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The "Introduction of the Subject"
Anthropology, Medicine, Education

Oreste Tolone

D'Annunzio University of Chieti-Pescara, Department of Philosophical, Pedagogical, and Economic-Quantitative Sciences, Via dei Vestini – Campus universitario, 66100 Chieti, Italy

orestetolone@gmail.com

Abstract

The introduction of the subject in physics, by Werner Heisenberg, has led to a questioning of the Cartesian paradigm, based on the separation between subject and object. This introduction of the subject was followed by an attempt to carry out a similar operation in the fields of biology, ethology, and medicine. In particular, Viktor von Weizsäcker identified the importance of a new doctor/patient relationship. This active reconsideration of the subject, with the consequent revision of the asymmetrical

relationship, has brought with it, however, a series of undesirable effects that we could summarize with the expression "defensive medicine." It seems to us that an "introduction of the subject" is also taking place in the field of teaching and education; it takes on the form of valorization of the learner and of open circular teaching, more suitable, according to Morin, to a global or planetary society. This positive innovation is, however, called upon to listen to the warning that comes from medicine. The protection of the "original scene," which gives a sense to the action of the doctor and the educator, serves precisely as a methodological corrective to the risk of an errant pedagogy, which avoids taking charge of the subject and helps him to acquire a form.

Keywords: "introduction of the subject", Cartesian dualism, defensive medicine, defensive education, medical anthropology, Weizsäcker, Morin.

»Vpeljava subjekta«. Antropologija, medicina, izobraževanje

Povzetek

Vpeljava subjekta v fiziki, kakršno predstavlja delo Wernerja Heisenberga, je pripeljala do prevetritve kartezijanske paradigme, ki je temeljila na razločitvi med subjektom in objektom. Tej vpeljavi subjekta so sledili podobni poskusi na področjih biologije, etologije in medicine. Zlasti Viktor von Weizsäcker je prepoznal pomembnost novega razmerja med zdravnikom in pacientom. Toda takšna aktivna preosmislitev subjekta, ki je imela za posledico revizijo asimetričnega razmerja, je povzročila nekatere nezaželene učinke, ki jih lahko povzamemo z izrazom »defenzivna medicina«. Zdi se, da se »vpeljava subjekta« godi tudi na področju učenja in izobraževanja; privzema obliko prevrednotenja učenca in odprtega krožnega učenja, kakršno je, po Morinovem mnenju, primernejše za globalno oziroma planetarno družbo. Vendar mora tovrstna pozitivna inovacija prisluhniti svarilu, ki prihaja s področja medicine. Zavarovanje »izvornega prizorišča«, kakršno daje smisel delovanju zdravnika in učitelja, predstavlja metodološki korektiv grožnji blodeče pedagogike, ki se izogne obvladovanju subjekta in pripomore k temu, da si pridobi obliko.

Ključne besede: »vpeljava subjekta«, kartezijanski dualizem, defenzivna medicina, defenzivno izobraževanje, medicinska antropologija, Weizsäcker, Morin.

Like every living being, man, as an autopoietic being, possesses a form and at the same time is called upon to give himself a form that allows him to maintain his own organization (Maturana and Varela 2001). Hence, the need for trans-formation. This autopoietic capacity—as asserted by Varela and Maturana—takes on completely original aspects in man; in particular, he has the possibility of acquiring new cultural structures, that is, of forming and transforming himself through an educational act (Portmann 1970, 282–299).[1] The concept of "formation," as we understand it in the diction of "sciences of formation,"[2] reveals humanity's capacity to give itself a form of its own, according to the epochs, that allows it to decline, time by time, the same human form.

Formation helps man to take shape, to prefigure an ideal image of himself, of humanity, in the light of which he can make his own choices, live his own life. Werner Jaeger stated about the Greek *paideia*: "The effort to consciously shape according to one's own idea" takes place through education, which reflects a "living normative consciousness," whose objective is identifiable in the will of transmission of the human type. *Paideia*, therefore, is an "eternal form" to which the Greeks "subordinated themselves" in order to achieve "the formation of a superior humanity" (Jaeger 1934–1947, I, 6). Among the main formative models identified in Western culture, besides the Greek *paideia*, stand out the Latin *humanitas*, the medieval Christian *perfectio*, the Renaissance *dignitas hominis*, and the German neo-humanistic *Bildung*—the traces of which are still evident in the philosophical approach, for example, of Martin Buber and Hans Georg Gadamer (Gadamer 2012, 227; Sola 2016).[3] Each of these epochs

1 As Gadamer claims, recovering Hegel: "Der Mensch ist durch den Bruch mit dem Unmittelbaren und Natürlichen gekennzeichnet, der durch die geistige, vernünftige Seite seines Wesens ihm zugemutet ist. 'Nach dieser Seite ist er nicht von Natur, was er sein soll' – und deshalb bedarf er der Bildung." (Gadamer 1986, 17)

2 In English, for example, the term is used in the diction "sciences of the primary formation" or "formative assessment and science;" in Italian, however, precisely: "scienze della formazione."

3 "If we think of our school years […] we perceive how the idea of Bildung was the basis of the school system of the century in which we attended school: not a preparation for a specific profession, not an insertion into a functionalized society, not an adaptation exercise, which, as heaven knows, has become the destiny of the industrialized world everywhere today." (Gadamer 2012, 227; my translation)

has had the strength to hypothesize an image of man—closely connected to the society of the time—, to which one should make one's own epoch faithful. Every educational action, whether school or university, had in mind what kind of man one wanted to contribute to form.

Before identifying, therefore, which subjects and disciplines should be taught, which competences privileged, it would make sense to ask oneself what *Bildung* today is, the formation to which one unconsciously tends, what is the form for the global, planetary age.

1. Which training for the global age?

The absence of a training model, in fact, simply risks maintaining as the only model that of training for the present society, of active and painless integration into the productive and social world, depriving the training act of its ideal momentum, aimed at the inner and deep training of the individual man. The distinction, introduced by Martha Nussbaum, between "traditional" and "liberal education" (Nussbaum 1997)[4] can also be read from this point of view. The recurrent concern about the (true or presumed) dangerous detachment of a teaching by competence with contents[5]—for example, in the higher teaching of philosophy—hides a doubt: that this sliding in the

4 According to Martha Nussbaum, the process of school "corporatization" has long been evident in the United States. The introduction of the National Testing System (NCLB) has further worsened the situation: "Curricular content has shifted away from material that focuses on enlivening imagination and training the critical faculties toward material that is directly relevant to test preparation. Along with the shift in content has come an even more baneful shift in pedagogy: away from teaching that seeks to promote questioning and individual responsibility toward force-feeding for good exam results." (Nussbaum 2010, 134)

5 The progressive shift from *content-centered* syllabuses to *skill-* or *ability-centered* syllabuses—such as those of the *European Computer Driving Licence* or the *European Certification of Informatics Professionals*—leaves open the problem of whether or not the two settings can be reconciled. This framework includes the eight key competences of European citizens (*key competences*), as set out in the Recommendation of the European Parliament and of the Council of 18 December 2006 (2006/962/EC), *Key Competences for Lifelong Learning. A European Reference Framework*. See also the European Commission's *New Skills Agenda for Europe* of 10 June 2016 (2016/381/F2/COM). Cf. *Key Competences* and *A New Skills*.

direction of "disengaged competence" covers the absence of an idea of man at the height of the epoch in which we live. The same imposition of analytical philosophy—or, more generally, of a philosophy conceived of exclusively as epistemology, methodology, learning logic, etc.—could be a symptom of the same weakness. It is indeed evident that the contents already give a direction to the competences, they target them in a preliminary way. According to Joseph Stiglitz, learning in itself is "future oriented. One has to make sacrifices today and undertake risks today for future benefits. But in the presence of instability, there is a risk that there will be no future." (Stiglitz 2015, 87). In the absence of an idea that brings us closer to the future, we live for the immediate present, and all this at the expense of learning. Which training, then, for a global or planetary age?[6]

2. The "introduction of the subject in…"

In the course of the twentieth century we witnessed the questioning of the Cartesian paradigm—which marked modernity—and of the annexed training model. The separation between subject and object (Bachelard 1984), with its objectivating approach—the foundation of a scientific epistemology—began to lose its absolute character. The unconditional affirmation of the scientific method has thus been accompanied by the critical epistemological reflection. Starting primarily from the field of quantum mechanics—in particular with Heisenberg's uncertainty principle—, we have witnessed the progressive attempt to "introduce the subject in…" The inert and quantifiable object of study has been replaced—especially in the areas of the living—by an active and interactive subject, with which the researcher finds himself in a relationship of circularity and mutual exchange from beginning onward (Weizsäcker 1997). The attempt to place a living being as his object of investigation forces the scientist to take note of an important fact: being faced with an "object with a

6 Edgar Morin highlights the difference between "globalization" and "planetarization." The latter takes on a broader and more complex meaning of globalization, since it does not limit itself to describing the global scope of the economic and technological processes; instead, it underlines the progressive process of man's insertion on Earth in its physical/biological/anthropological dimension. See Morin et al. 2003, in particular the paragraph entitled "La naissance de l'ère planétaire." Cf. also Morin 1999, 32 ff.

subject," and therefore creative, unpredictable, with its countermeasures and reactions to the context creates a process, which comes dangerously closer to biography and history than to mechanistic determinism.[7] So, if on the one hand we can speak of an "introduction of the subject in physics," on the other hand—especially thanks to Jakob von Uexküll, Viktor von Weizsäcker, and later Gregory Bateson—we begin to speak of an "introduction of the subject in biology" (Bateson 1972; Bateson 1979; Uexküll 1956); the study of the living being is always an encounter between subjects, the outcome of which—like a game of chess or a dance step in two—is never entirely predictable. The development of ethology itself as a discipline in its own right, especially with Konrad Lorenz, Nikolaas Tinbergen, Karl von Frisch, Irenäus Eibl-Eibesfeldt, Adolf Portmann, etc., presupposes a different interpretation of the animal (Lorenz 2002; Eibl-Eibesfeldt 2008; Portmann 1961). An animal is no longer interpreted in a deterministic and mechanistic way, according to the reductive stimulus-response model, but as being capable of operating with a certain dose of freedom, as can be seen from the different ritual and imprinting modules (Morin 1974).[8] This is even more evident when this "epistemological turn" is applied to the medical field. The "introduction of the subject in medicine," supported by the doctor and philosopher Viktor von Weizsäcker, by Alexander Mitscherlich, etc., theorizes the need for a substantial transformation of the doctor-patient relationship, which has significant implications also at the therapeutic level (1986).[9] The recent recovery of the role of the patient and of the dialogue advocated by the American medical anthropology of the Harvard

7 Viktor von Weizsäcker speaks expressly of this in his work *Gestaltkreis*, in which he states that "the object of biology is simply an object inhabited by a subject" (Weizsäcker 1997, 295). See Tolone 2016.

8 Edgar Morin speaks of a true "ethological revelation [*ethologische Offenbarung*]," which puts an end to an interpretation of animal behavior as a simple reactive automatism (Morin 1974, 33–35). Gregory Bateson himself, in his studies on dolphins and canids etc., recognizes the superior mammals as a true fourth level of "metacommunication" (Bateson 1972, 374–375).

9 The clash between Jaspers and Weizsäcker, regarding different ways of understanding the contribution of the "introduction of the subject" to a therapeutic change, at least confirms its heuristic and methodological validity. See in this regard Jaspers' correspondence, in particular with Viktor and his nephew Carl Friedrich von Weizsäcker; especially letters in Jaspers 2016, 551–554. Cf. 2002, 282–287; Mitscherlich 2010.

school, by narrative medicine, and by the medical humanities (Kleinemann 1988; Good 2006; Zannini 2008) find in the introduction of the subject in medicine their natural premise and condition of possibility.

This introduction of the subject in medicine has determined a real turning point, which has—variously evaluated—, in fact, led to the abandonment of the "paternalistic approach" between doctor and patient.[10] This advancement, consequent to the valorization of the subject also from an epistemological point of view, has favored a more complex vision of the medical dimension. But, also a series of not insignificant consequences, which arise from the need to reset a new dialogical and tendentially not asymmetrical relationship, instead of the asymmetrical one that had been consolidated over the centuries (or even millennia). Defensive medicine, the use of "informed consent"—in its most precautionary version—, the risk of bureaucratization and standardization of communication procedures, the risk of the overturning of roles linked, for example, to the telematic consultation by patients, nevertheless highlight the dangers intrinsic to this process of integration of the subject.[11] A process that therefore requires a correction in function of a more balanced and fruitful relationship between subject and object "from an epistemological point of view."

3. The warning of medicine

The medical avant-garde, which has gone further in this direction, is a wake-up call, which must be taken into account and treasured also in the field of education sciences. A form of the "introduction of the subject" has in the recent decades, in fact, also occurred in the field of training, teaching, and didactics in order to correct the predominantly "paternalistic" approach, well rooted especially in Europe. The model of frontal teaching, of teaching by (rigid and defined) programs, of the clear separation between disciplinary fields—as little inclined to interdisciplinarity as to multidisciplinarity—has been identified, not without reason, as the intermediary, the voluntary, or involuntary bearer

10 The emergence of a "*patient-centered*" approach should be read in this direction. See, for example, Pellegrino and Thomasma 1988. Cf. Engelhardt 2004, 611–618.
11 Cf. Broom 2005, Tolone 2019.

of an implicit ideology (Robinson 2010).[12] In addition to appearing less and less adequate to a society in perennial and vertiginous transformation and to the instinctive distrust towards all kinds of authorities, the "paternalistic-frontal" model has become in a certain way also the epistemological emblem of the Cartesian subject/object separation.[13] That is, the emblem of a "modern," dualistic approach, which takes as its model the classical Newtonian physics, the nineteenth-century industrial organization of work, and which the twentieth century tends in some way to resize. The same rethinking of didactic spaces, of the modular and open classrooms, is inserted in this framework of "didactic space" reorganization, understood in the sense that is not purely spatial.[14] Didactic innovation therefore identifies Descartes and the Cartesian dualism as its targets in line with a more widespread approach (Damasio 1994, Bateson 1979). The objective is to overcome paternalism (mono-directional on the side of the teacher) and to put the subject (of the learner) at the center as an epistemological correction to modernity. This has sometimes led to the preliminary transformation of one's polemical target into a caricature, which replaces "content" with "notions," "didactic dialogue" with "stereotyped monologue," "argumentation" with "mnemonic repetition," etc.

The danger that this correction, however, may run into the same problems that we have highlighted in the medical field is around the corner. Student-centered didactics, the "informed consent" contract, but also the increasingly

12 For example, with the so-called "Factory Model School" or "Factory Model Education" a nineteenth-century school model is outlined, also in rather rhetorical terms, in which there is a tendency to apply to education a form of Taylorism, of division of labor. If we overlook the correctness of this reading, we can see a growing tendency—especially since the 1970s—to underline the strict link between public education and *scientific management*. See in this regard Callahan 1962 and Tyack 1974.

13 The epistemology of the Cartesian, dualistic simplification must be followed by an epistemology of complexity, for which "it is necessary to reintroduce the role of the subject/observer/thinker/ideator/strategist in all knowledge"; "where in the same space and at the same time there is not only order but also disorder, where there are not only determinisms but also randomness, where uncertainty emerges, the strategic attitude of a subject is needed; in the face of ignorance and confusion its perplexity and lucidity are indispensable." (Morin et al. 2003, 45, 25; my translation)

14 *Flipped classroom*, *cooperative learning*, *peer education*, laboratory didactics, etc., are all methodologies which are part of this turn in the direction of student-centered didactics. Cf. Bergmann and Sams 2012; Turner and Shepherd 1999.

widespread form of caution underline a form of "defensive school."[15] The introduction of the subject, if conceived in purely geometrical or, worse, trade-unionist terms, certainly determines a demolition of the asymmetrical relations, but favors a sort of legal, formal symmetry, which risks inaugurating a sort of "pedagogical defensiveness." Moreover, and above all, the danger is that, in the name of a valorization of the subject—and therefore of the personal dimension, both of the teacher and of the learner—precisely that dialogic, creative, unpredictable dimension in the relationship between teacher and pupil will be lacking or will be contained in increasingly schematic procedures and protocols. As Martin Buber had correctly identified since the 1920s, the objective, Cartesian-Kantian evolution of contemporary science, applied through technology to world contexts, favors the extension of the "I-It" relationship to all kinds of relationships.[16] Even to those between people and in particular to educational relations, which on principle should represent the place of the "I-You" dialogical thought. Indeed, the teacher-student encounter, if it is to be educational and aim at the formation of the individual, must be based on a relationship of reciprocal listening, on a programming that takes into account the interaction with the student step by step, which remains open to time, that is, to the novelty that comes from the response of the other, to the educational input.[17] The didactic circularity, if it wants to be authentic, must necessarily remain "open," under construction, only partially definable a priori—under penalty of bureaucratization of the educational act.

15 In analogy with the model of "defensive medicine," we could today talk about "defensive education."

16 It is true that "ohne Es kann der Mensch nicht leben. Aber wer mit ihm allein lebt, ist nicht der Mensch"; this fatal fate is imbued with "erhabene Schwermut" and leads expeditiously to the tyranny of the "It" (Buber 1997, 44, 24).

17 In the dialogue meeting "ist die Beziehung Erwähltwerden und Erwählen, Passion und Aktion in einem. Wie denn eine Aktion des ganzen Wesens […] der Passion ähnlich werden muß"; "Beziehung ist Gegenseitigkeit. Mein Du wirkt an mir, wie ich an ihm wirke." (Buber 1997, 18, 23). See Milan 1994. Dialogical thought, applied to didactic activity, reaffirms the two theoretical cores of the "New Thought" and was welcomed at the medical level by Viktor von Weizsäcker: taking time seriously and needing the other. See Casper 2017, Fabris and Ciglia 2008.

4. The example of enactive didactics

A similar need, starting from different coordinates, is reiterated by the so-called "enactive didactics," which is, not by chance, based on the theoretical assumptions outlined by Varela and Maturana (cf. 1992). Enactivism starts from the assumption that the human system does not simply react to changes in the environment that surrounds it—in an almost deterministic and automatic way—, but with its own action modifies itself in relation to the world, and at the same time shapes the world with which it interacts (Bateson 1979; Rossi 2011). Knowledge is not simply a cognitive act of the ego, it is not the knowledge of an external object by an ego; knowledge is rather the permanent transformation of the vital process that includes man and the environment; it is a circular mutual adaptation process between action and experience, in which my cognitive act is already a response to the world, and where the world is already always modified by man. This condition of permanent feedback, this new balance of the living being in the context is knowledge, an *embodied cognition* (Varela, Thompson and Rosch 1993; Cusinato 2018), which depends as much on the conditions of the human body as on environmental inputs. Knowledge is the wisdom of the body in relation to the world, which is expressed in action and which through action modifies the world with which it interacts. It is a cognitive style that is acquired according to non-linear learning, and in which knowledge is a mode of bodily behavior in the world, an embodied cognition, the assimilation of bodily orientation.

This approach implies a recovery of the subject (pupil) in its circularity with the (scholastic) environment that has important implications, of which enactive didactics, for example, tries to take charge.[18]

5. The "original scene"

Compared to today, the previous *Bildungen* had the advantage of being a model with a clear and complete "form," functional for an era, and based

18 Cf. Minogue and Gail Jones 2006; Hanna and Maiese 2009; Varela, Thompson and Rosch 1993; Andrade, Diaz-Rojas and Reyes-Santander 2018; Bocchi and Damiano 2013.

on a centrality, that of the master, who—even before the modern Cartesian codification—could "dispose of" the learner. Paternalism, however temperate or enlightened, was the sign of an approach that lasted for centuries; we actually had to wait for the modern divarication between subject and object for the need for an epistemological correction to be postulated also in the pedagogical key (Rousseau).

With the disappearance of paternalism and the introduction of the subject, this clear Cartesian individuation of roles, contents, times, and forms fades. Teaching activity is called upon to achieve a form in the circularity of interaction. The educational encounter seems to assume an elongated configuration (that of a dance),[19] which is born from the flexibility and pathicity of the subject—both of the teacher and his culture, and of the learner; an intuition and transmission of the "objective" world is replaced by a "stipulated and negotiable" vision of the world. Surely, the risk that an educational act of this kind would allow itself to be caught up in an indefinite circular process, in a wandering that has as its objective wandering itself, is evident, even in the words of Edgar Morin.[20] And this would seem to be, in the final analysis, the mainly desired form for the global age: an open form, based on symmetry.

In this perspective, the review of the role of the teacher and the doctor seems inevitable. All the more so in a society of "moral foreigners,"[21] for which the high degree of freedom as a principal value detracts from the "arrogance"

19 The examples of dance and of the game of chess are used by Weizsäcker to indicate the dynamics of the *Gestalkreis*, the pathic dimension of the subject and the indeterminacy of the countermeasures that govern the relationship between doctor and patient, teacher and student: "Keines der beiden Tanzenden kann zweifelsfrei als der durchweg führende Verursacher der resultierenden gemeinsamen Bewegungen bezeichnet werden; die schließliche Bewegungsform möge immerhin ein im Tanzsaal augezogener Kreis sein; aber jedes richtet sich auch nach dem anderen." (Weizsäcker 1997, 250).

20 Morin's pedagogy of wandering rightly rejects learning as a transmission of knowledge or as a cumulative collection of data; however, it is problematic "to understand how this reflexive feedback must translate into educational programs, how it can become a concrete field of educational action" (Spadolini 2018, 19; my translation).

21 This is the famous expression used by Hugo Tristram Engelhardt for the subjects of contemporary pluralistic societies, characterized by secularization and references of multiple and contrasting values; see Engelhardt 1996.

of knowledge—both of the doctor and of the teacher. Indeed, the goodness of the action seems to fall under the absolute scrutiny of the one to whom it is addressed, so that the criteria of rightness and opportunity risk dissolving in the presence of the will (of the patient and the learner, as well as of their families). This attention, which is increasingly focused on learning and care methods and on the doctor-patient relationship, however, denotes a deep crisis. As Paul Watzlawick already pointed out, "it seems that the more spontaneous and 'healthy' a relationship, the more the relational aspect of communication recedes into the background. Conversely, 'sick' relationships are characterized by a constant struggle about the nature of the relationship, with the content aspect of communication becoming less and less important." (Watzlawick et al. 1997, 52). The freedom of the patient/learner (and their families) risks becoming the new polar star, on whose altar the original asymmetry is sacrificed; for a symmetry, vice versa, behind which is hidden the zeroing of the I-You relationship as a fundamental act and original scene.

As medicine has long shown, behind the rethinking of the asymmetrical relationship lies the need to overcome the Cartesian caesura, which has taken the form of one-way paternalism. It has also highlighted how this rethinking can dangerously slide towards a new form of asymmetry, which has as its main assumption the semi-unconditioned freedom of the patient. The fact that this can lead to the dissolution of the fundamental I-You relationship, putting at risk the original pact between doctor and patient, teacher and pupil, is testified by the defensive declinations of medicine and education. The educator cannot accept these, if he keeps alive the objective of responding to the appeal, to the original scene (*Urszene*),[22] by which he is questioned, even in spite of himself.

22 At the basis of the educational act, we could say, there is, as in medicine, a "methodical original scene," in which a person in need of "orientation in the world" turns to a man who could help them. There is an "original phenomenon" (*Urphänomen*) that is not imposed by the educator, but to which he, being asked, is called to respond, taking charge of the person facing him (Weizsäcker). The beginning of the biographical scene, however, is not, as in the case of the doctor, a creature's "pain," which divides the sick person from his neighbor and from the world, plunging him into a state of exclusion, but the original indigence of those who "come into the world," of those who precede the subject/object separation and the transcendental philosophical model of intentionality.

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