Historical-Cultural Psychology, Marxism and Education

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Abstract

All work carried out by Brazilian teachers and researchers, who are members of this group - which involve students in undergraduate and postgraduate studies in Psychology – have as basic characteristics the following: 1) in them, the Historical-Cultural Psychology, analyzed from their Marxists philosophical foundations , is taken as one aspect of Critical Psychology; 2) they discuss theoretical and practical possibilities for facing hegemonic psychology, human phenomena into the biologizing or naturalizing perspective , denying the multiple determinations that generate and perpetuated them; 3) repeatedly assert that the human development (normal and special) is social-historical and, consequently, rigorously defend proposals for humanization and transformation of social practices with a view to the full development of higher psychological functions that comprise consciousness; 4) discuss and analyze the historical constitution of the subject and its connection with the educational process, whose aim is to defend the ownership of scientific knowledge as tools for the analysis of objective reality; 5) commit to a psychology that seeks to transform and overcome the current capitalist mode of production, which is organically exclusionary. Thus, the research turns to a critical reading of reality, based on the assumptions of Historical-Cultural Psychology developed by L. S. Vygotsky, A. R. Luria and A. N. Leontiev, aimed at creating conditions for the transformation of psychological and pedagogical practice and, consequently, the society.

Keywords: Historical-Cultural Psychology, Marxist Psychology, psychological practice, education for humanization.

Introduction:
Why Historical-Cultural Psychology can be considered an aspect of Critical Psychology

We will start this text searching for elements which could explain the theoretical basis underlying the work of authors of Historical-Cultural Psychology, i.e., historical and dialectical materialism and the concept of criticism in this theoretical model. After this we will reveal the foundational assumptions of practices in educational psychology based on this approach to psychology.

According to Duarte (2000), the method adopted by Vygotsky is dialectical because the apprehension of reality does not happen instantly, at the level of appearance; knowledge takes place through the mediation of abstract concepts, by seeking for the essences of phenomena, not their appearance. In this respect, it is worth keeping in mind the ideas of Vygotsky (1996),

when he states that "[...] scientific knowledge has to be free of direct perception" (p. 285) and that "[...] the basis of scientific knowledge is to leave the confines of the visible and seek for their meaning, which can not be observed" (p. 289) directly and without mediation, which explains the multiple determinations that generate the facts or phenomena (taken as objects). So, it is necessary to go to the essences of the events studied, as stated by Duarte (2000), which involves going to the very essence of the objective reality; to social relations.

This understanding has supported our work in the training of psychologists in the undergraduate course in Psychology at the State University of Maringá (Paraná / Brazil). The activities are focused on the continuing education of teachers (regular and special education) and other professional areas of education and health, through courses and advisory services related to the federal government of Brazil,[1] the government state of Paraná and the governments of several municipalities of this state (such as Maringá, Cascavel, Cianorte, Campo Mourao, Lobato, Paiçandu, among others). It has also guided our work of teaching at post-graduate level, as well in the Graduate Program in Psychology (PPI / UEM – Master[2]), as in specialized Sensu Latu course titled Specialization in Historical-Cultural Theory, offered by the Department of Psychology (DPI / UEM), which has had six completed classes already and so far seems to be unique in the country.

We set out, therefore, from the perspective that the psyche, in its uniqueness, according to Duarte (2000), can only be understood through the concept of totality, taking into account the contradictions that permeate social relations. In this sense, a critical psychology considers that the question of method of analysis is essential because, as stated by Vygotsky (1996, p. 389), "the [...] possibility of psychology as a science is, above all, a methodological problem". The Marxist dialectic must lead the way to understanding the facts, considering that "The dialectic incorporates the nature, the thought, the history. It is the science in general which is considered the maximum universal" (Vygotsky, 1996, p. 393). Through this method it is possible to deny certain facts, to seek to overcome it, and to reach new syntheses.

In other words, standing in the field of psychology, we attempt to demonstrate in the activities we carry out that the facts that are presented in schools, health units, Reference Centers of Social Assistance (CRAS) [3] and in other social spaces, have to be explained and understood, and to include the involvement of professionals in order to impact in a positive way, unveiling and transforming the established practice. This can only be done successfully with the support of an explanatory theory and method of how the human being is in close relationship with their peers, and dialectival relationship with the world – in other words, historic. We believe that this theoretical-methodological option for psychology forms its critical basis.

With this in mind, it is important to highlight the historicity that permeates the study of the facts in critical psychology. Taking support from Shuare (1990), we would argue that the human psyche has a social-historical origin and that all the facts should be studied taking into account its historicity. Time, in this perspective, has the meaning of historical time.
For the author,

[1] The participation was in teacher training courses and specialization promoted by the Ministry of Education (MEC), under the headings of Auditory Sensory Disability and Indigenous Education and Support Education Specialist, respectively.
[2] To get further information, look at the website www.ppi.uem.br.
[3] Further information, consult the website http://www.mds.gov.br/assistenciasocial/protecaobasica/cras

> [...] Mental processes do not develop in isolated time from their own intrinsic characteristics, as this time acts on a seed and waits, the time required for the internal implicit structures occur, it is not the maturation time as usually understood, for example, related to the physiological structures which apparently contains in their germ what will be, since the corresponding time elapses. (Shuare, 1990, p. 59)

The time, thereby, refers to the process of development of the society. So, endorsing historicism, according to Shuare (1990), leads to a second proposition: the human psyche has a historical development and an intrinsic dependency relationship with psychic phenomena, with regard to life and social activity. For the author, human development must be understood from the perspective of productive activity, from the relations that men establish among themselves and with nature. Man becomes, as it also sets Saviani (2005), based on Marx, the synthesis of social relations.

Vygotsky (1996, p. 368) states that "[...] everyone is more or less the model of society, or rather the class to which he belongs, since it reflects the totality of social relations"; therefore, a critical psychology has to understand that the development of the psyche is tied to social relations, which are antagonistic social classes and established in certain historical moments. This leads us to recognize that the social, in Vygotsky, does not imply the meeting of people who are interacting with each other, but refers to individuals in the process of humanization in accordance with the objective conditions set by each time, society and social class.
Shuare (1990) also gives us a third proposition: the human psyche is mediated and the higher psychological functions are the products of interactions themselves mediated by man-made objects. All human behavior is mediated by tools and signs, as we shall see throughout this text.

Work, understood as a transformation of nature, is the source of universal mediation. According to Engels (1986), work was responsible for the creation of man; it is the fundamental condition of all human life, which is why it is taken as a vital activity. To supply his basic needs and those created later, man works, that is, he transforms reality and thus also transforms himself. By creating ways and means to step away from nature in order to survive, he creates his own humanity and humanizes nature at the same time. Man, unlike animals, not only passes on to new generations genetic markers, but through the established mediations, he also passes experiences and products, in order to continue the process of civilization. He is, therefore, both the subject and object of social relations which create and reproduce; being a product of society, he also produces it. Being the creator and creature (product) is a historical and dialectical relationship. Finally, each progress acquired by man meant a progress in the field of nature itself (Tuleski, 2008).

Vygotsky shares the views of Engels on human labor and the use of instruments as a means by which man transforms nature and transforms himself; that is, transforms his own consciousness. For Marx and Engels (1996), man's consciousness is determined by the material conditions of life and the social relations of production. Thus, historical changes in society and material life produce changes in human nature, that is, into the consciousness and behavior of men.

Marx, like Engels, sees labor as the fundamental characteristic of man. According to Vygotsky (2001, p. 43), since it became possible to work "within the meaning of the human word, i.e. the planned intervention and rational of the man in the natural processes in order to react and control the vital processes of man and nature, since then the humanity has designed

a new biological step [...]" that distinguishes humans from animals. It is by means of work that human beings, in transforming nature, build society and make history.
For Marx and Engels (1996, p. 39),

> [...] The first premise of all human existence, and therefore all history, is that men should be able to live, so that they "can make history." But to live, we must first of all to eat, to drink, to have shelter, to dress up and some more things. The first historical act is thus the production of means to the satisfaction of needs, the production of material life itself.

According to Facci (2004), in the process of work man has produced his history. When he meets the needs of subsistence through instruments prepared by the men himself, his satisfaction leads him to new needs. Thus, man is in constant process of transformation of nature and of himself; he is always with material and intellectual needs to be satisfied, and the formation of the collective human psyche occurs through the appropriation of culture.

The appropriation of cultural goods and materials leads to overcoming the limitations posed by biological development. The humanization process occurs when man develops higher mental functions – typically human, such as abstraction, planning, logical memory, which differentiate him from other animals. Leontiev (1978, p. 70) states that "the emergence and development of work, thefirst and fundamental condition of human existence, led to the transformation and humanization of the brain, the external activity organs and the organs of sense." Work, for this author, is characterized by the use and manufacture of instruments which can be made in collective activity. According to Vygotsky (1995, p. 85), "each step of the particular field of forces of nature, always corresponds to a particular stage of the field of conduct, in the subordination of the psychic processes to the power of man."

To accomplish this dominion over nature, man not only produces tools, but also introduces artificial stimuli in the process, such as signs. These, at first, work on the external level, but with gradual internalization, produce new connections in the brain.

Along this line, Markus (1974) also clarifies that the character of consciousness and human knowledge can only be understood from the perspective of work, which leads to the satisfaction of needs rather, not in a direct or immediate way, as in animals, but a mediated way. This mediation is presented in Marx, according to the author, in two ways: 1) as a working tool that man inserts between himself and the object of his need; and 2) as an activity of mediation, the work itself, which "precedes and makes possible to use the object" (p.51). Thus, for man, the productive activity assumes a developed working tool, which gradually transforms the natural environment in the human environment or "civilized", "an environment in which it was objected the needs and capacities of man" (p. 52). According to him, at birth man

> is already targeted to those needs and capabilities demonstrated in the past and he can access materially from the results of the whole social development that preceded him, surely it is the only way that the development process will not be forced to start again since the beginning, but can assume from where the activity of previous generations stopped. Thus the job, while an objectification of human essence, sets up, in a general way, the possibility of history. (Markus, 1974, p.52)

As stated, the Soviet scholars Vygotsky, Luria and Leontiev sought grounds in Marxism to explain the development of the psyche, stating, as presented in the quote from Markus (1974), that the human being is born in a developing society, in which various knowledges already have been drafted and should be suitable for new generations. The transformation of behavior and animal desire in human desire and behavior (humanization process) is given based on the work process, which presents itself sometimes explicitly, sometimes implicitly, in all the works of these Soviet authors.

The Marxist thesis that man, in transforming nature, not only humanizes it, but during the process humanizes himself – that is the human world, objectively and subjectively – is the basis of all training and development of higher mental functions, according to Vygotsky, Luria and Leontiev; but for these functions to develop fully, not only the insertion of each new member in society is enough, because from the moment that human societies become more complex their production activities also become more complex, specially their mechanisms and the symbolic tools that allow understanding of the reality in which men are placed. The development of higher mental functions, as discussed below, occurs in the community and demands an instrumental mediation.

Historic-Cultural Psychology and the development of higher mental functions as the basis for humanization

Luria (1981), in an attempt to understand the structure of mental activity, i.e. how the brain works, sought to overcome two possible explanations current in his time: the narrow localizationism (founded on the possibility of locating in a strictly way the more complex mental mechanisms) and the holistic view. He was firmly opposed to understanding the brain as a set of reactive systems or elementary schemes that incorporate basic stimuli received from the outside world and produce responses to these stimuli. This approach, considered by him as a passive and mechanical view of brain functioning, which would make this operation completely determined by the past experience of the individual, would be inadequate to explain the higher psychological functions of sociocultural origin.

Luria (1981) proposes a new approach to higher cortical functions. As they have been formed along the historical development and are thus social in origin and complex and hierarchical in their structure; and as they are based on a system of methods and cultural backgrounds, resulting in the basic forms of conscious activity, these complex forms of activity should be taken as functional systems, which radically alters the approach to the problem of localization of functions in the cerebral cortex. For him, the functional systems are distinguished not only by the complexity of their structure, but also the mobility of their constituent parts. In addition, systemic structure is characteristic of mental complex forms which can not be considered lonely powers located in the córtex strict fields.

Luria (1981, p. 16) explains that the higher forms of conscious activity are always based on certain external mechanisms, supports or devices that are historically generated, which act as "essential elements in the establishment of functional connections between individual parts of the brain, which by through their support some areas of the brain, which were previously independent, become the components of a single functioning system." The presence of these functional links differentiates the human brain from the animal one, because they are means which historically are generated by men to organize their behavior that will determine new relationships between the parties responsible for cortical activity.

The main feature that differentiates the regulation of human conscious activity is that this occurs with the close involvement of speech. According to Luria (1981), while the elementary forms of regulation of body processes and the simpler forms of behavior can occur without the aid of speech, the higher mental processes are formed and occur based on the activity of speaking, which is expanded in the early stages of development, but then becomes increasingly contracted or internalized. Thus, the programming and testing action of the human brain takes place in those forms of conscious activity whose regulation occurs by intimate participation of speech as controlling behavior.

In the same sense, Engels (1986, p. 272) says that speech and work "were the two main stimuli under whose influence the brain of the monkey has been transformed gradually into the human brain – which, despite all their similarities, overcomes it considerably in size and perfection." For this author, according to each new stage of development of humanity, of man's dominion over nature, which had begun with the development of the hand, with work, would expand the horizons of man, causing him to constantly find in the objects new properties which were unknown since then. He states that

> [...] The development of the brain and senses in his service, the increasing clarity of consciousness, the ability of abstraction and increasing discernment, reacted in turn on the work and on the word, encouraging more and more their development. (Engels, 1986, p. 273).

The instruments or tools used to transform nature, a product of social practice, provoke and cause the development of mental functioning. Luria (1994), therefore, consistent with Marxist philosophy, believes that tools not only lead to radical changes in the conditions of human existence, but act on humans to effect a change in their mental condition. In the complex interrelationships with the environment, his organization is being refined and differentiated: the hand and brain assume defined shapes and a series of complex methods of conduct are in the process of evolving, aimed at a man's adaptation to the surrounding world and the latter to him.

In this sense, for Luria, no development, even in the child, can under the conditions of modern civilized society be reduced to the development of innate natural processes and the morphological changes conditioned by them. Any developmental process includes the changes carried out in the social groups, in the civilized ways and in the methods that help the child to adapt herself to the conditions of the community that surrounds her. Such forms of the child's cultural selfadaptation are more dependent on environmental conditions in which she was properly inserted than constitutional factors.

These methods and forms of behavior in children are constituted, firstly, by the claims which make up the environment. These requirements and conditions are precisely the factors that may either stop or encourage her development; therefore, by requiring the child to work in new ways to adapt herself, can cause sudden changes in her, resulting in "undoubtedly cultural formations" whose role is crucial in her development (Luria, 1994, p. 46). Thus, the behavior of children and adults in relation to the practical use of tools and the symbolic forms of activity connected with speech are not parallel links of action. A complex psychological entity is formed from the folrms of instrumental mediation, in which symbolic activity is directed to organize practical operations by creating a secondary order of stimuli and planning one's own behavior. Contrary to the higher animals, in man a complex functional connection between speech, the use of tools and the natural visual field occurs, and without any analysis

of this connection, the psychology of the practical activities of man would be incomprehensible. “The formation of the complex human unit of the speech and practical operations is the product of a deeply rooted process of development in which the individual history is linked to the social history” (Vygotsky & Luria, 1994, p. 113).

The child, when talking and using the necessary tools, combines speech and action in a structure, and thereby introduces a social element into her action, which determines the destiny of the action and the future path of development of her conduct. The child’s behavior is then transferred for the first time to a brand new level, driven by factors that lead to the emergence of social structures in the psychic life of the child. Then, the entire history of the child’s psychological development shows that from the first days of development, her adaptation to the environment is achieved by social means, i.e. by those people who are around her: the object path to the child and from the child to her mind passes through another person (Vygotsky & Luria, 1994).

According to Vygotsky and Luria (1994), when the child separates the verbal description of the action (statement) before the action itself, she socializes her practical thinking, shares her action with another person, and so her activity enters into new relationships with speech. By introducing consciously the action of another person in her attempts to solve a problem, she begins to plan not only her mental activity, but also to organize the behavior of another person in accordance with the requirements of the problem, creating safe conditions for its solution. After this the process is oriented to her own behavior, meaning not only the temporary transfer of speech related to the action, but also the transfer of the functional center of the whole system. So, if in the first phase speech follows action, reflecting it, strengthening its results and remaining structurally subject to it and caused by it, in the second phase the starting point of the process moves to speech, which begins to dominate and guide the action, and determines the course of its development, being the planner of speech functions and fixing the direction of future operations. Thus, the self-directed stimuli of speech change in the evolution process of some means of excitation of another person to autostimuli, radically reconstructing the whole behavior of the child (Vygotsky & Luria, 1994).

These functions, which from the standpoint of phylogenesis are not the product of biological evolution of behavior but of the historical development of human personality, are what Vygotsky and Luria (1994) call “higher functions”. This is due to their place in the development plan: their history is distinct from the biogenesis of the lower functions; they refer to the sociogenesis of higher mental functions to indicate the irreducibly social nature of their genesis. The history of higher mental functions is defined as the story of the transformation of the means of social behavior in individual modes of psychological organization.

During this process of “internalization”, i.e. of internal transfer of functions, occurs not only a complex reconstruction of its structure and improvement of the separate functions in the process of psychological development of the child; the intrafunctional connections and their relations are also transformed in a radical way. As a result of these changes new psychological systems emerge that come together in cooperation and complex combinations of several elementary functions that were previously separated.This concept of higher mental functions include complex combination of symbolic and practical activities, i.e. the new correlation of functions, characteristic of the human intellect. It is precisely for this reason that human activity is considered a free activity, not dependent on direct needs and the immediate situation perceived – that is, it is an activity geared toward the future.

Importance of regular and / or special education for the establishment and development of higher mental functions

In discussing the formation of higher mental functions from a perspective that relates the biological and social factors differently from that which is recurrent in hegemonic conceptions in psychology – which we criticize – a question arises: what is the relationship between the constitution of these functions and the process of schooling?

For the conceptions that take human activity as a result of biological inheritance and family educational process, the school becomes a space for expressing what already exists; what the individual already possesses or which he unfortunately does not possess. In contrast, we believe that the school provides space for the formation of what does not exist but may exist, since the school content causes the emergence and development of proper human functions: the higher mental functions. The school, in addition to teaching the curriculum content, effects the development of those who pass through it (with and without disabilities), i.e. it is (or should be) a provocative institution for the humanization process. It obviously is not the only institution that promotes this process, however, as we shall see, its classical activity of teaching takes in it a fundamental importance.

The school is fundamental to human development because, in the same way that productive human action alters the biological constitution for the creation and the use of tools, the acquisition of knowledge generates thought processes completely new, as well as new needs for knowing and thinking. To argue this aspect it is first necessary to take up the changes that occur from the point of view of the subject, from the activity of human labor. Markus (1974) presents three modifications: 1) the objective world is established as a stable reality, regardless of the momentary relationships that one has with it, which cases the fusion between subject and object that exists in animals to disappear; 2) human consciousness resides in the appropriation of the historical experience of society, since the essential features of the objective world can be communicated to others, placing them in a position not only to understand it, but also to use common forms of communication; 3) the universality of human consciousness that is fixed in language (verbal, written, oral, signaled or mimed), allows the appropriation of the world in material and spiritual activity, modifying human sensibilities in shaping, refining and humanizing the senses,[4] or by forming collateral pathways of development.

This process of appropriation of the humanized world is present in ontogenetic development. Markus (1974, p. 54) says:

> For children, the human environment is something that is given to them, but not the objects in his human quality: those, while human objects, are only given as a task to undertake. In order to enter into relationship with these objects as objectifications of the essential forces of man, the boy can, however, use them in a human way, he must also develop in himself the same powers and the same forces. Naturally, in this case, there is a process that is no longer spontaneous because it takes place only through the adults and also the society mediation, which explains the impossibly short time in which this process may occur.

[4] Leontiev (1978) states that language is a form of consciousness and human thought. Consciousness can exist only under the conditions of existence of language: it is the historical practice of the human psyche.

Thus, to have proper ownership of an instrument means to assimilate a particular form of action that contains an instrument and object and processes or handles the connection between them, making the object an instrument for the satisfaction of certain needs. Leontiev (1978) states, in this sense, that the result of the appropriation process "is playing by the individual skills and human functions, historically formed." In this process, as they become human capabilities, certain specific connections and objective interactions are necessary in order to become the activity of a subject; which, although they may not specifically alter human organs (do not create new structures or organs), they may change them functionally. An eye has to stop being just an organ that receives electrical impulses that become light, but has to be one that captures the complexity of the humanized world; the ear, likewise, must overcome its biological status of capturing sound waves to receive the language.

The corporate life makes it necessary to perform this transformation of biological organs into social ones. Here, practical needs generate, in turn, new needs, and the humanization process involves the extension of these requirements, making the body and mind increasingly complex. Returning to the issue of school, it may be considered as a space where the biological is transformed into the social. We can also say that one of its most important functions in contemporary society involves the possibility of appropriation of conceptual or theoretical thinking.

The requirements that determine knowledge are becoming so increasingly numerous and universal, addressed to the entire object, nature and man, which leads to the creation of scientific knowledge, but this was possible due to the development of material production, the objectification of man and the universal process of transformation of nature. According to Markus (1974), human cognitive activity results from a complex activity of several partial processes. He refers to Marx, according to whom

> [...] The "humanization of the senses" suppresses the alienation, the absolutism of the various partials activities of knowledge, but at the same time, improves the characteristics of human cognitive faculties, enables the performance of the process of knowledge in a context of relative autonomy .[...] From the contradictions that may ventually arise in this activity [...] new problems emerge; and theorical and practical activity, that seeks resolution of such contradictions in the course of historical development, appears to be able to discover the limits of partial acting of the singular individual, to become aware of them and therefore to get to know the object in its real nature. (Markus, 1974, pp. 68-69)

Thus, cognitive activity is an ongoing process in which knowledge will overcome its own limits as the individual becomes aware of them, and conceptual thinking is the most important means of ensuring such an extension. The natural way of existence, to man, gives way to an environment transformed and humanized by him, product of human activity that preceded him, and the objects that are involved from the start are objective-materials brackets, objectifications of experience, faculties and needs of earlier generations. But this faculty that enables the use of "artificial" objects is not given in the biological-physiological structure of the human organism; it must be developed during the social "education" (Markus, 1974). Thus, based on Marx, the author shows that only work and language, which externalize the results of "intellectual production" as objectifications of human "core strengths", can create the possibility of human evolution which is continued and uninterrupted, i.e. their own history and the condition of access to such knowledge can only be offered by the school.

Following this reasoning, the school is, as outlined by Facci (2004), developed for the appropriation of scientific knowledge, where the teacher should organize educational activities in order to address the psychological development of students – where the higher psychological functions have the common feature that they are processes mediated by the use of signs as a fundamental means of guidance in the psychological processes. According to Vygotsky (2001), in the process of forming concepts, the word is a sign that later becomes the concept's symbol.

The appropriation of scientific concepts by students in the school is considered a major factor in their development. In the field of scientific concepts occur high levels of awareness of spontaneous concepts. Vygotsky (2001, p. 243) says:

> The continued growth of these high levels in scientific thought and the rapid growth in spontaneous thought show that the accumulation of knowledge invariably leads to improvement of the types of scientific thought, which, in turn, manifests itself in the development of spontaneous thought and leads to the thesis of prevalent role of learning in the development of the student.

The student, when he goes to school, has already a store of everyday knowledge that must be overcame by scientific knowledge, and Vygotsky (2001) clarifies that at this moment occurs a unique collaboration between teacher and student which promotes the maturation of the higher psychological functions. This collaboration is the central moment of the educational process because it is the moment when the teacher intervenes in the zone of proximal development of the student, changing the spontaneous knowledge through the appropriation of scientific knowledge transformed into curricular contents and thus causing further psychological development.

According to Vygotsky (2001), forming new concepts does not imply only making a certain amount of bonds formed by the associative memory, but "it is a real and complex act of thought that can not be learned through simple memorization and can only be performed when his own child's mental development has already reached its highest level" (p. 246). Forming new concepts involves making generalizations, beginning from what it is to what it is not; it means making transitions from one structure to another generalization, from rudimentary generalizations to other higher and higher, a process that culminates in the formation of true concepts. If we take as an example the issue of using the concept of time, we can see the complexity of this concept. If we think of the little child in his young age, who will begin to have an understanding of what the term "tomorrow" means, which surely will become more complex as this concept will be developed. Having access to information of historical facts, for example, we can conclude that the concept is extended until the adolescence or adulthood, when she can wonder: "How will 'tomorrow' be in Brazil?" Thus, as noted by Markus (1974), the contradictions that arise in human activities, whether practical or theoretical, will be solved in the singularity through the appropriation of new knowledge which, at the same time, satisfy certain requirements and create others more elaborate.

As we can verify in this example, the scientific concepts are not only assimilated or stored by the children, on the contrary, they constitute a more elaborate means of the activity of the student's own thinking. When starting a new curriculum content, the student relies on a spontaneous knowledge, in principle, to make approximations and generalization about knowledge which is being exposed by the teacher. As he appropriates concepts of higher type, as scientific concepts are, they will influence the spontaneous concepts already internalized,

becoming as well the dynamic and dialectical relationship between scientific and spontaneous knowledges. Vygotsky (2001, pp. 261-262) states that there are complex relationships between the processes of learning and development in the formation of concepts, and the school determines "the whole destiny of the child's intellectual development, including the development of their concepts." He also states that scientific concepts "can not arise in the child's head but from the types of elementary and lower generalization which has already existed, and they never are able to enter from outside the child's consciousness."

The several subjects, with varied curricula, develop, jointly, the intellectual capacity of students. The child's abstract thinking, the logical reasoning, the planning – in short, the higher mental functions – are developed in a comprehensive way, from the systematization of knowledge by the teacher, knowledge that is appropriate for the child. According to Vygotsky (2001, p. 326),

> [...] There is a learning process. It has its inner structure, its sequence, its logic trigger, and within the head of each student, who studies, there is an underground network of processes that are initiated and move in the course of school education and have their logical development.

In fact, according to Vygotsky (2001), there is an awareness of the contents given that they constitute a common basis for all higher psychological functions. For this author, all the basic functions involved in school learning revolve around awareness and arbitrariness. He reports that the development of scientific concepts begins in the concreteness and empiricism field and moves towards the superior properties of the concepts that require awareness and arbitrariness. If we return to the example of the concept of time, above, we can say that time is understood by the child, at first, just as a succession of days: yesterday, today and tomorrow. As she is having access to the curriculum of Physics, Mathematics, History, for example, this knowledge learned daily becomes more complex, requiring new elaborations and forming new concepts. For the formation of these new concepts, skills of abstraction, logical memory and planning are developed in a dialectical process in which the appropriation of scientific concepts leads to psychological development, and this, in turn, provides a new appropriation of knowledge, and so on.

Since the school is the best organized institution in our society to impart knowledge it can cause the development of psychological functions of individuals from the "spiritual appropriation of the world," according to Markus (1974), and when it proposes to conduct the student to thought for concepts, it helps them to get a better understanding of reality, because

> [...] It enters the inner essence of the objects, since the nature of them is not revealed in direct contemplation of either isolated object, but through the connections and relationships that are manifested in the dynamics of the object in its development linked to all the rest of reality. (Vygotsky, 1996, p. 79)

Thus, we reaffirm the importance of its own conception of science. As originally introduced, it must go beyond what appears at first sight or appearance: to clarify and explain the multiple determinants that contribute to present that certain fact or phenomenon and how this happens. By this vision, to know in fact the reality is not an issue in a peaceful society which, ideologically, reserves to a small portion of the population access to scientific knowledge and to most it provides mere information.

Duarte (2000) states that men build their mental representations of reality from the needs objectively posed by social existence, which means that the school should stay out of content in terms of simple and concrete categories, and raise the student to the plan of abstract thinking, organized, allowing him to unveil and understand the real. He also states that the knowledge derived from scientific thinking "from the mediation of the abstract is not an arbitrary construction of the mind, it is not what the phenomenon seems to be to the individual, this knowledge is the capture, by thought, of the essence of objective reality" (Duarte, 2000, p. 87). Therefore, when the school elevates the knowledge of the students from spontaneous to scientific it means that it is promoting the development of higher psychological functions to enable them to understand the essence of internal and external reality, and from this understanding, they have a chance to revolutionize their social practice.
Facci (2004) demonstrates that knowledge in the true sense of the word as well as science, art and the various spheres of cultural life can be properly treated only by means of concepts, because, as stated by Vygotsky (1996, p. 71), "[...] thinking in concepts reveals the deep connections that underlie reality, it refers to the laws that govern it, to rule the world that we perceive with the help of a network of logical relations." For Vygotsky, the concept, according to the dialectical logic, includes not only the general but also the particular and unique. It results in a lasting and profound knowledge of the object.

In a synthesis, we conclude with Facci (2004, p. 226) that the function of the school would be to "contribute to the development of higher mental functions, considering that these are developed in the community, in relation to other men, through the use of tools and signs, to lead students to take ownership of scientific knowledge acting through the teaching of theses knowledge, in the zone of proximal development." Thus, it is through the appropriation of scientific knowledge that the process of humanization of individuals may occur in an outstanding way, as it raises special forms of conduct, modifies the activity of the psychic functions, create new levels of human development and provides an understanding more articulate from the reality.

These arguments show the importance of school as an educational agency of science, philosophy and arts contents aimed at individual formation towards the generality in its most elaborate form, with a view to their elevation from a primitive stage to a state of cultural development. We can also say that by doing this it highlights the ethical and political commitment of a psychology committed to the course of humanity. It is also worth emphasizing that this commitment is revealed in the work of Vygotsky (1997) about Soviet Defectology, when the author demonstrated that the biological differences do not prevent individuals from learning to develop themselves. This shows the utmost importance in a historical moment in which the inclusion of people with disabilities in regular schools is being defended, although this remains of poor quality for all low-income students. The exclusion factor is the socio-cultural barriers, which are not always visible and identifiable at first glance. These barriers are perpetuated in schools and by professionals unprepared for the classic function of teaching, who reveal themselves in justifications and explanations about the reasons for the failure to achieve a more complex stage of development, referring to the biological or the individuals themselves and to their close groups.

For a good school education to be offered to all, Vygotsky's theory leads us to understand, human conduct has to be developed by teaching even as the value attributed to schooling is historically and socially dated. It also leads us to understand that limits can be overcome by offsetting them, i.e. through the preparation and use of strategies to replace the functions disrupted by establishing collateral pathways of development, so that there are no obstacles to

the individual's relationship with the world. With regards to the development distinguished by disability, we can still say that if an individual does not have biological eyes that can be turned into social organs, he does have fingers that need to assume the role of deciphering the coded language in Braille as well as other stimuli from the environment. Thus they presume to capture signals by touch, besides the main function of pointing and grasping. In other conditions, for the theory at hand, this compensation activity is processed in the same way.

For this reason we argue that as soon as one investigates and theorizes about the development distinguished by disability, Vygotsky offers us elements to consider how education is fundamental to all and, moreover, how necessary it is to target the community. Everyone needs to achieve the ability to grasp the world as a whole and interpret it in order to act and to contribute with it through a work that is socially useful.

What we saw in exploring critical aspects or clues alternative to psychology encourages us to continue studies in the school of Vygotsky, "precisely because it seeks to remove from the hands of fate the causality that would justify men being what they are, and go beyond the appearances for the purpose of uncovering the social man, of what he produces and how he reproduces himself" (Barroco, 2007, pp. 20-21).

Final considerations: From the possibilities and impossibilities of statements about critical theories in psychology in times of postmodernity

The development of human sensitivity and higher mental functions in its fullness – which leads to understanding of the object (reality) from the abstract to the concrete-sided – makes "the man rich man and deeply sensitive to everything" (Marx, cited by Markus, 1974, p. 65), because he no longer has a relationship with the object based only on its usefulness; he does not only see it in biological relations which are significative and utilitarian, but rather an object in the sensible world which belongs to the man becomes the object as it is, in and for itself (Markus, 1974).

As we have seen, in this process, new intellectual capacities emerge and are accompanied by new historical needs, such as the scientific "curiosity", religious and aesthetic aspirations as well as the need to perform them, making them more universal. "Thus, the social conditions of individuals, which are more and more widespread, allow each individual shows that he is more and more able to build upon the experiences, knowledge and wealth accumulated by mankind" (Markus, 1974, p. 88).

It should be noted, moreover, that this emphasis on the idea of the social character of the individual in Marx, in which he guided the theorists of Historical-Cultural Psychology, should not be confused or understood mechanically as a passive modeling of human nature through the material and social environment. Forms of behavior and the ideas are constituted in and with the human activity and are internalized during this event, so the social consequences of activities that shape and create the individual are more or less strictly defined by his historical situation, his class condition, etc., since man can only shape his existence from the materials that society puts at your disposal. The historical situation also determines the extent to which he can perform a free and conscious choice, within the limits and possibilities which are made available by society. "Even in an era of greater generalization of alienation, and in which the limits among which he is placed is much more narrow, man creates his own life from these raw materials" (Markus, 1974, p. 90).

Thus, man does not simply submit himself to history, because humanity creates his own story and, in this process, transforms its own nature. The historical process is not the sum of the external processes of socialization in opposition to natural impulses, but rather, the process by which, through work, man is formed and transformed. The main human feature is found in activity that shapes his own subjectivity and puts him in a constant state of motion of "coming-to-be."

When considered from the standpoint of society, history is the growing process of universalization and liberation of man; however, history thus far is characterized by the appearance of individuals less and less free and universal, as increasingly unilateral, limited, "abstract" and "fortuitous", because everything created by modern capitalism through industrial production, and the comcomitant development and expansion of human needs and growth of the means to satisfy them, became impossible for or completely inaccessible to most people. For Marx, according to Enguita (1993), there is no predetermined criteria for the humanization or humanity, but this criterion attached to achievements made by man – hence it is different in each individual the realization of the species – as in capitalist society most men have a complex unmet needs. According to the same author

> [...] The realization of what is said is from the generic being of man, and the dehumanization is his loss. There is no abstract human nature, natural or supra-historical to be held. The question is simply whether the individual man stands at the height reached by the species or whether, instead, finds himself away from it en masse, even if he converts this distancing in a condition and base of the highest made of his kind. (Enguita, 1993, p. 157)

In today's society we have witnessed a depletion of this capacity for humanization, because even the social institution that has the function of transmitting knowledge – the school – has been deteriorating in its task and has been at the mercy of theories that devalue the work of teachers – as notes Facci (2004). Working against the grain of this process is not easy, but its importance is even greater in this historical moment.

According to Moraes (2003, p. 153) we have been celebrating the "end of theory", prioritizing the "efficiency and building of a consensus ground which is based on the immediate experience"; and into that "practitioner utopia" "just the know-and how is enough and the theory is considered a waste of time or metaphysical speculation." Thus, if in this text we have been stating the need of scientific concepts for psychological development, we wonder if our schools, when they are only in everyday knowledge, are truly contributing to the process of humanization in order to face the resistance to barbarism. What we see is the need to emphasize, in the work of teaching and learning, the importance of more elaborate knowledge (scientific concepts) and the educational praxis for the disruption of this process of naturalization of social relations of capitalist production, to ensure the realization of the generic being of man, that is, the full incorporation of his higher mental functions.

In our training activities of psychologists, teachers and other professionals, we adopt this chosen theoretical base, and in light of this and the ideas of Vygotsky (1930), which states that human beings are created by the society they live in, we wonder: how to break with a biologizing vision of psychology and overcome the divorce that still exists between an objectivist psychology and a subjectivist psychology?

Considering this question and accepting the assumptions already mentioned, we believe that the Historical-Cultural Psychology provides subsidies in order to achieve this goal. As an example, all activities addressed in the continuing education of teachers of kindergarten, elementary and high school in the State of Paraná, various topics were deepened, problematized, searching for the systematization of new pedagogical practices that escape from the spontaneity of education that is based in conceptions biologizing concepts. Topics such as: Special Education, relationship between development and learning, teacher mediation, implications of the ownership of scientific knowledge for the development of higher mental functions, the development of writing and mathematics, difficulties in the schooling process, understanding of learning disabilities, among others have been thoroughly exploited every year and in each new job there is a growing evidence of a different action in the performance of teachers who report significant advances in the development of their students from using strategies anchored in the above assumptions. All the work supports itself in searching for systematic and abstract scientific concepts and how they can be tools to enable effective action with children and adolescents exposed to school failure and social state of vulnerability, embedded in schools and CRAS, whose action is founded on the problematization of current society and seeking ways to transform it. Besides contributing to the theoretical work of the teacher of all levels of education, we create spaces for discussion so that students and professionals of psychology under our training may analyze the Brazilian educational context, the daily routine of the classroom and seek, in the assumptions of Historic-Cultural Psychology, a tool to overcome psychological practice that often does not contribute to cognitive and emotional development of the student, as it emphasizes the pathology.

During the graduation level, in the Course of Psychology, in the Universidade Estadual de Maringá (UEM), we guide students who are in 5th year to develop educational practices in the context of the assumptions on grounds of Historic-Cultural Psychology. Themes such as relationship between development and learning, teacher training, school violence, career counseling, sexual orientation, collective work, indiscipline, psychological evaluation of school problems are analyzed based on studies by authors from the School of Vygotsky, such as Vygotsky, Luria and Leontiev, as well as Brazilian authors who investigated the subject areas related to Psychology and Education from this theoretical framework.

As for the Masters Program in Psychology of SUM, our mentees have been researching important topics in order to carry out confrontations with hegemonic conceptions of psychology under the naturalization and biologization of human development in order to be socialized and suitable both for professionals in education and related fields but also by students of undergraduate and postgraduate level. Several topics were investigated such as: voluntary attention and memory instrumental development, periodization of human development, blindness, intellectual disability, psychological assessment, development of higher mental functions, school problems, activity of the teacher, gifted, alcoholism and other issues.

We know that this effort must be relentless facing the framework which is presented in terms of intensification of the global economic crisis and its aftermath in the lives of thousands of individuals exposed to subhuman conditions, but we have sought to explore various fronts of action, training of psychologists, educators and researchers.
As stated at the beginning of the text, since 2004 we have promoted the development of the Specialization Course in Historical-Cultural Theory. It is noteworthy that this is the only course in Brazil that has the specific study of the theoretical and methodological principles of

Historical-Cultural Psychology at the post-graduation level. Classes are taught using as reference the classic texts of Marx and Marxist authors, as well as texts developed by Russian authors such as Vygotsky, Luria and Leontiev. 150 pupils were graduated at latu sensu level, these students were qualified in Pedagogy, mostly in Psychology, but also students of History, Music, Physical Education, Philosophy, Mathematics, Literature, Biology, among other areas. Many students who have completed the specialization came from cities in the region of Maringá, but this post-graduation also contributes to students who were enrolled in parallel to these studies, in Masters and Doctoral courses at other institutions in Brazil. The focus is precisely to offer theoretical subsidies about these assumptions about the Historical-Cultural Psychology and its base grounded in the method of dialectical and historical materialism.

Finally, supporting us in the quote below, we consider that the various listed practices intended to break with the ideological shackles of capitalist society and seek to advance in the understanding of the object of psychology – the human psyche – because they imply from the assumption that during certain historical period it can not be said that the composition of human personalities represent something homogeneous, univocal:

> [...] The class character, the division of present classes are responsible for human types. The various internal contradictions, which are found in different social systems, find their final expression in both personality type and the structure of the human psyche of a particular historical period. (Vygotsky, 1930, p. 3)

During this period, full of contradictions, a society that has advanced enough to supply the survival needs can truly move toward the emancipation of the relations between men. With regard to the socialist society, Vygotsky (1930, p. 9) positions himself as follows:

> This general contradiction between the development of productive forces and social order that corresponds to the level of development of the social forces of production [which no longer finds equivalence between forces and social relations of production], is solved through socialist revolution and the transition to a new social order in a new way of organizing of the social relations.

The author also lists some changes: "Collectivization, the unification of physical and intellectual work, a change in gender relations, the abolition of the separation between physical and intellectual development, these are the key aspects of the transformation of man" (Vygotsky, 1930, p. 11).

Is psychology prepared to take actions that promote the development of a man truly concerned about the community? Will the psychologists, faced with so many contradictions and a movement to press for the defense of a psychology that naturalizes human phenomena by bias biologizing, medicalized, supported by static evaluations, have objective conditions to acquire critical approach? This view, summarized by Meira (2000, p. 40), assumes that a conception is critical when

> [...] It is able to transform the immediate to mediate; deny the social appearances and ideological illusions; get all the concrete in its multiple determinations and articulate the essence / appearance, part / whole, singular / universal and past / present, including society as a movement of "come to be".

In this text we have tried to illuminate assumptions of Historical-Cultural Psychology which can contribute to the realization of a critical psychology that, in our view, can be characterized as Marxist, but we believe that there is still much to do. As contained in Barroco (2007), as we take a critical position in psychology, we make no apology for pessimism, but we stand in favor of the humanization of man with and without disabilities, in favor of developing the analysis capacity of what had already experienced before and predicts the future.

We position ourselves in favor of a psychology which subsidizes school and other institutions in a serious practices of teaching science, culture, arts, among other subjects, establishing positive values for the formation of a cultural and freedom man, against a broader movement to deny the full development for a large portion of humanity.

We ended up with Kosik (1976), who does not write about Vygotsky neither about scientific concepts, but he atates that the "immediate utilitarian praxis and corresponding common sense put the man in a position to orient themselves in the world, to become familiar with the things, to manage them, but do not provide an understanding of things and reality" (p.14). Thus, the education and teaching of scientific concepts itself does not guarantee the understanding or the confrontation of alienation; but if they are added to a philosophy that works as weapon to unravel the historical nature of facts, it really will contribute to the understanding of things and the reality beyond the phenomenal and apparent form.

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