Transduction

An Essay on Fire

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NOETICS WITHOUT A MIND

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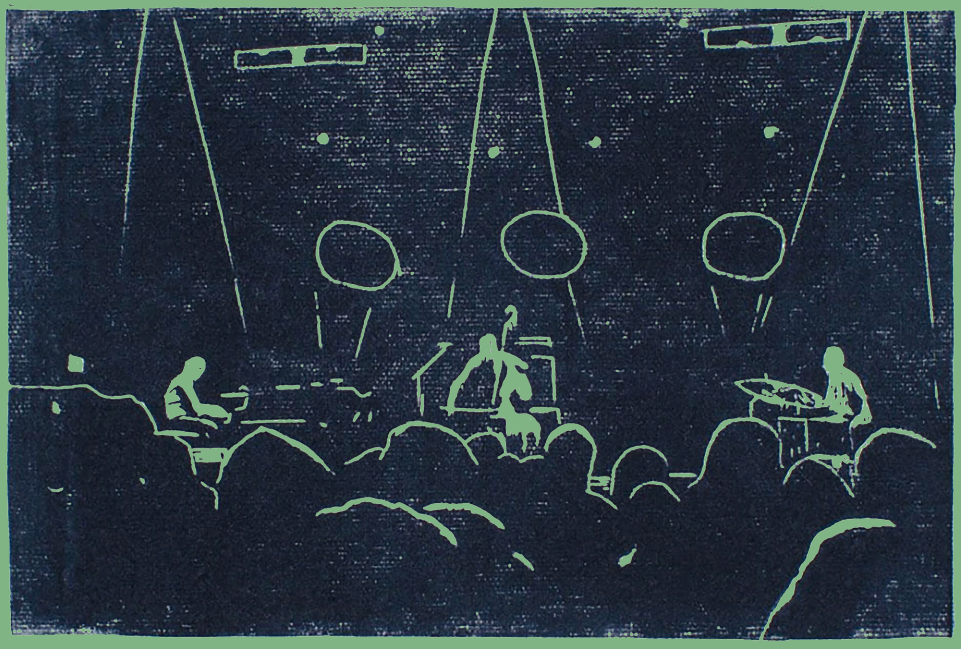

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Book Abstract
Addressing the intricate socio-techno-environmental dimension of noesis within the current climate of social and urban challenges necessitates a transdisciplinary approach. In pursuit of this objective, NWM incorporates contributions that delve into sense-making processes involved in the individuation of humans, technologies, and their affective environments. These contributions offer diverse perspectives that critically examine the production of sense and its heterogeneous potentials for transindividuation. Key questions include: What transductive relations emerge in the entanglements between technology, affects, and the production of our (offloaded) memories and desires? How do these relations shape the sensible apprehension of our lives and the lives of our milieus? In what ways can they be expressed beyond the conventional, Western, ocularcentric, and annotational fixations of generic sciences? What new senses are required to navigate the complexity of the present? And, collectively and technologically, how do we sense the effects of our actions? Drawing inspiration from Gregory Bateson, how can we cultivate a different sensory perspective to foster a transformative mode of thinking?

NWM provides a platform for thinkers who boldly traverse disciplinary boundaries, encompassing a diverse range of fields. These include, but are not limited to, affect and affordance theories, architecture, art and cultural studies, philosophy and philosophy of technology, (digital) media studies, feminist theories, film theory, social sciences, and literature.

Keywords: Architecture, Affordances, Technicities, Philosophy, Pedagogies

Series Abstract
The *Ecologies of Architecture* Book Series promotes a transdisciplinary approach to architectural thinking and doing by extending its interest to topics that bring together the three ecological registers, namely the environment, the social and the individual. Such an approach accounts for what the built environment will come to be, and speculates about who will become alongside it. The series focuses not only on the why, what and how of architecture, but also on the who, who with and for whom.

Transduction: An Essay on Fire

Heidi Sohn

Noetics without a Mind is primarily about relations: human, nonhuman, inhuman and more than human; organic and inorganic; relations of location; of interiority and exteriority; of proximity and distance; relations that give rise to thoughts, ideas, and minds; relations that, like vectors, crisscross the domains and plains of potential; relations that always precede individuals, identities, unities, and relata; relations of intensity; relations of magnitude; relations that define the terms and conditions for conviviality, that set the rules and the tone for toolmaking and tool use. Power relations; technological relations; environmental relations; biological relations; physical relations; psychic relations; social relations. Relations that connect, divide, cut, intersect, select, produce, create. Relations that entangle, knot, fragment, transform, transmute, subtract, multiply, add, reduce. Relations that augment, extend, exteriorise, prolong, change and transcend the conditions that gave rise to them. Relations between humans and machines, between nature and culture, between mind and body, between meaning and matter, between the raw and the cooked; relations between psychic, mental, personal inner worlds, and collective, social, exteriorised environments and worlds. Difference as relational.

The book deals with different perspectives that look at how relations pre-exist and co-constitute the very terms and properties that they connect, or which emerge from that connection. In this way, a relation is ontological, systemic *and* technical: through it, previously non-existent things, properties, phenomena, relata, and processes are brought forth, pushed forward, they are e*xpressed*, forced out into the open fields of reality and experience. New relations are formed,

relations that will connect and reconfigure subjectivities, objects and systems into environments (or milieus) where individuation occurs as a collective becoming with our technical objects.[1] In this collection, what is interesting is precisely the relation that gives rise to a world constituted by technics, ethics and aesthetics, and the processes that hold this world together: modes and means of existence, varying degrees of sustainability and (sporadic) episodes of extinction. In short, it lays out a relational ontology of human and cosmic orders and the evolutionary accounts of their technicities as mutually constitutive, mediated by a milieu within a system of systems, or ecology. In this ecology, different forms of interaction occur between technical objects, and their emplacement and activation in the world. Such an 'associated milieu' –understood as a radically relational and creative environment, a milieu 'at the same time natural and technical,'[2] develops, unfolds and evolves not only biologically, but also technologically, that is, by means 'other than life.'[3] Here, as in all creative milieus, ideas find fertile ground to flourish and produce and reproduce; or they encounter the dry sand of arid deserts to wither and dissolve. In this radical relationality of processes and systems, the phrase 'everything is connected to everything else' is more than a truism:[4] it forces us to discern what is relevant, and significant, from what it is not, and this is a question of onto-epistemological import: how do we know the difference?

To acknowledge this question, this collection is also about perception, apprehension and awareness and the ways in which different forms of thinking, knowing, learning and understanding occur, in short, about noesis. It investigates other 'post-classic' perspectives to the cluster of conventional approaches to the etymologies of *noema*, *noesis* and *noetics* ('thinking and knowing about thinking and knowing'), moving beyond stifling definitions and reductive views that bracket these processes as exclusively cognitive, intellectual and mental functions of a hegemonic form of consciousness (and intelligence) reserved for the mind of the human being alone. A mind, it must be said, that is not only a representational mind, but also a 'category mistake.'[5] There are other profoundly noetic modes and means that involve dreaming, perceiving, sensing, desiring, imagining, remembering, forgetting and feeling, in short, a noetics *otherwise*, that is, thinking outside, next, or with/out the *rational* human mind. Several vectors are revealed in this equation. The first and most important trajectory abandons the (false) suggestion that the 'mind' is reduced to a non-localisable consciousness somehow hidden and trapped – like a genie in a walnut – inside the self, the soul, the subject, the ego, an identity or some other esoteric essence of disembodied exceptional individualism. Instead, the 'mind' is seen as a biological and neurological phenomenon, tied to the functions of the brain and the nervous system as anchored in the (human) body, and thus, the noetic is embodied and embedded as an organic process.

While this vector recognises the workings of the mind-brain as bodily functions, it nonetheless retains the insistence of the hegemony of thought and rationality over other sense organs. Does this make sense?

The challenge then is to make sense, to give meaning, and to think beyond (and without) the hegemony of the neurological brain to open it up to other truly embodied, enacted, extended, embedded, *empowered* and affective modes ('*5*EA') that reconfigure the sense-making abilities of organs beyond the mental. This involves the development of a theory of mind that sees it as an entanglement of thoughts in process and tentative ideas that fold and unfold like the recesses of our brain. In this sense, noetics *otherwise* is a mode of thinking, knowing and understanding that is emergent, contingent, open, systemic, radically relational, processual (albeit cybernetic, and thus goal-oriented), creative, and above all, shared. It follows a rather simple idea that instead of a mind-centric, ego-centric, individualist and isolated (hermetic, monadic) model ('the walnut'), noetics *otherwise* encompasses other forms of intelligence that are above all social and collective, and thus, techno-environmental ('the rhizome'). The intelligence implied in this operation leans towards intuition and attends keenly to pattern recognition, in*formation*, and the observing of the processes that generate change and transformation within systems. In other words, it pays real attention to those bits and pieces of information as 'differences that make a difference.'[6]

As an operation, noetics otherwise rethinks and supersedes the individual to include the collective and the world. There is no individual mind or intelligence exclusively *in* the self, nor in the subject, not even in the body. Instead, all interiority is always already involved in intricate relations with an explicit, pre-existing form of exteriority. This outside, the exterior, is the collective thinking of the world: the world thinks a collective mind, and a collective mind thinks the world in constituting and affective reciprocity. This thought brings forth not only the world in a series of nested layers – 'geosphere', 'biosphere', 'ecosphere', 'noosphere', 'technosphere', in other words, the planetary dimension – but also the cosmos is involved in this perspective. While apparently disembodied, such a noetics weaves together intellectual *and* intuitive abilities with cognitive *and* bodily forms of perception, sensing, and sense-making along human and non-human spacetimes and (trans) contexts into collective minds where mind and nature are seen as interconnected systems. In grossly summarised terms, a collective mind always already participates in complex systems and their environments that unfold as an 'ecology of ideas', to borrow Gregory Bateson's famous theory.[7] These ideas, as we know, and as we will read further on in the twenty entries that give this book shape, may be creative and productive, or on the contrary, dangerous, barren or unproductive, pretty much like an 'ecology of weeds.'[8]

It is in the intersection or overlapping of the 'biosphere', 'noosphere' and the 'technosphere', however, that a third type of noetics otherwise takes shape, a more sinister modality that answers quite literally to the title of the book: noetics *without* a mind. A noetics without a mind is not dumb, senseless chatter or an endless flow of random thinking per se. It is not an unintelligent or cognitively impaired mode of thought. It is not stupid, although it might be thought of as 'idiotic', that is, self-centred, egotistically private. Noetics without a mind refers to thinking as happening literally *without* representation, without human intervention and agency, and thus suggests a separation of cognitive processes and effectively, action. But it also involves the externalisation of sensation and affect, as well as the exteriorisation and extension of many cognitive functions of the (human) brain and the nervous system (consciousness, thought, memory, understanding, knowledge, desire, the oneiric, etcetera) and their transference to exosomatic technical objects and other prosthetics and instruments that function as protractions and externalised organs that compute, store, record and memorise. Further, it implies surrendering agency, labour, data, information, knowledge and cognitive power in general to the operating systems of these technologies, engaging, perhaps unwittingly, in deadly relations of serfdom.

If we consider that human evolution is irremediably tied to the evolution of technical objects, as well as to the history of technonature,[9] the consequences of such a noetics without a mind are significant, and without a doubt tied to the present and impending transformations of the environment. The ways in which we relate to our (social, cultural, political and biological) technologies reflect how we relate to our lives, our world, our planet, our cosmos: how we live, how we work, what we produce, how we think, what we desire. Our mode of existence is dependent on the way we apply ourselves in thinking and knowing (noesis) and how we use our knowledge *as* technology.

Under the technological conditions of today, it is paramount to generate awareness and highlight the understanding that these processes of mutual transformation are always more than the result of simple, natural change (or 'flukes') produced by the emergence of 'new technologies' or seemingly trivial tech-gadgets. They encompass intricate relations, often asymmetrical ones, between signification, information, data-processing or encoding, meaning and affect, and the bodily and material impact that such encounters frequently have. If we understand technology as capable of arranging and aligning all this informational material into organisational and systemic principles, it is possible to see how it triggers transformation at the level of *transduction*.[10] This term is to my mind the core thematic of the book, and thus also the ignition point for this first essay, which is not intended as a prolegomenon, foreword, or introduction. I do not wish it to lead

in and show the way, but instead to set off a process and express some ideas. From hominids and fires and redwoods, and the not mentioned but tacit pulp and paper and ink of books and printing, and the acts of faith that burnt those books, the very brief story of fire that here follows, serves as a relational dynamic of technical objects. But it is also my excuse to short-circuit any pretensions of introductory authority over the ideas that fired and sparked the other twenty entries that give shape and volume to this collection.

I momentarily return to Bateson and his 'ecology of ideas' understood as an entanglement of propositions that, while shaping patterns – together and on their own– need not to be figured out, because they are complex, interactive systems, continuously changing, transmuting somehow into something else, into new patterns. In the same way, the twenty entries participate in an ecology of ideas of their own, and thus need not to be introduced, prefigured or explained against the book's general theme as if they were building a jigsaw puzzle with a 'bigger picture' to which each entry has something to add. They do contain the genes that together produce the connections of such an ecology. They are occasions to think and challenge the limitations of an enclosed, hermetic noesis, generating associations and articulations through which emergent connections are made or discovered. Readers can expect at least twenty-one ideas that will fire up whole sets of neurons and synapses in their brains and spark the imagination in – what I think are – transductive ways. Speaking of sparks, allow me then to talk about fire, that strange element that is also our primordial technology.

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To write about fire insinuates the sudden irruption of celestial bodies in the spheres of the planet. Meteorites that enter as fireballs that strike the tip of the top of a gigantic redwood. It cracks in half like a toothpick and within seconds flames engulf it. Thousands upon thousands of sparks lift and fly into the night sky, momentarily competing with fireflies against the impenetrable darkness of prehistory. It is the night before humans. The fire consumes the wood all night, leaving nothing but embers and the charred bodies of a small mammal and a lizard. Not far from there, in the depths of a cave, a tale is born in grunts and growls. It finds form in a vowel and a digit dipped in ashes. It is a tale told with the spores of a sentient-sapient species, a people 'yet to come': humans, the thinkers, the knowers, the social and technological animals. They, who understand the workings of fire and harness its power.

They approach the pit, charcoal smothered in white heat, still smouldering and smoky; they snatch the roast and taste the meat, tender and sweet. They arrange a circle around it and wait till night to ignite the flames again and gather

and sit together. Around the fire they exchange impressions, their experiences of the day: of their hunts, their prey, the deep ravine guarded by fierce wolves. They share insights on the meaning of signs in the sky or in the river; on the best way to shape a stone into a tiger-killing spear or arrowhead, or of where to find the driest tinder to kindle another fire. The moon orbits above. They yawn and lie down on their flanks next to the fire. The predators that kept them awake at night in their caves or on the high branches of trees are now kept at bay by the crackling flames. The night is infinite. While their bodies are partially paralyzed by deep sleep, they dream.

A mind is born, a mind that acknowledges signs as information, and learns how to decode it; how to mind these signs and crack the codes, how to pay attention, to notice, to sense and to understand. The divination of signs and information is useful not only to forecast and predict, but to make sense and give meaning to life and to a world that thinks. It is an interesting, dynamic, complex world that demands mindful regimes of attention capable of noticing minutiae, like the batting of a delicate wing, and the ability to care about things that matter. This attentive mind is also a thinking mind: knowledge is power when it is transformed into theories about how to produce something useful, like a catapult, or language, or a printer, or a telescope. Fire ignites an ecology of ideas and catalyses it as an ecology of practice: from thinking to organised action and participation. But it does more: it fuels the thirst for experimentation and the invention of instruments – or technical objects – that augment the sensory and cognitive powers of humans: to see better, to hear better, to think more and remember more precisely; to calculate, to count, to predict. A people with another organology.[11]

A world opens with the harnessing of fire, and the development of techniques that augment its power. It is the dawn of humans, the announcement of the arrival of a people that learns to forget to remember. A people that exchanges information, ideas, thoughts about how it imagines its own version of people 'yet to come': scavengers, hunters, weavers, crafts(wo)men, farmers, alchemists, sorcerers, philosophers, scientists, astronauts, engineers; makers of technical objects that will coevolve with them – organism, tool, and environment. They anticipate an impending cosmological bifurcation with political ramifications. The separation of natural and human orders – the cosmic and the moral,[12] will disconnect the logics of endemic (or indigenous) technics and the world it brings forth, from another form of logics, which will regard the world as a container full of resources ready to be exploited, extracted, consumed. But they relegate the cognitive discomfort they feel when confronted with that knowledge and assign to it the meaning of an omen of bad things yet to come, like the lonely comet of death. Not all conditions lead to the same outcome.

What is left at dawn is perhaps a heap of stones arranged around the first campfire, a few fossilised bones of hominid jaws. Unlike tales and stories, all organic material is burnt, pulverised. Turned and returned to carbon, ashes to ashes. Forgotten. But stone as crystals and fossils remains as the unique evidence of our paleolithic past, as a telling of stories of origin, myths of our ontogenesis as a people emerged from stone, with rock-hard memories: epiphylogenesis as mute lithic memory.[13] A stone axe designed as a weapon to kill an animal, or a granite boulder adapted as a mortar and a pestle mechanism used to pulverise acorns into meal act as mnemonic objects: they are residue and evidence of an exteriorised collective memory of a people whose elemental origin is said to be lithic, aquatic, earthen, terrestrial: soil and water. A (false) memory that forgets that the earth is a fire planet.[14] Such a planet doesn't care about ontogenesis, nor transgenerational memory, nor techno-aesthetics, only about transduction. Fire consumes it all, except its technological genetics. Fire, the forerunner of modern technology.

The day progresses with experiments of fake gold and fake news that, like wildfires, spread over plains and glaciers. The idea of fire that fires the idea of technology is the leftover desire of a form of thinking that makes humans hungry. It triggers a techno*logics* of instrumentalised knowledge as technology, and technology as power. It is a power that fragments and reticulates the territory, isolating and relating tendencies that run via regimes of distraction, and an insatiable appetite for war, destruction and control. The war machine of techno-capitalism and the societies of control it produces, consumes it all: the planet's biomass as starter. The dizzying acceleration of the technological order, the arrival of artificial intelligence, the obsession with digits and proxies, eclipse an environmental fire of unthinkable magnitude. The metastability, the precarious balance, necessary for the continued transformation and individuation of all provisional beings and their living environments is under threat. One by one, signs of impending catastrophes line up, forecasting rapidly approaching thresholds, tipping points, moments when all bodies, organic, artificial, docile and agential will reach their thresholds of sustainability. The afternoon sun disappears behind slate-coloured clouds. A black sky punctured by rolling thunder announces a storm of cosmic proportions. The air smells of overheated copper cables and planetary short-circuits. A lightning bolt strikes. It hits the tip of the top of a sequoia. For an instant the world is more alive than ever. The tree implodes, cracking open in halves. The redwood burns again, this time the energy of its fire is symbolically captured, recorded, deciphered, transmitted, controlled, while the earth around it is consumed by flames. It is the dusk of humanity. They identify as we.

We gather around the campfire again, but the fires that prolonged the day, and offered early humans the gift of safety, deep sleep and dreams, have been

replaced by the paralysing effect of blue light screens that distract us from the fires burning around us, robbing us of our sleep and extinguishing our dreams. In perpetual slumber and pumped up with dopamine-soaked brains, we wonder about the future of our planet, and of our young: of a people already here. But we shake off the worries thinking about the thermal death of the universe many aeons away, as we scroll through the newest life-hack on TikTok. Elsewhere, beetles, birds, marsupials, reptiles, bushes, trees, mushrooms, lichens and all sorts of beings slowly adapt and develop techniques to survive the Pyrocene.

Notes

1 Gilbert Simondon, *Du mode d'existence des objets techniques* (Paris: Aubier-Montaigne, 1969).
2 Ibid., 56–57.
3 Bernard Stiegler, *Technics and Time, 1: The Fault of Epimetheus*, trans. Richard Beardsworth and George Collins (Stanford: University Press, 1989), 17.
4 This aphorism is often referred to as the first law of ecology, geography and environmental sciences.
5 Gilbert Ryle, *The Concept of Mind* (London: Hutchinson,1949).
6 Gregory Bateson, *Steps to an Ecology of Mind* (New Jersey: Jason Aronson, 1972), 460.
7 Ibid., 2.
8 Ibid., 489.
9 Donna J. Haraway, *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991).
10 Gilbert Simondon, *On the Mode of Existence of Technical Objects*, trans. by Cecile Malaspina and John Rogove (Minneapolis: University of Minnesota Press, 2017).
11 Bernard Stiegler, 'Elements for a General Organology' *Derrida Today* 13, no.1 (May 2020): 72–94.
12 Yuk Hui, 'Cosmotechnics', in *Cosmotechnics: For a Renewed Concept of Technology in the Anthropocene*, ed. Yuk Hui and Pieter Lemmens (London: Routledge, 2021), 1–4.
13 Ibid., 3. See also: Andrej Radman and Robert Gorny's editorial introduction 'From Epiphylogenesis to General Organology' in *Footprint Delft Architecture Theory Journal* 16, no.1, issue 30 (2022): 3–19, https://doi.org/10.7480/footprint.16.1.6291.
14 Stephen J. Pyne, *The Pyrocene: How We Created an Age of Fire, and What Happens Ne* (Oakland, CA: University of California Press, 2021).