Epochal problems of philosophy of education, today. Technology, posthuman, neuroscience

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1. *Identity and role of "philosophy of education"*

Philosophical reflection accompanies pedagogy since the time of Plato. And it has been its only and decisive guide for a long time. Nowadays, instead, philosophy redefined its role in pedagogy and started to play the part of critical synthesis of educational knowledge and to orientate the educational processes in terms of rules. John Dewey explained this double role. In The sources of a science of education, published in 1929, the two mentioned aspects are clear: as a knowledge in itself pedagogy is a synthesis of various and different sciences that constantly develop and that have to be fixed as "sources", namely bearing data which are more and more complex, essential and new; as a knowledge-to-act then pedagogy regulates itself on the base of education (or, today is better to say, on the base of educating/forming) and considers and reconsders it critically. Therefore pedagogy provides analyses of acting structures and guidance ideals or models, developing a double reflective process: both ontological (about the object-education) and historical-regulative (with actual models). Pedagogical philosophy has increasingly developed its epochal nature and its critical and planning role on this two levels (epistemological-axiological and ontological-regulative). In this way pedagogical philosophy accompanies the all educational thinking/acting both as a shadow and a horizon-limit and there it forms itself as strong point which is never obsolete, but always legitimated and reintroduced. This process occurs all around the world: in Europe, USA, in the East, in the South of the world. The paths and the styles are different, but they are associated by this clear and common goal: to fix the form of knowledge and protect it, to elaborate purposes, projects and models for the acting itself of this articulate and complex knowledge. Just as the same Dewey taught us.

Surely, while defining themselves, philosophies of education (just as all the types of knowledge) also follow linguistic and cultural traditions, being bound to the respective countries of membership and the related pedagogical style. All that enriches the debate, makes the confrontation stronger, deve-

lops the perspective of philosophy of education itself. But, at the same time, it confirms philosophy of education as a transverse inner frontier, qualified and permanent, and takes it as a regulator of all that polymorphic universe that constitutes pedagogy/education nowadays. Or otherwise: it takes it as a device of "critical pedagogy". And today that enunciation or concept is significantly planetary. Then it is necessary to stare at this critical meaning of pedagogy as philosophy of education.

2. *Between systematic and radical... open*

The criticism of philosophy of education has two faces, as already said above: the first is epistemological, the second is ontological-planning. By now these two fronts present a great tradition, which was active with force and decision since the 19th century. Just to do some famous names: Herbart, Comte, the Italian Gentile, then Dewey, Brezinka, Illich, Rorthy, in the recent past Gramsci and today Morin.

Epistemological reflection has gradually tinged and complicated the image of pedagogical knowledge: it has structured it on experimentation, analysis of language, typologies of theorization, fixing it as a complex "device", tensional and problematic. With regards to ontology/planning, the "entity" to which pedagogy is bound has become more and more clear: the man-person, that becomes such in a lifelong process, but just during development age fixes his inner structures or "milestones". And also the task-of-planning has become more and more clear, here and now but also tomorrow, in relation to the subject, to culture, to society, also able to deal with the present and to aspire to a better (from an anthropological point of view) future. This planning activity had to identify the fundamental role of care (always developed towards the maximum target of self-care), that became the flywheel of pedagogical action, today.

The debate over this points-of-common-synthesis is always open. And always in a radical form, and more and more radical with new perspectives of critical analysis. Epistemology and ontology/planning are always open borders. And this ambits have to be developed with openness, in a period in which knowledge and reflection about it (about the society that expresses that knowledge and receives it etc.) are becoming more and more restless, flexible, integrated.

Therefore, nowadays, openness itself should characterize philosophy of education. That discipline should become a dynamic and innovative "toolbox", just because it had to be there, as central reflection able to manage its own reflexivity. Not only: philosophy of education should also apply this reflection to the new arrivals, to the problems that the process itself of historical development constantly presents us. Always. But today more than yesterday. And presenting us just more and more radical problems. Or rather also not-easy and disturbing problems.

3. *Three actual frontiers*

Three of this radical problems are in front of us today. And pedagogy is aware of them and disquieted by them, because of their radical and open condition. These problems are "open" because they are resources, but also risks and limits. Ergo they need to be thought and thought critically. As it always has been and always has to be in the future. 1. Technology. 2. Posthuman. 3. Neurosciences. Now let's see them closer from the point of view of actual philosophy of education: reflexive and meta-reflexive.

1) Today Technology, as Heidegger already said, is the heir of metaphysics: it is the Foundation of Reality. Of the entire Reality. It surrounds us, it dominates us in each form of our living. In this way, it's also a Bond. We can't escape it. Accordingly, it has to be known and not only used. It has to be thought beyond itself. It has to be entrapped in a constant reflection, able to reveals its limits, its shadows and the *imperium* that marks it. All this is valid for culture in general. But it is particularly valid for pedagogy and for the man that pedagogy should protect. *Homo technologicus*? Yes, also. But even more *Homo sapiens sapiens* and his critical mind, that interprets, that reflects about…, that is able to dominate exactly what tries to dominate the mind itself. Technology indeed. Each subject has to be educated to a critical thinking, activating a "multi-dimensional" (Bruner) and "meta-cognitive" (Morin) mind and a *ethos* able to reaffirm more properly human purposes, beyond those that are connected to the typical tools of technological culture. How? Keeping alive culture in its various articulations. Activating a creative thinking. Creating cultural spaces, stolen from technology, such as poetry, art in general, *eros*, etc. Pedagogy should guard the activity of thinking-technology and of going-beyond-technology at the same time. A vocation which is on the way, but has to be strongly supported. Today and again tomorrow. Is that reflection present in pedagogy? Philosophy has worked on this aim: let's think about Gehlen, about Jonas, about Severino here in Italy. Pedagogy oscillates between being "handmaid" of technology and becoming its "mistress". A natural oscillation for a knowledge that reflects about "here and now" and at the same time looks beyond and also against the present. Such oscillation is little studied as a structure of pedagogy and theses developed about technology are too divergent. Now the time has come to think about techonology from pedagogical point of view, in the light of these restless dialectic and problematic structure, however maintaining the aspect of going-beyond-technology as the most proper vector of pedagogy. Even if is always necessary a critical and dialectic approach, fed by the technology itself.

2) Nowadays even the *Posthuman* as extreme effect of Technology (because it manipulates the same man that produces and governs technology) is both a resource (against diseases, against deficits, against aging and perhaps the same death of man) and a risk, and a very restless risk. Where is the "human man" going in the *Posthuman*? Is he amputated? Is he polluted? Is he lost?

May be: all of this can happen. Therefore: what can we do? First: thinking about *Posthuman* and, this way, controlling it, imposing limits, integrating it with *humanitas*, that needs to be cultivated and raised as a rule, also against *Posthuman*. Creating a cultural dialectic, fine and complex and clearly epochal. This dangerous metamorphosis is happening today, so today we should understand it, evaluate it, integrate it and also fight it. And perhaps pedagogy is the most exposed field and the most central in terms of strategy, to activate and to develop this union/conflict and to think about it critically. This is because pedagogy is the discipline that protects man's humanization, every man's humanization. This pedagogical awareness is international and should be established in its critical function and in its dialectic identity. Today and much more in the future. In a future that will be more and more organized by Technology, also and exactly with its interventions on humans. Also in Italy we are working on the front of pedagogical reflexivity. And for a long time. And with critical outcomes: let's think about Pinto Minerva, just to mention one example. A process is on the way: with a fine and critical approach to the coming of a *Posthuman* that operates in many ways. As a pharmacopeia. As a set of nanotechnologies. As an intervention on brain circuits. In order to reflect on these outcomes. To delimit them. To reintroduce the above mentioned human-man (this is an Heidegger's diction).

3) Of course, to this purpose, pedagogy, in turn, should protect itself as a critical knowledge about man: exactly as a knowledge possessed by the *anthropos* and understood in its richness and complexity. Therefore pedagogy should more and more measure itself against dominant paradigms of/in human knowledge (or human-social knowledge) and re-interpret them itself. Nowadays in particular this should happen with the paradigm of Neuroscience that stands out as "ground zero" and nucleus *a quo* of every human knowledge, because it enlightens the basic circuits and effects of nervous system, starting from brain, and it establishes those data as generative and structural of all the human behaviour. Its results are enlightening, but they run the risk of reductionism: of explaining what is complex by using what is simple; of explaining what is more advanced by using neurological basic data. Yes, it's true that the reductionism is part of scientific work, but, in man, it should be integrated with the most complex "levels of reality" that mark it (the language, the symbolic, consciousness itself) and that are *beyond* those primary data. Pedagogy should *use* and *integrate* neurosciences at the same time. It can and should unmask also their imperialism and trespassing. It should, furthermore, protect the complexity of human-man and it can and should do it dialectically. With strong critical engagement and fine anthropological sensibility. Surely it also means to welcome discoveries of neurosciences, to assimilate them and to activate them in its thinking/acting. But, exactly, while integrating them with the different levels of that *anthropos* of which pedagogy becomes (and should become) the guardian. Let's think about the discovery of "mirror neurons" and their role of empathic imitation and socialization. It's an illuminating and valuable discovery, but a discovery that then should be

contextualized in those more complex processes that the "man cub" realises in his biological and social development. Let's think about the discovery, published on *Neuroscience & Biobehavioral Reviews*, about the different structure of man's and woman's brain and its different characterizations and potentialities. These aspects are valuable for education, and not only for gender education, because it becomes possible to assume an educational point of view to consider the *anthropos*, that nowadays has to be reinterpreted in a dual way (as Irigaray already invited to do some years ago). New discoveries. New contributions. Yes, but they need to be integrated – again and forever – with the complexities of the humankind, so that pedagogy can study and protect his complexity and his human education.

4. *Urgent and… planetary tasks.*

On a planetary level actual pedagogy, understood as philosophy of education, is call to fix with energy and scrupulousness some fundamental tasks.

I. It should protect itself as complex, critical and dialectic knowledge, with a strong scientific and philosophical origin, establishing its interpretative and regulative *tutor* in philosophical reflexivity. This means to cultivate philosophy of education as "critical pedagogy" and critique of pedagogy, like a theoretical seal of all its articulate knowledge-of-knowledge.

II. It should deal with the more urgent, restless and difficult problems of Our Times (those mentioned above), using that approach of critical pedagogy.

III. Il should fix the *anthropos* that it protects because of its status and that it should consider and consider steadily, regrouping his *identikit*, but also preserving his specificity of humankind, safeguarding his autonomy, establishing his inherent complexity: it should never lose sight of these elements, that need to be defended against every violation and/or "shrinking".

Nowadays pedagogy, just being placed between *Anthropos* and *Techne*, occupies an increasingly central and crucial space in culture of Our Time, for which it's called to understand itself and to equip itself, reactivating its critical sense. In fact, it has to play its complex and irreplaceable role. And, in the end, more and more actual role.

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