

The Ghost in the Machine: Deleuze, Guattari and the Mind-Body Problem

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When confronted with the mind-body problem — which refers broadly to how we understand the nature of consciousness and related aspects such as subjectivity and intentionality — many people readily turn to the brain-in-a-vat thought experiment. Grounded in Cartesian skepticism — and in Cartesian dualism which distinguishes between thought and extension, meaning immaterial minds are seen to be distinct from material bodies — the experiment asks you to imagine that your brain has been removed from your body and been placed in a vat. Ostensibly the vat is filled with some kind of life-supporting liquid, while your neurons have been attached to a supercomputer that stimulates your brain, thus providing you with an experience of a reality. The question that is asked is: Would this experience be any different to the experience you have in a body (especially given that much of it relies on brain stimuli)? And what, moreover, are the implications for thinking about consciousness and theory of mind?

Although this is an age-old philosophical problem, it is by no means only philosophical. Laid claim to by many ‘representatives of the mind’ — as Isabelle Stengers calls them (2010: 88) — consciousness has been the study of psychology, the neurosciences, the cognitive sciences, psychedelics research, artificial intelligence, religion and philosophy, with the result that there is no one overriding answer to this question. Materialists, for example, hold that “there is nothing ‘in’ the brain other than physical-chemical processes; physical chemistry defines states and ‘explains’ the behaviour of a system based on those states” (Stengers 2010: 89); metaphysicians invoke what has been called a ‘ghost in the machine’; new materialists argue for entanglement (Barad 2007), emphasizing the need “to acknowledge the embodiment of the brain” — the idea that the substrate matters to *how* experience emerges and thus to how *we* experience reality — “and the em-brainment of the body” (Braidotti 2017: 33); while others yet cling fastidiously to notions of free will, agency and purpose. Even popular culture has grappled with these questions — the most well-known depictions thereof probably being the cyberpunk book, *Neuromancer* (1984), by William Gibson; the 1999 film, *The Matrix*; and the recent television series, *Devs* (2020).

In this special issue, we asked authors to think about what Deleuze and Guattari might have to say about the mind-body problem. Of course, some scholars have already proffered some ideas. Drawing on the cognitive sciences — an interdisciplinary field of study spanning linguistics, philosophy, psychology, anthropology, the neurosciences and artificial intelligence — John Protevi (2010), for example, argues for a Deleuzian ap-

proach to 4EA cognition, according to which the mind is Embodied (experiential), Embedded (contextual), Enacted (emergent), Extended (beyond the boundaries of individual organisms) and Affective (responsive). Jeffrey Bell (2006) too considers the mind-body problem from a Deleuzoguattarian perspective, emphasizing Deleuze's break with thinking merely the extensive, with reference to the following passage in the *Logic of Sense*:

A consciousness is nothing without a synthesis of unification, but there is no synthesis of unification of consciousness without the form of the I, or the point of view of the Self. What is neither individual nor personal are, on the contrary, emissions of singularities insofar as they occur on an unconscious surface and possess a mobile, immanent principle of auto-unification through a nomadic distribution, radically distinct from fixed and sedentary distributions and conditions of the syntheses of consciousness. (Deleuze 1990: 102)

That is, Deleuze posits the virtual or pre-individual field as coextensive with the actual so that he can pursue an "immanent principle of auto-unification" to account for the genetic element of real experience. This part of Deleuze's thought is, of course, deeply influenced by Gilbert Simondon who conceives of existence in terms not of ontology, but of ontogenesis, meaning he gives an account not only of being and what being is, but also of how being emerges to take up spatiotemporal coordinates. According to Simondon, then, "the spatial determination of ontogenesis is topological and thus 'genetically prior' to the living individual or object" (Gray 2020: 123), while the temporal determination constitutes something beyond a mere "framework in which the genesis unfolds" because it is itself "the solution and dimension of the discovered systematic" (Simondon [1964]1992: 315). In other words, "temporality is chronogenetic rather than chronological in that it is generative in and of the solution and dimension of the [spatial] topological folds, themselves generative in their individuating capacities" (Gray 2020: 123). For Deleuze, in *Difference and Repetition*, this process is reformulated in terms of Problems, whose resolution does not rely on some dialectical "synthesis of the different which leads to reconciliation in extensity" — and which Deleuze calls 'pseudo-affirmation' — but, rather, on the differentiation of difference which only affirms intensity (1994: 235–236).

Revolutionary as this philosophy might be, does it stand up to new advances in the neuro- and cognitive sciences? Can the philosophy of Deleuze and Guattari help us think through new developments in artificial intelligence and the problems posed by what has been termed 'algorithmic reason' and governmentality? How did Guattari grapple with the mind-body problem? He was, after all, a psychoanalyst, deeply invested in the workings of the mind and the processes of subjectivation. To answer (at least some of) these questions, we invited both empirical and theoretical contributions to this special issue that think about consciousness from a Deleuzoguattarian perspective. Perhaps not sur-

prisingly, many of the articles — indeed, the first four — focused on digitality, grappling with what is certainly one of the overriding concerns of our time. The opening article by Emma Stamm, entitled “The digital image of thought”, explores the diagrammatic functioning of the digital; that is, how the digital is increasingly prefiguring and structuring thought. Her argument is that the digital image of thought is important for consideration “not only as a specific instantiation of the general image of thought”, but also “as a theoretical support for a mode of capitalism increasingly reliant on the production and circulation of data.” This, as she intimates, has been theorized by Bernard Stiegler in terms of *grammatization* which, for him, refers to the exteriorization of memory and knowledge. Of course, this is nothing new. People have always exteriorized their knowledge and memory — “at least partially and mnemotechnically, whether via tools and artefacts or social formations, organizations and rituals” (Gray 2022: 89). The point, for Stiegler, is that this kind of externalization has become near-automatic in societies of hyper-control. Think, for example, of how — and how often — we ‘dump’ knowledge and memory onto our technological devices, especially cellphones. For Stiegler, this kind of digitized exteriorization has provoked a “*structural loss of memory*” (2006) which has, in turn, triggered a loss of knowledge: work-knowledge (*savoir-faire*), life-knowledge (*savoir-vivre*) and conceptual knowledge — and this is what Stiegler calls a *generalized proletarianization* (2019: 14). This proletarianization goes hand in hand with the digital image of thought, which, as Stamm observes, “allows only thought which may be digitally computed... to the effect that the incomputable is rendered unthinkable.”

But how can we describe such a generalized proletarianization in more technical terms? This, in fact, is what the next article, by Chantelle Gray, tries to do. Tracing the history of cybernetics, especially the notions of *operational closure* and *operational recursion*, and linking these concepts and processes to what the neuroscientists Mark Solms and Karl Friston call ‘Markov blankets’, she argues that algorithmic reason is neither reducible to computer thinking, nor to “a relation between computers and their associated milieus — us.” For her, rather, algorithmic reason constitutes an autopoietic system made up of the human-machine brain, meaning the “computer is no longer a metaphor for the brain because the brain is the computer.” The implications are huge. Drawing on Deleuze’s work in the *Cinema* books, she holds that a “real cybernetic movement in thought has occurred, similar to the real movement in the image brought about by cinema.” How, then, are we to counter such a movement? Is it even possible? Drawing on Stiegler’s work on disaffection, Solms’s work on affect, and Deleuze’s work on sense, Gray argues that both individual and societal health depends on our becoming capable of being affected which, for her, is nothing short of a noetic act.

Relatedly, Giuseppe De Ruvo, following Thomas Berns and Antoinette Rouvroy, as well as Alberto Romele and Bernard Stiegler, argues that algorithmic processes tend to shut individuals into a causal determinism that renders everything “bit-reducible” — so much

so that the generation of an event becomes impossible. For him, however, such an ontology of the Internet remains abstract and “could be better understood if it were interpreted as a movement of differentiation in the Deleuzian sense.” What De Ruvo argues, in other words, is that “digital ontology disregards the movement that actually constitutes the Internet” and that re-interpreting it “in terms of a Deleuzian differential ontology can clarify how the practices of algorithmic governmentality are founded on an arbitrary abstraction.”

The fourth piece by Aragorn Eloff in some ways links with the second, taking up Friston’s work on the free energy principle (FEP) — “a framework for describing the operations of the brain as a complex, non-equilibrium system that seeks to maintain a steady state of operation”. Friston’s argument, in brief, is that any system can be understood in terms of the processes that help it endure by “minimising a free energy function of its internal states.” Systems do this by reducing ‘surprisal’, or the mismatch between internal and external states. Eloff asks what Deleuze and Simondon might add to our understanding of the free energy principle, undertaking a speculative argument to extend “the FEP’s focus is on ontology, i.e., on how systems endure” by thinking of it also in terms of ongoing individuation processes, or *ontogenesis*. Finally, Eloff applies this speculative undertaking to psychedelics, extending the Friston-inspired REBUS account of psychedelics into an account of what he terms, in a play on Deleuze’s famous essay, the method of *psychedelic* dramatization.

What these four articles have in common is an unwavering focus on contemporary neuroscientific, digital and algorithmic technologies and fields of research, each building on the most scientifically rigorous aspects of Deleuze and Guattari’s post-Simondonian thought in highly promising ways. Each of these articles also offers a response, explicit or not, to various forms of scientific reductionism — the kind employed in naïve models of consciousness, for instance — and, via Deleuze and Guattari, gestures beyond these towards the metastable, the pre-individual and becoming.

The fifth article, “Spiritual automata and Bodies without Organs: Spinoza, Deleuze, and parallelism”, by Emanuele Costa, forms a break between the first and last sections. Focusing on Deleuze’s reading of Spinoza, and examining two Deleuzoguattarian concepts, namely the spiritual automata and its counterpoint, the Body without Organs (BwO), Costa argues that what bridges these two poles is a third relational term, “which virtually interfaces with each other without violation of their parallel development.” This third term, for Spinoza, is the absolutely infinite substance while, for Deleuze, it is the notion of *sense* and, cognately, *affect*. What he argues, in short, is that it is in fact “sense-making, activated through the affective faculty of *feeling*” which allows for the “virtual reconciliation of body and mind.”

In the next two articles we move from Deleuze’s Spinoza to his Bergson. In the first of these articles, Julie van der Wielen unpacks Deleuze and Guattari’s concepts of *heteroge-*

neous multiplicity, machine and the *abstract machine*. Her argument is that Bergson's idea of heterogeneous multiplicity prefigures the concept of machine, while the abstract machine can be understood in relation to Bergson's *élan vital*. Her main objective is to tease out Bergson's thought in the oeuvre of Deleuze and Guattari in order to show how a proper understanding of "the machine overcomes the distinction between matter and mind." Finally, taking up Deleuze's work on cinema, Marcus Pereira Novaes and Antonio Carlos Rodrigues de Amorim problematize the concept of consciousness, especially "in its relations with images and movement". As in van der Wielen's article, they do so via the philosophy of Bergson. Extending the well-known movement-image and time-image, they argue that cinema gives to us another image "in the game between the movement-image and the time-image," namely the contrast-image – and it is precisely this image that produces an interval, allowing "thought to be moved to think" because consciousness, in this interval, is directly coupled with perception and affection. The implication is that immediate identification and recognition is bypassed, setting thought "itself adrift" so that new images and ideas emerge. This, they hold, is vital for thinking about education. What, they ask us, would happen if "knowledges and experiences are felt intensely and not merely in generic and repetitive applications of forms and theories that can be recognized from a project of unity or equality, sometimes far from the singular connections of each living being with the variations of their own milieu"?

Each of the exceptional articles in this special issue seeks to push the philosophy of Deleuze and Guattari in new, sometimes unusual directions, and some of them limn important yet underrecognized aspects of their thought. Taken as a whole, or as a heterogeneous multiplicity or war machine, rather, the issue seeks to think a different future for thought, and a different thought of and for the future.

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