

Dialectical logic and education: an introductory study based on the thinking of Álvaro Vieira Pinto*

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Abstract

The aim of this study is to discuss the contributions of dialectical logic to education within the framework of Álvaro Vieira Pinto's thinking. According to the author, dialectical logic and critical consciousness are inseparable and both concepts assume central relevance in his study. In carrying out the critical and concrete examination of different philosophical conceptions and existential phenomena, such as technique, information and work, the thinker offers authentic and rigorous foundations to reflect on different questions concerning the educational context. In this study, we discuss how these existential phenomena lead us to the question of educational duality, this in turn, according to the philosopher, both engenders and is derived from the antagonisms existing between the classes of society. To overcome the educational duality, the author proposes integral education. He also discusses the issue of coloniality in the context of Brazilian education. We conclude by pointing out the fruitfulness of these reflections for education and the need for systematized studies that address the issue of educational duality and coloniality in the Brazilian educational context.

Keywords

Álvaro Vieira Pinto – Education – Professional and technological education – Coloniality – Dialectical logic.

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Introduction

The Brazilian philosopher Álvaro Vieira Pinto occupies a prominent place in the history of philosophy in Brazil, especially for his contributions related to ISEB, Instituto Superior de Estudos Brasileiros (Higher Institute of Brazilian Studies) (DOMINGUES, 2017). In recent years, research on the philosopher's thinking has been revived (FREITAS, 1998; FÁVERI, 2014; MAINARDES, 1992; GONZATTO; MERKLE, 2016), this can also be justified by the posthumous publication of two of his works (VIEIRA PINTO, 2005, 2008). In 2013, thanks to the initiative of the Rede de Estudos sobre Álvaro Vieira Pinto, a library has been created in the Zotero platform containing references and metadata related to the author's thinking².

The author's thinking covers a wide range of topics, ranging from classical Hellenism in the pre-Isebian period; collective consciousness of national reality, ideology and national development, work, critical and naive consciousness of the Isebian period; education, scientific methodology, ontology and dialectical logic of the post-Isebian period; and cybernetics, technique, technology, and sociology, contemplated in the posthumous works.

Perhaps the contributions of Vieira Pinto to the educational debate are the best known, considering the great diffusion of the book *Sete lições sobre a educação de adultos* (1982), currently in its 16th edition. In addition, the work *A questão da universidade* (1962) was reissued twice. Despite this, it's possible to appreciate the fecundity of the author's thought for the field of education from other concepts and reflections, such as the distinction between critical consciousness and naive conscience, appropriated by Paulo Freire, who affectionately called him a Brazilian master (1974/2016), and his reflections on the limiting situations that were appropriated and discussed in the educational context (MOREIRA; GUZZO, 2013, 2016).

A fundamental characteristic of Álvaro Vieira Pinto's thinking is the use of dialectical logic in his reflections, which implies a critical and authentic examination of the phenomena studied by him. Although it is possible to perceive the presence of non-idealistic dialectical logic in the philosopher's thinking since *Consciência e realidade nacional* (1960), in two later works *Ciência e existência* (1969) and *O conceito de tecnologia* (2005), we can find chapters specifically devoted to broaching the dialectical mode of thinking.

The aim of this study is to discuss the contributions of dialectical logic to education within the framework of Álvaro Vieira Pinto's thinking. For this, we will broach dialectical logic and critical awareness in the author's conception, then his explicit conception of education. Finally, we will discuss the possible contributions of the author to education considering its transforming potential of man and society.

The dialectic in Vieira Pinto

Different commentators have already stressed the importance of dialectical logic for the reflections of Álvaro Vieira Pinto (FÁVERI, 2012, 2014; LIMA, 2015; ROUX, 1990).

²- Link to the platform: <https://www.zotero.org/groups/156901/alvarovieirapinto?>

The dialectical logic conceived by Vieira Pinto aims to provide support for understanding the concept of critical consciousness and is characterized by non-idealistic thinking attentive to the process of movement of the real.

We begin our approach with the work *Ciência e existência* (1969), of the post-Isebian period, to broach the dialectical logic according to the philosopher's reflections. In chapter 9 of this text, Vieira Pinto points out three circumstances that imposed the exigency of the critical way of thinking, that is, the necessity of dialectical logic is imposed by:

a) Scientific progress and the subsequent apprehension of the intimate aspects of natural, objective, or subjective processes determines the need for efforts to grasp more and more general aspects of reality. Formal logic merely offers a fixed and limited framework for what it is about, it is more concerned with the convenience and inconvenience of associating ideas that arise in its operations. Such a framework points out the limitations of formal logic, given its restrictive character;

b) Vieira Pinto points out that only the dialectical logic offers the categories of internal relation, mediation, totality, reciprocal action, denial of negation, and others, as essential instruments for a fair philosophical perception of the problems investigated. Such categories emerge from the self-understanding of the natural process of the world, of reality. *The human being is the one who will know the world and explain it; he is also a product of this world, so he must be understood through the same categories that explain the total process of reality.* Vieira Pinto (1969, p. 185) discusses the relationship between dialectical logic and formal logic, clarifying that “the dialectic statement has to be done formally, its statements, by semantic and semiotic constraints, have to be arranged in a formal way”. Dialectical thought must be expressed in formal language, so we can say that formal logic is encompassed by dialectic;

c) Finally, Vieira Pinto conceives that the dialectical logic is indispensable to understand the events in which the human being is both investigator and one of the elements of the investigated problematic. In that sense, there is an imposition of the use of dialectical logic, because according to the author, “the understanding of the human phenomenon, in itself and in its actuation on reality, belongs to dialectics by right” (VIEIRA PINTO, 1969, p. 186), since it is the science of the universal process of reality and the production of human existence occurs in this same reality. The process of existence of the real develops chronologically in geological or organic evolution. With the human being, despite the human being or without the human being, reality develops in evolutionary successions; however, by living, humans historicize time through its rationalization.

Time, therefore, becomes the chronological duration of the existence of reality as apprehended by the human being. Human reason “engenders historicity, historical perspective, by introducing the distinction between past, present and future” (VIEIRA PINTO, 1969, p. 186). If the human being did not exist, only the succession of geological and organic evolution would occur, that is, the course of the chronological duration of the universe. Only that which is thought by the human being, thanks to its interpretation, acquires the character of being historical. The constant emergence of the new and the very evolution of things and phenomena in the course of historical time create the need for the use of dialectics. Later, Vieira Pinto (1969, p.191) again discusses the relationship between

dialectical logic and formal logic, stating that the former deals with a dynamic approach to the same reality that the latter deals with the static approach that is its characteristic. Formal logic is the logic of the form of ideas, that is, it privileges the form of the concept rather than its content. This inversion, called idealist by the author, emphasizes the universal idea, abstract and invariable, coming from the concealment of content by form. From there, considering the convenience or inconvenience of the association between the ideas arising in the formal speculations, the formal logic acquires its operative character. The dialectical logic, in turn, aims to “serve for the explanation of objective phenomena, and not its simple figuration for operative purposes” (VIEIRA PINTO, 1969, p. 195). The explanation of the objective phenomena implies the consideration of its inherent dynamics, since it is a phenomenon of the universal process of reality. The appreciation of formal logic is compared to a static photograph, while the dialectical logic is compared to a film, as it encompasses the movement of the real in its increasingly larger totality.

Some of the dialectical categories mentioned in item b - reciprocal action, denial of negation and totality - are examined in the next chapter of the same work. In the following chapter, the author focuses on the concepts and laws of dialectical logic, as well as on its existential character. Concerning the *reciprocal action*, the author affirms that there are no “causal conditioning of a single direction, but rather influences in different and opposite senses between all the pairs of beings or phenomena we consider” (VIEIRA PINTO, 1969, p. 209), next he points out the limitations of the formal concept of linear causality and the need to use the dialectical concept of contradictory determinism. Linear causality is limited because it is only capable of explaining superficial relations and events. Conceiving that the cause works in the direction of a first to a second, says Vieira Pinto, is mistaken, because causation would not occur if there was not the possibility of the dynamics in the second. Therefore, there is a reciprocal action between the first and the second.

The *denial of negation* derives from the succession of phenomena that only occurs by contradiction with previous conditions, denying their reality; the new, therefore, denies that which produced it. The contradiction lies at the core of the real, for “every thing is at the same time, and from the same point of view, positive and negative” (VIEIRA PINTO, 1969, p. 189). This same real must be taken as a whole, that is, the movement of the real must be apprehended as a total process. The philosopher is determined to recognize the universality of reality that, instead of being configured in separate and incommunicable dimensions, subsists as a totality that is sustained by the absolute laws governing the reality.

In *O conceito de tecnologia* (The Concept of Technology) (2005, v. II) items 5 and 6 of chapter IX are dedicated to addressing with greater emphasis some reflections on the dialectical logic. Item 5 deals with the transition from formal to dialectic thinking for the understanding of the construction activity of cybernetics. The author underscores the distinction between cybernetic beings by nature and those that are by construction that he conveyed. Such a distinction “affords us the best way to encompass the general, theoretical, philosophical problems of cybernetics” (VIEIRA PINTO, 2005, p. 130). Furthermore, the philosopher states that, according to the progress of the formal representation of cybernetic facts and objects, the demands of the transposition of formal logic to dialectical logic are further increasing, since the interpenetration of opposites constitutes the dialectic, by unifying them into a broader and higher concept. The importance of item 6 lies in the

author's elucidation about the relation between formal and dialectical logic, a concept similar to that elaborated in *Ciência e existência* (Science and existence) (1969). The author states that "we need dialectical logic to understand formal logic, and we need formal logic to express dialectical logic" (VIEIRA PINTO, 2005, v. II, p. 133). The author conceives that everything natural is dialectical because it is a process. Therefore, for the apprehension of the movement of the real that has dialectical character (objective dialectic), the human being needs the dialectical logic (subjective dialectic). Such a distinction between subjective and objective dialectics, by the way, was also discussed in Chapter IX of *Ciência e existência* (1969, p. 190-191). In the same article, Vieira Pinto warns about the possibility of the formal application of dialectical logic, which would result in a serious mistake. Next the author brings (VIEIRA PINTO, 2005, p. 140) a metaphor for the glimpse of the two ways of understanding the dialectic: (I) *the static understanding*, in which the dialectic is conceived as a cake form and the cake is formed as the dialectical categories; and the (II) *dynamic understanding*, in which the dialectic is conceived as the active yeast in the whole process of movement of the reality in the transformation of the ingredients into the cake.

Without focusing on the details³ which we recognize as the theme deserves, we will now turn to the theme of critical consciousness in the author's conception, considering that this, together with the dialectical logic, offered him the support for his reflections, since it is a fundamental concept in his thought.

Critical Consciousness and Dialectical Logic

The reflections on critical consciousness and its antithesis, the naive consciousness, appear prominently in the two volumes of the classic *Consciência e realidade nacional* (1960). The author conceptualizes naive consciousness essentially as "one who is not aware of the factors and conditions that determine it" (VIEIRA PINTO, 1960, v. I, p. 83); critical conscience, in turn, is conceptualized soon after as "one that has clear awareness of the factors and conditions that determine it" (VIEIRA PINTO, 1960, v. I, p. 83). The author points out that we must conceive the two forms of consciousness as *antagonistic paradigms*, establishing the poles of attraction of the individual forms of thought. Therefore, critical consciousness and naive consciousness form a continuous line in which there are several positions that are neither static nor definitive, but which lie close to one or another pole of consciousness according to one's own way of thinking. Vieira Pinto dedicates much of the first volume of *Consciência e realidade nacional* to the examination of the naive consciousness, pointing out different traits and manifestations, such as its

3- Just as an illustration, we can cite the own conception of the author of dialectical logic as a theme that should be better explored. Although we can cite the appointment of Vieira Pinto, in *O conceito de tecnologia* (2005), of Marx and Engels as references to his conception of dialectical logic, Jorge Roux tells us in the book organized by Fáveri (2012) that Gérard Lebrun rejected the assumption that Vieira Pinto was a Marxist, because according to him, the philosopher would have gone to the most varied sources of dialectical thinking, from Plotinus to Hegel, to elaborate for himself the domain of dialectical logic. In addition, it is necessary to examine in depth the dialectical categories and the distinction between objective and subjective dialectics.

impressionistic and irascible character, pedantry, incapacity to dialogue, tendency to reification of concepts, among others (FÁVERI, 2014; ROUX, 1990).

In the examination of critical consciousness, carried out in the second volume of the same work, Vieira Pinto points out its fundamental categories as: objectivity, totality, rationality, activity, freedom and nationality. The *objectivity* refers to the characteristic of critical consciousness in representing the things of the world as they are in their concreteness, to the detriment of formalist preconceptions or metaphysical hypostatizations that misrepresent the manifestation of the thing as it occurs.

The critical posture also recognizes “the existence of a natural reality and a social structure independent of the thought that knows them and prior to the act of knowledge” (VIEIRA PINTO, 1960, v. II, p. 15). The *totality* points to the concrete condition of the human being, who is first and foremost a being in the world; we must always conceive that the human being is only in the world. Therefore, Vieira Pinto clarifies and corrects the existentialist concept of being-in-the-world affirming that the human being is in the world to be in the world. While being in the world is a fact, the position of the human being in the coexistence with the other animate or inanimate beings that form him the social and physical circumstance, being in the world is a process of the presence of the human being in the world. To be in the world means to “constitute oneself as it is in the realm where it is proper to be in” (VIEIRA PINTO, 1960, v. II, p. 135). The *historicity* refers to the apprehension of reality in the form of dynamic process. As discussed by the philosopher (1969), reality sees the new constantly arising. This new takes the place of the old to then become obsolete, giving way to the new in an endless process. The *rationality* of critical consciousness does not refer to a naive intellectualism that denies affective states, but rather refers to the dialectical character of critical consciousness (VIEIRA PINTO, 1960, v. II, p. 51). The activity refers to the active character of critical consciousness, which is always projected in some way in the production of its existence. It, however, should not be confused with mere motor activity, but it encompasses any work of the human being, which is essentially the way in which the human produces its existence, overcoming its contradictions imposed by nature and social life. Finally, the *nationality* is the character of the consciousness that is situated in a context that assumes the concrete condition of nation. It takes a lot of abstraction until it reaches an almost artificial scope, to neglect that the being in the world is to be in a nation, because the world is understood as a world through the social situation that determines the purports and meanings of what is experienced by human beings. The “world” is never understood abstractly, but each one understands it from the reality of his nation. The author defines nationalism as “the project of a nation in the making” (VIEIRA PINTO, 1960, v. II, p. 320), and in the case of a nation like the Brazilian, this project involves the humanization of the conditions of existence of the masses, so that we can paraphrase the words of Vieira Pinto, who points out that the ideology of development is a humanism, and nationalism is, in its conception, a humanism.

We must clarify, however, that his conception of nationality as a category of critical consciousness, or rather as a categorical synthesis, does not involve xenophobia or an ideology of totalitarian or fascist state, as Jorge Roux points out in an interview reported in the book of Fáveri (2012). The philosopher himself explicitly evaded these positions (cf.

VIEIRA PINTO, 1960, v. II, p. 146, 166, 213, 471, 513, 518, 557, among others), associating xenophobia as the manifestations of naive consciousness and rejecting fascism and totalitarianism as antidemocratic stances. According to Vieira Pinto (1960, v. II, p. 212), when the ideal of action is to realize itself without resistance, we have the synthesis of totalitarianism, which is an antidemocratic attitude. The author rejects such a position, recognizing that, while nationalist political decisions are made, others with more refined nationalist content emerge and it is up to the democratic process to enable them to be achieved. In addition, every action has some resistance, which can be understood through a metaphor: a bird has difficulties to fly against the wind, but if there was no wind, it would not fly (VIEIRA PINTO, 1960, v. II, p. 209). In another book by the author (VIEIRA PINTO, 2008) we have the complaint that the dominant minorities use different procedures for the preservation of their power, among which, as an emergency measure, police violence and, we would add, legal, political and legal-political measures. These expedients, in addition to benefiting the minorities with power, operate at the expense of the sacrifice of the masses and the worsening of their conditions of existence, which could never be achieved through democratic participation. In addition, the author fully assumes that “the development policy on nationalist grounds constitutes for us the true humanism” (VIEIRA PINTO, 1960, v. II, p. 471), because it implies a change in the conditions of production of existence of the masses, who from this nationalism can take advantage of different technical, political, economic and social changes responsible for an increase in their possibilities of being and the gradual interruption of the insidious onslaughts of imperialism, responsible for the exploitation of labor, fomenting misery and economic plunder. We refer to the work of Mainardes (1992) as a reference for the correct understanding of Vieira Pinto’s framing of the concept of nationality.

The categories of critical consciousness cited above have an intimate relatio

The process of the real world occurs according to material connections that constitute its internal logic. This, expressing the own nature of the nine relations between the facts, or between things, represents the truth of reality. In order for the consciousness to possess this truth, it must seize the system of objective relations, represent it, and only limit to it. In the presence of a fact or an object, the reaction must be to apprehend the system of all connections that materially involve such data, linking them to others, and then to others and more, ultimately implying the whole real process. This is what true consciousness must do.

Therefore, only the critical consciousness can be the true consciousness, that is, to apprehend the phenomenon, fact or object studied in its connective totality, implying higher and more general systems until the implication of the whole real process. Dialectics, being the science of the real, is the logical attitude that underlies the assertions and the thinking of the critical consciousness.

Once the notions of dialectical logic and critical consciousness have been exposed, indissociable from a concrete point of view, we will now turn to a brief exposition of Vieira Pinto’s explicit reflections on education, that is, we will discuss some passages in the work of the philosopher in which he is engaged to discuss education.

Education in the thought of Vieira Pinto

Vieira Pinto focused on education in different works. In *Consciência e realidade nacional* (1960), he addresses the issue of education in a developing country, that is, it projects its development tending to it. Always rejecting the naive stances, the philosopher points out that education does not precede the development process, but accompanies it at all times, having to update its contents according to the historical moment and it's up to pedagogy, as the science of education, to define the means and procedures to enable the educational task. Timely education is one that allows the emergence of critical consciousness in the learner, that is, it is a process of self-reproduction of critical consciousness. The education for development does not involve the transmission of specific contents or technical knowledge, but rather the awakening of the student to a new way of thinking and perceiving the existence in the national conditions that surround him, which, in the Brazilian case, implied in the struggle for overcoming underdevelopment (VIEIRA PINTO, 1960, v. I, p. 117 et seq.). Vieira Pinto, therefore, defended the education of the masses, provoking the transformation of their conditions of existence, which means giving greater resources for the production of the existence of the Brazilian people.

However, we must emphasize that this education should be popular, that is, geared to the needs of the people and not simply the transmission of knowledge extraneous to the Brazilian reality. Thus, it is proposed a link between education and the national development project. Subsequently, in the same work, the author points to education as one of the principles of a policy with nationalist bases. Education is conceived as a process through which useful social consciousness is expanded and multiplied and should therefore be popular (VIEIRA PINTO, 1960, v. II, p. 502 et seq.). In *Ciência e existência* (1969), throughout the work, the author approaches the formation of the scientist in a critical perspective, which points to the need to form the researcher's own consciousness. Also in *O conceito de tecnologia* (2005) we can quote item 15 of chapter X (pages 328-332) as a text that brings rich contributions to the educational issue, since it discusses the transmission of human rationality, a process that occurs through education, according to the author's assumption. Moreover, in the same text, the author thematizes the relationship between society and culture. Yet, in *A sociologia dos países subdesenvolvidos* (2008), there is also the presence of reflections dedicated explicitly to the educational question, especially the imperiousness of criticism to pedagogy as it was elaborated in countries of a different situation than ours. This criticism is justified by the perniciousness of assuming extraneous reflections applied to the Brazilian reality; such a measure serves both to stagnate the self-consciousness of the Brazilian people, who instead of understanding their reality from their own conscience assumes an alien understanding, fashioned by interests and purposes also extraneous. This implies an ideological use of the reflections of others, which may serve to maintain the framework of imperialist exploitation or cultural submission.

However, as mentioned earlier, Vieira Pinto published two books dedicated specifically to the educational question (1962, 1982). Since we will deal with education in a comprehensive perspective, we specifically resort to some reflections contained in the book *Sete lições sobre a educação de adultos* (1982) to thematize education from the

perspective of the philosopher, since that in *A questão da universidade* (1962), Vieira Pinto focuses on a more specific theme, that is, the question of the university reform under discussion in that historical period.

Vieira Pinto points out that education can be approached by considering its restricted meaning and its broad meaning. The restricted meaning refers to the institutionalized education that essentially materializes in the development of abilities and competences of interest of the society, being directed especially to children and young people.

On the other hand, in its broad and authentic meaning, education is understood as a process that permeates human existence throughout its duration: “education is the process by which society forms its members in its image and according to its interests” (VIEIRA PINTO, 1982, p. 29). Education is the formation of the human being by society, a process by which society acts on its development, aiming to integrate it according to the current social way of being and to work for collective ends. For Mainardes (2015), this conception is innovative and critical. We believe that the innovative character is a reflex of the understanding of education as an authentic fact, that is, a concrete thing in the existence of the human being, to the detriment of idealistic, metaphysical or formalist assumptions and preconceptions.

After presenting the authentic definition of education, Vieira Pinto (1982, p. 30 et seq.) highlights some historical-anthropological characteristics of education; the education is a *historical process*, therefore the formation of the human being is a historical fact in two senses: in the first place it represents the individual history of each human being; and secondly, it links to the history of the community, which is constantly evolving. Education is an *existential* fact, that is, constitutive of the human being, and through which he acquires his/her essence, becoming a human being. Education is a *social* fact, referring to society in its current form (economic relations and power, culture, science, institutions, etc.). Here we unfold a contradiction, for at the same time that education shapes the individual according to his current interests and habits, education causes progress, induces the new, that is, the student incorporates a certain form, but at the same time is provoked to create, to develop something new. Education is a *cultural* phenomenon, because “education is the integrated transmission of culture in all its aspects, according to the molds and means that the existing culture itself enables” (VIEIRA PINTO, 1982, p. 31). Education is *reproducing inequality* engendered by the division of society into antagonistic classes, since it is based on the economic process. The formal knowledge is considered superior and foundation of the leading professions and it is destined to the students of the dominating classes, that is, the owners of the power that can even legislate on the education. On the other hand, it's reserved to the children of the working classes a punctual education which relegates them to a condition considered uncultured. Education is a *teleological* activity, always being directed towards an end, that is, it is always aimed at the formation of the individual in a certain way. This aspect must be observed in the curricula, in their explicit and implicit facets, which are elaborated by those who hold the social command, but also in actual practice, in *concrete* formation that the student receives.

In fact, Vieira Pinto emphasizes the concrete character of education and the way it is offered, for all abstract or idealistic discussion comes from the ingenuity of the

debaters, or from the interests of the dominating classes that avoid discussing the concrete character, that is, deprived of quality, secularity and universality, to discuss education through the heights of metaphysics and abstract idealization, and which deals with an abstract and non-existent case. Finally, we can point to education as a fact of *conscious* order. Education is “the formation of social self-consciousness over time in all individuals who make up the community” (VIEIRA PINTO, 1982, p. 33).

We drew some reflections from the Brazilian teacher about education in order to offer an introduction to his reflections and explicit conceptions about education. However, despite these conceptions and explicit reflections, we will now turn to the examination of some concepts and reflections of the author that can offer support and contributions to the educational debate. Our intention is to continue with some reflections based on the author’s thought and on those that offer subsidies to the educational field.

Vieira Pinto’s reflections and education

One of the contributions of dialectical logic to education, based on the thought of the philosopher, can be elaborated considering the category of reciprocal action. Vieira Pinto (1982, p. 118) states that “in the process of education there is no essential inequality between two beings, but a friendly encounter by which each other educate themselves reciprocally”. According to Mainardes (1992, 2015), educator and educating affect each other in this dialogical encounter that implies the transformation of the consciousness of both and which is called education. Therefore, pedagogical action implies a mutual action between educating and educator. The philosopher even states that one of the specific aspects of the critical conception of education is the understanding of the educating as knowing and ignorant at the same time, that is, the educating can not be considered an absolute unversed because he/she has the cultural resources that guarantee his/her survival. The formal education, therefore, must be made starting from the cultural base that the educating already possesses (VIEIRA PINTO, 1982).

On the other hand, we see that the dialectic category of denial of denial was also explored by Vieira Pinto as a subsidy to think about education.

The author affirms that education is an exponential process, that is, the more the educating learns, the more he/she needs to learn and the more he/she demands to learn. Education, however, multiplies itself, leaving a transmissive phase and entering into a creative case of knowledge (VIEIRA PINTO, 1982). The creation of knowledge, however, does not happen through the genius of thinkers disconnected from reality. Knowledge is produced from the negation of previous knowledge, which gives way to a new one. In *Ciência e existência*, Vieira Pinto (1969, p. 471) explains this process by stating that the “emergence of a theory constitutes an eminently dialectical historical fact”. The new theory is thought with the aid of the concepts of the previous one and in the scope of it, that will deny. Thus, every new theory exemplifies the occurrence of the law of denial of denial”. Therefore, the production of theories is only possible thanks to the understanding of the socially produced knowledge until then. The negation of limited aspects and the

consequent dialectic leap culminate in the denial of denial, in favor of a higher stage of understanding of reality through the new theory, which later will also be overcome.

Another relevant aspect of the contributions of dialectical logic as used by the author can be glimpsed considering the importance of elucidating the character of the technique effected by him in *O conceito de tecnologia* (2005). The author, after examining the idealistic and metaphysical conceptions on the technique issued by Heidegger and Spengler, performs an exercise in the semantics of technique (see I, page 174 et seq.) in which he elucidates various contemporary philosophical misconceptions. In its Greek origins the term *technique* was an adjective and originally applied to human actions, which could be technical or not. The character of the technician being of a human action was later added to the own human being who performed the technical acts, thus who came to be called a technician. The technician, that is, the one who performed technical acts, therefore, practiced the technique: from that moment came the substantivation of the technique, its philosophical hypostatization or, according to some, its “reification”. This fact was considered by the author as unswerving and, he points out, responsible for several confusions of simplistic consciousness. The possibility of using the technique in noun form is valid in serious and authentic philosophical exercises, but it is necessary not to lose the ballast of criticality by conceiving it with attributes unrelated to its being. Great philosophical confusions are engendered by the hypostatization of technique, that is, the transformation of it into an entity with attributes and capabilities unrelated to its being.

Vieira Pinto clarifies that the technique is the mediation exerted by the human being that consciously acts, equipped with instruments or not, on the environment in the attainment of his existential purposes. The author defines the essence of technique as the “mediation in the attainment of a conscious human purpose” (VIEIRA PINTO, 2005, v. I, p.175), which ultimately extends the meaning of technique, giving it its fair amplitude. Thus, says Vieira Pinto, there is no plausible sense in elucidate about the day when technique will dominate the human being, or other scatological predictions, because technique alone does nothing, and what it does is due to the technical actions of the human being because, by definition, the technique is a mediation exercised by the human being. Only human action allows the manifestation of the technique and its subsequent abstraction, conceptualization and philosophical meditation (VIEIRA PINTO, 2005, v. I, p. 368). Vieira Pinto defined the technique as an existential, a term similar to the philosophical concept originated from existentialism, but elaborated in a radically different way by the author. According to existentialist elaboration, an existential is a characteristic of the being of man, with a solipsistic tone and centered on individualized consciousness, a definition that brings clear metaphysical traits. On the other hand, Vieira Pinto points out that, in his thought, an existential arises from the social character of the production of existence, which implies in the social being of the human. Technique, as the other existential ones, only acquires meaning and function within the scope of its collective relations of production of existence (VIEIRA PINTO, 2005, v. I, p. 238 et seq., II, pp. 392 and 543). It is clear that technique can not be dissociated from human action, implying that, strictly speaking, few actions of the existing human being would be mere repetition, that is, not technical.

These reflections on the technique allow two contributions to the educational field. The first one was pointed out by the philosopher himself (1982, 1994), we refer to the opposition between a so-called technical education and a so-called humanistic education. Vieira Pinto's reflections on technique also imply the recognition that the educational duality expressed in the distinct formation offered to the children of the ruling classes and to the children of the popular classes comes from ideological interests for the legitimation and maintenance of human exploitation. We see that the discussion about the question of technique and educational duality is one of the possible lines of reflection based on Vieira Pinto's thinking.

The meditation on the unfolding of the conceptualization of the technique according to the philosopher's thought must go through another line that still has everything to be done: the technical action in the educational praxis.

We can also think about the duality from the reflections of Vieira Pinto on the transmission of information. This topic assumes outstanding relevance when considering that one of the aspects that differentiate the human being from the animals is exactly this process of transmission. While animals do this through genetic transfer that embeds the instinctive imposition, in the human being the transmission of information takes place through the cultural development and dissemination within society (VIEIRA PINTO, 2005, v. II, p. 328 et seq.). Vieira Pinto points out that the socioeconomic situation of Brazil engenders a process in which the different levels of access of the human being to the cultural assets and to the knowledge of the superior rationality produced until then by humanity result in the impossibility of an egalitarian formation. In other words, there is a range of social factors that oppose the possibility of equal access to information. This opposition materializes thanks to the unequal distribution of education, as well as the type of education offered.

In a society divided into antagonistic classes, the ruling class arrogates to itself the power to establish what is cultured, erudite and superior, such as its antipodes, the popular, the vulgar, the lower and simpleton culture. To the masses, considered uncultivated and inferior, it is reserved an education of reductionist character and directed to the preparation for the manual and stamping work, that guarantees them strictly the subsistence, whereas to the dominant classes it is reserved an education that designs them for the charges said superior and intellectual. Vieira Pinto establish that:

What distinguishes the transmission of human reason is the cultural character, that is, the inclusion of the information to be transmitted in a social storage of knowledge, where the receivers reactivate the content that they acquire. This process, usually called education, is determined by the need for survival strictly speaking, not of the individual as such, but of the species, that is, in the case of the society to which the individual belongs and which has the culture to transmit (2005, v. II, p. 328, our griffins).

Education, therefore, must never be dissociated from society and its interests. It is, we repeat, a process that, seen authentically, pervades the whole existence of the human

being, not only occurring in the formal educational spaces, but in the production of the existence of the human being, which involves its social outline.

These reflections on education are only possible thanks to the authentic conceptions of human existence allowed by the use of the dialectical categories of totality, historicity and objectivity.

On the other hand, the quote above refers us to what is characteristically human, that is, something that is essentially human, also being an existential in Vieira Pinto's thinking. We refer to the concept of work. This *need for survival* can only be remedied by means of the set of actions undertaken solely by the human being in the quest for the adaptation of nature to himself and his interests, unlike animals, which only adapt to nature. This set of actions is called work. Vieira Pinto (1969, p. 228, 325) defines it as an existential, a characteristic trait of the human being that means "the mediation by which man solves the fundamental contradiction of his existence by virtue of being the animal species that was differentiated by ability to build a world for himself". Therefore, to say that animals or machines work is nothing more than an analogy or metaphorical use of that existential, which by definition, like other existential ones, is specifically human.

The human being seizes nature by proposing it according to their interests. According to the author, what is understood by *nature* has a distinct reality in each historical phase. If, previously, the natural world, almost untouched by the human, was nature, currently, in contact with products manufactured through art and science, there is a new configuration of what nature is (VIEIRA PINTO, 2005, v. I, p. 37). These reflections about the work bring us back to the question of educational duality, now with the intention of discussing the possibility of its overcoming. Vieira Pinto (2005, v. I, p. 390) affirms that the human being is "by nature the being that discovers the being, not as a result of a metaphysical illumination, but in the material, social, incessant execution of the project of being, every society is in possession of a 'potential for discovery". This quotation defines the human being as the being that discovers the being from its material execution, from practice, or, in other words, from work. The human being is bound to work, under penalty of, if he does not, dying (VIEIRA PINTO, 2005, v. II, p. 574). Therefore, work is a fundamental concept for the understanding of the production of the existence of the human being, because, for the human, "in a constitutive sense, not working would mean not existing" (VIEIRA PINTO, 2005, v. II, p. 788).

Moreover the philosopher explains that even the rich perform a certain form of work because they are characterized by taking advantage of the current socioeconomic dynamics to make others work for them. On the other hand, the unemployed undertake the search for work or even other types of occupation that configure existential work. If they do not have the occupation called employment, this is due to the social obstacles to this practice.

Work, being conceived as an existential, a constitutive of the human being, cannot be dissociated from human existence. Therefore, the human being only exists by working, considering the different expressions that can configure the work. However, the human being does not work alone, but rather in a regime of collaboration with his peers; the existence of the human being is produced through collaboration, that is, the

joint work between the different members of his community. The current socio-political regime establishes the distinction of types of work and their subsequent valuation in terms of superiority or inferiority. Such a dualistic assessment, however, cannot be taken as definitive or formative of the placement of labor in human existence. The duality of labor and its reciprocal, the duality of education, are derived from the own composition of society into antagonistic classes, whose leadership arrogates to itself the power to determine what is superior, cultured, elevated, and the lower, uneducated and uncontrolled antipodes. The maintenance of leadership and its powers is only effected by the perpetuation of the condition of exploitation of the working classes, and in this process of perpetuation, education plays a fundamental role. Since a strictly vocational education or humanistic education should not be taken as radically different antipodes. We can use the classic *Sete lições sobre a educação de adultos (Seven Lessons on Adult Education)* (1982) to address the overcoming of this duality. The philosopher unties this Gordian knot by stating that the discussion of this educational divergence is naive: “there is no differentiation on the screen when one starts from the unitary critical concept of ‘man’ and his reality in a developing world, with which he is indissolubly linked” (VIEIRA PINTO, 1982, p. 42). Therefore, formal education should aim at the integral formation of the human being. From the reflections elaborated by the author we can point out that there is a vice of reasoning that begins with the deficiency of the notion of content of education, since content should not be dissociated from its form, because it incorporates all the concrete conditions underlying the educational act. On the other hand, returning to the author’s citation, a fragmentary conception of human being can engender dual education, a fact that is emphasized, deployed and engendered by the antagonism of classes already mentioned.

But anyone who thinks of this antagonism as the main contradiction of Brazilian society is mistaken. Vieira Pinto points out that the main contradiction faced by Brazil is engendered by the opposition between the interests of the developed nations and those of the underdeveloped nations, such as Brazil. The author acknowledges the existence of the contradiction between the antagonistic classes within Brazilian society, but explicitly states that this is a secondary contradiction to the economic plundering and cultural influence suffered by our country (VIEIRA PINTO, 1960, v. I, p. 34). The underdeveloped country tends to carry out a two-way movement: while exporting its material goods, especially raw material, or, according to the economic jargon, commodities, concomitantly imports spiritual goods that do well for the maintenance of exploitation and cultural and economic plundering (VIEIRA PINTO, 1960, v. I, p. 238; 1969, Chapter XV). Vieira Pinto (2008, p. 63) clarifies that “the economic battle of the exploiters and powerful has never been separated from another, the battle for cultural submission of the poor world,” and this is because the battle for the economic exploitation of a nation is impossible to be carried out together with the presence of an authentic awareness of its national outline. It is also worth mentioning the epistemicide carried out in this battle, because, while the dominated country imposed its theories and ideologies, it should literally murder the epistemic foundations originating from the dominated people as a way to assure its domination. Material subjugation, precedent to economic plundering, depends on cultural subjugation.

In order to realize both movements, political arrangements are needed with the country's predecessors, that is, the ruling groups, the power-holders of the underdeveloped country function as a slave to the interests of the dominator, joining with foreign interests and operating according to the orders of the exploring metropolis (VIEIRA PINTO, 2008, p. 264 et seq.). These reflections elaborated by Vieira Pinto throughout the 1960s and 1970s more than ever are evident, considering the economic plunder suffered by our country in recent years to the detriment of the growth of a genuine national industrialization and exploitation of the natural resources in a way to serve the interests of our own people.

We have brought this brief digression with the intention of introducing the question of coloniality in the context of education, a topic that we will reflect from now on from the contributions of Álvaro Vieira Pinto. We can introduce the concept of coloniality from the explorations of Maldonado-Torres (2007).

Coloniality expresses the character of being of the patterns of relations of power that arose in modernity and that still reify the old context of colonial exploration. But if there had been a colonial exploitation, formalized thanks to the colonialism that was accepted and stamped even by the philosophers and thinkers of that time, today there is an exploitation and economic spoliation veiled through other concepts and practices, but concretely they are very similar to those of colonization. Coloniality underlies economic exploitation, being the basis for cultural influence and the obscuration of the just authentic awareness of national reality. We return to Vieira Pinto's citation (2008, 63), which states that "the economic battle of the exploiters and powerful has never been separated from another, the battle for cultural submission of the poor world." The philosopher thus shows us that the great influx of foreign works, completely alien to our reality, is not the result of chance, but the result of plunder and economic exploitation. It is a natural consequence of the country whose owners of power are merely the slaves of foreign interests, acting both politically and culturally and ideologically to project the interests of others.

In the work *Sociologia dos países subdesenvolvidos* (2008), Vieira Pinto brings, in chapter 60, reflections that we consider of great value for the debate around the question of coloniality and overcoming its tragedies. The philosopher points out the ideological interests underlying the idealistic foundations of the human sciences in general, and for our work we will emphasize pedagogy in particular. These idealistic foundations are enshrouded in a metaphysical and formalist position, serving, therefore, ideological manifestations thanks to the skillful maneuvers allowed by formal logic, given its lack of commitment to concrete reality. Vieira Pinto points out that sociology that is born out of the shady interests of outsiders and conceals the possibility of a fair and authentic examination of Brazilian society, a situation that we could extend to pedagogy and the field of education as a whole, which, like sociology, suffer the influences of the coloniality of knowledge. Throughout the work, the philosopher often addresses what we would summarily define as the question of coloniality. However, especially considering the educational issue, we emphasize the author's position that defends that a thinker of a country like ours should possess a critical spirit, rejecting methodically the concepts, techniques, procedures, measurement standards, projections and tactical conclusions from other people's realities and reflections from others.

This rejection, however, must base an examination of the concepts and methods that conceive them in the historical and social situation in which they will be applied; to apply them without due examination is conceived by the author as a “serious intellectual crime” (VIEIRA PINTO, 2008, p. 276). From this critical examination comes the possibility of taking advantage of the conceptual elaboration of others, but considering the experiences and experiences of Brazil so that the situation experienced by our people is the focus of an action situated and congruent to the Brazilian reality.

It is not uncommon to approach educators of basic education, especially primary education, and discuss the thought of this or that foreign thinker, some reflection coming from this or that great adventitious figure who thinks educational issues and we receive, in response, something like “in theory it’s beautiful, but in practice, history is different,” or “in theory it is like that, but in reality it works otherwise.” To elucidate the responses of these educators and their meaning, we must say that we conceive that every theory is the theory of some practice, for theory is contemplation, and especially in the educational context, theories are the abstraction of rationally elaborated practice. When educators point out that there is a split between theory and practice, they show the coloniality that underlies their own formation. The theory that these educators criticize is authentic and works, yes, according to practice, but according to the practice of others, born in an alien reality and in other contexts. That is why it is a serious intellectual crime, according to Vieira Pinto, to assimilate the reflections of the sciences of others as if they were ours, because we are wrong to take the theory of a practice that is not ours. Educators in their work are increasingly aware of their reality. This implies the discovery of phenomena, facts, ideas and questions unprecedented, and questions radically different from the experiences of other educators of other people’s realities. It is necessary to think of education and pedagogy in its concrete aspects and in its concrete outline, thus avoiding the ideological cover-ups engendered by coloniality. However, the sense of the response of these educators is the manifestation of the increasing degree of critical awareness, because, when working both in activities with material objects and in social activities, as in the case of education, the worker unceasingly discovers new aspects, facts and characteristics of that which was worked on. This implies the discovery of the inadequacies of theories generated in other people’s realities simply because they are theories of others.

Conclusions

Álvaro Vieira Pinto has a vast work, although not yet fully published, covering a wide variety of subjects. His reflections on education bring contributions that elucidate the concrete character of the educational process, which avoids reductionist and naive positions of this eminently human activity. The authentic conception of education, to the detriment of metaphysical and idealistic assumptions, disconnected from concrete existential reality, is fundamental for the understanding of education as it occurs and for the possibility of realizing effective actions of transformation of the national reality, affected by the great contingent of masses who suffer from the harsh conditions of production of existence.

However, along with his explicit reflections on education, his reflections on human existence, always based on a concrete and rigorous dialectic attitude, allow other themes and problems debated by the author to contribute to the discussions related to the educational context. This study addressed some topics of great importance in the educational context based on Vieira Pinto's thinking, emphasizing the contributions of dialectical logic.

The contribution of dialectical logic to the philosopher's thinking is reflected in the way topics are worked out, resulting in an authentic appreciation of their concrete manifestation, that is, aiming at the phenomenon or experience in how it manifests existentially and not in idealistic terms nor metaphysical. Moreover, the category of totality prevents reductionism, proposes the resolution of the false problems raised by idealistic thinking and refers to the meaning of the phenomenon investigated.

It can be seen that educational duality and the question of coloniality in education have both concrete and harmful effects on the educational context and that they must be approached from a critical perspective in order to overcome them. Only the critical consciousness, committed to the surrounding reality and to the dialectical categories of thinking, is capable of offering subsidies for overcoming these questions. The great influx of foreign works completely alien to our reality is not the result of chance, nor the consequence of the inability of our people, or other substitute ideological concealment, but rather the result of the plundering and economic exploitation to which we have been subjected, with the consequent impacts of cultural submission. Only the authentic examination of the manifestation of these phenomena in their objectivity can reveal the measures for their overcoming, and this examination can only be effected through the categories of non-idealistic dialectical logic.

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