



Luca Berta, *Dai neuroni alle parole. Come l'accesso al linguaggio ha riconfigurato l'esperienza sensibile*, Mimesis 2010

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What happens when we see a friend dying? We feel sad, we experience an imminent absence, we empathize with the person who is suffering. The more knowledgeable will say that our *mirror neuron system*, that class of neurons that allows us to attune our motor system to that of another person, is activated. Which mirror neurons, however, are activated when we see someone die? Death doesn't offer a neural bedrock to stand on in understanding it from the first-person because death manifests a condition in which pain, like every other sensation, no longer exists. In this case, it is not possible to rely on a known situation because death cannot be traced back to a previous experience. The modality of human understanding is checkmated, bouncing back against an impenetrable barrier. Nonetheless, our friend's death is not experienced coldly or with detachment; on the contrary, a flow of emotional reactions originating from memories and projections floods our consciousness. We feel not only solitude, but the contrast of our friend's absence of life with the simultaneous "vitality" of our thoughts, now realizing the cessation of his being. Such a relationship is not possible outside language. The specific condition of human language is precisely that of being detached from a referent and referring to inexistent or impossible things. For example, we try to imagine what it could mean for the other person to no longer be, or we try to think about our life without him. To tell the end of a man's life is a foundational experience for every culture and its symbolic system because it is one of the primordial forms of a vicarious and openly non-referential modality. "The meaning of the death of the other is, so to speak, the totality of language all at once." It is for this reason that, according to Terrence Deacon, only man can forecast the future, make suppositions on what could have happened, and tell stories, thus creating a virtual environment that only the human species populates.

This striking and paradigmatic example condenses the foundational hypothesis of Luca Berta's original and thought-provoking book on the nature of human language: not only do we feel sensations because of perceptive stimuli coming from our environment or from our body, but we also feel sensations when an episode is narrated, or an object is described to us while we are talking or reading. With his concept of "post-symbolic corporeality," Berta identifies the phenomenon by which we physically feel something comparable to inner sensations and perception, even when these sensations are generated by our relationship to language rather than by our environment. With this idea, Berta captures in its entirety the "philosophical" turn inaugurated by the discovery of so-called mirror neurons, by which the distinctions between perception, cognition, and motion are superseded. The findings of the team of neuroscientists following Giacomo Rizzolatti and Vittorio Gallese have demonstrated that certain neurons are

activated both when we perform an action, as well as when we simply observe an object that would require the same action. The activation of mirror neurons is not determined by the presentation of an object, but rather by the observation of an action performed by someone else. We can even echo an action entailing disgust or pain, thereby triggering the same neural areas activated during the direct perception of those sensations. These empathic reactions manifest themselves even when we are told that someone is in pain. We act like “mirrors” even when the friend is not actually feeling pain, or even when the episode did not really happen, since linguistic evocation is enough to set in motion the mirror neuron mechanism.

In the second part of his book Berta consolidates his position as he confronts the language theories of authentic champions of contemporary thought, such as Antonio Damasio, Douglas Hofstadter, Daniel Dennett and Ludwig Wittgenstein, and tackles broader issues such as the mind-body relationship and the relationship between corporeality and the linguistic I. The symbolic nature of language allows man to use “I” as separate from a corporeal referent, detaching it from a precise *hic et nunc* and impressively broadening its experiential field.

The third part of the book, in keeping with Merlin Donald, emphasizes the enormous evolutionary advantages that would have arisen from the discovery of language. According to Donald, the evolution of human language not only represents a technological revolution, but also a biological revolution because during this stage the fundamental visual-cognitive operations were capable of establishing a connection with an external symbolic system and becoming part of it. The vast increase of information made available to man by this development necessitated external memories to support biological memory. From a certain point onwards it became more important for man to face the symbolic relationships manifested by language rather than to react efficiently to environmental issues. In language the human *habitat* was broadened until it encompassed absence, possibility, impossibility, forecasts, and so on. According to some theories the extinction of Neanderthal man could be traced back to his less articulated linguistic capabilities compared to those of *Homo sapiens*. Berta distinguishes between two stages traversed by man in this final stretch of his evolutionary journey: during the first stage, the entry into a semiotic system, even a rudimentary one, enables the extrapolation of information, starting from the data of corporeal sensations. In the second stage, the detachment of the sign from the referent occurs. This signals the birth of linguistic thought, which functions according to recurrence and self-reference and which makes our cognitive system detach itself from the environment and deal with linguistically created contexts. This evolutionary overview fortifies Berta’s initial thesis, which disenfranchises symbolic thought and linguistic practice from a merely mimetic function. Corporeal sensation may be detached from environmental stimuli, just as a word may function in the absence of its object. Berta attempts to reflect on the evolutionary scenario in which such a phenomenon might have offered essential advantages in adaptative terms, but he doesn’t consider the recently proposed opposing thesis (Antonino Pennisi, Alessandra Falzone, *Il prezzo del linguaggio. Evoluzione ed estinzione nelle scienze cognitive*, Il Mulino 2010), according to which language, far from establishing itself as a powerfully adaptative process, counter-evolutionarily configures itself as a real and proper cause of the possibilities for the extinction of human beings.

The importance of Berta’s study lies in underlining once again the astonishing consequence of the emergence of language on human cognitive faculties. Thanks to language, the mind is capable of freeing itself from reality and of acting through the possibility of the symbolic dimension. This capability is full of consequences and so far had not been sufficiently illuminated, but Berta succeeds convincingly. From a literary expert like Berta, we would have expected more consideration of the repercussions that this concept should have on the field of aesthetics. Although he demonstrates his familiarity with the research in neuro-aesthetics (17)

and with the embodied dimension of literature (131), and although he quotes the evolutionary research of Tooby and Cosmides on the usefulness of the aesthetic dimension in human fitness (36, 39), Berta does not exert himself to translate the implications for aesthetics. In my opinion, Rizzolatti's research reveals the fictional nature of the human experience: if seeing an object implies the representation of the possible interactions with it, and if understanding the intentionality of someone else's action implies inner simulation, then our brain narrates our stories even before they happen and regardless of whether they will happen or not. Our brain simulates possible motor responses and this is where the core of narrativity lies. Some references to this are already present in Berta's previous studies (Luca Berta, *Narrazione e neuroni specchio*, in Stefano Calabrese *Neuronarratologia. Il futuro dell'analisi del racconto* (Bologna: Archetipolibro 2009) and in my *Stories without words: Narratives of the Brain* (Cognitive Philology, 2, 2009) in which on the grounds of post-symbolic corporeality I postulate precisely an overcoming of the distinction between reality and fiction. Moreover, since reading novels and stories activates our motor system (see, Anatole Pierre Fuksas, *The embodied novel, Cognitive Philology*, 1, 2008) or our tendency to imitate others, which is linked to the mirror neuron system (see, Gerhard Lauer, "Spiegelneuronen. Über den Grund des Wohlgefallens an der Nachahmung," in K. Eibl, K. Mellmann, R. Zymner, *Im Rücken der Kulturen*, Paderborn: Mentis Verlag, 2007, 137-165), it is precisely in literature that several examples of the relationship to the language described in the present study can be found.

Stephen Greenblatt in *Shakespearean Negotiations* has defined literary criticism as a dialogue with the dead. It is precisely in this encounter with death, proposed by Berta, that the necessity of narration and, therefore, of literature arises: "The other dies: thus I cannot limit myself to indicate his body as his referent, I must represent what happens to whatever belonged to him or her and is no longer here, while I imagine at the same time that it is still present. I must 'tell' myself something in its place, as if it were him or her doing that, even if that is impossible – rather, precisely because it is impossible" (33). With a style that is from many points of view literary and elegant and which allows a pleasant and fascinating read, Berta discusses language, but he pushes it to its boundaries, to its poetic origins. This is a language that the friend's disappearance plunges into silence and it is precisely this meaningful silence that the book closes with: "For the other [the dying friend] the impossibility of taking a word; for me the impossibility to express in a word (or in a million of words) the death of the other, because it is not possible to say everything at once, to say everything that the other was and no longer is, the entire web of possible, lived and interpreted symbolic references, that is, all the language and all the world that he had been" (139).