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When the Brain Increases, the Human Diminishes. Impacts of Technology on Learning and Teaching

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When the Brain Increases, the Human Diminishes. Impacts of Technology on Learning and Teaching

*Maddalena Colombo**

[Review of the book: Il cervello aumentato, l'uomo diminuito, by M. Benasayag, Erickson, Trento, 2016. ISBN 9788859009955]

Less than one year after its publication in Argentina, in early 2016 came to Italy this book from Manuel Benasayag, an Argentine philosopher and psychoanalyst now based in Paris, who studied medicine and biology too. The Author became famous to Italian scholars of youth and education studies some years ago, when he published *Passions tristes. Souffrance psychique et crise sociale* (in Italian 2004) with the psychiatrist Gérard Schmit, a reading of the current generation of adolescents, based on their psychoanalysis material: the youth's pathological behaviour during the growth and the signals of a lacking authority by the adults.

In his role of a modern "Cassandra", which is legitimated by those who work with such a special anthropological matter (as the youth's disorders in personality or in social behaviour), in this important book Benasayag tries to put under the light the ongoing revolution, that is, the non-limited and fully widespread use of technologies (from the mobile phone to the genetic engineering) in social life and its impacts on the brain, or better, on our way to consider the brain as the locus of one's identity. In fact, once the brain has been examined, tracked and discovered by the scientists, it has lost his "noble function" and its mystery. This issue is non-insignificant for those, as teachers and educators, testify every day the increasing mutation occurring in youth's behaviour and (the more evident) in their spirit and feelings, due to their massive exposition to ICT (more intensive and longer among them

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than adults). Educational professionals know well the influence that ITCs have on the teenager's learning, as they see in the classes these annoyed, demotivated, distracted and hyper-kinetic students almost frequently. And, as their social behaviour, teenagers become day-after--day more isolated and dependent.

The Author keeps reiterating during the book that he does not endorse "technophobia" (Brosnan, 1998), but he only wants to "breach the wall" in the common passive acceptance of technology in our life: the massive offer of technologies for every scope (entertainment, utility, improvement of life standards or liberation of diseases, etc.) looks as fair and non-renounceable, as we often agree with the well-known rhetoric of "there's no way back". But it is true, conversely, that if technologies come from the human being, the humans can (and have to) command to them, by choosing at least if, and how much, and when, to use them.

The central argument in the book is the following: the hybridisation *mankind-technology-artefact* is going to colonise the culture and the life, and we find it hard to realize it. In the meantime the brain has stopped to be considered the "vital and superior organ" (like it was by Saint Augustine and many other philosophers until Emmanuel Kant) from which depends the human way to understand the word. Across bio-technology, genetic and neuro-science, we are able today to think to the brain as a scientific object, among other parts of the body, instead of a "subject" as in the past. This is exactly the revolution he mentions, for social scientists is a radical change of outlook : "It is like the puppet would tell the puppet man : You are the puppet!" (p. 21). The post-human age (which comes from Foucault, Deleuze, and Derrida; see also Farisco, 2011) has created a new "Anthropocene", as the Nobel Prize-winning scientist Paul Crutzen first proposed in 2002, because the artefacts dominate the physical, biological and social sphere completely. Once robots and machines will substitute many of the human jobs, it will have worth questioning if the human brain will maintain or not its own functionalities and peculiarities (such as, anticipation and capability to create new "com-possible" worlds), like the mathematic Giuseppe O. Longo argues (Bonifati – Longo, 2011). To understand this process, and to be able to contrast it, many disciplines are helpful: biology, mind sciences, philosophy, sociology and pedagogy.

According to Benasayag, those who deal with the "human" at all ages have to learn how to manage some fundamental distinctions: firstly, the difference between artefact and organism. The former is composed by discrete units and does not possess neither interiority nor intentionality; organism instead is composed by integrated units, according to a dynamic functioning principle which is previous than its discrete parts, and – if human – has both interiority and intentionality, that is, free will. One other basic distinction

is between information (production of feedback) and knowledge (construction of meaning); and between reaction and action. The main confrontation between humans and machines lays – as many know – that humans are singular and unrepeatable while artefacts are physical, mechanic, in a word: repeatable.

This has a great impact on those who have the task to train, form, and “shape” minds and personalities through teaching and learning. In the light of the “autopoietic system theory”, made up by A. Maturana and F. Varela (1987), the brain is not human because it thinks, rather because – in order to relate itself to the knowledgeable world - it goes until its own limits, precisely its body limits; it experiences its own “territorialisation”, that is, it can reach knowledge only it can “experience” itself in the physical sense. And each time the brain can experiment its limits, according to the Author, it becomes *self-sculpted* (p. 62) and it builds in this way their unique identity.

Thus if in the future children and teenagers will not have any more the possibility to make experience of “knowledge” in this physical sense (as touching personal limits), their brain will lose its peculiarity and singularity, by adapting to the “information model” progressively. This is what, for instance, is already ongoing when teachers neglect to cultivate the calligraphy of their pupils. Handwriting implies a whole body activation and co-ordination, that lacks in digitalising; the same occurs when oral reading or taking handwritten notes from a lecture are non-requested activities at school, replaced by PC or Tablets interfaces. In the long run the result will be that the artefacts will shape, or better, sculpture the student’s brain and it will behave as it would not have limits, as a “de-territorialised” brain (p. 64), in brief, not augmented rather diminished.

The first part of the volume is devoted to explain how this happens particularly, according to many scientists (“construction” of world by the brain, brain temporality, sculpture of the brain by artefacts, “uprooted” brain, co-evolution brain-environment, difference organisms-artefacts etc.). In the second part the same issues are repeated by a wider cultural and sociological outlook. In a (sometimes redundant) discussion, Benasayag wonders what will occur further to the “human subject” in the light of the intense and accelerated hybridity humans-machines, as he already had described before this book (Benasayag, 2002; 2009). He supports the Foucault’s idea of bio-power and bio-politics (Foucault, 2008). The former is defined as “power on the life, thanks to which reiterate mechanisms of the social structure make it possible that the biological features of individuals become target of the politics”. Thus the latter is the way by which the social control of body (and brain, in this case) is necessary to ensure the degree of safety and well-being that are promised to all in the technoscape. Among others controlling mechanisms (concerning memory, identity and moral behaviour), two are the most dan-

gerous nowadays, according to Benasayag: the “profiling” and the “quantitativisation”. The first mechanism aims at substituting the personal identity with a “consumer profile” (drawn from the enormous big data sets that every day track each singular action of the citizen, even the less significant, transforming it in something of meaningful and evaluable in economic terms); the second one is the search of an unlimited transcendence beyond the body’s limits, that is, “life transcendence” by the mean of sophisticated technologies: both idealism and technocracy are allied in the quantitativisation of life in all forms, suppressing any singular, non-previewed, anomalous case.

To cope with these typical mechanisms of the current “behavioural economy” (as types of colonization of humans by artefacts) there are two possible responses. From the one side, the “technophobic integralism” (negative response), from the other side there is the “exploration of possible new kinds of hybridity which take care of culture and life” (p. 108), as artists and lively social networks try to do somewhere in Western societies (positive response). Resisting to technologies does not imply to renounce to them but to be aware that they do not empower the human being, rather they “simplify” and “discretise” him.

Although this book may look specialistic in some chapters, it provides educational professional with many multi-disciplinary ideas and concrete examples about how the “hybridity” works. Who looks for solutions to implement in the ordinary life and in education will be disappointed, of course, but – with the exception of a certain length – this book is fully fruitful both for scholars and professionals in social and human sciences. In fact, if the perspective of a post-human landscape is not an original idea, the acknowledge about his facets and concrete mechanisms of self-developing and hyper-developing across our minds is an obligation for critical analysts. In the end, the message of the book is positive and forward-looking.

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