

# Gilbert Simondon and the enactive conception of life and mind

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The work of French philosopher Gilbert Simondon is seeing a vigorous rediscovery. His ideas have a richly largely untapped potential for science, e.g., in origins of life studies, developmental psychology, embodied cognition, and artificial life. I summarise some key concepts of Simondon's philosophy side-by-side with ideas in enactivism, an approach to life and mind based on the works of Francisco Varela, Hans Jonas, and Maurice Merleau-Ponty. I hope to show that there is much overlap between the two approaches, which is good, but also many productive complementarities, and some tensions, which is better.

Simondon encourages enactivism by making its implications more explicit. He advocates the abandonment of hylomorphic metaphysics (the conceptual separability of form and matter) for an ontology of restless and open-ended materiality, relationality, and virtuality. According to him, being and becoming are mutually co-defined. The subject, in her ongoing individuation, sustains inherently meaningful relations with her world. Physical, biological, mental, and social processes of individuation nicely complement the different kinds of precarious autonomy and sense-making elaborated by enactive theory, concepts that in turn are only implicit in Simondon's work.

Individuation involves the organization that happens in a milieu capable of abundant potentialities when a process of concrete transduction occurs from more to less metastable states (crystallization is one example). Organisms are processes of individuation prevented from finishing through regulated engagements with the world in search of new sources of potentiality. This coheres with the enactive concept of life as the regulation of the tensions between self-production and self-distinction. Life and mind, for Simondon, entail the neotenic expansion of the early stages of individuation such that its termination is temporarily and progressively delayed. This makes explicit the material conditions of autonomy and introduces new elements for enactivism such as the notion of pre-individual criticality as inherent in the living body.

Simondon's recurrent use of the term information may entail some tensions with enactivism, although his notion is subtle and different from the (hylomorphic) information processing metaphor of biological or cognitive functionalism.

I conclude with reflections on the relevance of Simondon's philosophy of technology for artificial life, in particular the implication that any life-like artificial system must be materially embodied and embedded in concrete, open-ended relations with the world.