Space of action and perception for cognitive technologies

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Our individual or collective cognitive activity is supported by an immense variety of cognitive technologies, in particular the technologies of writing which allow a spatialisation of information (in general on a two-dimensional medium). We do not think with our bare bodies. All the sciences, all collective organisations and social rules, even our dreams, projects and memories, only exist by means of techniques that our parents have bequeathed to us and that we will pass on to our children. But how can objects in the "external" space participate in our thought-activity? Take the example of a table of data. How is it that the spatial structure of the squares obliges me to fill in those that are empty?

If one adopts a naively realist perspective according to which space pre-exists, and that cognition takes place in the brain of a localized organism, one is lead to suppose that cognition functions on the basis of internal representations of external entities. In this perspective, the table of data could only be effective if it is first represented inside the organism. But in this case it becomes difficult to understand how external media could transform our thought, since in the last resort everything has to be recomposed internally.

By contrast, in an enactive perspective, if the lived world (Umwelt) and the lived body (Leib) mutually define each other, there is a way out of this difficulty. For this, it is necessary to show that space is concretely constituted by the bodily engagement according to the motor capacities of the organism. One can then understand how it can be that consciousness is co-extensive with the actual space of perception and action. We will show how this is possible, by referring to situations of minimalist prosthetic perception which are put into a relation of dialogue with phenomenological descriptions.

In conclusion, I will adress some difficult issues that are still open questions in this approach. The fact is that the space in which inscriptions and tools appear to us is also the space of a transcendance – the regular transcendance of objects, and the radical transcendance of the Other. The meaning of a tool exceeds my individual Umwelt (it disrupts the operational closure of an autopoïetic entitity), and the Other recognized as such can be understood as a radical breach of my own lived world.

It is possible for me, starting from the immanence of my own consciousness, to constitute the transcendance of the object. Since there is no complete and instantaneous grasping of the object in itself, I can only know it as a rule of regular variation in my sensations according to the actions that I could perform (the horizon of Husserl). By contrast, the Other can only be constituted as a failure in such a constitution based on anticipations. This is what we have tried to show by means of a series of minimalist experiments on perceptual interactions.

The question of cognitive technologies cannot be separated from the question of the Other. It is the use that the Other has made (or will make) of them, which gives its primary meaning to tools and inscriptions that I can grasp.

There is indeed a fundamental difficulty in understanding how - by merely perceiving an object place in front of me (it is thus only a simple object constituted in the objective realm) - I can gain access to the meaning it will have for me when it is taken "in hand". Once it is actually taken in hand, the tool is no longer constituted, it becomes constituting, it transforms my lived body and my lived experience; but by that transformation, the tool itself becomes invisible because it is what makes it possible for me to see.

My hypothesis is that it is only by means of the Other, who grasps the tool and who uses it, that I can recognize an object as being a tool even while it is still placed in front of me.

Now if we follow Heidegger, the world always presents itself to me in the first instance as a system of cross-referrals between "tools": all the things which exist for me are first of all tools whose role is to serve an activity aiming at other tools which themselves are to serve…

The breach in the Umwelt effected by the technical substrates of a collective, social, historical thought therefore proceeds from the more primordial breach effected by the meeting with the Other.

The Other is the primordial form of a separation known as such, of the lived experience of a failure to accomplish, of frustration, of distance. Space is not only constituted as a group of transformations that I have to enact. It is also perceived as a distance that has not yet been covered, not concretely realized. It is by means of another person that I can recognize this ignorance or this inability, and that I can thus face a space of future possibilities. Similarly, it is through the Other, kept at this distance which is known even if it is not covered, that I can give the meaning of a tool to an object that I have not yet grasped; that I can receive and transmit inscriptions which can then be understood as such.