Bio-education, simplicity, neuroscience and enactivism. New perspectives for education?
There are many challenges facing the current scientific system. Among them, there is pedagogy, along with it, is also neuroscience.

Or, rather, it is from these two that overhang a fair part of current research and the relative practices.

Above all comes the choice of internationalisation as first and mandatory “password”, faultlessly marking scientific progress, totius et partibus scientiarium, as well as its effects that benefit also the quality of life of (all) individuals and of the whole mankind.

Specifically, as editor of this Journal, allow me say, I sign this Editorial together with my most authoritative colleagues and friends Eliana Zeuli Frauenfelder from the Universitarian Institute “Suor Orsola Benincasa” of Naples (Italy) and Simone Aparecida Capellini from University “Júlio de Mesquita Filho” of São Paulo (Brazil), whom I would like to thank with sincere esteem and affection, which they well know. I would like to remark and record, with strength and satisfaction, a further increment of a larger and more consistent opening towards an international dimension that the articles contained in this number, beyond any doubt, testify.

This issue has been looked after in particular by Pier Giuseppe Rossi of the University of Macerata, the already mentioned Eliana Frauenfelder, Pier Cesare Rivoltella of the Catholic University of the Sacred Heart of Milan and Maurizio Sibilio of the University of Salerno, who I equally thank, with the same appreciation.

A “deal” to research, globally represented, whose essential weight lies in the common pedagogical-didactical interest. It unfolds in the shape of a “four-leaved clover” clustered around a stem identifiable with bio-educational sciences, which represent a thread throughout the entire journey: a holistic approach to system Man.

The bio-educative problem, that starts and returns to the prevalent relationship between biology and pedagogy, and able to channel, now, many of
the educative problematics around neuroscience, and represent, at the same time, its foundation and evolution.

On the other hand, “simplexity”, equally argued and widely discussed here, identifies the thinking of Berthoz as focused on the intentional dimension of the “act” (along the lines of Faust: “in the beginning was the act”). It becomes, in this perspective, synchronic action of mnemonic processes and the re-organising the suitability to future actions. With the adaptation of the organism to the environment, and with the functional mechanisms that preceded action, that converge in a thick and continuous relation between biology, pedagogy and didactics. Making allowance to the simplification of these pages, for a functional didactic investigation, which would lead to a correct focus on structured processes of human formation, in whose interior enter dynamics of teaching-learning, resulting from a perennial interdependence of educational, environmental and biological variables.

A further insight, in this seventh issue of Education Sciences & Society, is left to enactivism. It shows itself capable to successfully outline a possible reciprocity, also in the partial concepts of objectivism and subjectivism. The interaction and integration of these, consequently cause one effective interpretation of the classroom as an “us-centred” space, where “transformative” knowledge causes a further coordinated and simultaneous evolution of teacher and learner.

While the sequence brain-body-artifact-world causes eventually a different perspective of knowledge and of corporality related to cognitive processes. It also locates, by inference, a new eventuality of its synergic portrait through the use of technological artifacts. Artifacts become systems of building, amplification and propagation of the biological/cultural system that projects and simulates environments, situations and contexts of meaningful learning.

The wide scientific and operative representation, in theory and practice, examined here, underlines the peculiarity, which belongs to the genetic code of everybody, to be susceptible to biodynamic shaping by the environment. Also, the knowledge of the genetic potential, qualitatively analysed, becomes, at one time, founding requirement for the structuring of learning environments and for building appropriate stimuli.

Formation and education chances that lay inside the image of the “four-leaved clover”. However, starting from the operative potential of bio-educational sciences, they are presently led back to the modalities through which
prove to be able to transfer and manage, in these environments, the keys to the interpretation of knowledge and the criteria to orient observation, similarly to codifying and de-codifying, to organise and connect, in meaningful ways, the information data. Therefore, it is precisely through organisational models and schemes derived from experience, that the individual might obtain, finally, the capacities of critics of comprehension and orientation, essential to substantiate the learning process with real individual contributions. Finally, an adaptive learning capable to offer the articulation and systematisation of knowledge through networks for evolutionary and finalised relations.

In last analysis, it follows that all the thematic addressed in this issue, have a unique signification both in the pedagogical and in the didactical contexts, where they represent essential conditions for any experience of growth and change. Here, the sciences of bio-education, simplicity, en-activism and neuroscience, all together, prove to be vastly suitable to be traversed from the specific viewpoint of pedagogy, and its perspective of research and investigation. They all concern, all of them, the understanding of the individual in its entirety and, at the same time, in its specificity, to build hypothesis of global training that express themselves in the concepts of learning, development and adaptive process. Equally, it refers, on this path, to an inter-subjective mind, distributed and placed in the contingency and in multiple contexts. This perspective leads also to a bio-educative pedagogical line, which unites the dimensions of learning and training. On the other hand, outlining a critical and constructive learning able to involve the entirety of the future man, not accepted anymore as a passive recipient of behaviours and models, but as active protagonist able to innovate and transform his horizon to grow, yet, equally linked to its specificity, environmental stimulations and to the organisational mediation that binds them. It also designs a teaching architecture where all these elements rise as spaces of self-affirmation and as harmonisation of different perspectives and possibilities of decantation and synthesis.

Consequently, purely pedagogical paths are essential for each individual’s growth, who, by transforming himself, intends to be a real autonomous builder of its subjectivity.

It is along these scanty premises, that runs the thread that binds this issue of Education Sciences & Society ready to be published, and, as said above in this “Editorial”, it contemplates, beside many qualified Italian colleagues, significant contributions by authoritative European and non-European colleagues.
An issue titled: “Enactivism, Neuroscience, Simplexity: New Perspectives for Education?”. The list of authors harbours, beside the studies and praised research by Eliana Frauenfelder, Pier Cesare Rivoltella, Pier Giuseppe Rossi and Maurizio Sibilio, by Paola Aiello, Stefano Di Tore, Pio Alfredo Di Tore and Rodolfo Vastola from the University of Salerno, by Lorella Giannandrea, Patrizia Magnoler and Valentina Prenna from the University of Macerata, by Alessandro Ciasullo and Nadia Carломagno from the University of Suor Orsola Benincasa of Naples, as well as Gianluca Bocchi and Luisa Damiano of the University of Bergamo, important and dense pages of authentic scientists from three different continents. This does not belong to the logics of “provincial subjection” – that does not belong to us, since science and culture cannot be split in “nations”, or, rather to be collective heritage for mankind – but in an authentic spirit of shared global and international interest.

We refer to the articles by Marc Durand and Germane Poizat from the University of Geneva, by Deli Salini from the Federal Universitarian Institute for Professional Training (IUFFP) of Lugano, by Jérôme Proulx of the University of Québec of Montréal, as well as Elaine Simmt of the University of Alberta in Canada and Andy Begg of Auckland University, New Zealand.

The national-international work by Catia Giaconi, Pier Giuseppe Rossi (both from the University of Macerata), Maria Beatriz Rodrigues of the Brazilian Institute of Management (IBGEN) of Porto Alegre and Simone Aparecida Capellini of University “Júlio de Mesquita Filho” of São Paulo (Brazil) is the proof of an ausplicable literature able to connect the intelligence of different countries.

Meanwhile, the pedagogical lexicon on “Action and Practice” is taken care by Stefano Casulli of Macerata University and the reasoned bibliography has two contributions, both of great value: Valentina Prenna, University of Macerata, on enactivism, and Paola Aiello, University of Salerno, on simplexity.

With this seventh issue Education Sciences & Society we are sure to have offered to the research in pedagogy and neuroscience a contribution of absolute scientific value, in favour of its virtuous reciprocity and toward further and worthwhile studies to come. We wish that the readers might use the best of this results and inspirations for their own present or future investigations and reflections.