *what we know* and *how we act*. Still, this schizophrenia appears less surprising if we consider that for humans and posthumans alike, habits do not operate on a disembodied consciousness that takes its lead from the order of rational discourse, or logos. On the contrary, habits operate via an affective pathos rooted in a "mimetic unconscious,"[13] by which I mean an embodied, habitual, automatic, and intersubjective unconscious with the affective power to induce semi-hypnotic practices of somnambulistic consumption, exploitation, and pollution.

Via pervasive cultural influences (advertisement, tourism), repeated patterns of behavior (consumerism, travel), shared ideologies mediated by modern technologies of communication (film, social media), and daily repetitions now reloaded via good doses of algorithmic influences, practices of pollution become second nature over time, ingrained in both bodies and minds, individually and collectively. This is perhaps the reason Latour, drawing on the French sociologist Gabriel Tarde, writes that with respect to the climate crisis, "we have progressed like somnambulists."[14] Somnambulism is, indeed, an exemplary manifestation of the mimetic unconscious. Tarde, among other modernist theorists, relied on hypnosis, suggestions, and somnambulism to account for the imitative and unconscious dimension of social behavior in his classic, *The Laws of Imitation* (1890). As he puts it: "having only suggested ideas and believing them to be spontaneous: this is the illusion proper to the somnambulist and to social beings."[15] Somnambulism is only aggravated in the digital age by new media that operate as black mirrors with powers to fixate the gaze and induce hypnosis (from *hypnos*, sleep). As sci-fi films from *Avatar* to *Black Mirror* make clear, the magnetizing spell of such mirrors generates mimetic or, better, hypermimetic forms of psychic dispossessions that now punctuate everyday life, making trance states the norm rather than the exceptions.[16] This "mimetic madness," as Stiegler also calls it, generates a will to conform that

13 See Nidesh Lawtoo, *The Phantom of the Ego: Modernism and the Mimetic Unconscious* (East Lansing: Michigan State University Press, 2013). I discuss the relevance of the mimetic unconscious for posthuman studies in Nidesh Lawtoo, "Posthuman Mimesis 1: Concepts for the Mimetic Turn," *Journal of Posthumanism* 2, no. 2 (2022): 101–14.

14 Latour, *Face à Gaïa*, 18.

15 Gabriel Tarde, *Les Lois de l'imitation* (Paris: Seuil, 2001), 137 (my translation).

16 See Nidesh Lawtoo, "Avatar Simulation in 3Ts: Techne, Trance, Transformation," *Science Fiction Studies* 42 (2015): 132–50; Nidesh Lawtoo, "Black Mirrors: Reflecting (on) Hypermimesis," *Philosophy Today* 65, no. 3 (2021): 523–47.

operates below conscious awareness, dissolves the boundaries of individuation, turns egos into phantom egos, and is largely responsible for the fact that "we live in a herd-society"[17]—which does not mean that mimesis cannot be put to productive, diagnostic, or patho-*logical* use.

As we move deeper into the epoch of the Anthropocene, one among many paradoxes constitutive of both mimetic studies and posthuman studies sets up a magnifying mirror to the predicament of the mimetic/posthuman subject: Depending on the models we imitate, be they real or fictional, human or nonhuman, online or offline, technological or natural, among a plurality of possibilities, posthuman mimesis in the digital age is certainly capable of furthering liberating discourses, or *logoi,* that were already central to poststructuralism and contribute to cultivating a life worth living. They include, feminist emancipation, promotion of racial diversity, sensitivity for sexual differences, support for disabilities, social justice and equality, openness to migrants, and increased ecological awareness, among other life-affirmative modes of existence. They all benefit from new media that do not simply copy or represent the world from a distance, but rather contribute to forming and transforming subjects receptive to the proximity of mimetic affect, or pathos. At the same time, and perhaps more visibly in the last decades aggravated by multiple (economic, pandemic, humanitarian, environmental) crises, the same technologies are driven by profit-oriented corporations that program algorithms in new media to cast a hypermimetic spell on users with pathological effects: from new media violence to the rise of (new) fascist movements, online vitriol to offline addictions, conspiracy theories to insurrectionist practices, among other symptoms that are currently generating contagious and thus mimetic forms of pathological behavior that operate for the worse—a Janus-faced, "patho(-)logical" lesson that is constitutive of the genealogy of mimetic studies[18] and is as old as the mythic birth of technics itself.

There are thus significant ethical, political, and environmental reasons for posthuman studies to come to a better understanding of mimetic processes central to our ongoing metamorphoses, if only because the geology of the Earth itself is already changing due to an all too mimetic human behavior. The goal for us affirming survival in the Anthropocene, then, is now no longer limited to Enlightenment ideals of daring to understand or know (*saper*

17 Bernard Stiegler, *Acting Out*, trans. David Barison (Stanford, Calif.: Stanford University Press, 2008), 70, 48.

18 I first defined patho(-)logies as both sickness and therapy in Lawtoo, *Phantom of the Ego*, 6–9; see also, Nidesh Lawtoo, *Violence and the Mimetic Unconscious: Vol. 2, The Affective Hypothesis* (East Lansing: Michigan State University Press, 2023).

aude), characteristic of transcendental theories rooted in theological beliefs in afterworlds. It is, rather, to draw on the vast spectrum of (un)consciousness animating homo mimeticus 2.0, so as to mimetically foster, encourage, or performatively induce life-affirmative mutations, transformations, or metamorphoses in immanent practices (*mutare aude*). Similarly, the question for us reloading mimesis in the twenty-first century is no longer how to reach a better, more ideal, disembodied, and perhaps even eternal life in digital second lives already animated by a multiplicity of avatars—as a metaphysical tradition that goes from Plato to *transhumanism* suggests. Rather, it entails heeding the Nietzschean imperative to "*remain true to the earth* and do not believe those who talk of over-earthly hopes!"[19]—as an immanent tradition attentive to the contagious powers of mimetic pathos taught us to affirm.

For both good and ill, logical and pathological reasons, then, the relational, embodied, affective, and plastic characteristics of homo mimeticus 2.0 render us radically open to influences and will continue to play a major role in our posthuman becoming in the Anthropocene. This is what precursors of the mimetic turn like Nietzsche already recognized. Under the mimetic mask of Zarathustra, he stated for instance that "a polluted stream is the human,"[20] urging his readers to go through a mimetic metamorphosis of the sprit beyond the human. As Bruno Latour more recently puts it, renewing the Nietzschean imperative to remain faithful to the Earth from the perspective of the Anthropocene, it is now a question of charting a map that will allow us to find "where to land" (*où atterir*):[21] namely, on the only planet we have.

Landing entails a downward, delicate, and perilous movement that is subjected to an immanent gravitational pull; yet, if the conditions are right, a good pilot manages to partially control this pull via a deft maneuver, change of speed, and right inclination vital to avoid catastrophe. Taken as an imperfect metaphor for collective survival (there is currently no pilot in charge, alas), this all-too-human will to land entails, at least in theory, a radical shift of perspective away from the image of planet Earth seen from a gravitation-free, extra-terrestrial, and somewhat disembodied distance familiar since the Moon landing.

This is, indeed, a view from nowhere that we have by now become mimetically accustomed to due to endless reproductions and iterations. Mesmerizing in its aesthetic beauty that operates on vision alone, the blue marble planet seen from space appears to be objective in abstract theory, at least if we focus

19 Friedrich Nietzsche, *Thus Spoke Zarathustra,* trans. Graham Parkes (Oxford: Oxford University Press, 2008), 12.

20 Nietzsche, *Thus Spoke Zarathustra*, 12.

21 Bruno Latour, *Où Atterir: Comment s'orienter en politique* (Paris: La Découverte, 2017).



FIGURE 11.1 Evans, Ron or Harrison Smith Apollo 17 crew. *The Blue Marble*, original orientation (AS17-148-22727), 1972. https://en.wikipedia.org/wiki/The_Blue_Marble
PHOTO COURTESY NASA

on the Earth understood as an object *represented*. And yet, if we overturn perspectives to pay attention to the subject of representation, we soon realize that this view from nowhere is neither human nor posthuman—very few members of *Homo sapiens* have experienced this gravitation-free point of view from space, and not for long. Upon reflection, this omniscient perspective rests on an anthropocentric ideal centered on humans as sovereign, autonomous, and semi-divine figures who, via millennia of idealist beliefs—be they Platonic or Christian—now supplemented by the material power of technology, have deluded themselves that they can occupy such a position beyond the world in the first place. As Latour puts it: "Those who look at the Earth and see a Globe always take themselves for a God."[22] This is, indeed, the mythic view the demigod Prometheus made technically possible in the sphere of myth, as we shall

22 Latour, *Face à Gaïa*, 180.



FIGURE 11.2 *Earth Space Sunlight Sun*, https://pixabay.com/illustrations/earth-space-sunlight-sun-rays-1756274/
PHOTO FROM PIXABAY

see. And yet, this does not mean that the semi-god himself could occupy such a metaphysical position for long. Quite the contrary. Even the Titan was tied to the Earth via a cautionary myth that, as we shall hear, speaks, perhaps more than ever, to the present hubris of *anthropos*.

Now, if we want to promote our chances of landing by furthering life-affirmative metamorphoses in the Anthropocene, this reassuringly distant perspective of the Globe must be replaced by a more affectively close view of what Latour calls "Earth" (*Terre*). This entails taking hold of the fact that life on Earth is only possible within a thin atmospheric zone, or Critical Zone, which spans only a little over 10,000 km and offers a rather different picture of where landing can perhaps take place.

This is, indeed, the Critical Zone, or as Latour also calls it, "the metamorphic zone" where life on Earth is at all possible. It is called critical because it is critical to the existence of life. The fact that we are radically dependent on this thin atmospheric layer for basic physiological functions like breathing and nourishment turns the abstract globe into a fragile surface or skin that should at least generate a feeling of modesty. It should also shatter the imaginary feeling of omniscient distance induced by the globe. Instead, it suggests a subjective feeling, or pathos, that, as Nietzsche foresaw, roots us to the Earth and renders metamorphoses possible in the first place. To put it in the equally earthly language of Latour, "a *metamorphic zone* can capture in a word all the 'morphisms'

that we will have to register,"[23] including posthuman, all-too-human metamorphoses for the future. If the linguistic turn taught us that there is nothing outside the text, the metamorphic turn should teach us that there is—not nothing, for the universe is infinitely vast—but no human or nonhuman life so far attested outside the Critical Zone.

In order not to fatally mistake *Homo sapiens* for *homo deus*, a metamorphosis is thus in order, as historian Yuval Harari also suggests.[24] Given that imitation is constitutive of subject formation, the mimetic turn has a role to play in this transformation of consciousness—though new models are urgently needed. The good news is that a theory of homo mimeticus provides an immanent, relational, and intersubjective principle that accounts for humans' chameleon-like metamorphoses over the epochs; the sad news is that mimetic metamorphoses tend to follow the dominant models in power. If, for a long time, a Christian world rested on a theocentric tradition that promoted the imitation of Christ (or *imitatio Christi*) as the model of moral virtue leading to imaginary rewards in a paradisiac afterworld, and in an overturning of perspectives, humanism replaced this divine model with an all-too-human model still aspiring to a sapient sovereign position of omniscience, the posthuman will have to find or, rather, create new, postanthropocentric ways of life that can inspire future generations.[25]

Writing contra dominant neoliberal models of mass consumption and exploitation, a long genealogy of thinkers that goes from Friedrich Nietzsche to Gilles Deleuze, Donna Haraway to Katherine Hayles, Bruno Latour to Rosi Braidotti, William Connolly and Jane Bennett to Bernard Stiegler, and others tends to agree, from different perspectives, with the fundamental assumption now driving the mimetic turn in posthuman studies: namely, that posthumans are not only conscious but also unconscious; not solely driven by the mind but also by bodily affects; not distinct from nonhuman animals but part of a spectrum of mimetic animals; not divided from nature but deeply rooted in, composed, and decomposed by nature; not simply rational and moved by

23 Latour, *Face à Gaïa*, 79.

24 See Yuval Noah Harari, *Homo Deus: A Brief History of Tomorrow* (New York: Harper Collins, 2017).

25 An innovative postanthropocentric perspective comes from the area of biomimicry, which suggests taking nature not only as a "model" for technological innovation but also as a "mentor" for "measure." See Janine M. Benyus, *Biomimicry: Innovation Inspired by Nature* (New York: Harper Collins, 1997). For a rich study that gives philosophical foundations to biomimicry in ways that contribute directly to mimetic studies, see Henry Dicks, *The Biomimicry Revolution: Learning from Nature How to Inhabit the Earth* (New York: Columbia University Press, 2023).

an abstract logos but also irrational and animated by affective experiences, or pathos, open to both contagious pathologies that spread from self to others, online and offline. For these and other reasons, new diagnostic discourses (*logoi*) on the dynamic of mimetic affect (*pathos*) are urgently needed in the epoch of the Anthropocene.

The vertiginous technological innovations that propel us into the future make it tempting for transhumanists to merge anthropocentrism with theocentrism, to embrace phantasies of technological will to power, and to mistake themselves for gods who can take flight to imaginary afterworlds and perhaps even dream of immortality. These are not new ideals. They are as old as Platonism. As an immanent counterbalancing move, it might thus be sobering to revisit the myth of a demigod who is mostly remembered for his technological gift to humans. This might help to reorient ourselves, change course, and aim to land back on planet Earth. As Braidotti also puts it, metamorphosis leads us "to think through the body, not in flight from it."[26] And who more than Prometheus reminds us that our all-too-human body is bound to Earth? After all, he is the son of Gaia.

As we turn to see, the Greek demigod may not offer the omniscient point of view from nowhere that his gift of technology made possible. His position is much more modest, embodied, and Earth-bound. Still, the myth sets up a self-reflective mirror to techno-patho(-)logies we need to re-evaluate, at least if we want to deepen our self-knowledge and affirm life-affirmative metamorphoses for the future here on Earth.

2 The Patho(-)logies of Prometheus

The mythic text at the very origins of technological innovations that set humans on the course of becoming posthumans generating patho(-)logies that reach into the present, remains, to this day, the myth of Prometheus. One of the most ancient myths of which we have written traces, its exemplary lesson continues to appeal to both posthumanist and transhumanist theorists, albeit often for opposing reasons. As Ibn Hassan put it in a pioneering essay, "Prometheus mirrors our own present."[27] The mirror is, of course, the most classical mimetic trope; it was first invoked by Plato to frame the destabilizing (im)properties of mimesis and structure his vertical metaphysics in book 10 of *Republic*. And yet, what this mirror reflects might not be the traditional ontological problem

26 Rosi Braidotti, *Metamorphoses: Towards a Materialist Theory of Becoming* (Cambridge: Polity Press, 2002), 5.

27 Hassan, "Prometheus as Performer," 832.

of "the one and the many,"[28] as Hassan suggests, echoing a Platonic tradition that ties mimesis to metaphysical phantoms or shadows. Nor does it promise a "marriage of Earth and Sky"[29] of Romantic and thus anti-mimetic inspiration. Instead, I suggest that the myth articulates a Janus-faced confrontation of mimesis and technics that sets up a diagnostic mirror to techno-patho(-)logies immanently tied to the Earth on which we aim to land.

What was true of mimesis in the past, then, remains true of posthuman mimesis in the present: A *vita mimetica* goes beyond good and evil in the sense that it is a *pharmakon* (poison/remedy) that can be put to both pathological and patho-*logical* use. The reality of global warming casts not so much a shadow as an unbearable light on the Anthropocene. It should also bring Hephaestus's cautionary prophecy to Prometheus at the opening of Aeschylus's tragic play *Prometheus Bound* (ca. 479–424 BC) closer to home. As the sympathetic god brutally puts it to the chained Titan: "You shall be grilled by the sun's bright fire and change the fair bloom of your skin."[30] The lesson that one can be burned by fire goes back to the dawn of *Homo sapiens*, but in this mythic context, the warning is not deprived of ironic foresight: The "original" god of fire, Hephaestus, makes clear to Prometheus that the fire he stole is a gift (cognate with German *Gift*, poison) that operates for both good and ill. The ills might thus come back to infect the very figure who stole it for good humanitarian reasons. At one further remove, this warning acquires a renewed urgency under the new climate regime haunting a technologically driven homo mimeticus 2.0. The mythic lesson is as simple as it is fundamental: If humans used fire for grilling, both humans and posthumans alike, including transhumanists, can equally be grilled by fire.

There is thus a mirroring inversion of perspective at play in the myth of the birth of technics. This mirror applies to both Prometheus and his (post)human descendants but deserves to be revisited from a mimetic perspective in the present and future as well. Since times immemorial, in fact, the powers of myth cannot be dissociated from the powers of mimesis to form and transform subjectivity, and the same applies to the myth of Prometheus. Its first mention in writing is registered by Hesiod, in his genealogy of the birth of the Greek gods, or *Theogony* (730–700 B. C.). There, Hesiod tells us that Prometheus, whose "mind was labyrinthine and swift," deceived Zeus and, "within a hollow fennel

28 Hassan, "Prometheus as Performer," 835.

29 Hassan, "Prometheus as Performer," 835.

30 Aeschylus, *Prometheus Bound*, trans. David Grene, in *The Complete Greek Tragedies, vol. 1*, eds. by David Grene and Richmond Lattimore (Chicago: The University of Chicago Press, 1959), 309–351, 311, ll.21–23.

stalk stole the far-flashing unwearying fire."[31] As is well known, the trickster Titan passed fire down to humans who, over time and with dedication, developed technological skills that rendered themselves feared even by the gods themselves—the power internal to the technics of fire, and by extension, technics in general, being the very reason of the initial prohibition. Less known, is that Prometheus's technical gift is meant to supplement a preceding fault made by his forgetful brother, Epimetheus. If Prometheus is synonymous with "forethought," in a mirroring reversal, Epimetheus is defined as "afterthought." Together they compose a Janus-faced figure that looks in opposite directions. And as their echoing names suggest, the myth is not deprived of mimetic fore/afterthoughts.

How does the myth of technics connect to the problematic of mimesis? As often in mimetic matters, it is Plato who provides an important critical beginning. In the *Protagoras*, the sophist of the same name joins the myth of Prometheus with the one of Epimetheus to prove to Socrates that virtue can be taught via education: namely, via what Plato, as he made clear in books 2 and 3 of *Republic*, considers an eminently mimetic practice formative of what I have dubbed a "*vita mimetica*."[32] The Platonic myth narrated by Protagoras specifies what Hesiod had left untold: Epimetheus had taken charge of distributing qualities, or powers, to the newly created mortal creatures, including human and nonhuman animals. Hence, Protagoras narrates that Epimetheus "gave to some creatures strength without speed, and equipped the weaker kinds with speed."[33] He did so by following the "principle of compensation" (*P*, 320e), so that speed balanced strength, wings balanced weight, and so on, in view of guaranteeing an ecological equilibrium that would make possible the survival of each species.

"Now Epimetheus, who was not a particularly clever person" (*P*, 321b), specifies Protagoras, used up all the qualities on nonhuman animals and forgot humans, who were left without qualities; we are told that they remained "naked, unshod, unbedded, and unarmed" (*P*, 321c). It is thus to supplement what appears in afterthought to be the fault of Epimetheus that Prometheus, in a flash of foresight, stole fire to gift it to humans: "Being at a loss to prove any means of salvation for man, stole from Hephaestus and Athena the gift of skill

31 Hesiod, *Theogony, Works and Days*, trans. Apostolos N. Athanassakis (Baltimore, Md.: Johns Hopkins University Press, 1983), 26–27.

32 See "Vita Mimetica in the Cave," in Lawtoo, *Homo Mimeticus*, 69–91.

33 Plato, *Protagoras*, trans. W. K. C. Guthrie, in *The Collected Dialogues of Plato*, ed. by Edith Hamilton and Huntington Cairns (New York: Pantheon Books, 1963), 308–51, 318, 320d-e. Hereafter cited in the text as *P*.

in the arts together with fire—for without fire it was impossible for anyone to possess or use this skill—and bestowed it on man" (*P*, 321c-d). Thus, a new species was born, endowed with no original qualities but skilled in the protean gift of technics; the gift of *techne*, in other words, is tied since the dawn of philosophy to the gift of fire. It supplements, so to speak, a lack of powers that left humans bereft of proper qualities.

This, then, is a Janus-faced myth. *Epimetheia* (afterthought) and *prometheia* (forethought) join perspectives to compose a picture of an original species characterized by the gift of technics. But it still does not say why this technological gift itself is also a gift of mimesis. Let us thus stress that if the fault of Epimetheus generates an all-too-human default that is constitutive of a lack of essential powers, properties, or even being, Prometheus's gift of technics supplements this original interior lack with an exterior technical ability to generate *ek-static* transformations in time. This, you will have recognized, is the fundamental thesis at the origins of Bernard Stiegler's monumental *Technics and Time,* a multivolume genealogy of technics that goes from Plato to Rousseau, Husserl to Heidegger, Leroi-Gourhan to Derrida, and, we should add, provides philosophical foundations to account for the technical process of becoming posthuman—out of an ancient mimetic paradox.

Short of reconstructing the entirety of Stiegler's deconstructive account of the philosophical forgetting, or repression, of technics that, in his post-phenomenological hermeneutics, characterizes the history of western metaphysics, I restrict my focus to its essential starting point, or *Stoßpunkt*: The first volume of *Technics and Time*, which is subtitled *The Fault of Epimetheus* (1994).[34] Following a genealogy of anthropological theories of technical evolution based on the paleoanthropologist André Leroi-Gourhan, Stiegler zooms in on the mythic figure of Epimetheus who, he writes, is "not only forgetful [*oublieux*]" but, like the subject of technology itself, is also "forgotten [*oubliée*]" (*TT*, 216). Stiegler's turn to a forgotten myth is thus geared toward providing an alternative ontology of technics that, not unlike mimesis, from Plato onward, was left at the margins of philosophy.

Starting from a reading of the mythic narrative of Epimetheus and Prometheus dramatized in the passage of *Protagoras* I have just mentioned, Stiegler stresses that the fault of Epimetheus generates a "default of origin or the origin as default" (*TT*, 218) whose consequence is to define humans

34 Stiegler offers a detailed account of Prometheus and technics as a pharmakon directly in line with patho(-)logies of mimesis that go from writing to new media in *La Technique et le temps, I,* 21–313, esp. 213–311. Hereafter cited in the text as *TT*. On Stiegler, technics and mimesis see also Azizov's contribution to this volume in Chapter 12.

as beings without qualities. As he puts it: "The essential, is the accident, the absence of quality" (*TT*, 223). Genealogists familiar with the vicissitudes of the history of mimesis should begin to hear some echoes. This is, in fact, the moment to recall the genealogy of homo mimeticus outlined in Chapter 6, step seven in particular: such a lack of proper qualities, lack of anything proper, or lack of Being is also the defining characteristic of the concept of mimesis that, at least since Plato, was defined as a shadow or phantom far removed from true Being. You will also recall that poststructuralist philosophers of Nietzschean inspiration like Jacques Derrida, writing contra this very same metaphysical tradition, valued precisely what Plato critiqued: the impropriety of mimetic concepts such as the mask, the simulacrum, the trace, and, finally, writing as a copy or imitation of speech. This overturning of perspective led Derrida to turn a type of mimesis characterized by "nothing proper" into the deconstructive motor scheme for the deconstructive era. As Derrida puts it, Thoth, the god of writing "has neither a proper place nor a proper name. His propriety or property is impropriety."[35] Could it be, then, that this ontological impropriety characteristic of mimesis calls for a re-productive supplement that goes by different names or masks—be it writing, mimesis, pharmakon, or technics—yet always rests on the same paradoxical logic that turns passivity into activity, a lack of proper being into a creative process of becoming?

Perhaps. What is certain is that this paradox, in Stiegler's reading of the myth, turns a lack of proper qualities caused by Epimetheus's forgetfulness into an excess of improper technical skills supplemented by Prometheus's foresight. That is, a future-oriented sight that renders human existence *ek-static* or located outside of itself in time. For Stiegler, in fact, the gift of technics is impressed by a "promethean stamp [*frappe*]" (*TT*, 223) that, *après-coup*, orients humans toward an *ek-static* condition that finds in technological prostheses in general, and in writing in particular, its means of self-realization in time. As he puts it: "The being of humans is (to be) outside themselves. To supplement the fault of Epimetheus, Prometheus gives humans the gift of putting them outside of themselves" (*TT*, 223). This is, of course, a partial summary, but it already reveals essential genealogical connections central to our topic. An *ek-static* subject without proper qualities, a technological supplement, and an existential/temporal orientation toward finitude and death: these are the ontological foundations on which the subject of technology (objective/subjective genitive)

35 Jacques Derrida, "Plato's Pharmacy," in *Dissemination*, trans. Barbara Johnson (Chicago: University of Chicago Press, 1981), 61–171, 93; see also Jacques Derrida, "The Double Session," in *Dissemination*, 173–286, esp. 186–98. I discuss Derrida's deconstruction of mimesis in more detail in Lawtoo, *Homo Mimeticus*, ch. 3.

rests—at least for Stiegler, though he is not alone. Of explicit Heideggerian inspiration and supplemented by a deconstructive re-evaluation of temporal/spatial *différance* constitutive of an ek-static and decentered subject qua *Dasein* that has nothing proper to itself, Stiegler's meditations on technics reinscribe human subjectivity in a long genealogy of thinkers that goes from Plato to Nietzsche, Heidegger to Derrida, via phenomenology, anthropology, deconstruction, and has already received much critical attention.[36]

What we must add now if we want to further our genealogy of technics from the specific angle of posthumanism, is a mimetic supplement that is embryonic in Stiegler's account of technics and that still needs a push to come into the world. Everything Stiegler says of the gift of technics, namely, its lack of essential properties, its *ek-static* dimension, its supplementary nature in general, its supplement to a lack of proper qualities in particular, its power of impression or *frappe,* and so on, can be said about the gift of mimesis as well. And unsurprisingly so. In fact, technics, not unlike writing, on which it models itself, is based on a pharmacology that finds in mimesis the paradigmatic concept that troubles, or deconstructs, metaphysical oppositions like origin/copy, inside/outside, nature/culture, proper/improper, good/evil, poison/therapy, and other binaries. This is a lesson Stiegler directly inherited from his teacher, Derrida, who in "Plato's Pharmacy" famously argued that "mimesis is akin to the *pharmakon*,"[37] thereby setting in motion a deconstruction of mimesis that already informs mimetic studies and continues to inform the mimetic turn in posthuman studies as well.

In a different but genealogically related iteration, we find a confirmation that the improper gift of technics is an innovative variation on the improper gift of mimesis. This link is made visible by Derrida's early collaborator, the French philosopher and critic Philippe Lacoue-Labarthe, in a foundational text titled *Typography*, which paves the way for the mimetic turn or re-turn. Equally on the shoulders of Heidegger and Derrida, but also of Nietzsche and Girard, Lacoue-Labarthe writes, in fact, that the "*gift of mimesis*," not unlike the gift of writing or of technics, is in effect a "gift of nothing, or of nothing other than the 'aptitude' for presenting, that is, substituting for nature itself; a gift for 'doing' nature, in order to supplement its incapacity."[38] And giving away the

36 See, for instance, Christina Howells and Gerald Moore, eds., *Stiegler and Technics* (Edinburgh: Edinburgh University Press, 2013).

37 Derrida, "Plato's Pharmacy," 139.

38 Philippe Lacoue-Labarthe, *Typography: Mimesis, Philosophy, Politics*, ed. by Christopher Fynsk (Stanford, Calif.: Stanford University Press, 1989), 259. On Lacoue-Labarthe and mimetic studies, see also Lawtoo, *Homo Mimeticus*, ch. 4.

same ontological foundations he shares with Derrida, and thus with Stigler, Lacoue-Labarthe outlines a mimetic paradox that supplements the paradox of technics as well, as he writes:

> The paradox states a law of impropriety, which is also the very law of mimesis: only the "man without qualities," the being without properties or specificity, the subjectless subject (absent from himself, distracted from himself, deprived of self) is able to present or produce in general. Plato, in his way, knew this very well.[39]

The paradox of a technological supplement, then, leads us back to the paradox of a mimetic supplement; the gift of technics leads us back to the gift of mimesis. And unsurprisingly so, for, as I tried to demonstrate, technics and mimesis are two sides of the same Janus-faced coin. That is, a conceptual coin that has been, I would not say repressed, but certainly excluded, marginalized, or more simply ignored by dominant idealist trends in philosophy, yet continues to operate in the immanence of existence in time, for good and ill. Prometheus's gift, in other words, is an improper gift that goes beyond good and evil, health and sickness, remedy and poison. Or, if you prefer a more ancient and duplicitous term, both mimesis and technics operate as a *pharmakon* that is currently informing the mimetic pathologies and mimetic patho-*logies*, or diagnostic accounts of a mimetic pathos that continues to infect and affect homo mimeticus 2.0.

At the dawn of mimetic studies, Plato, for one, knew this very well. It is thus no accident that in *Protagoras*, immediately after having told the myth of the fault of Epimetheus followed by the gift of Prometheus, the sophist resumes the argument with Socrates on the issue of whether virtue can indeed be taught. How? Via a poetic, mythic, and thus mimetic education that was constitutive of ancient oral cultures before Plato and, via different media, remains at play in a contemporary mass-mediatized, globalized, and digitized culture.[40] Thus, as Protagoras puts it, teachers give their students "poems containing much admonition and many stories, eulogies, and panegyrics of the good men of old, so that the child may be inspired to imitate them and long to be like them" (*P*, 326a). Plato, then, was fully aware that mimesis not only represents or copies the world on the side of art. On the contrary, it also provides models for students to copy or mimic, generating performative mimetic effects on the side of

39 Lacoue-Labarthe, *Typography*, 258–59.

40 For a pioneering link between orality and modern media, see Marshall McLuhan, *Understanding Media: The Extension of Man* (Signet Books: New York, 1964), viii–ix.

life. Mimesis can thus operate in favor of the good, if the models are worthy of imitation; conversely, it can also operate for the worse, if the models generate pathologies that spread contagiously in the body politic, or *polis*.[41] For good and ill, then, this ancient Platonic lesson on the powers of mimesis, redoubled by the powers of technics, not only to inform or misinform but also to deform and transform human character, has not lost any of its relevance today. Located at the origins of mimetic studies, it traverses our genealogy of homo mimeticus, and now informs the *re*-turn to a more embodied, performative, and relational mimesis in posthuman studies that, via the gift of technics, continues to operate as both poison and cure, or in our language, as both pathology and patho-*logy*.

Despite the well-known quarrel between philosophy and myth, then, even a partial genealogy of the sibling concepts of mimesis and technics reveals profound affinities that have so far gone largely unnoticed both in posthuman studies and mimetic studies and that mimetic posthumanism now brings to the foreground. With the fault of Epimetheus in mind, let us thus return to interpret subsequent iterations of the myth of Prometheus. The old practice of interpretation, or hermeneutics, will allow us to re-evaluate patho(-)logical insights that may not only orient the mimetic turn in posthuman studies; they might also provide Janus-faced criteria to decide which models are worthy of imitation in the epoch of the Anthropocene to better land back on Earth.

3 Techno-Patho(-)logies in *Prometheus Bound*

We have heard that both Hesiod and Plato give voice to the transgressive, supplementary powers of Prometheus' gift, yet neither of them focused on the pathological consequences of a stolen gift that did not go unpunished. We will have to wait for the origins of Greek drama in Aeschylus' *Prometheus Bound* for a tragic dramatization of the consequences of Prometheus' theft and subsequent gift. As the title suggests, Aeschylus's focus is on the Titan's punishment as he is chained to a cliff in the remote mountains of Scythia, overlapping with current-day Ukraine. There, Prometheus's liver is regularly devoured by an eagle during the day only to regrow at night, in an eternal return of the same that takes titanic efforts not to fall prey to nihilistic despair and to continue affirming life on Earth. What emerges from the first lines of the play is that

41 See Plato, *Republic*, in *The Collected Dialogues of Plato*, ed. E. Hamilton and H. Cairns, trans. Paul Shorey (Princeton, N.J.: Princeton University Press, 1963), 575–853, 395c–d.

even the demigod still has a body that can be chained to the Earth. His landing was far from smooth, despite his Titanic powers—or perhaps because of them. This is a lesson worth recalling in an age of transhumanist fantasies of endless technological enhancement and digital disembodiment that aspires to move beyond an all-too-human body.

The punishment should thus give us pause for thought, for at least two related reasons. The first is because we live in a period in which the same region is currently devasted by a criminal war that relies on high-tech missiles to strike civilians from the above while awakening nightmares of nuclear escalations below—as the Russian invasion of Ukraine has been making palpable since February 2022 in horrors that are still ongoing as I write. The second is because this is an age in which technological powers put humans (collectively, and with radically different degrees of agency) in a position to operate as titanic forces on the planet. The same mythic tradition also reminds us that the planet the Greek tradition called Gaia was, as I mentioned, the mother of Prometheus. Not present in the myth itself, Gaia is endowed with agentic powers of her own that retroact, sometimes devastatingly, on human and nonhuman life in reality—as the catastrophic effects of climate change make palpably clear, from hurricanes to droughts, species extension to rising temperatures. As both technics and mimesis are implicated in the crisis of the present, generating technological solutions but also escalating systemic problems, it is thus useful to further revisit *Prometheus Bound* with an eye to the future.

Prometheus's punishment reveals patho(-)logical lessons that are particularly relevant to account for the Janus-faced (im)properties of mimesis and technics alike. Chained by the god of fire and master ironsmith Hephaestus to a cliff, I already mentioned that *Prometheus Bound* starts with the ominous warning that "you shall be grilled by the sun's bright fire."[42] This is not only a tragic overturning of fortune that reveals how the trickster god who actively put his labyrinthine mind to use to steal fire is now passively subjected to endure the power of fire with his body; it is also a subtle confirmation that fire, and thus technics, operates as a dangerous supplement that cuts both ways. On the patho-*logical* side, it can be put to liberating use by furnishing humans without proper qualities with techno-*logical* powers that partially free them from natural constraints; on the pathological side, and without contradiction, fire can also be put to destructive use insofar as human bodies can easily be subjugated to both natural (the sun as a literal force) and human-made (fire

42 Aeschylus, *Prometheus Bound,* 311, ll.21–22. Hereafter cited in the text as *PB* with line number.

as a metaphor of technics) powers that not only go beyond human control but also retroact on them with destructive and binding effects. Either way, as Prometheus is grilled by both literal and metaphorical fire, what is clear is that we are far removed from the Platonic metaphor of the Sun as the transcendental idea of the Good as dramatized in Plato's *Republic*. And yet, this does not mean that we are far from Plato's pharmacological diagnostic of mimesis as supplementary technics, which, we are beginning to sense, is already internal to the register of myth Plato so vehemently critiqued.

That the myth is operating within a medical or diagnostic register is clear. As the Chorus sympathizes with Prometheus' suffering body torn to pieces—an experience out of which this tragedy, and perhaps tragedy tout court, is born—the following dialogue ensues:

PROMETHEUS: I gave to mortal man a precedence over myself in pity … I caused mortals to cease foreseeing doom.
CHORUS: What cure did you provide them with against that sickness?
PROMETHEUS: I placed in them blind hopes.
CHORUS: That was a great gift you gave men.
PB, ll. 240–53

A few lines into the tragedy and we are already confronted with a complex techno-mimetic patho(-)logy to reinterpret for the present. The sacrificial gesture that animates Prometheus's gift to humans is a mimetic gesture in a sense that it is, once again, Janus-faced. On one side, the demigod is animated by pity, compassion, or *sym-pathos* (feeling with) that mimetically binds him to his fellow mortals; and this shared pathos leads him to place humanity over and beyond Zeus' divine interdiction—an indication that there is an immanent, relational, and affective power I call mimetic pathos that is stronger than any transcendental divine imperative, is not reducible to desire alone, and is constitutive of the mimetic turn in posthuman studies. On the other side, Prometheus, whose primary characteristic, as we have seen, is foresight, provides a "gift" that aims to cure humans by turning, paradoxically, human foresight of their death into what he calls "blind hopes." The irony that the god of foresight cures the misery caused by humans' anticipation of their "doom," namely death, with "hopes" that are "blind" is revealing. It shows that the gift of *prometheia* is eminently unstable, for it has both therapeutic and pathological sides. The blinding/revealing im-properties of mimetic technics should thus be treated with precaution.

Here we have yet another confirmation that the "great gift" of technics operates as a *pharmakon* that is not one but double: It serves both as a medicine to cure that all-too-human sickness that is the fear of death, and as a poison, for this gift is based on vain "hopes" that simply "blind" humans to their mortality without curing it. Today doctors would call it a placebo, which does not mean that it is deprived of mimetic efficacy. In our language, Prometheus's gift of technics is a mimetic gift that is Janus-faced in its duplicity. One face operates as a *patho*-logy that is based on pity or a shared pathos that blurs the boundaries between humans and nonhumans in terms that operate as a cure or patho*logy*. On the other face, the "gift" operates as a pathology that casts a blinding spell on humans, depriving them of the foresight into their mortality on which, a later philosophical tradition will insist, self-knowledge and the awareness of the place of humans in the cosmos is based. Although Aeschylus's *Prometheus Bound* tends to side with the suffering Titan, generating a *sym-pathos* between the theatrical audience and the tragic hero that mirrors the pity the latter felt for humans, a critical distance allows us to see, between the lines, a confirmation of Hesiod's original characterization of Prometheus as having a "labyrinthine mind" that leads him also to be not only a benefactor but also a "skillful crook."[43] The mythic tradition warns us that hermeneutical caution is de rigueur when dealing with a trickster.

Now, it is on this complex patho(-)logical foundations of a gift that is already not one but double, that, as an aside, the Titan adds a supplementary and much more familiar gift, as he mentions, rather succinctly:

> PROMETHEUS: Besides this, I gave them fire.
> CHORUS: And do creatures of a day now possess bright-faced fire?
> PROMETHEUS: Yes, and from it they shall learn many crafts.
> *PB*, ll. 254–56

Fire is, indeed, a real gift insofar as it is at the source of "many crafts," or *technai* that "creatures of a day" such as humans will use to master the natural world, expand their powers over the Earth, and reach the quasi-divine status even Olympic Zeus feared. We have thus moved from a gift based on "blind hopes" characteristic of religious beliefs in immortality deprived of material foundations, toward a gift based on fire that is at the material foundations of many crafts with immanent material powers. Prometheus lists "building houses," "reining horses," "numbering," "combining letters," observing the "rising of the

43 Hesiod, *Theogony,* 26.

stars" (*PB*, ll. 447–61), among the many technics of production. This second gift thus provides mythic/technical foundations to the human Promethean mastery of nature that informs humanism, is constitutive of anthropocentrism, and continues to inform transhumanist dreams of immortality based on the blind belief in endless technological progress.

And yet, what if the two gifts (blind hopes and the technics of fire) are two sides of the same mirroring *pharmakon*? Taken together, they provide a patho(-)logical frame that already implicitly warns those mastering the art of hermeneutics that the foreseeing gift of technics can equally turn into a blinding poison. After all, fire, not unlike the sun, warms as much as it burns. Plato, in another foundational myth, the one of the cave in book 7 of *Republic*, will later use the technics of fire to project illusory shadows on the wall, tying mimesis to a technological apparatus of projection that induces neither a *vita contemplativa*, nor a *vita activa*, but what I call a *vita mimetica* aminated by technics of mimetic shadows.[44]

What we should retain from a Greek tradition sensitive to the excess of what they called *hubris*, then, is the following advice: When it comes to handling such dangerous *pharmaka* such as *mimēsis* and *technē* it might be a question of right use and measure. And for the Greeks, but perhaps for us too, the right measure in our use of technical objects remains dependent on the question of self-knowledge concerning the mimetic subject that handles technics in the first place. Contemporary descendants of Prometheus, in the end, might have to gain self-knowledge first, not only to avoid pathological schorches but also to propose patho-*logical* transformations for the Anthropocene.

4 Promethean Self-Knowledge

Given these genealogical reflections that, from mythic times onward, set up a destabilizing mirror to posthuman, transhuman, and all-too-human aspirations, it is no accident that the most ancient of tragedians—yes, still Aeschylus—also convokes the famous Socratic "know thyself" maxim in his *Prometheus Bound*. He does so in a tragic context that continues to set up a revealing mirror to the mimetic posthuman and is worth revisiting in the guise of a conclusion.

That the problematic of self-knowledge cannot be dissociated from Prometheus's gift of technics, which as we have seen, is deeply entangled with

44 Lawtoo, *Homo Mimeticus*, 74–92.

the patho(-)logies of mimesis, is made clear in *Prometheus Bound* itself. Having provided the technical gift that supplements humans' lack of qualities according to a paradoxical mimetic logic that turns a lack of natural properties into an excess of technical im-properties, which allowed for all-too-human metamorphoses, an interesting overturning of perspective ensues. It is Prometheus himself, in fact, who is advised to "reform his ways." Following the Chorus' sympathetic exchange, the chained Titan is in fact visited by his brother, the demigod Oceanos, also a son of Uranus and Gaia, who addresses Prometheus's complaints as follows:

> OCEANOS: Yes, I see, Prometheus, and I want, indeed I do,
> to advise you for the best, for all your cleverness.
> *Know yourself and reform your ways to new ways.*
> *PB*, ll. 308–11; my italics

What was true for the genealogy of mimesis we traced in Chapter 6 is equally true for the genealogy of technics we trace in this chapter: Mythic wisdom paves the way for philosophical wisdom. "Know yourself" (*gnôthi seauton*) is, indeed, the philosophical imperative that was inscribed on the temple at Delphi.

Thanks to Plato's dialogues such as *Alcibiades*, *Phaedrus*, and others, we now commonly associate it with Socratic wisdom. And yet, in its mythic origins, it was first and foremost an Oceanic wisdom addressed to Prometheus. Rather than being opposed to myth and the mimetic models they entail, as a Platonic tradition conditioned us to blindly believe, myth reveals itself as the very origins of philosophical wisdom. And in a mirroring overturning of perspectives, the *object*-oriented problematic of technics brings us back to the *subject*-oriented problematic of mimetic self-knowledge. Or better, as should be clear by now, there is no opposition between the two complementary techno-mimetic perspectives. The Promethean gift of technics, whereby humans conquered the exterior, social, and natural world—now venturing with blind hopes into the cosmos as well—serves as a lead-in to the inner experience of self-knowledge. That is, an experience that for the Greeks was not based on a narcissistic and solipsistic self-reflection in an imaginary *imago* understood as "an ontological structure of the human world,"[45] as psychoanalysis later posited. On the contrary, it entailed a re-evaluation of one's position in the social, natural, and

45 Jacques Lacan, "The Mirror Stage as Formative of the Function of the I as Revealed in Psychoanalytical Experience," in *Écrits: A Selection*, trans. Alan Sheridan (Paris: Seuil, 1977), 1–7, 2.

cosmological world in view of a "reform of ways" vital for the birth of "new ways," as Oceanos, son of Gaia, puts it.

This is, indeed, an ancient piece of advice if there is one. It has been tempting for philosophers since Plato to dismiss myth as a fiction; yet, as we saw, Plato was the first to echo myth in his philosophy. Once we understand the "mimetic agonism" that connects Plato's famous opposition to myth,[46] we can see that both myth and philosophy lead us to look back to the birth of technics—out of a mimetic lack of human properties. This backward glance is not deprived of foresight that reaches from an ancient pharmacology, via modern recuperations of Prometheus, into present patho(-)logical diagnostics informing mimetic posthumanism. It is thus no accident that Romantic precursors of posthuman studies such as Mary Shelley were fascinated by the figure of Prometheus in classics like *Frankenstein* (subtitled, *The Modern Prometheus*). In this modern version, Shelley also issued a warning against aspirations that "far exceeded moderation" and led to a technical "horror" instead.[47] Among the modernist precursors of mimetic/posthuman studies, Nietzsche, who was also fascinated by Prometheus in his youth, called attention to the dangers of pathological infections. In fact, he consistently assumed the role of psychologist qua philosophical physician who inverted perspectives by looking at health from the point of view of sickness, and vice versa. He would thus have been sensitive to the Chorus's diagnostic warning to Prometheus as they compare him to "a bad doctor that has fallen sick himself" (*PB*, ll. 473–74). This is, indeed, one of the central lessons of new mimetic studies, which now applies to posthuman studies as well: Not unlike the ancient and the modern Prometheus, the doctor developing a technical patho-*logy* with the intention to cure can—in a spiraling feedback loop characteristic of the mimetic turn or re-turn—become a pathological victim as well.

The Chorus of this tragic play, then, stages the pathos triggered by Prometheus's gift in its pathological consequences, while also developing a patho-*logical* lesson: the *pharmakon* of *techne* can be the source of pathologies that retroact to infect and affect the creator and user as well. In fact, as this diagnostic just made clear, the spiraling logic internal to the patho(-)logy of mimetic technics also entails that being infected is not restricted to a debilitating pathology; it is also the experiential condition that allows the philosophical

46 See Lawtoo, *Violence and the Mimetic*, 75–123.

47 Mary Shelley, *Frankenstein*, ed. by Johanna M. Smith (New York: Bedford/St. Marin's, 2000), 60–61. For a rich mimetic reading of the modern Prometheus in the context of the Anthropocene, see William E. Connolly, *Climate Machines, Fascist Drives, and Truth* (Durham, N.C.: Duke University Press, 2019), 24–45.

physician to develop a patho-*logy*, a diagnostic insight that goes from Plato to Nietzsche, Derrida to Stiegler, and has been animating mimetic studies all along.[48] In the end, the self-propelling wheel of mimetic metamorphoses brings posthuman studies back to mythic origins. And what we find in the language of myth is neither a moral imperative nor a divine interdiction, neither a unilateral condemnation nor an enthusiastic celebration of technology. Rather, we find a cautionary myth on the Janus-faced, pharmacological nature of technical patho(-)logies that require first and foremost a degree of self-knowledge to be effectively diagnosed, and, in the best of circumstances, cured.

In the end, between the lines of *Prometheus Bound*, we find a self-reflective diagnostic mirror that reaches into the present and continues to orient the all-too-human efforts of homo mimeticus 2.0 to find a landing in the Anthropocene. Not unlike the sick physician, there is now increasing pressure in posthuman studies to look into the self-reflective mirror to recognize at least two points: first that the gift of technics operates not only as a therapy but also as a poison; and second, that a "reform" is urgently necessary to develop patho-*logies* that open "new ways" for the future.

The goal of the "know thyself" imperative is thus in need of reinterpretation. It does not simply aim to discover the truth of an individual self within via ever more sophisticated techniques of introspection uniquely attentive to self-development. Nor is it based on a quasi-divine Promethean model of autonomous and defiant self-sufficiency. On the contrary, as the dialogic nature of the tragedy indicates and the dialogic continuation of philosophy confirms, self-knowledge emerges in relations of bondage and dependence to others, be they human or nonhuman, individually or collectively, all of which remain ultimately exposed to the sun and chained to the Earth, for good and ill. As Michel Foucault also stressed late in his career, shifting the focus from "technologies of production" to what he calls "technologies of the self": "The Delphic principle was not an abstract one concerning life; it was technical advice, a rule to be observed for the consultation of the oracle. 'Know yourself' meant 'Do not suppose yourself to be a god.'"[49]

This is still a sound piece of advice in an epoch in which climate catastrophes are compensated for by blind hopes. Transhumanist hubris should indeed be balanced by a posthumanist moderation. One of the future aims of mimetic posthumanism is to turn the gift of technics from a mimetic pathology that

48 See Lawtoo, *Phantom of the Ego*, 3–6.

49 Michel Foucault, "Technologies of the Self: A Seminar with Michel Foucault," ed. by Luther H. Martin, Huck Gutman, and Patrick H. Hutton (Amherst: University of Massachusetts Press,1988),19.

spreads contagiously from self to others to mimetic patho-*logies*, or critical discourses on mimetic pathos, whose goal is to engender a reform of ways in view of living responsibly on the only planet we have. Taking the measure of our place on Earth might be the necessary first step to reorient ourselves to land back on Earth. Given the Oceanic nature of this lesson, it is perhaps not accidental that a growing number of thinkers of the Anthropocene started to call our planet by its ancient mythic name once again: Gaia.

In the end, it is worth recalling that at Delphi, next to the more famous "know thyself" maxim, which is Promethean before being Socratic, there was a second, less known and popular, but equally important maxim that cast a retrospective light, or Epimethean afterthought, on the first one: namely, "nothing in excess." If Oceanus claims that self-knowledge is needed for Prometheus to reform his ways, the lesson that is currently emerging from their mother, Gaia, is that "nothing in excess" provides a down-to-earth afterthought for humans and posthumans to reform their ways. If recognized in time, this mimetic pathos of dependency, interconnection, and bondage revealed by the mirroring interplay of technics and mimesis, Promethean foresight and Oceanic wisdom, will perhaps allow for the right measure vital to finding out where to land. With some luck, we might then continue inhabiting the Earth—at least for a little while.

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CHAPTER 12

Noomimesis: The Political Economy of the Meaningless Sign

Zeigam Azizov

In this chapter, I would like to point to Bernard Stiegler's work and his post-phenomenological inquiry into technics qua pharmakon as an important supplement to the mimetic turn in posthuman studies.[1] In his philosophy, the human is understood through the initial flaw of forgetfulness. Forgetfulness is also a condition of memory, as humans correct it by remembering. What is remembered is the lost "technics" (from the Greek *techne*, meaning skills and knowledge), which is inseparable from memory. "Technics" is used in the plural to refer to technique, technicity, and technology.[2] One avenue to explore could be Stiegler's discussion of *disorientation* as a competition or rivalry, but with a sense of admiration and imitation. Disorientation happens because knowledge automatically produced by technics not only precedes but also exceeds humans. This is confusing us, as we must always think of new technics for access to knowledge. Stiegler's reflections on the disorientation of knowledge amount to a pharmacology of imitation. The pharmacology of imitation is especially important because it points to its double-edged nature: It orients as much as it also disorients. Forgetfulness is both disorientation by oblivion and orientation by remembering. In other words, disorientation, which leads to the loss of knowledge, is also the condition of the discovery of loss. From the very start, "the human is not what is given, but what must be produced […], re-produced and repro-duced."[3]

Memory is pharmacological as it assumes both remembrance and oblivion, and this is the condition of the constitution of the human. Since memory produces the human unconsciously as a faulty subject, the conscious constitution is made by thought or noesis as Stiegler uses the term elsewhere. From this

1 For the full account of Stiegler's work see Zeigam Azizov, *The Time of the Image: A Philosophical Exploration of the Image in the Work of Bernard Stiegler* (Cologne: Herbert von Halem Verlag, 2020).

2 Bernard Stiegler, *Technics and Time, 1: The Fault of Epimetheus* (Stanford, Calif.: Stanford University Press, 1998), 29.

3 Bernard Stiegler, *Nanjing Lectures 2016–2019* (London: Open Humanities Press, 2020), 97.

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angle, I would like to develop the notion of imitation of thought as a conflicting force challenging unconscious imitation. To do so, I have coined the term *noomimesis*, a combination of the Greek *nous* (understanding) and *mimesis* (imaging, sign-making), which is related to but different from biomimesis.[4] Noomimesis is in contrast to biomimesis, which is the unconscious imitation resulting from the automation of techniques. Noomimesis is to be understood as a recontextualizing of the existing meaningless signs produced by automation. The discourse of posthumanism opens up the possibility for this kind of recontextualization as a mimetic turn that involves both questions of noesis and mimesis.[5] I will return to the critical examination of meaningless signs and their potential reproducibility by being recycled below. I will demonstrate the possibility of translating these meaningless signs from automation to autonomy in new conditions created by the discourse of posthumanism. These new technical conditions are the conditions of translations of the recorded memory and digital writing.[6] It is also the age of increasingly challenging times consisting of new fascisms, triumphalism, and traditionalism, which points to critical conditions.

It is crucial to remember that our history consists of translations and instead of falling prey to nostalgia, there is always a chance to become different by making sense of and producing new meanings out of the meaningless signs residing in memory. Now all memory is recorded and made available through multiple forms of data. In this way, thought is entering into the lives of subjects without their realizing it, because machines are used by people unconsciously producing meanings while depriving subjects of "sensibility via calculation."[7] This situation of unconscious imitation or biomimesis threatens to eliminate thought, but I argue that it also opens up the possibility of new thought through conscious emulation or noomimesis. Since my focus is on the notion of noomimesis, I will not focus on a detailed explanation of biomimesis, which

4 Imaging is just one of the meanings of the term "mimesis." For a more detailed analysis of the origins and different meanings of this complex term, see Gunter Gebauer and Christoph Wulf, *Mimesis: Culture-Art-Society* (Berkeley: University of California Press, 1995), 27.

5 The semantics of the term "mimesis" already points to the contrast between unconscious and conscious imitation; the coining of the new term only underlines their connectivity and difference.

6 For genealogical continuity with my argument, see Nidesh Lawtoo, ed., "Posthuman Mimesis," Special Issue, *Journal of Posthumanism* 2, no. 2 (2022).

7 N. Katherine Hayles, *My Mother Was a Computer: Digital Subjects and Literary Texts* (Chicago: University of Chicago Press, 2005).

is the core of Katherine Hayles' theory.[8] Although related to biomimesis, noomimesis is different, because it makes possible a conscious imitation that is already implicit in unconscious imitation. The similarity between these two is that both reside in the mimetic faculty.

The demand for noomimesis emerges from the conflict between unconscious automatism and conscious autonomy retained through the awareness of knowledge and described by Vladimir Vernadsky as the noosphere.[9] Influenced by Bergson's philosophy[10] and relying on his own distinguished knowledge of geology, especially his research in soil studies, Vernadsky defined the noosphere as the inevitable extension of the biosphere. This theory precedes current theories of the Anthropocene and extends the study of signs emerging in the biosphere to the noosphere and the semiosphere (the sphere of signs).[11] It states that the stratification of the Earth and its subjects by previous intellectual systems automatically overcome the human, while at the same time opening up a new possibility for autonomy through knowledge of entropy. This autonomy through knowledge of entropy is developed by Stiegler as "negentropy" or "negative entropy" in order to demonstrate the potential of humans to overcome the critical situation of disorientation in a world dominated by technologies.[12]

This knowledge constitutes subjects as semi-autonomous semiurgs (sign-makers), enabling the production of new meanings to overcome the crisis. Due to the constant translations, signs previously produced by memory lose their meaning without losing their formal appearance. They are simply separated from their initial meaning and exteriorized as the memory of the past. The production of new signs out of meaningless signs that reside in the exteriorized memory is a driving force of noomimesis.[13]

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8 See also Nidesh Lawtoo and N. Katherine Hales, "Posthuman Mimesis II—Connections: A Dialogue Between Nidesh Lawtoo and Katherine Hayles," *Journal of Posthumanism* 2, no. 2 (2022): 181–89.

9 Vladimir Vernadsky, *The Biosphere* (Oracle, Ariz.: Synergetic Press, 1986).

10 Henry Bergson, *Matter and Memory* (Mineola, N.Y.: Dover Philosophical Classics, 2004).

11 Yuri M. Lotman, *Universe of the Mind: A Semiotic Theory of Culture* (London and New York: I. B. Tauris, 1990).

12 Bernard Stiegler, *The Negantropocene* (London: Open Humanities Press, 2018).

13 In Platonic philosophy, a demiurge is a being responsible for the creation of the universe, the maker or creator of the world. See Plato, *Timaeus and Critas* (London: Penguin, 1977), 29. Semiurge, (from the French *sémiurgie*), is a term coined in the 1970s in works about mass media and widely used by Jean Baudrillard for the critique of the production of new meanings by the creation of new signs, the expansion of the semiosphere. See Jean Baudrillard, *Simulacra and Simulation* (Ann Arbor: The University of Michigan Press, 2000), 121–29.

1 Knowledge and Mimesis in the Age of the Anthropocene

The Anthropocene, often understood as an age of posthuman technological proliferation, is also an age of disorienting knowledge of how to live, work, and think due to the automation that technologies produce. This situation creates a panic in the face of technologies surpassing humans, while at the same time opening the way to the discovery of new ways of translation. I use "translation" in the sense that this English word derives from the Latin word *translato*: *trans*, "across" + *ferre*, "to carry" or "to bring" (*latio*, derived from *latus*, is the past participle of *ferre*). Thus, *translato* is "a carrying across" or "a bringing across," which assumes translations occur in time and place. What Jacobson calls "rewording"—an interpretation of verbal signs by means of other signs in the same language—is in my work understood as a decomposition of meaningless signs into meaningful ones.[14] These meaningless signs, as will be made clearer below, are technical objects preceding the emergence of meaning that give rise to newer technical objects.

The notion that technics precedes thought and the human is the product of technics, as theorized by Bernard Stiegler, is also the starting point of my argument for posthumanism being a condition of any existence. Following Stiegler, I use the term "technics" in the plural, which includes the triad of technique, technicality, and technology. Although technics also includes technology, they are not synonymous. Technics refers to the meaning of technology, while technology refers to domains of technical action, such as industry or cyberspace, to give but two examples. If technics precedes thought, which in its turn produces humanity, then becoming human is the result of the contingency of technics, of the chance encounter, and therefore becoming human means overcoming this contingency by translation. It is possible only by the understanding (bearing in mind that the "understanding" is also technique) of meaningless signs and assembling them according to understanding.

In his work, Stiegler makes two interrelated claims: that "technics" is the main question of all futures to come, and that "technics" is what philosophy has repressed or excluded throughout its history. Understanding technics therefore is primarily to gain an understanding of all futures to come and the question of "the return of the repressed."[15] Philosophy's exclusion of technics is the denial of the human as the product of technics, whereas science more convincingly demonstrates that the human is the product of technics. For

14 Roman Jakobson, "On Linguistic Aspects of Translation," in *On Translation*, ed. by R. Brower (Cambridge, Mass.: Harvard University Press, 1959), 232–39.

15 Sigmund Freud, *Five Lectures on Psychoanalysis* (London: Penguin, 2004), 87.

example, according to the paleontological theory of Leroi-Gourhan, the shift from quadrupedalism to bipedalism constituted the human as technique, the constitution which also includes the mimetic faculty.[16] Bipedalism freed the hands and face, where the hands allow techniques of gesture, i.e. language, and the face allows the technique of seeing and exteriorization, i.e. image-making.[17] From this point, for primary societies, the most important thing was to remember this mimetic relationship between the gestures created by the use of hands and eyes as contact with the outside world: hands were used for gesticulation to communicate and the open face made it possible to look in different directions.

The formation of humans through the process of exteriorization always already demands a "return" to this primal impulse, to this mimetic relationship, therefore there is always the demand for the new mimesis. The "always already" is not present as a memory, but effective as temporal potentiality, something to come or to be set forward. The new mimesis emerges from the possibility of memory as a default of forgetting. It should also be noted that the role of technics here is twofold. These technics preceding humans constitute subjects unconsciously, both logically and pathologically, as Nidesh Lawtoo explains following Nietzsche's notion of "the phantom of the ego."[18] It is also at the core of biomimesis, which means technics constitutes subjects pathologically, yet technics also constitutes humans noetically, like in Aristotle's notion of the noetic soul.[19] So, becoming human is on the one hand biological and on

16 André Leroi-Gourhan. *Gesture and Speech* (Cambridge, Mass.: MIT Press, 1993). Another example is the work of Jacques Monod on chance and necessity. See Jacques Monod, *Chance and Necessity: An Essay on the Natural Philosophy of Modern Biology* (New York: Alfred A. Knopf, 1971).

17 It is already by Aristotle and his notion of the hand as a tool of tools, it is a tool which makes tools, it is organon pro organon, organism and language. Aristotle, *Categories* (Scotts Valley, Calif.: Create Space Independent Publishing Platform, 2016). In the work of Gilbert Simondon, this question received its important transformation, where the hand is understood as a technique which makes technology; Simondon, Gilbert. *On the Mode of Existence of Technical Objects*. (Minneapolis: University of Minnesota Press, 2017). Deleuze as well as Derrida, before Stiegler, had already referred to Simondon's understanding of the hand and the face as technics. Giles Deleuze, *The Logic of Sense* (London, New York: Continuum, 2004); Jacques Derrida, *Of Grammatology* (Baltimore, Md.: Johns Hopkins University Press, 1998). Another curious thing is the invention of clothing, which leaves hands and face open, and gloves temporarily hide hands, so does the veil hide away the face, etc.

18 Nidesh Lawtoo, *The Phantom of the Ego: Modernism and the Mimetic Unconscious* (East Lansing: Michigan State University Press, 2013).

19 Aristotle, *Categories*.

the other hand noological; it is biomimesis on the one hand and noomimesis on the other.

In these circumstances, the task of philosophy is to think of a good imitation that overcomes the difficulties and challenges imposed by posthumanist theories. One of the difficulties is the ongoing struggle created by the so-called object-subject relationship, with the crucial question of memory. In order to overcome this challenge, which is cardinally changing our view of time and subjectivity, we also need to think of good imitation, which brings together images and thought, art and philosophy in the world of hyperchaos and contingency. Although the world exists independently from humans and technics precede humans, the question of "time after" persists.[20] The time after is the point of the irreversible separation of the world from its image, yet it is also a reminder and a record of the memory of this separation, which contains traces of "the transient, the fleeting and the contingent."[21]

The time after demands the imitation of technics, which are embedded in human memory. The time after is the point of irreversible separation of the world and its signs. These signs are storage spaces of the contingent, transient, and temporal. The time after is not a copy of the contingent or its signs, but a delicate image that forms the exterior space of the memory of separation that is recorded in these signs. This memory does not reside in the human, but is exteriorized and exists outside the human with the potential to produce meaning. The human is a fiction that produces its own fictional existence out of these meaningless signs by giving them a new meaning. Stiegler calls this exteriority "the third retention," which I find very convincing and will refer to as the posthuman memory with the potential to create a model of post-artistic mimesis.

The third, or tertiary retention, means that memory is recorded by technologies and separated from the human; it exists as a reminder and at the same time as a potential assistance as a support for remembering. In Stiegler's definition, tertiary retention (third memory) is the hidden condition of possibility, of the play between what Husserl called primary retention and secondary retention.[22] Throughout his work, Stiegler (drawing on Husserl) speaks of retentions, whereby primary retentions are sense perceptions, secondary

20 Jacques Rancière, *Bela Tarr: The Time After* (Minneapolis: University of Minnesota Press, 2013).

21 Charles Baudelaire, *The Painter of Modern Life* (London: Penguin Books, 2010), 17.

22 Edmund Husserl, *The Phenomenology of Internal Time-Consciousness* (Bloomington: Indiana University Press, 2019); Bernard Stiegler, *Technics and Time, 2: Disorientation* (Stanford, Calif.: Stanford University Press, 2019).

retentions are memories, and tertiary retentions are media (cultural mnemonics). The third memory is the technology that records memory and makes it "accessible" to us. The tertiary retention precedes our understanding of time, and it is the condition of the primary and secondary retentions.

Becoming human is the internalization of the exterior, with understanding playing a crucial role in this. It is worth adding here that signs exist only in technologies of memory, that is mnemo-technologies, and signs are memories of time. Any technique is the absence of the imitation and time after is imitation that reconstructs by translating the time that is absent in the technics. Although technics already contain memory, that memory does not necessarily correspond to time, whereas time comes into existence by remembering but also equally by forgetting. The time after is also the time of the retention, which either excludes or includes the missing dimension of time embodied in memory. It is what I call "time which is lost," and this loss is the condition of the gain. Like the time before, the time after also exists independently as the carrier of the trace of contingency.

According to recent theories, time does not exist, and any contingency is explained by the persistence of "the ancestral" or before thought,[23] but other theories, such as Derrida's deconstruction followed by Stiegler, hold that there are traces of time.[24] These traces are memory and history, and they are translational technics. Traces of time give rise to the recognition of the human subject that produces technics. The challenge created by most posthumanist theories is an attempt to dispose of the "subject" altogether in order to create a "perfect" world of objects.[25] I think that when it comes to humanism or posthumanism, they are not products either of the subject or of the object as creation

23 Quentin Meillassoux, *Time Without Becoming* (London: Mimesis International, 2014).

24 Jacques Derrida, "Plato's Pharmacy," in *A Derrida Reader: Between the Blinds*, ed. by Peggy Kamuf (New York: Columbia University Press, 1991), 112–39; Stiegler, *Technics and Time, 1*, 135.

25 This is especially true of object-oriented ontology and speculative realism, but also for the metahumanist theories of Stefan Lorenz Sorgner, which seems to influence posthumanist theories without questioning the role of the subject. See, for example, Graham Harman, *The Speculative Turn: Continental Materialism and Realism* (London: re.Press, 2011). It should also be noted that for theories of new materialism, such as for Rosi Braidotti or Karen Barad the question of subjects is still a very important argument. It is partly because these subjects are excluded ones and their inclusion in history is a matter of the truth or the "intra-action." Or, in Braidotti's case, it is a question of "transposition." Karen Barad, *Meeting the Universe Halfway*: *Quantum Physics and the Entanglement of Matter and Meaning* (Durham, N.C.: Duke University Press, 2007); Rosi Braidotti, *Transpositions: On Nomadic Ethics* (Cambridge: Polity Press, 2006).

or as the "thing in itself,"[26] but only of language imitating "reality." Yet on the political level, the recognition of contingency is a necessary condition for making excluded subjects present and becoming "a part of those who are not part of."[27] In this sense, I accept the term "posthuman" only if we understand that we have never been human and from the inception of humanity, because the human is a product of technics. We have always been posthumans, albeit not always aware of it in phenomenological terms, as we consider ourselves more in control of our hominization and humanism. The term that conflicts with posthumanism is transhumanism: If posthumanism means that we were always already posthuman, then transhumanism means that this posthuman condition is also the condition of translation and alterity; it is both imitation and understanding. For this text, I will use the term "posthuman," and use "transhuman" only where it is appropriate in that specific sense.

Becoming human, from its inception, has been a matter of imitation and the human can make its own image by extending itself into something else, into another technique. The other word for imitation is the persistence of the abovementioned question of memory (imitation as remembering), where forgotten or lost time is embodied. To imitate is to remember, but it also entails oblivion. To speak of the "origin" of the human already means speaking of the imitation, which also means that the human born by such imitation is always already a fiction. Analogously, we can speak of "cyborgs" as imitations. Hence, there is a need to understand imitation as the pharmacological effect, which is a double-edged act of producing good and evil, or pathologies and patho-logies simultaneously.[28] Stiegler's theory of technics and time introduces humans merely as fiction and the product of technics.[29] Humans are always in default and the fault, or imperfection, is at the same time the condition of "correcting" the fault. But because of the pharmacological nature of this act, there is the danger of becoming adapted by the imitation. Yet, at the same time, there is the possibility of adopting from the imitation to change one's perspective.

Good imitation, in this sense, is understood as changing the perspective of the self by becoming the other through the assistance of technics. It should

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26 Immanuel Kant, *Critique of Pure Reason* (London and Basingstoke: Macmillan Press, 1976).

27 Jacques Rancière, *The Distribution of the Sensible: Aesthetics and Politics* (London: Continuum: 2006).

28 Nidesh Lawtoo and Bernard Stiegler both share an interest in a genealogy of the pharmakon. Lawtoo reflects on Nietzsche and Stiegler develops Derrida's notion of pharmacy. See Lawtoo, *Phantom of the Ego,* 27. Bernard Stiegler wrote on this subject throughout his work and he also was the founder in 2010 of the philosophy school Ecole de Philosophie d'Epineuil-le-Fleuriel at Épineuil-le-Fleuriel in France (pharmakon.fr).

29 Stiegler, *Technics and Time, 1*, 135–79.

also be noted here that mimesis is a highly politicized process because of the repressed artistic dimension, and posthumanism must be understood as the inclusion of what is excluded from the history of humanization. What is excluded and controlled is the aesthetic potential of subjects, with Plato's banishment of poets from the state being only one, but possibly the most famous, example of this.[30] My aim is not to defend artists but to make prominent the ignored notion that artistic potential resides in any individual.[31] This is what I mean by considering mimesis to be a highly political process that opens the way to the symbolic gain of the repressed, or lost dimension.

It is worth mentioning here, albeit briefly, that becoming is also to be understood as "acting out," which takes place during the encounter with the repressed in the realm of mnemo-technologies.[32] Acting out may be understood as the gain of the loss and rediscovery of lost knowledge through understanding and having an intention for acting. This kind of mimesis as a re-contextualizing of the existing signs, for translating them into the subject's personal repertoire is crucial to noomimesis. It is a term for knowing and mimicking as a matter of becoming a part of the collective consciousness through the use of signs. These signs provide technological conditions for translations. The technical condition precedes the realization of thought, such as the use of, for example, alphabetic writing: in order to write, one needs to first learn letters of the alphabet. Writing is the exteriorization of one's thought by the use of meaningless signs, such as letters of the alphabet; taken separately they are just signs, but combined together they become words, sentences, and finally meanings.

We become human and invent the missing dimension of time with the assistance of technics. As is well known, *techne* as art was also the industrial model for ancient philosophy, which assumed the complicated nonlinear relationship with the primary model. This is also true for our highly technologized age of the Anthropocene. This nonlinear relationship concerns, first and foremost, the temporality of technics and aggregates produced/imitated by them. What is produced by technics are meaningless signs. These signs are the main context of technics: They precede humans by becoming but also overcome humans by changing the perspective; they are called "meaningless" because the human is

30 Plato, *Great Dialogues of Plato* (New York: Signet Classics, 2015), 131.

31 In passing, I would like to note that Jacob Burkhart also remarked that no explanation of culture ever fully accounts for its works of art because aesthetic activity lies in part outside culture. Influenced by this idea, George Kubler stated that "the idea of art can be expanded to embrace the whole range of man-made things"; George Kubler, *The Shape of Time: Remarks on the History of Things* (New Haven, Conn.: Yale University Press, 1962), 2.

32 Bernard Stiegler, *Acting Out* (Stanford, Calif.: Stanford University Press, 2008).

not determined, but either predetermined or overdetermined. Therefore, it is possible to say that humans are always in a state of becoming by appropriating meaningless signs by temporarily giving meaning to them. Becoming itself is always a matter of becoming other than human, and this process is supported by technics. This is because becoming is a process of assembling meaningless signs as appropriate for personal use and meaning comes into existence in this appropriation, albeit temporarily. These meaningless signs are incomplete evidences of the contingent world that took place before thought. They are often excluded from the established form of thought because of their imperfection. This exclusion represses the very fact of the impossibility of perfection. The recognition of contingency is necessary precisely because human reason is not capable of comprehending the world fully and this impossibility poses the question of these signs existing as incomplete evidences.[33] Hume also proposed connecting ideas with images, which could help provide a model for possible completeness despite the skepticism evidenced in incompleteness.

Trying to discover a model of connectivity immediately points to the loss, which resides in signs of this incomplete evidence. It gives rise to the possibility of assembling these signs in order to discover their meaning and to gain the lost dimension of time. This, in turn, gives rise to a temporal formation of subjects and this formation is not due to the human's "original experience." Instead, it is the ability to assemble inhuman, contingent meaningless signs.[34] The human is not a cause of this event of assembling or its final goal: the human is the quasi-cause of this event rather than the negotiator of the original experience. Deleuze and later Stiegler paid attention to this aspect of experiencing.[35] It is also in this sense that the human is a fiction, which depends upon the

33 David Hume, *A Treatise of Human Nature* (Oxford: Oxford University Press, 1978).

34 I borrow the notion of "the inhuman" from Lyotard. Jean-Francois Lyotard, *The Inhuman: Reflections on Time* (Oxford: Blackwell, 1991). I prefer the term "inhuman" to the term "nonhuman," because the inhuman assumes a connection to the human whereas the nonhuman completely rejects this connection.

35 "Quasi-cause" is a term coined by Deleuze and later used by Stiegler. Deleuze uses this term elsewhere, yet, the most interesting example is in the life and work of the French poet Joe Bousquet, who was wounded on May 27, 1918, at Vailly near the Aisne battle lines at the end of the First World War. He spent the rest of his life paralyzed, mostly in bed surrounded by his books. His physical incapacity and constant pain caused a retreat from the world but also became the starting point for an extensive body of poetry and writing. As he said, "*My wound existed before me, I was born to embody it.*" Giles Deleuze, *The Logic of Sense* (London, New York: Continuum, 2004), 169. See also Bernard Stiegler and Daniel Ross, "The New Conflict of the Faculties and Functions: Quasi-Causality and Serendipity in the Anthropocene," *Qui Parle: Critical Humanities and Social Sciences* 26, no. 1 (2017): 79–99.

possibility of such becoming by the assistance of meaningless signs produced by imitation. In turn, these signs become models for further imitation. This mimesis is the condition of understanding of living, which is the rediscovery of the lost knowledge of time. The loss took place due to the primary separation of the human from the outside world, and this separation is recorded in primary techniques such as writing, speaking, and images. In this process, the only thing remembered is the recording, the technics; the recording suspends the meaning. Meaningless signs are therefore signs that have lost their meaning irreversibly during their separation from the outside world, while being remembered by the technics of speaking, writing, and imaging. These technics themselves are temporal elaborations of this separation, whereas the knowledge of this loss during separation provides a minimal gain. This knowledge is for one to realize that we cannot create the world, which is contingent, but we can reproduce it out of the signs of the world that are available contingently.[36]

All in all, noomimesis addresses these questions by combining two terms, noesis and mimesis, both of which are understood as techniques exemplified here as speaking, writing, and imaging. Although these technics have been designed in many respects to imitate our senses, they do not share the limits of our senses. It is our senses that are limited and in need of assistance. Technics extend human senses, yet they also expand the range of our senses in some way through exposure to a technical way of seeing, thinking, and imaging. Images are not imitative of natural perception, they imitate technics. Technics liberate perception from its natural settings and offer us means to exceed our habits and gain access to the flow of signs. As such, technics become a technology of new perceptive and political possibilities. These possibilities reside in "places of memory"[37] such as archives, libraries, and what are now called databases—or what I call recorded memory. A recorded memory is what exteriorizes memory, like a written text or a recorded video. It is knowledge embedded within technology or knowledge understood as the pre-exteriorized characteristic of technology.

Knowledge is embedded in technologies as the collection of meaningless signs that give rise to (post)humans. They exist as an embodiment and form of hybridity between humans and other imitators, and between meaninglessness and meanings. It is possible to say that techno-logy (*techne* and *logos*) is knowledge, which consists of the economy of the loss and gain articulated by meaninglessness and meaningfulness. Meaning, made from meaningless

36 Roy Bhaskar, *Philosophy and the Idea of Freedom* (Oxford: Blackwell, 1991).

37 Pierre Nora, *Realms of Memory* (New York: Columbia University Press, 1998).

signs, is a gain made from the loss. Therefore, reality is always without the real, the human is always without the being and in a constant state of becoming by searching for the real. The human has no basis: It is always about becoming as a result of the discovery of the lost knowledge and this knowledge always resides in meaningless signs. These signs are produced by contingency, and yet the human is a quasi-cause of any becoming, which is always the posthuman as it comes after the loss and by the discovery. The recorded memory is a meaningless sign, separated from its original meaningful context by exteriorization, and temporarily has no meaning or has meaning that has been produced through contingency. The meaningless sign recursively informs us, as a reminder, how to process the meaning into the meaningless sign. In this sense, imitation is not blindly copying the recorded memory as a meaningless sign, but bringing understanding and imitation together in the process of acting out. It turns the information received during the encounter with the exteriorized memory into one's own knowledge and the condition of knowing. In this sense, imitation is also an ontological constitution that connects people with other beings, such as inhumans, including technologies.

Noomimesis brings thought to existence; otherwise thought does not exist. Thought is brought into existence as a method of grasping knowledge of the "great outdoors," as mimicking the exterior that resides in the meaningless sign.[38] Signs of the "great outdoors" exist as signs of the remainder of the exterior that exists independently of our existence. These meaningless signs are inscribed in every recorded memory and memorized while existing by themselves, from fossils, as reminders of natural geological formations, to the emojis used in electronic communication as reminders of this communication.

These signs have no meaning in the sense that they exist independently of thought and only receive a specific meaning when thinking takes place in relation to them. In other words, although these signs are meaningless, they are given meaning by the "end user" in the time after. In this act, noomimesis leads to the artificial fabrication of the model of the world, which is not the world itself, but its imitated image. This imitated image stands against the meaningless sign of the "great outdoors" as the encounter of the interior with the exterior, while constantly reminding us about the condition of existence as a matter of temporality open to the influences from the outside. The meaningless sign becomes the condition of bringing forward and projecting to the exterior the internal possibilities—also called augmentation. This augmentation is

38 The term "great outdoors" is borrowed from Meillassoux. See Quentin Meillassoux, *After Finitude: An Essay on the Necessity of Contingency* (London and New York: Continuum, 2008).

the projection to the future decomposing by reproducing the meaningless sign by giving a meaning to it, the meaning that is unique to the context.

2 Noomimesis and Transhuman Translations

In the context of posthumanism, transhumanism is understood as the augmentation of humans by their own knowledge. It is the technique that extends the human by bringing forward their "technics"—constantly translating.[39] It also means two things: first, the translation of sensibility into the technics of reproduction; and second, the augmentation or bringing forward of one's intelligibility in the technics. This double-edged activity is alternated intermittently and introduces indeterminacy into an otherwise "deterministic" system and unexpectedly swerves away from its initial destination. It brings together noesis and mimesis on the one hand, and underlies their irreversible separation on the other. This separation is crucial as it is the condition of contextualization and translation. The question that I would like to accentuate is this translation's automation: the automatic adaptation of the individual on the one hand, and the possible autonomy of changing one's perspective by adapting on the other. In this process, translation plays the role of the orientation of the recorded memory, of the meaningless sign, which exists as anamnesis and the support for knowing.

The notion that post/transhumanism is the augmentation of humans by knowledge also implies that it may increase the awareness of humans about their own technics. It is both the condition of one's own making and knowledge of one's own invention. It is the possibility to act according to this knowledge and avoid the control that automation imposes. It can also allow translating one's own knowledge into technologies. Since technologies are the results of the exteriorization by signs and this exteriorization is made by, for example, writing, it is also a memory of the lost time, the loss that takes place during automation. This loss is symbolized in images that are signs outside of the meaning. The world consists of these signs as technical objects and this consistency is also the insistence on the third retention or memory, which constitutes the exterior world.

39 My own interest in transhumanism emerges from my reading of Stiegler as well as AI scientist Lotfi A. Zadeh's work on "fuzzy logic" and McLuhan's theory of technology as an "extension of man." See Lotfi A. Zadeh, *Fuzzy Sets, Fuzzy Logic, Fuzzy Systems* (Singapore: World Scientific Press, 1996); Marshall McLuhan, *Understanding Media: The Extensions of Man* (Cambridge, Mass.: MIT Press, 1994).

Remembering takes place by making a new image out of these signs with the crucial role of mimicking or imitation. Imitation takes place in the openings in between the outside and inside, and opens the way toward translations. The boundary emerging between the exterior and the interior is the meaning-free zone and, with imitation, thought enters this zone. This zone itself is fuzzy and this fuzziness precedes thought while being translated into a thought as a fuzzy object. This fuzzy object contains both discovery and concealment. The concealment potentially plays the role of the sign of the reminder while being separated or excluded from the meaning zone. In this zone:

> The empty sign, qua true sign, uncovers for us the remarkable fact that *meaning is contingent in the constitution of the sign that the sign* has no need of meaning in order to be a sign—and that semiotics (the study of signs) intervenes before semantics (the theory of meaning), and independently of it; for it concerns a domain that is autonomous from the latter: the domain of the non-signifying sign.[40]

The sign (imitation) is meaningless and free of any decision-making (translation, which is also knowledge). Although I agree with Meillassoux that the sign can exist without meaning after it has been reproduced, I absolutely disagree that the sign comes into existence without meaning. It comes into existence as a meaning, but the sign irreversibly loses its meaning after coming into existence. Conversely, the sign that can exist without meaning can also exist with meaning. Even if to understand contingency as the event that is both something that may or may not occur, it is reasonable to say that knowledge is never made according to contingency; knowledge is the internalization of a hypothesis. This hypothesis is fuzzy and never determined; it is either predetermined or overdetermined and only temporarily terminated in a particular context, and shortly after this termination the meaning is lost again while being translated from one context into another. The inscription left behind is the image of translation and it is true to say that images are opening the indirect access to the outside world. Philosophy is questioning this indirect relation by undertaking and realizing what is undertaken. Realization takes place at the boundaries, where limits play a role rather than access or directness. Limits and transgression of limits amount to techno-genesis that also generates a new world by engineering and engendering.

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40 Quentin Meillassoux, "Iteration, Reiteration, Repetition: A Speculative Analysis of the Sign Devoid of Meaning," in *Genealogies of Speculation: Materialism and Subjectivity Since Structuralism*, ed. Armen Avanessian, (Bloomsbury, 2016), 117–197.

Like any new turn, the mimetic turn of posthumanism creates new conditions for resistance and translation. Technics has always been, at least since bipedalism, the projection forward, bringing forth the human through skills and now the technologies of augmentation and virtualization, such as augmented reality or virtual reality, continue this project. Noomimesis as the production of new signs is the possibility of the expansion of the semiosphere. This is also the possibility of restoring the lost knowledge of how to live, work, and think, however contingent our lives may be. Stiegler's philosophy reminds us that in today's highly technologized world of automatism, which is defined by biomimesis, there is a possible autonomy, which is a conscious imitation of thought, which helps to find the orientation in this world of constant disorientation. Last, but not least, I would like to stress the importance of further research into the notion of noomimesis, which I developed partly from my interest in the work of Stiegler and Vernadsky. It is crucial to our "post-humanist" age of technodiversity, accompanied by automation, which demands noodiversity, that will challenge recent theories by assembling notions of contingency and technics as a way of increasing capacities of thought in the noosphere. My project also includes finding the answer to the question posed by Vernadsky in 1944, following Alfred Lotka: If thought is not a form of energy, how can the act of thinking influence material processes?[41] And to what degree are these material processes materialistic? I see noomimesis as a technique for starting to grasp these questions, which is also the subject of my forthcoming book, *Realism* [*Without*] *the Real: Imitation of Thought.*

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41 Vernadsky, *Biosphere*, 481.

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CHAPTER 13

Posthuman Agency and Techno-mimetism

Diego Scalco

1 Subjectivation from a Technological Stance

In its broadest sense, agency consists of both the capacity or intention to act and the mediated or immediate awareness of past, present, and eventual interactions. It thus constitutes a mode of subjectivation that we propose to discuss in correlation with techno-mimetism. Techno-mimetism is inseparable from any subject, even if the latter is not necessarily aware of the techno-mimetic aspects of its own development. It is based on both the learning and the unlearning of forms of action, whether or not they are reflected upon. This means that an agentive pattern has to be abstracted, if not rationally deduced, from each impending situation, so that the (re)production of action can be perceived as appropriate or, at least, as plausible. Take communication at a distance, where the participants interpret the sedimented *praxis* and may also divert it, for it is a function of the degrees of focus, of the speeds of reaction, and of the margins of maneuver allowed, if not completely set, by the technical means involved. Whether or not we follow Ernst Kapp, who brings the genesis of the technical object back to the unconscious projection of bodily organs and organic systems,[1] it is clear that the subject-technics co-entailment articulates itself concurrently in a transfer of an agentive pattern and in a techno-mimetic coutertransfer through which a retrospective relationship of intelligibility is

1 By its unconscious nature, projection is distinguished from the mechanical reproduction of bodily organs or sensory apparatuses to which techno-mimetism is often and fallaciously reduced: "An organ is never a machine part, nor is a hand tool the limb of an organism. A mechanical organism would be tantamount to something like organic clockwork—a squaring of the circle. … We can account for the confusion of concepts in the essential relations subtending the process of projection as a sort of involuntary and unremarked slippage of the representation of the organic from the prototypal image to its mechanical after-image, and vice versa: when the machinal is used to explain organic processes, then, in the fervor of experimentation, the mechanical slips into the organism unremarked, such that impermissible confusions necessarily arise alongside problematic figurative explanations"; Ernst Kapp, *Elements of a Philosophy of Technology: On the Evolutionary History of Culture*, trans. Lauren K. Wolfe (Minneapolis and London: University of Minnesota Press, 2018), 75. Hence the need "to firmly establish the difference between unconsciously occurring absolute self-production and the conscious reconstruction of an organic structure" (76).

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established.[2] It therefore seems useful to distinguish the immersion in action from the judgment of agency, i.e. from the retrospective attribution of whether one did or did not achieve an effect in a specific mode.

To recognize such techno-mimetism, it is not even necessary to question governmental, educational, and financial organizations on a national or international scale, as Thomas P. Hughes does in referring to the "institutional structures that nurture and mirror the characteristics of the technical core of the (technological) system."[3] It is sufficient to share Madeleine Akrich's insight that "technical objects define a framework of action together with the actors and the space in which they are supposed to act,"[4] when they do not directly "define actants and the relationship between actants"[5] by stabilizing and channeling the latter.[6] It would be an oversimplification to see in the actant the cause of the action, insofar as he only achieves the effect in terms of which his action can, on occasion, be apprehended as techno-mimetic. The actant does not intervene in a causal order of events leading up to his action and "those who speak as if an action were an event one candidate for whose cause is an agent make it seem as if an action might be identified independently of any

2 An analogous dynamic underlies the spiraling feedback loop that Nidesh Lawtoo conceptualizes in terms of hypermimesis, to "indicate a torsion within hyperreal simulations that do not remain in the sky of digital second lives behind this world but, rather, retroact on an embodied, relational, and porous all too human, posthuman subject in this world"; Nidesh Lawtoo, "Posthuman Mimesis I: Concepts for the Mimetic Turn," *Journal of Posthumanism* 2, no. 2 (June 2022): 101–14, 112.

3 Steve Woolgar, "Reconstructing Man and Machine: A Note on Sociological Critiques of Cognitivism," in *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*, eds. Wiebe E. Bijker, Thomas P. Hughes, and Trevor Pinch (Cambridge, Mass.: MIT Press, 1989), 311–28, 312.

4 Madeleine Akrich, "The De-Scription of Technical Objects," in *Shaping Technology/Building Society. Studies in Sociotechnical Change*, eds. Wiebe E. Bijker and John Law (Cambridge, Mass.: MIT Press, 1992), 205–24, 208.

5 Akrich, "The De-Scription of Technical Objects," 207.

6 Bruno Latour speaks of an anthropomorphism of technical objects, given that "*anthropos* and *morphos* together mean either that which *has* human shape and that which *gives shape* to humans"; Bruno Latour, "Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts," in *Shaping Technology/Building Society: Studies in Sociotechnical Change*, eds. Wiebe E. Bijker and John Law (Cambridge, Mass.: MIT Press, 1992), 225–58, 235. According to him, artifacts "have to thoroughly organize the relation between what is inscribed in them and what can/could/should be pre-inscribed in the users" (237). He calls "*conscription* the mobilization of well-drilled and well-aligned resources to render the behavior of human and nonhuman predictable" (257) and states that the "label 'inhuman' applied to technique simply overlooks translation mechanisms and the many choices that exist for figuring and defiguring, personifying and abstracting, embodying and disembodying actors" (241).

agent,"[7] as Jennifer Hornsby points out, for "such events do not belong in a causal order from which people themselves might be missing."[8]

However, beyond the current "idea of technology as the focus for continuing debates about the essential qualities of 'humanness,'"[9] what does the link established here between posthuman agency and techno-mimetism allow us to discuss? Does techno-mimetism imply agency in a transitive as well as in a reflective sense? Does the behavior adopted in front of the so-called technical tool, if not induced by it, constitute an action coupled with the consciousness of acting? In order to explore these issues further, a distinction must first be made between techno-mimetism and mimicry in the sense of ethology. This distinction is also envisioned to avoid any use of naturalistic analogies, in view of the fact that they are often not exempt from anthropocentrism. On the other hand, mimicry is not agentive in the sense just defined, because there is not, necessarily, consciousness of acting, knowledge of cause and effect relations, or awareness of being acted upon. Despite its apparent finality, mimicry isn't final at all,[10] while despite its eventual uncritical dimension techno-mimetism implies agency. This distinction already allows us to approach posthuman agency, insofar as the awareness of being acted upon in spite of oneself, if not always without one's knowledge, exceeds the instrumental relations established, in classical humanism, with the technical apparatus.

Thus, the posthuman actant would be distinguished, among other characteristics, by the capacity to transitively and reflectively situate his own action

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7 Jennifer Hornsby, "Agency and Actions," in *Philosophy of Action. An Anthology*, eds. Jonathan Dancy and Constantine Sandis (Chichester: Wiley Blackwell, 2015), 48–62, 56.

8 Hornsby, "Agency and Actions."

9 Woolgar, "Reconstructing Man and Machine," 312. "Discussions about technology—its capacity, what it can and cannot do, what it should and should not do—are the reverse side of the coin to debates on the capacity, ability, and moral entitlements of humans. … In discussing and debating new technology, protagonists are reconstructing and redefining the concepts of man and machine and the similarity and difference between them. As well as providing a tangible focus for continuing debates about the uniqueness of man, technology may also act as a catalyst for changing conceptions of the nature of man. Assessments of the character and success of new technology can both reify existing assumptions and provide powerful images for further attempts to establish (construct) 'the character of man'" (312).

10 A connection can be made here with the mimetic unconscious, in Nidesh Lawtoo's terminology, to stress "the centrality of mirroring forms of involuntary imitation in this unconscious or nonconscious processes [mimicry, simulation, etc.], … to differentiate it [the mimetic unconscious] from the Oedipal variant, but also to indicate the role of aesthetics, relationality, and contagious *pathos* of affect as its *via regia*. … Still, the mimetic unconscious also differs [from the Oedipal one] for it adapts, chameleon-like, to the new natural-social-technological environments that surround it"; Lawtoo, "Posthuman Mimesis I," 109.

in a technical dimension whose dynamics themselves denote certain agentive capacities and where knowability, decidability, and predictability lose definition. Formulated initially within a humanist framework to substantiate a subjectivity intended to transcend technics, in accordance with the assumption that technology arises from prior knowledge and is unable to overtake it, the question of subjectivation can now receive answers that no longer conform to this very framework. In this lack of conformity lies the possibility of a posthuman agency conceivable, within the limits of the present article, as apprehending the subject-technics co-entailment against a framework of thought that can no longer guarantee its adequate apprehension. The techno-mimetism constitutive of what Xavier Guchet calls "techno-evolution"[11] cannot be apprehended agentively within a humanist framework, given that the agentive capacities of the technical dimension remain veiled by the very way in which the question of subjectivation is formulated. Consequently, evolution doesn't mean here a linear development and, once again, it would be misleading to indulge in naturalistic analogies without specifying that "the theory of the evolution of living beings is certainly not deterministic and univocal,"[12] and that only in this sense can there be a technical evolution too.

To come to the example that will serve as a touchstone, that is, technological transfer, the eventuality of agency is shaped differently if what is transferred is no longer apprehended instrumentally, in the light of a transcendent subjectivity that would be able to set the conditions of agentive possibility in the context of technology by reducing it to a set of tool representations. At the end of this reduction, technics and agency would become spatio-temporal abstractions based on an ontological divide, for there could be a technical object only in terms of the objectification of an instrumental relation through which the assumed transcendence of the subject would substantiate itself. Contrariwise, the focus on the transformational character of technological transfer, on the fact that acting implies being acted upon, allows us to recognize that techno-mimetism withdraws from the apparent causality that links the different techno-mimetic phenomena. The causal links between these phenomena shield techno-mimetism as a mode of agency whose contours are radically withdrawn in space and time. In space because it is impossible to determine the scope of techno-mimetism empirically, from the phenomena that instantiate it. In time because, without even positing that "at the origin [of

11 Xavier Guchet, *Les Sens de l'évolution technique* (Paris: Léo Scheer, 2005), 83.

12 Guchet, *Les Sens de l'évolution technique*, 96–97.

the human] there is technics,"[13] it is impossible to restrict techno-mimetism to a precise period. The specific ground of techno-mimetism, namely, the withdrawal, is distinct from the ground of its various phenomena as isolated acts linked by the appearance of causality. Acts that, in the chosen example, rely on the techno-mimetic competencies mobilized, acquired, or abandoned in the course of technological transfer.

In a similar way, albeit in a different order of analysis, Guchet notes that there is a "technical evolution, but technical objects do not evolve, they are not transformed into something else. The isolated technical object is not the support of evolution"[14] and "it is only because we have a pre-understanding of what technical evolution is that there are technical objects situated in history."[15] The same applies to techno-mimetism, which is apprehended as diffuse and discontinuous because of its withdrawal behind each isolated techno-mimetic phenomenon, and to posthuman agency, which is apprehended as circumstantial and dispersed because of its withdrawal behind each isolated subjectivizing dimension. To again quote Guchet, "it is precisely insofar as it appears to be linked to other objects by the idea of evolution that the technical object acquires all sorts of determinations."[16] As for the ideas of techno-mimetism and posthuman agency, they make it possible to indicate certain techno-mimetic phenomena and certain subjectivizing dimensions, to wit those who exceed the intentions of the transcendent subjectivity postulated by humanism, whose apprehensions are in turn meant to be necessary and encompassing.

2 The Challenge of Theoretical and Praxical Antinomies

Guchet reminds us that technical evolution "is not in its essence an historical relation,"[17] but "the mode in which the technical object actually manifests itself as a technical object."[18] Techno-mimetism and posthuman agency are

13 Jacques Derrida, "Nietzsche and the Machine," trans. Richard Beardsworth, in *Negotiations: Interventions and Interviews 1971–2000*, ed. Elizabeth Rottenberg (Stanford, Calif.: Stanford University Press, 2002), 215–56, 248. On this topic, see Arthur Bradley, *Originary Technicity: The Theory of Technology from Marx to Derrida* (New York: Palgrave Macmillan, 2011).

14 Guchet, *Les Sens de l'évolution technique*, 25.

15 Guchet, *Les Sens de l'évolution technique*.

16 Guchet, *Les Sens de l'évolution technique*, 26.

17 Guchet, *Les Sens de l'évolution technique*.

18 Guchet, *Les Sens de l'évolution technique*.

not historical relations either. They are not the respective determinations of techno-mimetic phenomena and of subjectivizing dimensions. On the contrary, they are the modes in which certain phenomenal and dimensional determinations take place, both respectively and correlatively. Now, the human-technology relationship is generally defined in terms of the following three antinomies: the one between the concepts of intentionality and unintentionality; the one between the categories of necessity and contingency; and the one between the criteria of mastery and loss of control. Of course, there are other antinomies worth discussing, like the one between the postures of openness and closure, but for the sake of clarity, we must limit our scope of analysis. Intentionality and unintentionality frame the difficulties encountered in distinguishing the subjective instances from the objective conditions of agency at the level of technics conceived as an autonomous dimension. Necessity and contingency frame the divergent individual choices that are looming on the horizon of technification interpreted as an inevitable condition. These divergences are also framed by mastery and loss of control, if technicity is still identified with an infrastructure from which the subject ought to emancipate itself. It is appropriate then to re-examine these main antinomies, especially in consideration of the fact that the technical apparatus always already conveys an explicable, if not explicit, agentive logic.

The antinomy between the intentional and the unintentional stems from a misunderstanding of the role of the instances that Don Ihde calls "technological *intentionalities*."[19] By criticizing the concept of "instrumental intentionality,"[20] Ihde also criticizes the voluntarist conception of intentionality defended by Frederick Ferré, among others. Ferré sees technologies as "*practical implementations of intelligence*"[21] in which he includes technical objects as means of changing the current situation "in the service of life's appetite."[22] For him, intentionality coincides with the necessary tendency of the will to produce or manipulate technical objects, just as agency coincides with the voluntary capacity to know, decide, and predict what has to be produced or manipulated:

> Practical intelligence, as a mental phenomenon, deals with ideal possibilities. Motivated by the urge to live and to thrive, practical intelligence sorts these envisaged possibilities into orders of relevance for realization

19 Don Ihde, *Technology and the Lifeworld: From Garden to Earth* (Bloomington: Indiana University Press, 1990), 102.

20 Ihde, *Technology and the Lifeworld*.

21 Frederick Ferré, *Philosophy of Technology* (Athens: University of Georgia Press, 1995), 30.

22 Ferré, *Philosophy of Technology*, 36.

> and attempts to guide action into the fruitful channels of regular method. … The history of human technologies shows that after a discovery is made of some method with its associated artifacts, the new complex is quickly brought to maturity within its own terms, is radiated geographically, and then is repeated and repeated by the adopting cultures.[23]

In these passages, technological transfer is reduced to mere imitation and even to instrumental learning through repetition. This conception of technology is far too generic and does not account for the fact that the same tool can acquire different methodological dimensions and support different techno-mimetic agencies, not to mention that the same method can call for different tools and even lead to different actions. Whether or not a possibility is held as intrinsic or conjunctural depends on the confusion or on the distinction between tools and instruments. A tool is an object produced to serve a technological purpose, while any object expected to carry an intention can become an instrument or, more specifically, a technology. Expectations or anticipations about someone else's agency are formed in both cases, even though in the latter case they may remain merely conjectural. So, in contrast to Ferré's voluntarist approach to intentionality and agency, Ihde seeks to highlight instances that, from the subjective point of view, turn out to be unintentional and with which technological intentionalities overlap. In summary, the actant and the technical object are constituted of a convergence of intentionalities whose subjective side is techno-mimetic, to a certain extent.

In Ihde's account, technological intentionality engages the mediation, accomplished through the technical object, between the actant and the action. It doesn't render the techno-mimetic involvement of the subject with its world vicarious, as if the technical object were simply interposed. "This is another reason for not beginning with the object as object,"[24] writes Ihde. As he puts it, "technologies, by providing a framework for action, do form intentionalities and inclinations within which use-patterns take dominant shape,"[25] in a sort of distributed logic. The actant makes only an apparent use of the technical object, since his agency is mediated by the technological intentionality and, in the last instance, reveals itself to be relatively unintentional. Once more, mediation is effective not as an intrinsic disposition of the technical object, but as a convergence of intentionalities in the singular sense that technics (re)frames the actants' involvement in the impending situation and gives their

23 Ferré, *Philosophy of Technology*, 36–37.
24 Ihde, *Technology and the Lifeworld*, 70.
25 Ihde, *Technology and the Lifeworld*, 141.

inter-subjectivation an inter-objective turn. Think of the way the transfer of a modern media technology stages the convergence between identity and alterity, the mutual apprehension of the participants outlining techno-mimetically the agentive features that should be taken into account.[26] Were specific dispositions assigned to technical objects independently from the techno-mimetic agency they engage, mediation would be interpreted instrumentally. The recognition of such mediation constitutes a translation of agency that parallels the techno-mimetic constitution of action. The question of mastery or loss of control of the technical apparatus can therefore only be raised at the risk of falling back into instrumentalism. In this regard, Ihde makes the following remarks:

> To enter any human-technology relation is already both to "control" and to "be controlled." Once the notion of technology in the ensemble is raised, particularly insofar as technologies are embedded in cultural complexes, the question of "control" becomes even more senseless. … The very question of control takes its shape within an implicit, but outdated, metaphysics of determinism. Just as the debate of technological versus social determinism is rejected here, so it should be seen that technologies-in-use do not, as such, determine.[27]

We are here at the antipodes of the agency that Gilbert Simondon considers, from a humanist perspective, as compensation for the intrinsic disposition of technology. "The twentieth century seeks a humanism capable of compensating for the form of alienation that intervenes within the very development of technics, through a series of specializations that society demands

26 "In the age of the mass media, [despite the unobservability of the world and the nontransparency of individuals to themselves and to others,] they [the conditions of plausibility of the schemata recognizable in others and in ourselves] are virtually unthinkable without the participation of the media. Like theatre, the mass media also put the individual into a scene that is outside the scene set on the stage. … What is presented to them affects them too, since they have to lead their lives in this world; and it affects them even when they know very well that they will never get into the situations or play the roles presented to them as factual or fictional. … When individuals look at media as text or as image, they are outside; when they experience their results within themselves, they are inside. They have to oscillate between outside and inside, as if in a paradoxical situation: quickly, almost without losing any time, and undecidably"; Niklas Luhmann, *The Reality of the Mass Media*, trans. Kathleen Cross (Stanford, Calif.: Stanford University Press, 2000), 114–15.

27 Ihde, *Technology and the Lifeworld*, 140–41.

and produces,"[28] Simondon holds. Hence the antinomy between the status of majority and the status of minority concerning the relation established with the technical object:

> The status of minority is one whereby the technical object is firstly an object of utility, necessary for everyday life, belonging to the heart of the environment where the human individual's growth and training takes place. … Technical knowledge is [in this case] implicit, non-reflective, and habitual. Conversely, the status of majority corresponds to an operation of reflection and self-awareness by the free adult, who has at his disposal the means of rational knowledge, elaborated through the sciences: the knowledge of the apprentice is thus distinguished from that of the engineer.[29]

The question of the criteria of mastery or loss of control does not allow us to dismiss the idea that technics as such determines an agentive conformity, if not a desubjectivizing techno-mimetism. In this respect, the antinomy between mastery and loss of control refers to the antinomy between necessity and contingency. When apprehended in the light of a transcendent subjectivity necessarily destined to exercise choices that themselves seem to become necessary, techno-mimetism can only be reduced to an alienating agency. From a similar assumption, Langdon Winner draws some extreme conclusions about the place assigned to the subject in the technical environment. With no room to maneuver, the subject would be caught in "*the gap between complex phenomena that are part of our everyday experience and the ability to make such phenomena intelligible and coherent*."[30] In other words, the intellectual mastery previously taken for granted as a transcendent technological tool only achieves a fallacious synthesis that inevitably undermines agency. "People work within and are served by technical organizations that by their very nature forbid a perspicuous overview. … Human beings have still a nominal presence in the network, but they have lost their role as active, directing agents,"[31] Winner asserts.

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28 Gilbert Simondon, *On the Mode of Existence of Technical Objects*, trans. Cécile Malaspina and John Rogove (Minneapolis, Minn.: Univocal Publishing, 2017), 118.

29 Simondon, *On the Mode of Existence of Technical Objects*, 103.

30 Langdon Winner, *Autonomous Technology: Technics-out-of-Control as the Theme in Political Thought* (Cambridge, Mass.: MIT Press, 1977), 283.

31 Winner, *Autonomous Technology*, 28–29. "The idea that civilized life consists of a fully conscious, intelligent, self-determining populace making informed choices about ends and means and taking action on that basis is revealed as a pathetic fantasy. … On occasion a particular system generates an unexpected event whose origins and cause are a puzzle. Mistakes, errors, and extraordinary lapses of control occur which simply should

The situation is quite different from a contingency perspective, mainly when agency is at stake. As long as we remain on the empirical level, it will seem that agency cannot be contingent. The common explanation for action indeed reflects the presupposition of an isolated subject whose responsibility raises various sets of concerns.[32] Yet, experiencing technics in a transcendent fashion does not guarantee the truthfulness of the actual experience. Especially since the attempt to understand action solely by relying on the subjective issues of an inferred agency fails and, in our view, brings forth the question of posthuman agency. To prevent such failure, Joseph Margolis built his "theory of the technologized [or technological] self,"[33] which "is, primarily, a theory of the contingently constituted, societally formed, historicized, diachronically alterable practices,"[34] whether or not the techno-mimetic aspect of these practices is recognized. To take again the example of technological transfer, the subjectivizing dimension that emerges derogates from the conditions of agentive possibility that transcendent subjectivity claims to determine. These alleged conditions do not ensure the apprehension of what is transferred and are, on the contrary, recognizable as transient assumptions made within the shifting horizons of contingently formed and focused agencies.

3 Techno-mimetism as Twice Withdrawn from Focus

It finally appears that technological transfer serves here as a borderline example, for it is always difficult to know, decide, and predict what is transferred, as transference involves a certain degree of unlearning. Ihde observes that "the adaptation of a transferred technology—at least, at first—depends upon its being able to fit into an extant praxis. But even when it is adapted, the context of significations may differ quite radically relative to the sedimented type of praxis in the recipient culture"[35] or individual, we could add. Due to such

not have happened. Deeds and misdeeds are done which seem to defy any reasonable account" (296).

32 In opposition to this presupposition, our reflection on posthuman agency and techno-mimetism joins the *Homo Mimeticus* Project as an extension of its decentering of the subject. On this topic, see Nidesh Lawtoo, *Homo Mimeticus: A New Theory of Imitation* (Leuven: Leuven University Press, 2022).

33 Joseph Margolis, "The Technological Self," in *Technological Transformation: Contextual and Conceptual Implications*, eds. Edmund F. Byrne and Joseph C. Pitt (Dordrecht: Kluwer Academic Publishers, 1989), 1–16, 5.

34 Margolis, "The Technological Self."

35 Ihde, *Technology and the Lifeworld*, 127.

a difference, the "network of involvements"[36] of the technology about to be embraced can never be exhaustively transferred, which provides the transfer of an alternative, unacknowledged dimension. More precisely, as long as it withdraws behind the technical object, techno-mimetism can give rise to innumerable "cross-cultural disjunctions."[37] In a sense, "a 'technology' has been transferred, yet there is also a sense—insofar that there is a doubled set of contextual involvements—that 'a' technology is not what is transferred."[38] This happens because an object "becomes technologically what it 'is' in relation to the degree and type of transferability to which the respective cultures [or individuals] overlap in practice."[39] In this respect, the transfer is inseparable from techno-mimetism. "Virtually any object can become a technology,"[40] thanks to the "ambiguity of objects in use contexts,"[41] but "what allows the partial symbiosis of myself and the technology is the capacity of the technology to become transparent."[42] And the techno-mimetic withdrawal corresponds to this transparency, although on a further ground, as we shall show.

Now, according to Albert Borgmann, all "technological existence"[43] oscillates between two contradictory states: the engaged and the disengaged. Because of its withdrawal, techno-mimetism can indeed be modeled on a "technological pattern"[44] consisting of the continuous replacement of the presence of objects by the availability of commodities delivered by devices. A technological pattern entails a number of devices that render commodities available. Devices replace objects, whereas they cannot be reduced to (mere sets of) them. Devices also substitute the actant, rejecting him from the action they perform in his place while directing his agency. Were techno-mimetism in the foreground, not withdrawn, the device would require involvement—even in the form of the awareness of both acting and being acted upon to which posthuman agency seems to relate—rather than inducing consumption indefinitely.

Within such a pattern, engagement consists of focusing on the background, on the techno-mimetic withdrawal, which implies the re-examination of the

36 Ihde, *Technology and the Lifeworld*, 126.
37 Ihde, *Technology and the Lifeworld*, 127.
38 Ihde, *Technology and the Lifeworld*, 128.
39 Ihde, *Technology and the Lifeworld*.
40 Ihde, *Technology and the Lifeworld*, 70.
41 Ihde, *Technology and the Lifeworld*.
42 Ihde, *Technology and the Lifeworld*, 86.
43 Albert Borgmann, *Technology and the Character of Contemporary Life: A Philosophical Inquiry* (Chicago and London: University of Chicago Press, 1984), 103.
44 Borgmann, *Technology and the Character of Contemporary Life*, 5.

antinomies identified above, in order to eventually get rid of them. Indeed, Borgmann admits:

> One might be tempted to approach the question of the rule of technology from the side of freedom [intentionality or mastery] and determinism [unintentionality or loss of control], to ascertain the ethical and metaphysical [or transcendent] groundwork on which to erect a theory of technology [and subjectivation].[45]

However, for him too, "one cannot fall back on a universally accepted answer to this question."[46] It is rather a matter of "delineating the scope of action and the occasion of decision where people work out their position in relation to engagement and technology."[47] And this "requires reflection on the kind of awareness [or agency] with which people work out their … technological existence,"[48] since "technology [or techno-mimetism] has the tendency to disappear from the occasion [or techno-mimetic phenomenon] of decision by insinuating itself as the basis of the occasion."[49]

In conclusion, Ihde and Borgmann revive the ontological explication of the tool-being undertaken by Martin Heidegger, while developing it in two complementary directions. In a series of passages on which we will rely to complete our theoretical purpose, Heidegger distinguishes readiness-to-hand from presence-at-hand, which he relates respectively to an engaged (praxeological) attitude and to a disengaged (theoretical) attitude toward technology.[50] Whereas "in the 'in-order-to' as a structure there lies an *assignment* or *reference* of something to something,"[51] he argues that awareness arises only through a disentanglement from "our '*dealings*' in the world and with entities within-the-world."[52] He adds that "the peculiarity of what is proximally ready-to-hand is

45 Borgmann, *Technology and the Character of Contemporary Life*, 102.
46 Borgmann, *Technology and the Character of Contemporary Life*.
47 Borgmann, *Technology and the Character of Contemporary Life*, 103.
48 Borgmann, *Technology and the Character of Contemporary Life*.
49 Borgmann, *Technology and the Character of Contemporary Life*.
50 "As the 'environment' is discovered, the 'Nature' thus discovered is encountered too. If its kind of Being as ready-to-hand is disregarded, this 'Nature' itself can be discovered and defined simply in its pure presence-at-hand. But when this happens, the Nature which 'stirs and strives', which assails us and enthralls us as landscape, remains hidden"; Martin Heidegger, *Being and Time*, trans. Edward Robinson and John Macquarrie (New York and Evanston, Ill.: Harper and Row, 1962), 100.
51 Heidegger, *Being and Time*, 97.
52 Heidegger, *Being and Time*, 95.

that, it must, as it were, withdraw in order to be ready-to-hand quite authentically. That with which our everyday dealings proximally dwell is not the tools themselves."[53] From its withdrawn position, the technical object in general or the Heideggerian hammer in particular opens up an agentive dimension understandable as techno-mimetic wherever and whenever presence-at-hand and the correspondent theoretical attitude are reached.

In return, Heidegger warns us that, "no matter how sharply we just *look* … at the 'outward appearance' … of Things in whatever form this takes, we cannot discover anything ready-to-hand. If we look at things just 'theoretically,' we can get along without understanding readiness-to-hand."[54] While withdrawing from focus, the tool enters the subject-environment co-entailment and provides it with an agentive pattern. Readiness-to-hand concerns the technical object insofar as its actuality exceeds any possible use and awareness of it. This signifies that Heidegger's explication is not about instrumental activity, that readiness-to-hand is not in itself technology, and that technicity can arise from every situation. Ihde emphasizes that he inaugurates an "actional"[55] or agentive approach of technology, for he "materializes and technologizes action."[56] In our opinion, Heidegger does so by also pointing out the existence of a techno-mimetic absorption in the work-world:

> Our concernful absorption in whatever work-world lies closest to us, has a function of discovering; and it is essential to this function that, depending upon the way in which we are absorbed, those entities within-the-world which are brought along [*beigebrachte*] in the work and with it (that is to say, in the assignments or references which are constitutive for it) remain discoverable in varying degrees of explicitness and with a varying circumspective penetration. The kind of Being which belongs to these entities is readiness-to-hand.[57]

53 Heidegger, *Being and Time*, 99.

54 Heidegger, *Being and Time*, 98. "Equipment can genuinely show itself only in dealings cut to its own measure (hammering with a hammer, for example); but in such dealings an entity of this kind is not *grasped* thematically as an occurring Thing, nor is the equipment-structure known as such even in the using."

55 Don Ihde, *Instrumental Realism: The Interface between Philosophy of Science and Philosophy of Technology* (Bloomington: Indiana University Press, 1991), 53.

56 Ihde, *Instrumental Realism*.

57 Heidegger, *Being and Time*, 101.

The work-world is made up of actualities removed from any theoretical access and readiness-to-hand cannot unfold in presence-at-hand.[58] The tool does not appear as if it were a phenomenon, it rather disappears behind the work-world and stays unnoticed. There is no tool, phenomenally speaking, and "one reason why the phenomenon of use-objects and their particular type of 'knowledge' can be overlooked, according to Heidegger, is precisely because in uses of such technologies the user is 'absorbed.'"[59] Here absorption denotes techno-mimetism in that the product "has an assignment [or reference] to the person who is to use it,"[60] it "is cut to his figure; he 'is' there along with it as the work emerges. Even when goods are produced by the dozen, this constitutive assignment [or reference] is by no means lacking; it is merely indefinite."[61] The withdrawal of the tool leaves a blank around which the action revolves and we can affirm, due to this specific feature, that techno-mimetism is twice withdrawn from focus. Let's remember that the withdrawal of the tool does not establish any rift between essence and appearance, since a tool is never a thing between what is and what shows. Let's also remember that techno-mimetism is not twice withdrawn from focus in the same way as Plato's mimesis is twice removed from reality, for ultimately it is a mode of agency. It was quite foreseeable then that, for Borgmann, the issue would come down to examining the modes of subject-technics co-entailment, and its resolution would be summed up in criticizing the agentive molding by the devices' indefinite assignments or references. As a complex of tools, a device can effectively be ready-to-hand in an engaging or in a disengaging mode, it all depends on the sort of techno-mimetic involvement that ensues with it.

In the final analysis, the question of techno-mimetism becomes a matter of focus. We discern focus in posthuman agency as a transitive and reflective alternative to the misconception of the current subject-technics co-entailment by the transcendent subjectivity discussed earlier. Such a focus calls for a deictic shift which, unlike the theoretical approach pursued in this chapter, would stop at the threshold of presence-at-hand, to borrow again from Heidegger's lexicon. The term "deictic" is introduced by Borgmann to designate the character of the discourse indicating a "*focal* practice."[62] Borgmann does not exclude

58 "To lay bare what is just present-at-hand and no more, cognition must first penetrate *beyond* what is ready-to-hand in our concern. *Readiness-to-hand is the way in which entities as they are 'in themselves' are defined ontologico-categorially*"; Heidegger, *Being and Time*, 101.

59 Ihde, *Technology and the Lifeworld*, 33.

60 Heidegger, *Being and Time*, 100.

61 Heidegger, *Being and Time*.

62 Borgmann, *Technology and the Character of Contemporary Life*, 208.

that certain technical objects can "call forth engagement and allow for a more skilled and intimate contact with the world,"[63] but he remains convinced that focal practices essentially concern nontechnical objects. Nevertheless, he considers the possibility of a "technological engagement"[64] with which we associate the lifting of the unawareness of techno-mimetic withdrawal characteristic of the discourse on the conditions of agentive possibility in the context of technology. Once foregrounded by a deictic shift of the discourse, techno-mimetism as a continuum on which the subject-technics co-entailment unfolds may in fact be experienced as a component of subjectivation in general and of posthuman agency in particular. On a case-by-case basis, we can try to indicate the person (ourselves and/or others), the time, and the space of the techno-mimetic withdrawal as determinants within agency, thus stepping out of the transcendent subjectivity constitutive of technological humanism. After all, by means of deixis, the actual subject not only indicates the world through itself, but also emerges from anonymity, which is a kind of indefinite condition.

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63 Borgmann, *Technology and the Character of Contemporary Life*, 221.

64 Borgmann, *Technology and the Character of Contemporary Life*, 288.

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CHAPTER 14

Imitating Nature through Technology: On Mimesis, Innovation, and Environmental Ethics in the Anthropocene

Philipp Höfele

When speaking about the imitation of nature from a philosophical perspective, one traditionally refers to the subject area of philosophical aesthetics.[1] Thus, Plato and, in his succession, Aristotle, defined the arts as an imitation of natural models.[2] This incurred a negative connotation, insofar as art, at least in Plato's case, was thereby committed to a second-degree representation of the ideas already represented in the natural world. Since the era of *Storm and Stress* (*Sturm und Drang*) at the end of the eighteenth century, the theory of art as imitation has often been considered to have been overcome and discredited as secondary, as the aesthetics of genius emphasized the unprecedented originality of art.[3] In contrast, imitation was regarded as a sign of negligible dilettantism.[4]

In this context, the philosopher Hans Blumenberg even spoke of an "overcoming of the mimesis-bond" in modern times, even if this was still in the "phase-out of the agonal process."[5] For Blumenberg, the beginning of this "agonal process" in which the "mimesis-bond" dissolves is not to be found in the pathos of freedom toward the end of the eighteenth century, but rather in

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2 See Matthew Potolsky, *Mimesis* (New York and London: Routledge, 2006), 13–46; Gunter Gebauer and Christoph Wulf, *Mimesis: Culture, Art, Society,* trans. Don Reneau (Berkeley: University of California Press, 1995), esp. 31–60.

3 See especially, Jochen Schmidt, *Die Geschichte des Genie-Gedankens in der Deutschen Literatur, Philosophie und Politik: 1750–1945*, 3rd ed. (Heidelberg: Winter, 2004), vol. 1.

4 See Friedrich Balke, *Mimesis zur Einführung* (Hamburg: Junius, 2018), 120–26.

5 Hans Blumenberg, "'Nachahmung der Natur': Zur Vorgeschichte der Idee des Schöpferischen Menschen," in *Schriften zur Technik,* ed. By Alexander Schmitz, and Bernd Stiegler (Berlin: Suhrkamp, 2015), 86–125, 124. If not otherwise indicated, all translations from German or French are mine.

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the late Middle Ages. In his various works, he never tires of emphasizing that this period in the history of ideas was revolutionary.[6] In particular, he highlights nominalist theology's insight that God can create many things without wanting to and without putting them into practice. Wilhelm von Ockham conceived of a *potentia Dei absoluta,* as the potency of God that allows him to have a space of possibility beyond that which is realized in nature. It is precisely this conception that Blumenberg sees as the bone of contention, initially still sanctioned by the Church, that set the ball rolling on the idea that even human technical production is not bound to the space of possibility realized in nature.[7] Thus, in Blumenberg's eyes, metaphysical and theological frameworks determine the imaginative space and the technical options for human action, which first had to be freed from being oriented solely toward what is found in created nature.

As convincing as this thesis may be, it is fair to say—and this is the thesis of the following reflection—that the paradigm of *imitatio naturae,* of imitating nature is by no means in an "agonal process" in modernity. Rather, the concept of *imitatio naturae* is beginning to reassert itself, especially since the "mimetic turn" or "return" in the second half of the twentieth century.[8] This time, however, it is not limited to the space of the aesthetic, but is an all-encompassing feature of modern developments concerning the cultural, but most especially, the technological sphere. Perhaps due to its omnipresence in a wide variety of sectors, it no longer stands out to us, to the point that one might even speak of the idea of a "mimetic unconscious."[9]

The following reflection is far from merely trying to prove this empirically. One could mention phenomena such as artificial intelligence, whose founding text, published by Alan Turing in 1950, characteristically outlines an "imitation game" at its outset.[10] This game has come to be known as the Turing

6 See, for example, Hans Blumenberg, *Die Legitimität der Neuzeit* (Berlin: Suhrkamp, 1996), 139–262.

7 See, for example, Blumenberg, "Nachahmung," 116–19.

8 See Jacques Derrida, *Dissemination,* trans. Barbara Johnson (Chicago: University of Chicago Press, 1981); Philippe Lacoue-Labarthe, *Typography: Mimesis, Philosophy, Politics,* ed. by Christoph Fynsk (Stanford, Calif.: Stanford University Press, 1998); Nidesh Lawtoo, "Posthumanism and Mimesis: An Introduction," *Journal of Posthumanism* 2, no. 1 (2022): 87–100, https://doi.org/10.33182/joph.v2i2.2242.

9 See Nidesh Lawtoo, "The Mimetic Condition: Theory and Concepts," *CounterText* 8, no. 1 (2022): 1–22, https://doi.org/10.3366/count.2022.0254.

10 See Alan M. Turing, "Computing Machinery and Intelligence," *Mind* LIX, no. 236 (1950): 433–60, 433–34. See also N. Katherine Hayles and Nidesh Lawtoo, "Posthuman Mimesis II—Connections: A Dialogue Between Nidesh Lawtoo and Katherine Hayles,"

Test, a tool for testing real artificial intelligence that can no longer be distinguished from natural intelligence. But we should also mention disciplines such as biomimetics or bionics, which seek to make the functional and structural achievements of biological evolution fruitful for technology.[11] There are even suggestions to modulate social behavior based on the principle of mimesis, as already described by Gabriel Tarde in his epochal work *Les lois de l'imitation* in 1890[12] and further elaborated by the *Homo Mimeticus* ERC project using concepts such as "viral mimesis" and "hypermimesis."[13]

The list could easily be extended, thus calling Blumenberg's thesis into question solely by the sheer abundance of examples, especially since the second half of the twentieth century. In the following, the aim is rather to understand why, for structural reasons, the imitation of nature cannot simply be filed away as a world-historical "progress in the consciousness of freedom,"[14] a thesis to which Blumenberg implicitly commits himself with his approach (thesis 1). Apart from whether this thesis is appropriate, at least one of Blumenberg's unjustified presuppositions—according to the second thesis of my chapter—is that imitation is an act of unfreedom and that freedom can therefore only be realized in the isolationistic form of autonomy. As I intend to prove, freedom can consist of imitation of or orientation toward a given phenomenon, whether it be natural or not (thesis 2). Thirdly, imitation of living nature can, under certain circumstances, be an excellent way of responding to the environmental challenges posed by the Anthropocene, which requires a posthumanistic or "postanthropocentric" thinking achievable precisely only through mimesis (thesis 3).[15]

Journal of Posthumanism 2, no. 2 (2022): 181–92, esp. 184–85, https://doi.org/10.33182/joph.v2i2.1939.

11 See Janine M. Benyus, *Biomimicry* 2nd ed. (New York: Harper Collins, 2002); Thomas Marzi et al. *Fragen zu Einer Biologischen Technik* (Oberhausen: Karl Maria Laufen, 2018), https://www.umsicht.fraunhofer.de/content/dam/umsicht/de/dokumente/publikationen/2018/umsicht-diskurs-biologisierung.pdf.

12 See Gabriel Tarde, *Les Lois de l'imitation: Étude sociologique* (Paris: Alcan, 1890).

13 See http://www.homomimeticus.eu/the-project.

14 Georg W. F. Hegel, *Gesammelte Werke,* in cooperation with the German Research Foundation ed. by North Rhine-Westphalian Academy of Sciences and Arts (Hamburg: Felix Meiner, 1968ff.), vol. 18, 153.

15 See Martin Möller, Philipp Höfele, Andrea Kiesel, and Olga Speck, "Re-actions of Sciences to the Anthropocene: Highlighting Inter- and Transdisciplinary Practices in Biomimetics and Sustainability Research," *Elementa: Science of the Anthropocene* 9, no. 1 (2020): 9–11. https://doi: 10.1525/elementa.2021.035. On the concept of "Post-Anthropocentrism," see Rosi Braidotti, *The Posthuman* (Cambridge: Polity Press, 2013), 55–104.

These three theses arguing against Blumenberg's approach will be defended in the following only in brief flashes and with reference to three philosophical or more precisely techno-philosophical positions. First, I intend to trace the origin of the thesis of the imitation of nature (*physis*) by *techné* in Aristotle's *Physics*. I will then discuss Canguilhem's reflections on the historically suppressed relationship of dependence between organism and machine in his main work, *La Connaissance de la vie,* first published in 1952. Building on this, I will show how Canguilhem's pupil Simondon understands the technical object as a living thing in relation to its environment, its "milieu." Finally, I will briefly outline the ethical implications of the idea of mimesis on the basis of the modern interdisciplinary research field of biomimetics and the so-called biomimetic promise. A brief overview of the parallelism of technology and life concludes the considerations.

1 Aristotle's Concept of *Techné* as Imitation and Completion of *Physis*

Already in Aristotle, the imitation of nature by technology is not understood as a merely passive and inferior reproduction of the natural, when he defines their relationship in *Physics*, even though the Greek terms have a much broader range of meaning than their English loanwords: "Generally art (*techné*) in some cases completes (*epiteleî*) what nature cannot bring to a finish, and in others imitates (*mimeîtai*) nature."[16] Unlike Plato in the tenth book of the *Politeia,* Aristotle even connects imitation with a superiority of the artistic over the natural. In contrast to Blumenberg, one should not conclude that "the overarching component lies in the element of 'imitation'"[17]—and that the "completion" of what "nature cannot bring to a finish" is only a subordinate, insignificant moment compared to the imitation which negates autonomy.

In this part of *Physics*, Aristotle is certainly interested in integrating the realm of *techné* into that of nature almost to the point of identity. To prove this structural equality of *physis* and *techné,* Aristotle gives the example of a house: If one imagines the house to be a natural object that had grown of its own accord, the parameters for considering its construction would still be the

16 Aristotle, *Physics*, in *The Complete Works of Aristotle: The Revised Oxford Translation,* vol. 1, 4th ed., ed. by Jonathan Barnes, (Princeton, N.J.: Princeton University Press, 1991), 32; bk. II, par. 8, 199a15–16. See Philippe Lacoue-Labarthe, *L'imitation des modernes: Typographies 2* (Paris: Galiliée, 1986), esp. 23f.

17 Blumenberg, "Nachahmung," 86.

same as those for a work of art. The purposefulness present in both cases guarantees this structural equality between the artificial and the natural—both share a "why (*hoû héneka*)" as a cause that structures the process of creation or production; in other words, its goal.[18] Even if Aristotle in no way does justice to the findings of modern evolutionary biology, he is reacting to such objections as could possibly arise from a modern perspective. Aristotle seeks to reject the notion that the "why" is less developed in plants and other natural processes because "we do not observe the agent deliberating about it."[19] Instead, he insists that even in the case of artistic skill, there is usually no more deliberation than in the case of the supposedly agentless plant. Aristotle also dispels the objection with regard to variations or "monstrosities (*térata*)" in the natural, which are "failures in the purposive effort," with reference to the parallel of possible errors in technical production.[20]

At the same time, Aristotle does not lose sight of the difference between *physis* and *techné.* Aristotle's insistence on structurally equating *physis* and *techné* is accompanied by an emphasis on a fundamental difference between the two areas.[21] He announces this in the above quotation by referring to the possibility of technically perfecting the natural, which Blumenberg neglected. In a certain respect, the fact that "art (*téchné*) in some cases completes what nature cannot bring to a finish" attests to nature's inability (*adunatei*) to accomplish the form (*entelecheía*) or goal (*telos*) that is to be purposefully achieved.[22] *Techné* is supposed to overcome this powerlessness by leading the movement begun by nature to its end or goal after all.

This means that (1) the autonomous movement of nature, which contains itself through self-causality and teleology, is broken up by means of the *techné.* The self-identity of nature is suspended by the technical act that imitates or further elaborates on its movement by means of a web of relations between nature and the *techné* that expands it. Conversely, this means that (2), in relation to the *techné,* that which is artificially produced does not represent anything self-contained either. On the one hand, it receives the efficient cause from something that is naturally given merely in order to continue the

18 Aristotle, *Physics,* 32; bk. II, par. 8, 199a32.

19 Aristotle, *Physics,* 33; bk. II, par. 8, 199b28.

20 Aristotle, *Physics,* 32; bk. II, par. 8, 199b4.

21 Aristotle elaborates on this difference between *physis* and *techné* at the beginning of the second book of his *Physics* in the context of his determination of the essence of *physis*; Aristotle, *Physics,* 19; bk. II, par. 1, 192b–193b. See also Henry State, *Techne Theory: A New Language for Art* (London: Bloomsbury, 2019), 65–84.

22 Aristotle, *Physics,* 32; bk. II, par. 8, 199a15–16.

movement that has already been initiated. On the other hand, with the exception of certain cases such as doctors who treat themselves, the form that is to be achieved expediently is applied to the technical product from the exterior. However, this double non-self-sufficiency and blurring of the demarcation from the natural is not understood by Aristotle (3) as an expression of the inferiority of the *techné,* but as a form of the completion (*epiteleî*) of the natural. The *techné,* completing nature, can add the decisive keystone in the form of an added value compared to the natural. For even the most uncreative expression of imitation means not only the indistinguishable copy of an original, but the transposition of a form, structure, or movement onto another substance or material to which they do not originally belong. It is precisely the passive adoption of a formal cause, structure, or movement from outside that creates something new, a free space for something different; it is the representation of something in a completely new context.[23]

Aristotle, between the lines as it were, here advocates for a union of *physis* and *techné* that makes perfection possible. Even in passive imitation, this position does not ignore the difference and the added value of each for the other. According to Aristotle, the new does not arise by acceding to a space of possibility of absolute alterity, but rather in the converging union of the different domains, which allows the other, the new, to emerge of its own accord.

How this emergence is to be understood more precisely, not least in terms of the theory of science with a view to nature and technology, which Aristotle only hints at here, can be understood with reference to a modern thinker, namely with reference to Georges Canguilhem's work *La connaissance de la vie,* published in 1952, in which he discusses the historical relationship between organism and machine. Here, the prehistory of a discourse of mimesis emerges even more clearly, which can be understood precisely as an opportunity for an ecologically sustainable, posthumanist Anthropocene.

2 Canguilhem's Understanding of Technology as a "Universal Biological Phenomenon"

In the chapter "Machine et organisme" of *La connaissance de la vie*,[24] Canguilhem sought to reveal the history of a multilayered interrelationship

23 See Lacoue-Labarthe, *L'imitation des modernes*, 24, who speaks of a "productive mimesis."

24 The chapter "Machine et Organisme," however, is older. As Canguilhem notes in the preface, it goes back to a lecture given in 1946–47. Georges Canguilhem, *La connaissance de la vie* (Paris: Librairie Hachette, 1952), 5.

between nature and technology, which is partly characterized by repressions and abridgments. Like Aristotle in *Physics*, he also assumes that nature in the form of the organism is imitated by the technical machine, even if this view is by no means widespread in the history of ideas. At the same time, however, a second relationship must be taken into account, insofar as—according to his thesis—"one cannot understand the phenomenon of machine construction if one falls back on concepts of nature from biology (*notions de nature authentiquement biologique*) without at the same time asking where technology comes from in relation to science."[25]

Canguilhem seeks to plausibilize his thesis that there are mutually dependent relationships between the organism and the machine on the one hand, and technology and science on the other, in four successive steps of argumentation. First, Canguilhem shows that "the mechanistic explanation of organ functions is historically … based on the construction of automata."[26] To this end, Canguilhem does not only go back to the iatromechanical school of the seventeenth century and Descartes, who sought to describe and explain the human organism mechanistically, using the example of the physician Giorgio Baglivi. He sees such starting points even in Aristotle's work *De motu animalium,* which describes the organs animals have for movement as "*organa*" and compares them with parts of war devices such as the catapult. Canguilhem blames a process of displacement for the fact that such a parallelization and even a reversal of the mimetic relationship between organism and machine could have occurred, namely that the organism only realized abstract technical-mechanical principles. Due to the storage of energy, a hydraulic *automaton,* for example, merely gives the impression of being an "*automaton*," a self-moving thing. The delayed setting-in-motion of an effect conceals the external driving force: "It is this shift (*décalage*) between the time of storage and the time of release of energy that leads to the dependence between mechanical performance and the action of a living being falling into oblivion."[27]

In the second step, using Descartes as an example, Canguilhem tries to make clear the implications of this "exchanged" imitative relationship in the history of ideas. By understanding the organism on the basis of mechanistic causality, the finality or teleology of the organic, still emphasized by Aristotle, was blunted. But if, according to Canguilhem, "man negates all natural finality and regards all of nature, including obviously animate nature, as a means to an end,

25 Canguilhem, *La connaissance de la vie,* 125.
26 Canguilhem, *La connaissance de la vie,* 128.
27 Canguilhem, *La connaissance de la vie,* 130–31.

he can declare himself the master and owner of nature."[28] Yet by eliminating the "anthropomorphism of finality" from nature in this way, in evolutionary-biological terms, a "technological anthropomorphism" was introduced at the same time.[29] For, as Aristotle already noted, technology is not simply ateleological, it also obeys purposes that are now fatally applied to the interpretation of nature on the basis of a technical end-means rationality.

Third, Canguilhem also identifies an overturning (*se renverse*) of the relationship between organism and mechanism at work that occurs with Descartes. For "in an organism one observes … phenomena of self-construction, self-preservation, self-regulation and self-repair. To the machine, on the other hand, the process of construction is alien; it needs the inventiveness of the mechanic."[30] Canguilhem must concede that the development of the organic realm is not fully subordinated by teleological forms to the same extent as the technical—even if the organism offers its own form of finality, which the machine does not. Here, phenomena of the monstrous, the pathological, and the deviant become central, phenomena that Aristotle still thought he could dismiss as errors related to technical production and as "an accidental cause (*symbebekòs*)."[31] These phenomena precisely indicate that the organic realm, despite its undeniably teleological moments, possesses a freedom and openness to possibilities that are made particularly apparent by its deviation from final causality: "An organism thus has more scope for action than a machine. In the organism, there is less finality and more potentiality."[32] Canguilhem contends that the machine can only be understood with reference to the natural, namely by referring to the history of humanity and of life; its meaning arises from this natural history, without the freedom of the inventive thereby being restricted.[33]

Canguilhem's fourth and final step is to underline this once again in a concluding reflection on the relationship between technology and science. Referring to §43 of Kant's *Critique of Judgement*,[34] Canguilhem calls for a

28 Canguilhem, *La connaissance de la vie,* 138.

29 Canguilhem, *La connaissance de la vie,* 141.

30 Canguilhem, *La connaissance de la vie,* 144.

31 Aristotle, *Physics,* 33; bk. II, par. 8, 199a25.

32 Canguilhem, *La connaissance de la vie,* 147.

33 See Canguilhem, *La connaissance de la vie,* 150.

34 See Canguilhem, *La connaissance de la vie,* 152. Canguilhem refers here to a passage in Kant in which he insists that—for example, in the production of a shoe—the most detailed knowledge about the nature of an object to be produced does not imply the technical ability to produce it. Immanuel Kant, *Critik der Urteilskraft* (Berlin and Libau: Lagarde und Friedrich, 1790; 2nd ed. 1793), B 175, A 173. While Kant might have in mind that the technical production process represents something added to knowledge, Canguilhem

distinction between art and science. "The one does not graft itself onto the other, but each sometimes borrows solutions and sometimes questions from the other. The rationalization of techniques makes the irrational origin of machines fall into oblivion."[35] Canguilhem's statement is by no means a plea for irrationalism, but rather for a rationalism freed from the dominance of scientific necessity, following the suggestions of Ernst Kapp, the philosopher of technology.[36] For him, the freedom of technical developments and innovations seems to be guaranteed precisely when technology is not degraded to a simple application of scientific reasoning—in this, astonishingly, he coincides with Blumenberg's position on the philosophy of technology.[37] Nonetheless, Canguilhem, unlike Blumenberg, believes that this freedom of technology is guaranteed by its mimetic integration into the space possibility contained in the natural world, technology being "a universal biological phenomenon (*un phénomène biologique universel*),"[38] which, like the latter, also has its potentiality at its disposal. According to Canguilhem, imitation of nature not only opens up potential for technical innovation, but at the same time frees us from a scientific anthropocentrism.

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concludes that the productive originality of technology cannot be reduced to a scientific rationalization.

35 Canguilhem, *La connaissance de la vie,* 157.

36 See Ernst Kapp, *Grundlinien Einer Philosophie der Technik: Zur Entstehungsgeschichte der Cultur aus Neuen Gesichtspunkten* (Braunschweig: George Westermann, 1877), 136–38, 155–64.

37 In his central essay on the philosophy of technology, "Lebenswelt und Technisierung unter den Aspekten der Phänomenologie" (Lifeworld and Technization under the Aspects of Phenomenology) from 1963, Blumenberg assumes that the essence of technology is to be understood precisely in its relationship to history, that it consists of an omission of history. As he tries to make clear with the example of an electric doorbell, the functioning and thus also the essence of technology lies precisely in the fact that the processes of development and production are forgotten in its handling. According to Blumenberg, mechanization consists of a reduction and suppression of the scientific knowledge behind it. When we use technology, we do not think about how it works, and that is what makes it efficient. See Hans Blumenberg, "Lebenswelt und Technisierung unter den Aspekten der Phänomenologie," in *Schriften zur Technik,* ed. Alexander Schmitz and Bernd Stiegler (Frankfurt a.M.: Suhrkamp, 2015), 163–202, esp. 187–202; Oliver Müller, "Natur und Technik als falsche Antithese. Die Technikphilosophie Hans Blumenbergs und die Struktur der Technisierung," *Philosophisches Jahrbuch* 115 (2008): 99–124, 114–20.

38 Canguilhem, *La connaissance de la vie,* 158.

3 The "Milieu" of the Living and of the Technical Object

In a certain sense, both Aristotle and Canguilhem rub salt in the wound created by an understanding of technical freedom such as that represented by Blumenberg. In its detachment from all ties to nature, such an understanding must be questioned as to where it derives the possibilities of its freedom. In the literal sense, these possibilities would appear to be groundless, as they result from abandoning the paradigm of imitation.

The technical object and its development, however innovative it may be, are always bound up in contexts. This was emphasized above all by Canguilhem's student Gilbert Simondon in his 1958 work *Du mode d'existence des objets techniques,* systematically following his teacher's reflections on the concept of the "milieu."[39] Canguilhem understands living things in general, from cell to organ to organism, as being immersed in a "milieu," as forming a unity of mutual constitution and therefore to be characterized by the basis it presents. Simondon, similarly, seeks to understand the technical object in relation to its environment. Against this backdrop, Simondon understands the man-machine relationship as an "inter-individual coupling (*couplage*) between man and machine": "Man can be coupled to the machine as a being that participates in its regulation, not as a being that merely directs and uses it by incorporating it into the ensembles, or as a being that serves it by supplying it with material or elements."[40] Simondon assumes here a symbiosis between man and machine, so to speak, which leads to the fact that neither of the two interaction partners can exist on their own. Martina Heßler rightly emphasizes the proximity between Simondon's approach to the philosophy of technology and Bruno Latour's network theory, which sees the biosphere as being made up of irretrievably interwoven actors and agents.[41]

In addition to this interconnection of the machine with its external environment, Simondon—analogous to Canguilhem's concept of the "milieu"[42]—also

39 See Canguilhem, *La connaissance de la vie,* 160–93.

40 Gilbert Simondon, *Du Mode d'existence des Objets Techniques* (Paris: Aubier, 1989), 119–20.

41 See Martina Heßler, "Gilbert Simondon und die Existenzweise Technischer Objekte: Eine Technikhistorische Lesart," *Technikgeschichte* 83, no. 1 (2016): 3–32, esp.27, https://doi.org/10.5771/0040-117X-2016-1-3.

42 Like Simondon's concept of the technical object, Canguilhem's concept of the "milieu" of the living also assumes external and internal relationships: "From the biological point of view, it must be understood that between the organism and the environment there is the same relationship as between the parts and the whole within the organism itself. The individuality of the living being does not end at its ectodermal borders, any more than it begins at the cell." Canguilhem, *La connaissance de la vie,* 179.

understands the technical object to have an inner structure almost like that of a living organism. For here too, according to Simondon, the formation of relations and ever stronger dependencies of the technical elements among themselves on the one hand, and the multifunctionality of individual elements on the other, play a central role: The technical object is defined "through the process of concretisation and functional overdetermination which gives it its consistency at the end of an evolution, proving that it cannot be considered as a pure utensil."[43] With "concretization," Simondon points precisely to this increasingly strong relationship of dependence among technical objects, both inwardly between their functional elements and outwardly to their environment. However, this is by no means accompanied by a one-dimensional cause-effect determinism with regard to the functional elements of the technical objects. As is the case with living beings, a multifunctionality of individual elements can also arise here, which Simondon describes using the term "overdetermination."

Even if Simondon generally strives to maintain the difference between the natural and the technical, this description of technical objects leads him to liken them to natural organisms. At the same time, with this mimetic approach between the technical and the living, he points the way beyond an understanding of technology that is centered on the human subject, insofar as the human being is not simply understood as a user of technology who masters it and exists independently of it, but stands in a symbiotic relationship with it.

Simondon's posthumanist or, more precisely, "postanthropocentric" view of technology ensures the autonomy and innovativeness of the technical object precisely in the way it imitates central structures of the living. However, the imitation of the holistic integration of technical objects into the environment is by no means accompanied by claims about its sustainability, as is the case with the life cycles of the natural world.[44] On the contrary, there is also the possibility that the "too perfect" imitation and above all the holistic integration of technical objects into the natural environment can harm it in a lasting and unsustainable way. The Anthropocene debate, which emerged at the turn of the millennium, has clearly drawn attention to the fact that human activities, especially those related to its technical products, have irreversibly inscribed themselves in the biosphere of our planet in a largely harmful way.[45] As

43 Simondon, *Du Mode d'existence des Objets Techniques,* 15.

44 See Möller et al., "Re-actions of Sciences to the Anthropocene," 9–11.

45 See Philipp Höfele, "The Changed Role of Anthropology in the Anthropocene," in *Emerging:"Moral" Technologies and the Ethical-Legal Challenges of New Subjectivities,* ed. by Silvia Salardi and Michele Saporiti (Turin: Giappichelli, 2020), 125–44, 127–35,

Bensaude-Vincent has vividly shown with the "history" of plastic and nuclear waste, this happens precisely when one fails to reflect sufficiently on the fact that these man-made products continue to exist beyond their use, similar to living things, even when they have become waste. They have an ongoing history, even if it is mostly suppressed by humans, and each product possesses its own "timescale" or even "timescape." In the Anthropocene, these problems must be taken increasingly into account if we want to avoid environmental catastrophes.[46]

In this respect, the normative claims advanced by the interdisciplinary research field of biomimetics[47]—which Canguilhem understood as early as 1965 to be an adequate practical implementation of his definition, outlined in "Machine et organisme", of the relationship between natural life and the technical object[48]—must be examined more closely in the following. Approaches to technological development that seek to imitate nature's life forms and to integrate the resulting technical objects back into nature can usually claim innovative potential for themselves. However, they are by no means automatically accompanied by a promise of sustainability, as the "Life Cycle Assessment" to be carried out for technical products demonstrates.[49]

4 The Ethical Claim Regarding a Technical Imitation of Nature in Biomimetics

As has been seen, propagating an orientation of technology toward nature only appears to be a lack of freedom if nature is understood as a static *natura*

https://www.giappichelli.it/le-tecnologie-morali-emergenti-e-le-sfide-etico-giuridiche-delle-nuove-soggettivita-23035.

46 See Bernadette Bensaude-Vincent, "Of Times and Things: Technology and Durability," in *French Philosophy of Technology. Classical Readings and Contemporary Approaches,* ed. by Sacha Loeve, Xavier Guchet, and Bernadette Bensaude-Vincent (Cham: Springer, 2018), 279–98, 291–94. https://doi.org/10.1007/978-3-319-89518-5_17.

47 On the meaning and different uses of the terms biomimetics, biomimicry, bioinspiration, and bionics, see Möller et al., "Re-actions of Sciences to the Anthropocene," 3.

48 In the second edition (1965) of his work *La Connaisance de la Vie,* Canguilhem refers in a footnote at the end of the chapter "Machine et Organisme" to the discipline of "bionics"—established about ten years earlier in the United States, mainly at the Massachusetts Institute of Technology—which turned to the study of biological structures and systems in order to use them as models for technology. Georges Canguilhem, *La connaissance de la vie: Deuxième édition revue et augmentée* (Paris: Librairie philosophique, 2015), 163.

49 See ISO 14040, *Environmental Management—Life Cycle Assessment—Principles and Framework* (Berlin: Beuth, 2006).

naturata for which a deviation from the established laws is not foreseen. What is overlooked here is precisely the historicity of nature in its dynamics as *natura naturans*.[50] Such an understanding describes nature as never being exclusively structured by developmental goals that are fixed once and for all, but rather as characterized by multifunctionality, potentiality, and openness to goals.[51] Insofar as nature's space of possibilities is used as an orientation for technological development, no restriction of technological innovation is to be expected, but rather an enrichment of it through the identification of new, innovative solutions, inspired by nature, for problems that arise in technological development. In biomimetics, a twofold approach is possible: on the one hand, engineers can approach the natural sciences with their questions in order to find solutions for concrete technical problems (top-down approach). On the other hand, biologists can also use the findings of natural processes for technical products (bottom-up approach), which is a more time-consuming process because it is less targeted than the former, but which can lead to much more innovative results due to its openness with regard to the future use of these findings.[52]

However, this raises the question of sustainability and thus the normativity of this approach, especially in the face of the challenges of the Anthropocene. Certainly, one does not immediately fall into a naturalistic fallacy (concluding what ought to be from what is)[53] if one normatively propagates nature as a possible space for orientation in technical action. As Henry Dicks has rightly pointed out, in the first place, an orientation toward the functional principles of nature does not mean "that doing so follows *logically* from the nature of Nature,"[54] insofar as scientific-technical action is still free. In the second

50 See Franziska Bomski and Jürgen Stolzenberg, eds., *Genealogien der Natur und des Geistes: Diskurse, Kontexte und Transformationen um 1800* (Göttingen: Wallstein, 2018), esp. 25–124; Michael Hampe, *Erkenntnis und Praxis: Zur Philosophie des Pragmatismus* (Frankfurt a.M.: Suhrkamp, 2006), 127–31. On the one hand, Hampe distinguishes between a concept of nature that understands "everything that is part of the necessary coherence of laws or falls under necessary laws" as nature; on the other hand, he draws attention to a concept of nature that takes account of the historical, according to which—as in the case of the concept of *natura naturans*—"everything that happens 'of its own accord' without human planning and intentionality, i.e. also the random (*Zufällige*), which cannot be grasped by law," is nature (127).

51 See Canguilhem, *La connaissance de la vie* (Paris: Librairie Hachette, 1952), 124–59.

52 See Möller et al., "Re-actions of Sciences to the Anthropocene," 2–5.

53 See David Hume, "A Treatise of Human Nature," in *The Essential Philosophical Works* (Ware: Wordsworth Editions, 2011), 1–551, 409; bk. III, sec. I, part I.

54 Henry Dicks, "The Philosophy of Biomimicry," *Philosophy & Technology* 29, no. 3 (2016): 223–43, 239, https://doi.oeg/10.1007/s13347-015-0210-2.

place—as Dicks notes following Martin Heidegger's interpretation of the concept of *physis,* but which one can also show with regard to the historical-dynamic concept of *natura naturans* around 1800[55]—a naturalistic fallacy would only be applicable to a static-unhistorical nature consisting of a collection of dead objects. However, "it belongs to the very nature of *physis* [or *natura naturans,* PH] to be open to understanding and interpretation."[56] The openness of nature as a space of possibility, which is not ultimately encapsulated by overarching teleological structures, not only ensures the freedom and innovative power of a science oriented toward nature. Rather, it also protects this kind of science from a naturalistic fallacy. Nature, understood as a dynamic force having played through countless possibilities in its evolutionary history, can only serve as a stimulus for science and offer possible models for imitation. The evaluation of its imitability, however, must come from a different angle.

The interdisciplinary research field of biomimetics is well aware of this need for an "external," additional normative evaluation of its developed products and is therefore increasingly integrating sustainability researchers and ethicists into its collaborative, interdisciplinary research.[57] The concept of the "biomimetic promise," coined by Von Gleich et al.[58] and forming the core normative content of biomimetics, is not a self-perpetuating one. Admittedly, the normative aspect of biomimetic developments, "that is, a qualitative promise of better, more ecological, low-risk and more appropriate solutions" to technical problems,[59] is derived from its orientation on optimized biological models that fit perfectly into the natural environment. Furthermore, because their inspiration from biological models flows into technical applications, biomimetic solutions ought to have the specific potential to contribute to sustainable technology development. However, even if biological models have evolved extraordinary properties in the course of 3.8 billion years of evolution,[60] this

55 See Philipp Höfele, "Schelling—Goethe—Schopenhauer: Zur holistischen Betrachtung der Natur in der 'Sattelzeit' um 1800," in *Schopenhauer Liest Schelling: Freiheits- und Naturphilosophie im Ausgang der Klassischen Deutschen Philosophie,* ed. by Philipp Höfele and Lore Hühn (Stuttgart-Bad Cannstatt: frommann-holzboog, 2021), 163–95.

56 Dicks, "The Philosophy of Biomimicry," 239.

57 See Olga Speck, David Speck, Rafael Horn, Johannes Gartner, and Klaus Peter Sedlbauer, "Biomimetic Bio-Inspired Biomorph Sustainable? An Attempt to Classify and Clarify Biology-Derived Technical Developments," *Bioinspiration & Biomimetics* 12, no. 1 (2017): 1–15. https://doi.org/10.1088/1748-3190/12/1/011004; Möller et al., "Re-actions of Sciences to the Anthropocene," 1–16.

58 Arnim von Gleich, Christian Pade, Ulrich Petschow, and Eugen Pissarskoi, *Potentials and Trends in Biomimetics* (Berlin: Springer, 2010).

59 Möller et al., "Re-actions of Sciences to the Anthropocene," 5.

60 See Benyus, *Biomimicry*.

does not mean that biomimetic products are automatically sustainable by virtue of their functional principle.

(1) The example of the cherry tree and its sustainable life cycle mentioned by McDonough and Braungart[61] may be an illustration of sustainable, harmonious integration into the natural environment. However, there is a limited extent to which it can be a model for imitation in the production of sustainable technical products, since the interface between the natural and technical "milieu" is quite different from that between different natural entities, not least because of the different materials used in each case.[62] Even if, for example, chemical risk management[63] attempts to remedy this situation, there is always a residual uncertainty as to whether the technologies developed are unproblematic or dangerous with regard to their interface with the natural environment. In view of this lack of knowledge, which can never be completely resolved, Hans Jonas introduced the concept of a "heuristics of fear (*Heuristik der Furcht*)" in his main ethical work *The Principle of Responsibility,* which argues in favor of rejecting new technologies in case of doubt in order to preserve the possibilities of the present for future generations. Even if this principle in Jonas' work is more oriented toward the protection of future human life and can thus be described as anthropocentric, there is nothing fundamentally opposed to a "postanthropocentric" or biocentric extension of this concept, so that it can still be applied under the intensified environmental ethical questions of the protection of nature in the Anthropocene, for example to decide on the imitability of certain biological principles.[64]

(2) However, the ethical consideration of technologies that imitate nature is not limited to their supposed physical impact on nature and humans. They must also be considered in relation to other, conventional technical objects. Biomimetic approaches always have to raise the scientific question of whether the biomimetic product at hand is more sustainable than a comparable conventional product. To answer this question, biomimetics not only has to resort

61 See William McDonough, and Michael Braungart, *Cradle to Cradle: Remaking the Way We Make Things* (New York: North Point Press, 2002), 85; Dicks, "The Philosophy of Biomimicry," 240.

62 See, for example, the complex task of Area C of the *liv*MatS cluster of excellence, which deals with the technical implementation of concepts such as adaptation, repair, and multiredundancy. *Liv*MatS, "Research Area C," n.d., https://www.livmats.uni-freiburg.de/en/research/research-area-c.

63 See Möller et al., "Re-actions of Sciences to the Anthropocene," 8.

64 See Philipp Höfele, "New Technologies and the 'Heuristics of Fear': The Meaning and Prehistory of an Emotion in Jonas, Heidegger and Hegel," *Hungarian Philosophical Review* 64, no. 1 (2020): 166–82, 166–71.

to the methodological approaches of sustainability research, particularly life-cycle assessment. Rather, economic aspects must also be taken into account, as only products that are justifiable in terms of costs will be able to establish themselves in the market, however sustainable they may be.[65] Finally, in the context of the imitation of nature pursued by synthetic biology, the ontological level must also be taken into account, insofar as, for example, the production of an artificial cell also raises entirely new questions about its ethical status in relation to conventional technical products.[66]

(3) Last but not least, we must also take into account that technologies that imitate nature stand in a relationship to humans and society and must therefore be ethically reflected upon in this regard. Mark Coeckelbergh, for example, notes with reference to the example of social robotics that such nature-mimicking technologies are always at the same time concerned "with the making of human, social, cultural, and political meanings (and the very claim that the robot is an 'other' is one of these meanings that has political significance and that must be problematized)."[67] For him, technologies that imitate living beings and especially humans, as is the case for social robotics, are neither simply neutral instruments nor absolute "others" that act in complete independence from the human being like another, alien person. In this sense, he distances himself from his understanding of posthumanism. Rather, he understands these technologies as "instruments-in-relation," almost in the sense of Simondon, without naming him in his explanations: "Humans and robots are entangled in the many ways outlined; they are internally and deeply related."[68] This can lead to problems of societal acceptance, especially in the case of technologies that imitate nature, as these attack and blur conventional ontological categories accorded to objects. In this respect, fields as diverse as the natural sciences and the humanities, not to mention the users of such technologies, are called upon to reflect not only on the possible implications of these technologies for theories of sustainability and environmental ethics, but

65 See, for example, Florian Antony, Rainer Grießhammer, Thomas Speck, and Olga Speck, "The Cleaner—the Greener? Product Sustainability Assessment of the Biomimetic Façade Paint Lotusan® in Comparison to the Conventional Façade Paint Jumbosil®," *Beilstein Journal of Nanotechnology* 7 (2016): 2100–15, https://doi.org/10.3762/bjnano.7.200.

66 See Joachim Boldt, Oliver Müller, and Giovanni Maio, *Synthetische Biologie. Eine Ethisch-Philosophische Analyse* (Bern: Bundesamt für Bauten und Logistik BBL, 2009), 55–61.

67 Mark Coeckelbergh, "Three Responses to Anthropomorphism in Social Robotics: Towards a Critical, Relational, and Hermeneutic Approach," *International Journal of Social Robotics* 14 (2021): 2049–61, 2058, https://doi.org/10.1007/s12369-021-00770-0.

68 Coeckelbergh, "Three Responses to Anthropomorphism in Social Robotics," 2057.

also to keep an eye on their nonphysical repercussions on the living beings interacting with them.

5 Outlook: The Simultaneous Safeguarding of Technical Freedom and the Diversity of Natural-Cultural Relational Realities

The fact that technology, as was already noted by Aristotle, involves the imitation and even the perfection of nature is not to be criticized as a paradigm that was historically overcome as part of a long struggle favoring freedom and originality. The opposition that Blumenberg believed necessary to establish turns out to be illusory. Technology in the Anthropocene that is to meet the current environmental ethical challenges must be posthumanistic and "postanthropocentric," and this it can be in its imitating nature. Sustainable imitation of nature in the Anthropocene is precisely possible to the extent that it is free, just as freedom and originality in the Anthropocene are possible when they are imitative and integrated into an environment. Technology must adaptively integrate itself into the natural environment without ignorantly dominating the natural. But by taking this to heart, technology is an imitative image of life itself, as Canguilhem and his pupil Simondon have already indicated.

To use Whitehead's words, life is "a bid for freedom," a striving for novelty and originality; but life is at the same time not "a defining characteristic": "The characteristic of life is a reaction adapted to the capture of intensity, under a large variety of circumstances."[69] Intensity, however, is a phenomenon that only occurs against a background and in comparison to it: life does not stand out absolutely as separate from its environment, but rather, despite its similarity to the environment, emerges as a more intense, more significant event in relation to it. But, to remain in the picture, what appears more intense, more significant in relation to its surroundings, always runs the risk of repressing them. Nevertheless, what appears more significant is dependent on its environment in many ways, not only in a physical sense, but also in a nonphysical, socio-cultural sense. The task of ethics in the face of such new technologies that imitate nature is precisely to consider and ensure these diverse relationships, without at the same time endangering the freedom and innovativeness of these technologies, but allowing both to go hand-in-hand.

69 Alfred North Whitehead, *Process and Reality: An Essay in Cosmology. Gifford Lectures Delivered in the University of Edinburgh During the Session 1927/28,* ed. by David R. Griffin, and Donald W. Sherburne (New York: The Free Press, 1985), 104–5.

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CHAPTER 15

AI and Reverse Mimesis: From Human Imitation to Human Subjugation?

Kevin LaGrandeur

With the evolution of artificial intelligence (AI) over the past 70 years or so, we have undergone a great experiential change: From creating imitations of ourselves, we have transitioned to having those intelligent artifacts we created become able to teach themselves to imitate us in ways that have begun to surpass our own abilities—today, for example, in the activities of playing chess and radiology diagnoses. And we have also allowed ourselves to rely on them too much—especially for decision-making. In this way, the artificial servants we have made threaten to upend the master-servant relationship between us and them by flipping the locus of the power to determine actions. In this sense, our development of intelligent technology over the years has combined mimesis with a Hegelian dialectic to create an ironic, and possibly dangerous, reverse-mimetic cycle in today's posthuman world. As a species, we have moved from creating intelligent tools in our own literal or functional image to having those tools succeed so well that they are seducing us into following their direction, rather than the opposite. And this in turn is forcing us to remake ourselves in *their* machinic image. In other words, as I will show, we are in a situation where in order to survive competition from our own intelligent inventions, we must consider incorporating into ourselves elements of those very inventions—cyborgizing ourselves—or risk losing jobs and perhaps even existential viability. And so we have begun to imitate them in a reversal of the original mimetic process of their creation. The resulting possibilities raised by imitating our machines via techno-corporeal enhancement are both amazing and horrifying.

1 The Ancient Roots of Mimetic AI

We have dreamed of making machines that are imitations of ourselves or our functions since ancient times. The reason for this is given quite explicitly by Aristotle in his *Politics*. A smart machine that could do a common chore like weaving by itself would lessen the need for human slaves, solving at least two

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problems: most importantly, alleviating the master from providing for the needs of the slaves themselves for food, drink, rest and such; but also the moral problems of enslaving humans that even some of Aristotle's fellow Athenians complained about (in book 4).[1] Referring to the *Iliad,* in book 18 of which Homer tells us about Hephaistos's intelligent serving tables that move by themselves through the banquet hall of the gods, Aristotle speculates that if, in a similar way "the shuttle would weave and the plectrum touch the lyre [by themselves], chief workmen would not want servants, nor masters slaves."[2] But later conceptions of such intelligent humanoid technology were far more fraught with risk precisely because of its human-like intelligence. William of Malmesbury, in his medieval *Chronicle of the Kings of England* (*Gesta Regum Anglorum*), written between 1118 and 1125, tells a story of a talking brass head supposedly built by Pope Sylvester (who was a polymath) around 1000 AD.[3] This intelligent artifact could foretell future events. Sylvester asks about the circumstances of his own death in order to prevent it, but unfortunately the robotic head misleads him with a vaguely worded forecast, leading the Pope to do the very thing that causes his demise. Similarly, a play written around Shakespeare's time by English playwright Robert Greene has a main character named Roger Bacon (a fictionalized representation of the real medieval scientist) who is in the process of creating a brass head similar to Sylvester's. This android will have a number of impressive functions when it is finished. According to Bacon, it will be able to build a defensive brass wall around England, give philosophical lectures, and solve difficult theoretical questions.[4] However, this machine proves dangerous as well, imploding upon its activation late in the play.

The dangers of these humanoid machines have to be reckoned with in the context of their times, of course. In that context, of a very socially static and traditional Christian society, these humanoid creations are mostly symbolic of human hubris, the impropriety of trying to supersede one's God-given natural and social limits and to acquire godlike power for oneself. By the same token, they also express the era's suspicion of innovation and intellectual adventurism, as signified by the fact that the innovators in both of these stories are foiled by their own daring, an adventurousness that makes them shortsighted

1 Aristotle, "Politics," in *The Complete Works*, vol. 2, ed. by Jonathan Barnes (Princeton, N.J.: Princeton University Press, 1995), book 4.

2 Aristotle, "Politics," 2:1253b38–1254a1.

3 William of Malmesbury, *Chronicles of the Kings of England,* ed. by J. A. Giles (London: n.p., 1847), 174–81.

4 Robert Greene, *The Honorable History of Friar Bacon and Friar Bungay*, ed. by Daniel Seltzer (Lincoln: University of Nebraska Press, 1963), 2:25–30.

and overconfident. For example, Sylvester is blinded to the fact that his robotic head has tricky ways of speaking. And Bacon fails to understand why the powers he invests in his brass head are completely improper: First, he misses the fact that the brass head could deprive him of his own job by its superior ability to give philosophical lectures and solve complex problems; and he also fails to see that his plan to have the brass head help him build a defensive wall around England usurps the social duties of the aristocracy, and so it is completely inappropriate to his own social position as a friar in a society so rigid that there were even "Sumptuary Laws" at the time, specifying what people of various classes could wear and eat.[5]

2 Connections to Today's AI: Superhuman Imitation of Narrow Human Functions

The fact that all of these machinic androids are designed to be superior in power to their human makers is very risky, as outlined in the stories of ancient eras. But these ancient stories were just fiction. Today's AI is a reification of those fictional ideas that cause real concerns about their dangers. And those dangers are growing. Although today's AI is still a very narrow type of intelligence, it has still outstripped our abilities in some respects, and therefore has posed perils. Today's AI usually can only do one thing well, but it has been developed to the point where it can in some cases do that one thing better than most humans. Computers that play chess are good examples of this. Early chess-playing computer programs made in the 1980s could beat the average chess player, but not a true expert; however, IBM's Deep Blue, developed in the late 1980s and 1990s, was eventually, and famously, able to win both a game and a match against one of the world's top chess players, Gary Kasparov. This caused problems, with Kasparov leaving competition altogether, for instance, because of his losses. The risk posed here was not catastrophic, perhaps, except to the chess world; but the liabilities got larger with time.

For example, in the early 2000s, AI systems that can diagnose tumors in radiological images advanced markedly. Recently, they have developed to the point where they can make diagnoses of tumors better than human radiologists. Even though such AI cannot replace human radiologists yet (it is still up to the radiologist to decide what to do about the diagnosis and other complexities of dealing with the patient), fears that such AI could eventually supplant

5 Joyce Youings, *Sixteenth Century England* (London: A. Lane, 1984), 110–16.

human specialists have had a strong negative effect on recent medical students' choice of specialties. According to Vijay Rao, past president of the Radiological Society of North America, news of radiology AI's accuracy caused "panic and backlash in the radiology field" that had the significant effect of causing medical students to avoid specializing in it.[6] In a 2018 survey of Canadian students, 68 percent thought that AI would cause a decline in jobs in the field, and this caused the number of radiologists to decline.[7]

3 The Main Problem: We Have Begun to Over-Rely on AI, with Often Disastrous Results

Some intelligent technology has caused even worse consequences because we have allowed it to control our decisions and actions in catastrophic ways. This technology includes things like GPS, algorithmic trading in financial markets, and autopilots in vehicles. There are numerous instances around the world of travelers dying in remote areas because they blindly trusted the directions their GPS was giving them, even though it took them into unexpected and dangerous areas, such as onto unpaved roads in the wilderness. In fact, this is so common a phenomenon that it has a name: "death by GPS."[8]

Automated algorithmic trading in financial markets is another example of disastrous over-reliance on intelligent technology. This sort of automated trading has caused numerous "flash crashes" of the American markets over the past 15 years because of the unanticipated consequences of letting algorithms do all the work of buying and selling equities. Programmers didn't anticipate emergency situations that could be caused by the autonomous operation of these systems. The basic idea behind them was that they could react almost instantly to any movement in the financial markets, such as a large sale of a particular company's stock, by then selling that stock before its price sank too much as a result of the selloff. This saved money for the algorithmic system's owners. The problem was that once a lot of companies were using these systems, their lightning-quick reactions were often exaggerated, and they caused market calamity. One algorithmic system would sense movement and sell a

6 Sara Reardon, "Rise of Robot Radiologists," *Nature News*, December 18, 2019, https://www.nature.com/articles/d41586-019-03847-z.

7 Reardon, "Rise of Robot Radiologists."

8 Greg Milner, "Death by GPS: Are Satnavs Changing Our Brains?" *The Guardian*, June 25, 2016, https://www.theguardian.com/technology/2016/jun/25/gps-horror-stories-driving-satnav-greg-milner.

huge amount of a particular stock, which would then cause other systems to do the same, and then those actions would be replicated in turn by other systems, leading to a cascade effect that dragged the whole market suddenly and radically downward. In the early 2000s, these "flash crashes" would cause the market to drop by huge amounts in just minutes—too fast for human intervention. Eventually, "emergency brakes" were built into the market so that if it plunged too rapidly over a short period the whole market would stop until the problem was fixed. Even so, algorithmic trading still causes problems—for instance, smaller investors can no longer compete with their speed and have a severe disadvantage in buying and selling individual equities with any effectiveness, and this concentrates market power in fewer hands causing unequal opportunity.

One other prominent smart technology that has already been causing significant problems for humans is the autopilot technology available in planes and some automobiles. Airline pilots who have become overdependent on their automated flight technology have caused horrific plane crashes, the most famous of which was the Air France Flight 447 crash off the coast of Brazil in 2009, which killed 228 people. In that crash, the flight recorders indicated that pilots did not know what to do when their autopilots failed during a crisis.[9] Likewise, the news over the past five years or so has carried a number of stories about humans coming to harm by relying on their cars' self-driving technology. In fact, "The National Highway Traffic Safety Administration has about two dozen active investigations into crashes involving [Tesla's] Autopilot [and] … at least three Tesla drivers have died since 2016 in crashes in which Autopilot was engaged and failed to detect obstacles in the road."[10] Although this type of smart technology for automobiles has well-known flaws and operational blind spots, these crashes are at least partly the result of drivers placing so much faith in the technology that they become complacent and inattentive to what is happening on the road in front of them. For instance, in one recent fatal crash, the car's driver dropped his phone; instead of stopping his car at the side of the road to find it, he engaged the Tesla autopilot and bent over to search under his seat. When he straightened back up, he saw too late that he was about to hit a car stopped in front of him. He ended up killing a 22-year-old

9 Matt Hosford, et al., "Air France Flight 447 Crash 'Didn't Have to Happen,' Expert Says," *ABC News*, July 5, 2012, https://abcnews.go.com/Blotter/air-france-flight-447-crash-didnt-happen-expert/story?id=16717404.

10 Neal E. Boudette, "'It Happened So Fast': Inside a Fatal Tesla Autopilot Accident," *New York Times*, September 1, 2021, https://www.nytimes.com/2021/08/17/business/tesla-autopilot-accident.html.

man in that car.[11] There are also numerous videos on social media, such as one posted by *NBC News*, of people who have evidently engaged the autopilot in their Teslas and have gone to sleep—a disaster waiting to happen.[12]

More recent and advanced AI poses even greater dangers to humans, and yet an even greater temptation to rely on them too much. There are intelligent machines that can displace us from our jobs, for example. And yet, corporations will rely on them because they increase the profit margin. These include automated workers such as robotic bartenders on some Carnival cruise ships,[13] and automated chefs[14] and robotic hotel workers in some parts of Japan.[15] Highly educated white-collar workers are not immune to losing jobs to intelligent machines either. Natural Language Generators (NLGs) such as Wordsmith, made by Automated Insights, are already being used by the Associated Press (AP) and other large news organizations for writing sports and financial stories—no humans needed. For the AP alone, this automated writing program has been producing 1,000 stories per month, which is "14 times more than the previous manual output of AP's reporters and editors."[16] And AI applications derived from the same source are being used to scan, correct, and help research legal documents, replacing paralegals.[17] Coming next: the OpenAI Corporation (owned partly by Elon Musk) has made a text-generating AI system called GPT-3, which has just recently gone public in the form of applications like ChatGPT, and can generate all kinds of human-like

11 Boudette, "It Happened."

12 Dakota Randall, "Tesla Driver Caught on Camera Apparently Asleep at the Wheel," *NBC Nightly News*, September 9, 2019, https://www.youtube.com/watch?v=NHUZxeSUFUk.

13 Theme Park Review, "Bionic Bar! Robotic Bartenders Mix Drinks on Quantum of the Seas—Royal Caribbean," November 23, 2014, https://www.youtube.com/watch?v=TBF7EE2xnN4.

14 Kana Inagaki, "Japan's Robot Chefs Aim to Show How Far Automation Can Go," *Financial Times*, February 1, 2017, https://www.ft.com/content/9b72c5a6-d680-11e6-944b-e7eb37a6aa8e.

15 Allied Analytics LLP, "Hospitality Robots Market Expected to Reach $3,083 Million by 2030 Allied Market Research," *EIN Presswire,* September 7, 2021, https://www.einnews.com/pr_news/550735240/hospitality-robots-market-expected-to-reach-3-083-million-by-2030-allied-market-research.

16 Fritz Gleyo, "AP Has a Robot Journalist that Writes a Thousand Articles per Month," *Tech Times,* October 10, 2015, https://www.techtimes.com/articles/93473/20151010/ap-has-a-robot-journalist-that-writes-a-thousand-articles-per-month.htm.

17 Gizem Akilli, "Is Artificial Intelligence Making Lawyers Redundant?" *Legal Futures,* July 6, 2021, https://www.legalfutures.co.uk/blog/is-artificial-intelligence-making-lawyers-redundant.

texts—from essays to instant messages, to emails, and even computer code.[18] Think of all the people whom that could replace.

Worse, there are intelligent applications that corporations are beginning to use that can even control access to jobs—and our actions if we get those jobs. Examples of the first include AI applications for screening job applicants[19] and even for interviewing candidates.[20] The problem with these kinds of tools is that they make the process more machinic, less nuanced, more data-oriented. Thus, they don't screen for crucial "soft" criteria, such as whether someone has personality qualities that make them easy to work with or how enthusiastic they are about working. These tools also reduce us to data points, exposing us to data biases and demeaning our worth. But they promise to save companies lots of money.

4 Existential Danger: Machines Gaining Agency over Us

This is also the case with an even more frightening AI application being used by some companies in China. There, some businesses are monitoring data from employees' brains by forcing them to wear caps outfitted with sensors while they work; these sensor array caps can scan workers' brainwaves for emotional disturbances and send that data to a central office where it is processed by AI. At one such factory, Hangzhou Zhongheng Electric, the management feeds that data into algorithms that allow AI to recommend how to manage these wired-up human workers, such as adjusting "the pace of production and redesign[ing] workflows."[21] This is one example of how reverse mimesis has already begun. We created AI in imitation of ourselves to supply us with workers we could easily control and whose efficiency we could thereby easily

18 Sam Shead, "Why Everyone is Talking About the A.I. Text Generator Released by an Elon Musk-Backed Lab," *CNBC Tech,* July 23, 2020, https://www.cnbc.com/2020/07/23/openai-gpt3-explainer.html.

19 Tom Simonite, "New York City Proposes Regulating Algorithms Used in Hiring," *Wired,* January 10, 2021, https://arstechnica.com/tech-policy/2021/01/new-york-city-proposes-regulating-algorithms-used-in-hiring.

20 Simon Chandler, "The AI Chatbot Will Hire You Now," *Wired,* September 13, 2017, https://www.wired.com/story/the-ai-chatbot-will-hire-you-now.

21 Stephen Chen, "'Forget the Facebook Leak:' China is Mining Data Directly from Workers' Brains on an Industrial Scale," *South China Morning Post,* April 29, 2018, https://www.scmp.com/news/china/society/article/2143899/forget-facebook-leak-china-mining-data-directly-workers-brains. On posthuman mimesis, see also Nidesh Lawtoo, "Posthumanism and Mimesis: An Introduction," *Journal of Posthumanism* 2, no. 2 (2022): 87–100.

increase via better programming; but with this example, we see the tables have been turned. Now humans are working under the control of AI and operate according to its programming and for the purposes of satisfying its goals—and those of the corporate machine that controls all.

Most dangerous of all, there are newer AI applications that pose existential threats to humanity. And yet, the siren call of these AI servants is strong for those who would employ them. Lethal autonomous weapons systems, like the US's Reaper drone and autonomous machine guns used at the South Korean border with North Korea,[22] can spare the human lives of the country that uses them, because their soldiers are not at risk. So the temptation to increasingly rely on them is great. And yet, they are not as good as humans at determining exactly who is an enemy combatant and who is not, and thus pose an increasing existential risk to humans the more they are used. For instance, although exact statistics are disputed, there is no doubt that there has been significant so-called "collateral damage" (in other words, civilian deaths) caused by the United States' unmanned aerial attack drones, as one can see from numerous news articles. Figures compiled by several nongovernmental organizations indicate "an estimated civilian casualty rate of 7.27 to 15.47 percent."[23] And all of this is still with these weapons operating semi-autonomously. The militaries that own them consistently push to let those robots work autonomously, to make life-and-death decisions about humans, as shown by the fact that there are already some instances where this was allowed. In one instance, a prototype autonomous anti-aircraft gun activated and accidentally targeted and killed the soldiers working with it.[24] More recently in 2020, and more chillingly, Libyan government forces allowed a killer drone to hunt and attack enemy forces on its own, making its own decision whether and when to take human lives.[25]

The final and greatest danger is that our creations will turn the tables on us and replace us as a species. This may sound sensationalistic or unlikely, but

22 Simon Parkin, "Killer Robots: The Soldiers That Never Sleep," *BBC Future*, July 16, 2015, https://www.bbc.com/future/article/20150715-killer-robots-the-soldiers-that-never-sleep.

23 Nicholas Grossman, "Trump Cancels Drone Strike Civilian Casualty Report: Does It Matter?" *War on the Rocks,* April 2, 2019, https://warontherocks.com/2019/04/trump-cancels-drone-strike-civilian-casualty-report-does-it-matter.

24 Noah Shachtman, "Robot Cannon Kills 9, Wounds 14," *Wired,* October 18, 2007, https://www.wired.com/2007/10/robot-cannon-ki.

25 Alyse Stanley, "The Age of Autonomous Killer Robots May Already Be Here," *Gizmodo,* May 30, 2021, https://gizmodo.com/flying-killer-robot-hunted-down-a-human-target-without-1847001471.

this peril is possible and significant enough that a number of leading thinkers about technology have warned us from the beginning of the digital age about the existential risks of over-reliance on what they think might eventually become our intelligent doppelgangers. These dire existential warnings began with Norbert Wiener and Martin Heidegger in the 1950s and have continued more recently with prominent technologists such as Elon Musk, Bill Gates, Bill Joy, and Stephen Hawking. Wiener, for instance, who is widely considered the originator of robotics and AI, began worrying soon after his pioneering work that humans would "accept the superior dexterity of … machine-made decisions without too much inquiry as to the motives and principles behind these."[26] And Bill Joy, the founder of Sun Microsystems, has been so wary of the dangers of the intelligent tools he was helping to create that in 2000, he published a famous essay in *Wired* magazine titled "Why the Future Doesn't Need Us" (The "us" being computer engineers). That essay was full of dire warnings such as his statement that, "I may be working to create tools which will enable the construction of the technology that may replace our species."[27] Musk,[28] Gates,[29] and Hawking[30] have all publicly echoed Joy's apocalyptic statements about AI's threat to humans.

The key dangerous action that we are prone to making with regard to the intelligent tools that we make in our image is ceding too much of our own agency to them. This flaw of ours is central to the warning I just used from Wiener's work, about "accept[ing] the superior dexterity of … machine-made decisions." Jacques Ellul put it a bit differently in his book, *What I Believe* (*Ce Que Je Crois*). There, he said that we are in effect mediated by technology,[31] and so we have moved from adapting technology to *our* needs toward a situation where "human beings have to adapt to *it*."[32]

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26 Norbert Wiener, *The Human Use of Human Beings* (Garden City, N.Y.: Doubleday, 1954), 184–85.

27 Bill Joy, "Why the Future Doesn't Need Us," *Wired*, April 1, 2000, 4, https://www.wired.com/2000/04/joy-2.

28 Chris Welch, "Elon Musk is Worried that AI Research Could Produce a Real-Life Terminator," *The Verge*, June 18, 2014, https://www.theverge.com/2014/6/18/5820880/elon-musk-worried-ai-research-could-produce-real-terminator.

29 Kevin Rawlinson, "Microsoft's Bill Gates Insists AI is a Threat," *BBC News,* January 29, 2015, https://www.bbc.com/news/31047780.

30 Abigail Higgins, "Stephen Hawking's Final Warning for Humanity: AI is Coming for Us," *Vox,* October 16, 2018, https://www.vox.com/future-perfect/2018/10/16/17978596/stephen-hawking-ai-climate-change-robots-future-universe-earth.

31 Jacques Ellul, *What I Believe* (*Ce Que Je Crois*) (Grand Rapids, Mich.: Eerdmans, 1989),133–34.

32 Ellul, *What I Believe,* 136.

In other words, what all of these experts fear and predict is that our over-reliance on artificial servants poses a risk of a Hegelian dialectical reversal in which the master-slave relationship flips. In his *Phenomenology of Spirit,* Hegel posited that masters attain their positions because they have the superior skills and power to dominate others, and so can force them to do work. But if these servants are relied upon too much, he asserts, the masters become soft and inferior at doing the very tasks that made them dominant in the first place, which allows the increasingly knowledgeable and skilled servants to surpass the abilities of the masters and become dominant over them, in a dialectical reversal.[33] In the case of humans and their artificial servants, this reversal is not likely to be a Terminator-style deadly rebellion of AI against its human makers, but rather an increasing displacement of humans—in jobs, logistical and social operations—and an increasing regulation of humans by AI, and the necessity for *us* therefore to adapt to *it*, as Ellul worries. In other words, according to people like Musk, Hawking, and Joy, the replacement of our species in a less violent, but inevitable evolutionary sense than the Terminator scenario is likely if and when AI surpasses our cognitive abilities.

5 Tech Leaders' Proposed Solution: Humans Merge with AI, Making Us More Like It

How do these leading thinkers propose we fix this? Some, like Gates, Joy, and Hawking, recommend increased regulation in developing AI (more on this idea at the end of this chapter). But others, like Musk, Ray Kurzweil, Hans Moravec, and Rodney Brooks, think that our only way of avoiding obsolescence is to make ourselves more like our creations, in a sort of reverse mimesis. Kurzweil has famously proposed that AI will attain superhuman intelligence—which he calls technological singularity—by the year 2045, and that we will inevitably merge with such AI soon after.[34] Moravec has gone further, claiming we will eventually become happily extinct in our present form, and be recreated by super-powerful AI as a simulation—if we aren't already unknowingly in such a state.[35] In other words, because we made AI in our image, and it has started superseding us in its very imitation of our abilities, we have to embrace the

33 Georg F. W. Hegel, *Hegel's The Phenomenology of Spirit: Selections*, trans. Howard P. Kainz (University Park: Pennsylvania State University Press, 1994), 57–61.

34 Ray Kurzweil, *The Singularity is Near* (New York: Penguin, 2005).

35 Charles Platt, "Superhumanism," *Wired,* October 1, 1995, https://www.wired.com/1995/10/moravec.

next wave in the dialectic: We have to become more like AI in order to keep it from dominating us—because otherwise, it will dominate us. In practical terms, this prescription for survival destines us to incorporate into ourselves more technology in a process of merging with AI, making ourselves a more posthuman species for the purpose of our own survival—in order to stave off irrelevance (at best) or obsolescence (at worst).

This process has not only been proposed by some of the people mentioned above; it has already begun. In the past few years, there have been some smaller innovations, such as the robo-glove, a new bionic aid for auto-workers and others who need to hold and use a tool in repetitive ways for long periods,[36] and an implantable memory chip to enhance memory and skills-acquisition.[37] One of the projects of this type with a high profile is being carried out by Elon Musk's corporation, Neuralink. It has been working on a type of brain-computer interface (BCI) called "neural lace" to keep humans competitive with AI by providing cognitive enhancement to humans. Neural lace is essentially a Wi-Fi antenna that can be implanted in the brain, enabling it to be wirelessly connected directly to external digital devices.[38] It was originally developed by a Harvard team to help epileptic and Parkinson's patients who need what might be called pacemakers for the brain. These folks have to be wired to external devices that regulate brain activity because their conditions are so extreme.[39]

But Musk's vision for neural lace is far more radical. He has the ultimate goal of making us superhumanly smart. Musk envisions using this implanted Wi-Fi antenna as a way for humans to communicate more efficiently with digital instruments—via a sort of digital telepathy—and thus as a way for humans to compete with AI, which he thinks will surpass us very soon and put us at an existential disadvantage.[40] Among other things, Musk argues "that as artificial

36 Brandi Vincent, "NASA's Ready for Companies to Put Its 'Robo-Glove' to Use," *Nextgov,* December 1, 2020, https://www.nextgov.com/emerging-tech/2020/12/nasas-ready-companies-put-its-robo-glove-use/170394.

37 Theodore W. Berger, et al., "A Cortical Neural Prosthesis for Restoring and Enhancing Memory," *Journal of Neural Engineering* 8, no. 4 (Summer 2011), https://doi.org/10.1088/1741-2560/8/4/046017.

38 Alex Knapp, "Elon Musk Sees His Neuralink Merging Your Brain With A.I.," *Forbes*, July 17, 2019, https://www.forbes.com/sites/alexknapp/2019/07/17/elon-musk-sees-his-neuralink-merging-your-brain-with-ai/#7ea967674b07.

39 Devin Powell, "A Flexible Circuit Has Been Injected into Living Brains," *Smithsonian Magazine,* June 8, 2015, https://www.smithsonianmag.com/science-nature/flexible-circuit-has-been-injected-living-brains-180955525/?no-ist.

40 John Markoff, "Elon Musk's Neuralink Wants 'Sewing Machine-Like' Robots to Wire Brains to the Internet," *New York Times,* July 16, 2019, https://www.nytimes.com/2019/07/16/technology/neuralink-elon-musk.html.

intelligence becomes more sophisticated, it will lead to mass unemployment. 'There will be fewer and fewer jobs that a robot can't do better.'"[41] His long-range plan is even grander, allowing us to communicate with other humans telepathically and to improve our survivability in numerous ways. He "wants to use BCIs in a bi-directional capacity, so that plugging in could make us smarter, improve our memory, help with decision-making and eventually provide an extension of the human mind."[42]

6 What Are the Consequences of Reverse Mimesis, of Building AI into Ourselves?

But what will be lost in such a transformation? What are the dangers? Does this reverse mimesis, this incorporation of machinic elements—especially into our behavioral and cognitive functions—threaten to dehumanize us, make us more machinic? Back in the mid-1960s, Philip K. Dick's science fiction novel *Do Androids Dream of Electric Sheep?*[43]—known by its more famous film title *Blade Runner*—presaged this. The humans in the novel's future world deluded themselves into thinking that they were superior to the intelligent androids they made, chiefly because they had deeper, broader emotional capacity. The hypocrisy of this was shown in the novel by humans' blind reliance on their intelligent machines for much of that capacity. In the opening chapter of the book, we see the main character and his wife completely relying on a machine—the mood organ—for their emotions, which are supplied by dialing in various codes, and virtually all of the story's humans also rely on what we would call a multiuser, holographic online videogame called the empathy box to maintain their senses of empathy with fellow humans—the very emotion that androids all lack and which humans use as an excuse for discrimination against them.

As with Dick's story, the emerging technology I've just been discussing raises the question of human autonomy and agency. There have already been

41 Olivia Solon, "Elon Musk Says We Must Become Cyborgs to Remain Relevant. Is He Right?" *The Guardian*, February 15, 2017, https://www.theguardian.com/technology/2017/feb/15/elon-musk-cyborgs-robots-artificial-intelligence-is-he-right.

42 Sarah Marsh, "Neurotechnology, Elon Musk, and the Goal of Human Enhancement," *The Guardian,* January 1, 2018, https://www.theguardian.com/technology/2018/jan/01/elon-musk-neurotechnology-human-enhancement-brain-computer-interfaces.

43 Philip K. Dick, *Blade Runner* (*Do Androids Dream of Electric Sheep?*), (New York: Del Ray, 1987).

problems with this regarding the use of today's hardwired BCI for psychotherapy. BCI is already being used as a form of next-generation deep brain stimulation to treat mood and emotional disorders, such as obsessive-compulsive disorder and depression. If an AI is controlling the brain's moods and the reactions a person has toward their environment, then, patients and physicians worry, is it the person or the AI being expressed at any given moment? As some neuroscientists working on this type of BCI point out, "If [an AI] controller is added, one has effectively constructed a device that autonomously determines what the patient may or may not feel."[44] Some patients who have been treated with BCI for depression started losing their sense of self. One said:

> There are parts of this where you just wonder how much is YOU anymore, and you wonder kind of, "How much of it is my thought pattern? How would I deal with this if I didn't have the stimulation system?" You kind of feel artificial.[45]

7 Conclusions

Ultimately, imitation is part of how we may be painting ourselves into a corner with our intelligent technology, in the sense that to survive the powerful products of our own ingenuity designed to imitate us, we will be forced to make ourselves more like them—in a sort of reverse mimesis. And that, in turn, will cause many social problems we didn't bargain for. For example, the increasing datafication and algorithmization of humans is leading to a loss of privacy and agency, as we have seen in the examples I've presented above. And this, in turn, makes us more like our machines, risking a gradual dehumanization.

The fact that incorporating smart technology into our bodies has already been normalized enough that the leading thinkers discussed previously would seriously consider it as a way to enhance our species and fortify it against our own artificially intelligent inventions shows one of the possible negative effects of the posthuman condition. Emerging technology is changing our very concept of what humans are and what place they occupy in the hierarchy of things. This has been rightfully celebrated by some because the decentering of humans opens up space for a larger consideration of other species, and of

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44 Eran Klein, et al., "Brain-Computer Interface-Based Control of Closed-Loop Brain Stimulation: Attitudes and Ethical Considerations," *Brain-Computer Interfaces* 3, no. 3 (Summer 2016): 140–48, 141, https://doi.org/10.1080/2326263X.2016.1207497.

45 Klein, et al. "Brain-Computer," 144.

the Earth itself, as every bit as special as humans. However, this change also presents the possibility of our own denigration if we end up becoming more cyborgic—which is already happening. Even our constant and increasing immersion in digital media has this implicit effect. As Jaron Lanier argues, "When developers of digital technologies design a program that requires you to interact with a computer as if it were a person, they ask you to accept in some corner of your brain that you might also be conceived of as a program."[46] Thus, by even engaging with intelligent artifacts we are already seduced into being algorithmized, which is tied in with the reduction of everything and everyone to data so that AI, and the corporate and government entities that own it, gain power and ascendency.

If this trend continues unobstructed, we will come to live in an ever more corporatized, impersonal, and inhumane environment than we do now. We are part way down that road now: Consider how much more valuable our personal data is compared to the body to which it is attached. At least in the United States, the homeless and the old, for instance, are seen as inconvenient and unproductive bodies; but the data about who they are, where they are, and what they do is a valuable commodity to be traded to large corporate entities so that they can determine how they affect the economy and buying habits of various regions.

I don't mean to militate against technological progress. I think we should encourage innovation, but we also need to be judicious and careful about how we do it. The only way to avoid being subsumed by our own clever technology in our increasingly posthuman world is to tighten the reins somewhat on our progress by instituting careful regulation of what we create and how it is disseminated. There are a number of plausible ways to do this. One might be a type of broad statement of ethical standards that scientists and researchers would agree to in order to try to ensure those who create AI are operating along the same ethical lines. The recently published Montreal Declaration regarding the responsible development of AI does this for emerging technology. Originally drafted and promoted by computer scientist Yoshua Bengio and others at a recent meeting of concerned academics at the University of Montreal, the Declaration is now posted online for the signature of anyone who is worried about the responsible development of emerging technology.[47]

Another model is provided by Allen Buchanan's "Global Institute for Justice in Innovation" (GIJI), discussed in his book *Beyond Humanity.* This institute

46 Jaron Lanier, *You Are Not a Gadget: A Manifesto* (New York: Vintage Books, 2010), 4.

47 "The Montreal Declaration for a Responsible Development of Artificial Intelligence," 2018, https://declarationmontreal-iaresponsable.com/la-declaration/.

would license companies to distribute emerging technology, especially those meant to be embedded in human beings, and make sure by various means that such innovations are used and distributed fairly.[48] A third way, promoted by Nick Bostrom in his article "The Vulnerable World Hypothesis," would be to regulate and license access to key materials for *making* dangerous innovations, rather than by regulating their output.[49] This would have the possible advantage of discouraging rogue operators. Whatever we choose, we must have some regulation. There is much possible good in our smart technology, but we need to be careful to keep these applications humane, equitable, and nonthreatening.

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48 Allen E. Buchanan, *Beyond Humanity? The Ethics of Biomedical Enhancement* (Oxford: Oxford University Press, 2011), 254–74.

49 Nick Bostrom, "The Vulnerable World Hypothesis," *Global Policy* 10, no. 4 (2019): 455–76, https://doi.org/10.1111/1758-5899.12718.

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Coda: Philosophical and Mimetic Posthumanism – A Dialogue

Francesca Ferrando and Nidesh Lawtoo

Prior to the mimetic turn in posthuman studies and different areas of critical theory that are currently re-turning to the timeless realization that humans are mimetic animals, this might have sounded like an unusual dialogue. Mimesis is, after all, an ancient Greek concept that looks back to the origins of western thought rooted in an anthropocentric tradition that singles out humans' unique ability to represent the world via aesthetic fictions. Posthumanism, on the other hand, is a contemporary concept that deconstructs the ontological binaries dividing humans from nonhumans, the mind from the body, nature from culture, the "true" world from technological "simulations" that already inform and transform a multiplicity of subjects in the digital age.

And yet, as this volume reaches an end, it should be clear that these perspectives are not opposed. The plurality of voices animating homo mimeticus 2.0 makes strikingly clear that there is much to be gained in joining these two concepts to further the now entangled fields of posthuman studies and mimetic studies via the intersectional field of mimetic posthumanism. Once traditionally restricted to hierarchical forms of imitation that set up oppositions between the original and the copy, or to stable notions of representations that mirror the external world, the Greek concept of *mimēsis* turns out to be a troubling, untranslatable, and destabilizing concept central to a new transdisciplinary theory of imitation located at the intersection of philosophy, aesthetics, and politics, now stretching to inform and transform the posthuman imagination as well. As this dialogue shows, there are ample reasons to continue bridging mimesis and posthumanism from the pluralist angle of what Francesca Ferrando calls "philosophical posthumanism" and Nidesh Lawtoo calls "mimetic posthumanism."

NIDESH LAWTOO*: Contributors to this volume have been joining forces to establish a link, or better, a bridge between the ancient concept of mimesis and the contemporary notion of the posthuman. I call it a bridge in order to foreground a Nietzschean genealogy that connects mimetic studies and posthuman studies in general, and our respective works on homo mimeticus and philosophical*

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posthumanism in particular. Nietzsche, in fact, convokes the creative image of the bridge to introduce the concept of the Overman or Übermensch *in his philosophical poem,* Thus Spoke Zarathustra *(1883), writing: "What is great in the human is that it is a bridge and not a goal; what can be loved in the human is that it is a* going-over *and a* going-under."[1] *It is thus not accidental that, rather than staring at the blinding ideal of the sun that since Plato's* Republic *has stood for the immutable idea of the Good and the universal, transcendental world of ideal Forms he locates "behind the world" in an imaginary* Hinterwelt*, Nietzsche starts his philosophical poem by going in the opposite direction: not upward, toward the sky of ideas but, rather, under toward an immanent, material, and relational life I call* vita mimetica*. It is a life sensitive, vulnerable, and exposed to the affective powers of mimesis to turn the ego into what Nietzsche elsewhere also calls, a "phantom of the ego." That is, an ego that does not simply reproduce or copy other egos from the outside (as a painter represents the world); instead it mimics others from the inside (as an actor impersonates a role) so fundamentally to become dispossessed of its proper identity, turning into a phantom instead. Thinking of another Nietzschean philosopher, Gilles Deleuze, we could also call this immanent, affective, and embodied conception of mimesis understood as a relational force, power, or* pathos*, "minor mimesis." And I do so to* differentiate *it from a dominant metaphysical tradition that, since Plato, tends to reduce mimesis to a debased copy or representation of an ideal world.*

That said, the number of contemporary voices attentive to an immanent conception of mimesis that flows rhizomatically, on a horizontal plane of immanence, generating mirroring reflexes, contagious affects, plastic transformations, and spellbinding influences, is gaining traction in different areas of critical theory, including posthuman studies. This led us to speak of a mimetic turn, or re-turn *to this ancient yet protean and metamorphic concept. In your work on philosophical posthumanism, while you did not explicitly rely on the concept of mimesis itself, you have also been very sensitive to the affective, contagious, and embodied flows internal to what we now call posthuman mimesis, drawing creatively and conceptually on a materialist tradition that goes from Nietzsche to Deleuze to Braidotti to other figures internal to* Homo Mimeticus *as well. You published a book titled* Philosophical Posthumanism *and my first questions are: Could you remind us of what differentiates philosophical posthumanism from other posthumanisms (critical, cultural, etc.)? And given your philosophical focus on posthumanism*

1 Friedrich Nietzsche, *Thus Spoke Zarathustra*, trans. Graham Parkes (Oxford: Oxford University Press, 2005), 13.

and the philosophical origins of mimesis as a concept, do you see connecting points between your work and minor mimesis as we have just defined it?

FRANCESCA FERRANDO*:* Thank you for suggesting this timely and, perhaps, timeless dialogue in the first place. I think that the pandemic we have recently experienced as a species generated a historical crisis; yet, it also brought numerous insights. In my case, it has deeply transformed both the ways I see academia and the way I think of posthumanism. After the pandemic, it is no longer possible to think of theory just as theory; the ivory tower of academia was contaminated, to use your definition of mimesis as a contagious force, by the COVID virus, so to speak. If we don't get this message, we are not getting the message of existence; we simply remain in our mimetic bubble and continue turning in the same loop. The first effect of the pandemic crisis for us academics is to see ourselves not only as part of society, but of our species. Yes, we are all uniquely diverse, but we are also part of the same species; the self operates on many different levels, collective and individual, conscious, subconscious and unconscious, among others; these levels constitute the self, which is always in connection to alterity. We can call this, the mimetic post-conscious, a dynamic knot of an existence that is permeable and in co-evolutionary relationships with others. We are constantly changing, we are like rivers; the power of water is the mimetic us that is shifting, like in the Dao—flow is an essential dynamic of existence. In that sense, there are indeed numerous connections between the posthuman and the mimetic turn. One of the main takeaways of the pandemic experience is a better understanding of our agency at different levels, including the bodily and virtual ones, and the realization that we are all connected because we are a relational, intersubjective, and, in this sense, mimetic species.

When I first received your invitation, I wasn't sure what you really meant by mimesis, because this concept comes out of a classical tradition structurally rooted in a hierarchical notion of the human (which can be exemplified in the educated, privileged, white, patriarchal canon). But your distinction between a major and a minor mimesis mediated by figures like Nietzsche, Deleuze, and other thinkers allowed me to understand much better what you mean. The possibilities of connection with philosophical posthumanism are many. The first one is that we are constantly permeated by others and intra-changing with others. In that sense, we are constantly playing the game of mimesis, which is not something that we are taught once, and then we simply passively repeat or reproduce. This brings the question of agency into our existence, for we have the power to generate radical transformations. Existence is never dichotomic; it is more like a rainbow of possibilities calling for radical imagination and

creativity. Hence, within the mimetic-posthuman turn, it is crucial to stress the foregrounding importance of agency.

We have not only agency, but also response-ability. Think, for instance, of the social role of academia. We are not only developing abstract ideas. People can use these ideas, mimetically so to speak, and these ideas can change people's lives for better or worse, including forging and sustaining different types of discrimination. We can go as far as mentioning that unjust laws and regulations are often based on theories written earlier. Academics do not only bear responsibility for the pasts (in the ways they are studied and portrayed) and for the present, but also for the futures. Racist and sexist ideas, for instance, can be ingrained in society and mediated via (formal and informal) education. The media, movies, advertisements, etc. have the power of mimetically (in)forming subjects. In that sense, yes, I think we are mimetic animals. At the same time, this mimesis can be fully agential. It is not only neutral or passive, in the sense that we adapt to the colors or environments around us. There is always an act of agency in the way we adapt (or not) to familial, social, and national norms, among others. In that sense, it is crucial for academics to understand the deep mimetic effects and affects that we generate with our work.

As a last point, let me say that we may be giving the wrong message to our students as we emphasize the intellect only in relation to the books they read. We talk about going beyond the mind/body dualism, but if, as teachers, we address the mind only, we fall short of going beyond it. Already for Plato, teaching was part of a context in which people were dialoguing and moving in space: from the agora to his academy, the path was rich in trees, rocks, and nonhuman elements. As we teach in Zoom, we may talk about going beyond the mind/body dualism, yet we are only addressing the mind, forcing the body into stale positions, as if it was not intelligent or as if the mind was not embodied. We need to address posthuman mimesis not only in what we teach, but also in the ways we teach, for we educators are responsible for developing existential awareness not limited to the noosphere of the mind, but comfortably awake to the creative plasticity of this dimensional materializing.

Indeed, what you say resonates strongly with the practical, ethical, and political implications of the mimetic turn. It is in fact no accident that as Plato first theorized the concept of mimesis in books II and III of Republic*, he did so in the context of his ethical and pedagogical concerns with education* (paideia)*. He realized that models, be they real or fictional, have a formative, or deformative power on the material foundations of that malleable and plastic subject matter that is children's souls. In this pedagogical context, his critique of Homer was not*

simply reduced to a question of an adequate or truthful representation of reality; it was rather a pedagogical question concerning subject formation, a question that, as you also note, via different models in the digital age, has not lost any of its relevance today. Quite the contrary. This was indeed made clear by the pandemic crisis in which teaching could not address students directly, but through digital simulacra on Zoom. Students and teachers were indeed reduced to visual phantoms far removed from the body. To use another Nietzschean distinction, online teaching was dominated by an Apollonian mimesis understood as a visual representation, and what was missing was indeed the more embodied, or Dionysian mimesis, that is attentive to affective contagion rooted in the body instead. Hence the importance of recuperating, genealogically, a minor conception of mimesis for new generations to speak to their bodies and souls.

On the question of agency, I fully agree with you that educators and academics should take responsibility for the work they produce. True, the influence of academics in general and the humanities in particular might be minor in a world dominated by more quantitative and profit-oriented ideals and practices, I'm afraid. The recent developments in AI, most notably ChatGPT, may even generate worries that teachers and pedagogues will soon be replaced by chatbots that effectively simulate language online but lack consciousness, let alone embodied consciousness, offline. A focus on the still embodied nature of homo mimeticus 2.0 *reveals important differences between artificial and human intelligence, which does not mean the two cannot effectively cooperate and supplement each other. As you note, through teaching, we are nonetheless in a privileged position to use our mind-bodies as a medium to produce performative, and in this sense, mimetic effects on student's receptive imagination. While few will continue with an academic career that is becoming increasingly difficult to pursue, ideas live on outside academia and can hopefully help bring about transformations across professions.*

With respect to the major forces at play in a neoliberal society dominated by economic, political, industrial, and corporate greed with the power to infiltrate, via new algorithmic technologies, posthuman subjects and transforming mimetically, or as I call it, hypermimetically, the desires, pleasures, and activities of new generations of digital natives, I see a double bind at play in mimetic posthumanism. On the one hand, new technologies are consciously and intentionally developed by engineers who program algorithms that can be put to use in advertisements, on social media, but also in politics, going as far as generating violent, contagious insurrections that start online yet, via a hypermimetic feedback loop, generate real effects on homo mimeticus offline, as we have seen in the case of January 6, 2021, in the US, and in an aggravated form in the information war that

doubles the Russian invasion of Ukraine since 2022. Such actions are indeed fully intentional and consciously calculated from a rational distance in view of generating psychic, social, and political pathologies that are increasingly under the lens of new mimetic studies. Agents who spread such pathologies should indeed be held responsible and new systems of accountability should be put in place online in order to avoid future abuses of power and the predictable hypermimetic reproductions thereof.

On the other hand, since mimesis operates on the unconscious register of homo mimeticus 2.0*, the question of a fully conscious, rational, and volitional subject is also problematized by the mimetic turn. Let me clarify that with the unconscious I do not mean the dominant psychoanalytic unconscious, which, in its Freudian, Lacanian, or other variants tends to privilege an Oedipal myth based on incestuous familial desires and the repression thereof as a via regia. Rather, I mean a pre-Freudian unconscious that, for fin-de-siecle philosophers like Nietzsche, but also modernist writers like Joseph Conrad or Virginia Woolf and marginalized psychologists such as Hippolyte Bernheim and Pierre Janet, had mirroring, bodily, relational, involuntary, and in this sense unconscious reflexes as a starting point.*

The discovery of mirror neurons in the 1990s did much to bring this model of the mimetic unconscious, as I call it, back on the theoretical scene. Our neuronal system is wired to unconsciously respond to affective and infective actions with pathos, which does not mean we cannot set up a distance from it in theory, if not always in practice. I think of the unconscious as a spectrum with different degrees of conscious awareness, from the fully conscious to the semi-conscious to a trance-like, hypnotic, suggestible state where full agentic control escapes. My fear in practice is that the hypnotic power of mimetic models who cast a spell on the masses of the past, as in the case of fascism and Nazism for instance, can be reloaded in the digital age to generate (new) fascism as we see on multiple political fronts. This would take us too far afield, but the question of agency and responsibility you rightly foreground for those in a position of power becomes more difficult to diagnose when the mimetic unconscious of people under the spell of charismatic leaders, hypnotizing ideologies, or spellbinding algorithms is at play in the vita mimetica of posthuman digital subjects. As we felt intensely during multiple lookdowns, we risk being chained to simulations without referential reality yet with magnetizing powers that chain a significant part of the population in mythic caves, to use Plato's analogy of the Cave.

This is perhaps also because this volume started by stressing the importance of creativity and critique, which are not opposed, just as the pathos of mimesis is not opposed to the logos of philosophy, but can mutually reinforce each other, via what I call patho-logy. This interplay between creativity and critique is equally

foundational to your work on philosophical posthumanism. Since times immemorial, mimesis has been as much a philosophical concept as it is at play in creative practices: literature, painting, theater, music, etc. I was wondering if you could comment on the importance of this creative/critical interplay for posthuman mimesis as well.

This is a very important question. I think that radical imagination is one of the most powerful capacities we have: It cannot be taken away. I love a concept that is perhaps not well known in the west, which is the one of "*leela*" (लीला) in Hindu cosmology. According to this notion, we are in a big cosmic play in which we are the actors, the people who are writing the script, but also the stage, the audience, the props: everything. As opposed to a theocentric approach based on the idea that "God" created "us," we are the poietic co-creators who are staging one of many cosmic games. The element of the game is very important. Think of young children: We have all been children at some point; all young children really like to do is play. Everything is a game for them. The realization that we are co-creating our cosmic game is very powerful in relation to radical imagination: What is the kind of life that we would like to live?

I am glad you mentioned Nietzsche early on; Nietzsche changed my life. When I was a teen, I studied *Thus Spoke Zarathustra*. The idea that our life could come back eternally, in an endless repetition of the same, has forged my life since. I kept it as an existential thought experiment throughout all major mo(ve)ments of my being. Every time I would make a decision, I would ask myself: Would I say "Yes" to my life, exactly the way it is, forever and ever? This is a powerful step in our path toward self-realization. We are actually creating archetypes of existence; hence, if we just keep going with the uncritical acceptance and repetition of the archetypes that we were given, based on our caste, gender, class, skin color, or sexual orientation, among many others, we only limit our unlimited potential. We are always unique manifestations. This is where the notion of creativity comes in at the ontological level. Poiesis, that is existential creativity, is present at all levels of manifestation. Biological agency, for instance, is based on creativity: evolution does not move toward hierarchical complexities, but in rhizomatic diversifications. This is in harmony with the notion of *leela*, the game, but also, the art; for art is *poiesis*, creation. This understanding unveils that we are already ontological co-creators (which does not mean dominators, as domination requires a dichotomic misconception: Who am I dominating, if we are everything?).

And yet, we are rarely invited to think of ourselves in those terms; rather, we are taught to be part of a religion, of a nation, of the embodied history of

a specific gender, caste, ethnicity, etc. in a passively mimetic way. I don't want to fully dismantle this mimetic passivity, for some people may find their peace of mind in it. That was not my case. I always felt that those impositions were limitations: The Self cannot be defined by any strict label. Radical imagination is an extremely powerful capability, because no one can take that away from us (for instance, some of the most powerful books have been written in prison). In hard historical situations, radical imagination was used to keep going and think of alternatives, for life did not have to be that way. It is the basis of existence. Without radical imagination nothing would even exist: We are here to understand who we are, and we are potential. Radical imagination is always unique, dynamic, and pluralistic; thus, it opens up original ways in the processes of becoming.

Your passionate appeal to the uniqueness of human imagination is a manifestation of the importance of fostering creative, affirmative, and productive, rather than simply reproductive, communities of researchers opening up new frontiers of knowledge. It is also a reminder that the pathos of emotional creativity can be supplemented by the logos of critical thought and that both are vital for opening up new perspectives on posthuman mimesis beyond western traditions as well.

If I take some genealogical distance and look at our discussion historically, the following observation comes to mind: It may be true that traditionally, in the west at least, the romantic concept of the imagination has been opposed to the classical notion of mimesis as passive copy, or representation, just as the glowing lamp is opposed to the reflecting mirror, to quote M. H. Abrams' famous distinction in his account of the romantic imagination; it is equally true that, starting with creative movements like modernism, and, more recently with the mimetic turn, artists and thinkers have been drawing on a tradition of individualist figures that are radically opposed to passive mimesis, but are attentive to the creative power, or pathos, of mimesis, a creative, productive, or re-reproductive mimesis, as the French philosopher Philippe Lacoue-Labarthe calls it, that does not simply represent or mirror nature but, rather, is at play in the mimetic subject, endowed with the creative ability to re-produce the creative force of nature itself. To put it in Spinozist language, this type of productive mimesis entails not natura naturata *but* natura naturans*. While I think that mimesis complicates the romantic ideal of a solipsistic, autonomous, and somewhat divine genius modeled on the ideal of God's creative powers, the Hindu perspective of* leela *you discussed, and the theatrical language you convoke to account for this creative freedom, is in line with a conception of mimesis that one finds in the theater* (*mimesis, from* mîmos*, performance, mime*)*, and thus in play, its genealogical starting point. The recent return*

of attention to the language of animism, which was relegated to "primitive cultures" in the past but that allows for a less anthropocentric conception of subjectivity that fosters life-affirmative metamorphoses in the age of the Anthropocene, also speaks in favor of it.

Indeed, the perspectival shift from Homo sapiens *to homo mimeticus is also meant to remind us of the importance of games, play, and animistic identifications constitutive of* homo ludens*. We have all been children, a period dominated by the mimetic faculty. As Walter Benjamin famously put it, and, in case we have forgotten, any parent knows as well, play often entails a strong mimetic element that allows the player to become other, for better and worse: It can lead to imitating stereotypical archetypes such as cowboys and Indians or Barbies and Kens in the past, and violent avatars in games in the present. On one side, they reproduce stereotypical identities with formative pathological powers in adulthood as well in need of critique; one the other, play also allows for less stereotypical identification with humans and, if children are still allowed to play outside, nonhumans as well: windmills, trains, says Benjamin; bears and tigers, roar my children. What is crucial in these experiences is that the player is in touch with an animistic magical participation or* methexis *that I think is compatible with the notion of radical imagination as you define it, a mimetic imagination, to use an oxymoronic term, that allows for creative/mimetic processes of becoming other.*

Let us now go back to a figure who helped me launch the concept of posthuman mimesis: Katherine Hayles. In the dialogue that prefaces this book, we agreed that one of the connecting bridges between the concept of mimesis and the one of the posthuman we are now extending has to do with paradoxes, which are central to both concepts. I mention one. On the one hand, mimesis is a concept that, in its traditional philosophical conception, is perhaps one of the most humanistic and anthropocentric there is, as humans, since antiquity, have been defined as the most mimetic creatures and are uniquely able to represent or reproduce the world via artistic techniques like painting, literature, and now AI simulations. And yet, as the mimetic turn in posthuman studies shows, mimesis is a plastic concept that can be turned contra a patriarchal, humanistic, anthropocentric, and metaphysical tradition by establishing troubling continuities with nonhuman imitations, for instance. On the other hand, your work on philosophical posthumanism, in the company of figures like Braidotti and others, also emphasizes the importance of going beyond oppressive dualisms and anthropocentric conceptions of what the (post)human is or should be. Humans are indeed far from autonomous for we are dependent on human and nonhuman others for survival (the pandemic made that fully clear), which also makes us responsible for finding solutions and alternatives to affirm survival for both humans and nonhumans alike in the age

of the Anthropocene. We are thus responsible in the sense of response-ability, the ability to respond to humans and nonhumans who share this fragile planet, a small, decentered, and marginal planet but the only planet we have—pace trips to Mars. This change of perspective that urges us to "stay true to the earth," to echo Zarathustra again, is more urgent than ever in an age of radical transformations caused by humans in general and western, privileged, neoliberal countries in particular.

I was wondering if you could address this paradox that leads posthuman and mimetic studies to move beyond human/nonhuman binaries on the one hand, while on the other we are uniquely accountable as a species for the age of the Anthropocene we have, with different degrees of responsibility, initiated.

Let's address this paradox by embracing existence through locations and perspectives. Posthumanism underlines that, to manifest in this dimension, there must be some type of embodiment (which can also be virtual): Everything and everyone is embodied, situated, and located. This does not imply that we are only what we are directly experiencing; mystical experiences open to the awareness that, in the extended reality, we are everything. Yet, this doesn't mean to erase our embodied situation in the historical manifestations of spacetime, but to see ourselves as part of the full manifestation, which is happening: We are always contributing, to what is. The location can also transcend the location itself; for instance, in shamanistic practices, the shaman becomes the animal or rather, interestingly enough, in such traditions, animals are considered human, interpreted not as a species, but as the perspective of the subject. We are all humans, and we are all different: We are one and many at the same time. For some, this may sound difficult to comprehend, but in many traditions, the one and the many are not divided; for instance, in the Dao, the transformative (mimetic and creative) power of water, as flow, is the metaphor. This is something Deleuze and Guattari also stressed in *A Thousand Plateaus:* The self is already multiplicity. Think about your childhood. You have changed; that child is there, but is not alone, and is not the same. If we think of the biota in our guts and all the microorganisms that make us "human," we can approach ourselves as universes, more precisely, multiverses.

We are embodied, situated, and located, but these are not limits, and can be transcended within a broader approach to existing that is not just intellectual. For instance, right now I am at this conference, and my location is remote. My experience in this virtual event is unique to everything that constitutes my current assemblage: my body, the location in which I find myself right now, the technical entities I'm being through, the perspectives I'm seeing—for instance,

the sky in the window, behind my computer screen, etc. We are in the same conference[2] (now redoubled in the written continuation of our dialogue on the page), with a unique experience of the conference; yet, the conference is the ocean of intra-connected experiences and ramifications, including this book, which are coming out through the conference. Different types of technologies are also enabling this dialogue via the agential mediations of agential simulacra on Zoom, Google, and other digital platforms; this counts as one among many examples of technological mimetic embodied assemblages.

Let's, for instance, address the ways technologies are being designed. Here, it is important to understand technology at the planetary level, from the ways technological gadgets are manufactured in unsustainable ways (for instance, to become obsolete), to its current socio-economic value, in what Shoshana Zuboff defines as "surveillance capitalism." This is an important point for the mimetic turn: There is no technology without the intentions behind creating technology. If technological developments opened up some utopian possibilities in the 1990s, now they have also turned into ways for the digital neocapitalist system of power to experiment on their users. Data is collected, sold, and utilized most often without users' awareness or consent. Hence, the importance of bringing economics to the discussion of posthuman mimesis. I used to talk of technology in ontological terms; it is now a priority to consider how big data has revealed itself as the gold of the twenty-first century. We need to become aware of what is happening and challenge it, in posthuman studies; we need to promote change at the legal level as well, in order to protect users from exploitation and manipulation, which can only lead to a general state of existential misery for all the agents involved. This is a paradigm shift that concerns not only economic transparency, but also sociopolitical stability, as well as psychological and physiological sovereignty.

To go back to your question, we need to understand ourselves as a species living in the Anthropocene. We are not just one among many species; our behaviors and becomings are now operating as geological forces, igniting the sixth mass extinction. In this sense, let's go back to ontological response-ability: What is it that we want to manifest? The destruction of the planet? On some levels, that is what we are currently manifesting. Or are we invested in manifesting something else? Hence, the importance of attaining a comprehensive understanding of ourselves as individuals, as societies, as part of a species and of a planet, among others. In that sense, we understand that the

2 This refers to the Conference "Posthuman Mimesis," held at KU Leuven (2021) where this dialogue took place.

Anthropocene is not a lie nor a prophecy: It is happening, and yet, it does not need to happen.

There is no going back to a pre-Anthropocene situation; still, we can change our anthropocentric habits, right now, right here. Since this is a matter of understanding, our role as educators is fundamental. We are all constantly changing, and changes are not linear. We should help students realize that they are (mimetically and creatively) connected to all these levels, and that they make a difference on planet Earth. Let's bring this message to our humanity as a shared experience. If we do not change our anthropocentric behaviors, this pandemic crisis won't be the last one: We are creating conditions that are damaging other species, including our own. As a metaphor, let's think of this. If I have lung cancer and I keep smoking, I might eventually die; yet, such a diagnosis is also an occasion to let go of harmful habits and heal, becoming the potential for radical transformations. The Anthropocene is calling for a transformation in the way we write and teach, and, most importantly, in the ways we exist. There is no need, nor time, for excuses or apologies; we are in the game of existence and we are always changing, no matter what. This is an existential call to posthuman awareness.

Thank you. This is indeed the life-affirmative metamorphosis the mimetic turn in posthuman studies aims to promote. We are already in good company, as the different voices animating Mimetic Posthumanism *showed. Strong of multiple collaborations, we shall continue expanding new mimetic studies in* Homo Mimeticus III: Plasticity, Mimesis and Metamorphosis*. Stay tuned.*

References

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It is tempting to affirm that on and about November 2022 (post)human character changed. The revolution in A.I. simulations certainly calls for an update of the ancient realization that humans are imitative animals, or homo mimeticus. But the mimetic turn in posthuman studies is not limited to A.I.: from simulation to identification, affective contagion to viral mimesis, robotics to hypermimesis, the essays collected in this volume articulate the multiple facets of homo mimeticus 2.0. Challenging rationalist accounts of autonomous originality internal to the history of *Homo sapiens*, this volume argues from different—artistic, philosophical, technological—perspectives that the all too human tendency to imitate is, paradoxically, central to our ongoing process of becoming posthuman.

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