

## Locative ontology of embodied cognition

There is always a general idea about the nature of the subject laid down in any theory belonging to cognitive science. Insofar as the idea develops into a broader conception, it can be called *ontology* of the subject. This project drives on a belief that the most recent findings referring to the evolution, and the environmental embedding of cognition call for a new ontological account of the subject. The project provides a sketch of such a theoretical construction.

Up until just recently, almost nobody has questioned the assumption that subjects build internal representations of external reality, and that thanks to these representations, the subjects can act and make different decisions. Therefore, the proper purpose of a representation is to be true, as much as possible, to what the external reality is *in itself*, independently of being cognized. Philosophy of perception and, more broadly, philosophy of cognitive science, call this view "representationism." The latter is anchored in the Cartesian conception of the mind, and - in our times - in several groundbreaking developments made by the pioneers of computer and information science, subsequently employed, first in psychology (the notion of the physical computational system) and then in philosophy, too. Representationism conceived of in this way has effectively served as the paradigm of cognitive science.

Meanwhile, according to some, we are facing these days a paradigm shift, i.e., the abandonment of representationism in favor of the idea of embodied cognition, at times referred to as "enactivism." In line with this new account, the nature of cognition does not boil down to the subject forging diverse representations inside the mind, as it were, and then testing them in the environment. Instead, the subject *emerges together with* a variety of its interactions with surrounding entities. The difference is subtle, yet critical: here cognition is *not* about building a model *and then* employing it (or not) to navigate in the world; here cognition runs parallel to action and interactions - in fact, it *is* a kind of interaction. Therefore, not only neural firings, allegedly bearing representational contents, are constitutive to cognition; the environment in which the living subject is embodied also plays the constitutive role.

On the other hand, at least some parties within the enactivist movement would argue that the environment results from the interaction with the subject, too. This idea could be read as a generalization and extrapolation of the notion of niche and niche construction. The fact is that organisms transform their surroundings on their daily basis and influence causal chains in the world. In this somewhat constructivist spirit, enactivism comes to the conclusion that there is no "ready-made world," to use a term once coined by Hilary Putnam. The shape of reality *qua cognized* eventually depends on the cognitive tools at a given subject's disposal. If we were equipped with a completely different cognitive apparatus, for example, eyes sensitive to a wider range of electromagnetic waves, the *very same reality* would very likely *present itself to* us in a completely different manner - as a different environment. This process of bringing forth an environment is referred to as "enactment," and it poses a serious challenge to all interpreters of enactivism.

In this context, **the proper purpose of this project** is a thorough philosophical study of this new conception of the subject and the *subject-environment* interactions. The project shall make use of the tools provided by contemporary formal ontology: mereology as well as the ontology of location and boundaries (sometimes referred to as "mereotopology" or "locative ontology;" I prefer the latter term). The enactivist approach to the subject calls for a new understanding of the boundaries of the subject, i.e., the "lines" that delineate the internal, intellectual life of the subject on the one hand, and the external world on the other. It also calls for a new conception of the subject's location - we need a detailed theory of environment thought of as a kind of *locus*. In addition to that, we need a new account of how and where products of cognition are located, since we can no longer say that they are *inside* the mind. Finally, we need such an ontology of the *subject-environment* relationship that would articulate the idea of mutual determination of these two *relata*, and their synchronic emergence. The expected ontology should arm us to answer the thread of idealism, i.e., an idea according to which the cognized world is just a projection of the mind; a kind of dream, or a phantom. It is certain that enactivism, despite all its peculiarities, *is* strongly realistic, and it is a challenge for any conceptual framework to unpack this specific kind of realism properly.