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EXPERIMENTS AND SOVIET PSYCHOLOGY: A MISTAKEN METHODOLOGICAL ANTITHESIS

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ABSTRACT

This work presents itself as a theoretical essay dedicated to emphasizing the ontological and epistemological Soviet Psychology bases to delimit its necessary methodological properties. We accentuate the risk announced for the field of Historical-Cultural Psychology when we give in to the mistake of emptying the meanings attributed by Vigotski and by the members of his Circle to the Genetic-Experimental Method to the methodological organization in the in Psychology research field. Therefore, the aim of this work is to recover the emphasis about the dimensions of experimentation within the organization of Soviet psychology and Education. This care prevents us from contributing to the maintenance of a theoretical and political project that we announce to be fighting. It is intended to contribute to the understanding that the experimentation activities do not oppose the dimensions of criticism within Historical-Dialectical Materialism, on the contrary, they are often required by it.

Keywords: genetic-experimental method, historical-cultural psychology, experiment

Experimentos y Psicología Soviética: una antítesis metodológica equivocada

RESUMEN

Este estudio se presenta como ensayo teórico dedicado a enfatizar las bases ontológicas y epistemológicas de la Psicología Soviética para delimitar sus necesarias propriedades metodológicas. Destacamos el riesgo anunciado para el campo de la Psicología Histórico-Cultural cuando cedemos al equívoco de vaciar los sentidos atribuidos por Vygotsky y por los integrantes de su Círculo al Método Genético-Experimental a la organización metodológica en el campo de las investigaciones en Psicología. Por eso, se propone como objetivo de este estudio el rescate del énfasis sobre las dimensiones de experimentación en el ámbito de la organización de la psicología soviética con el intuito de descubrir su impacto a este respeto en el campo de las producciones brasileñas, en interfaz entre la Psicología y la Educación. Este cuidado evita que contribuyamos con la manutención de un proyecto teórico y político que anunciamos combatir. Se pretende contribuir con la comprensión de que las actividades de experimentación no se oponen a las dimensiones de la crítica en el interior del Materialismo Histórico-Dialéctico, al contrario, son, muchas veces, requeridas por él.

Palabras clave: método genético-experimental, psicología histórico-cultural, experimento

Experimentos e Psicologia Soviética: uma antítese metodológica equivocada RESUMO

Este trabalho apresenta-se como um ensaio teórico dedicado a enfatizar as bases ontológicas e epistemológicas da Psicologia Soviética para delimitar suas necessárias propriedades metodológicas. Acentuamos o risco anunciado para o campo da Psicologia Histórico-Cultural quando cedemos ao equívoco de esvaziar os sentidos atribuídos por Vigotski e pelos integrantes de seu Círculo ao Método Genético-Experimental à organização metodológica no campo das pesquisas em Psicologia. Por isso, propõe-se como objetivo deste trabalho o resgate da ênfase sobre as dimensões de experimentação no âmbito da organização da psicologia soviética com o intuito de desvendar seu impacto a esse respeito no campo das produções brasileiras, na interface entre a Psicologia e a Educação. Esse cuidado evita que contribuamos com a manutenção de um projeto teórico e político que anunciamos combater. Pretende-se contribuir com a compreensão de que as atividades de experimentação não se opõem às dimensões da crítica no interior do Materialismo Histórico-Dialético, ao contrário, são, muitas vezes, requeridas por ele.

Palavras-chave: método genético-experimental, psicologia histórico-cultural, experimento

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INTRODUCTION

The literature about the genesis and emergence of School and Educational Psychology in Brazil is rich and vast. The quality of this production carefully characterizes the nuances that delimit the interface of Psychology with Medicine and Education. We know about the varied clashes that have absorbed the efforts of the area to combat mistaken positivist brands that have led us to tortuous attempts to psychologize and stereotype the complex human phenomenon. We are aware of the dilemmas that involved the specificity and the possibility (including in the context of legal procedures) of the school psychologist's performance, attentive to the scrutiny of their functions as a creator of foundations that should be offered to Pedagogy or to the opportunity that both psychologists and pedagogues, collaborate, dialectically, in carrying out the schooling work within school institutions (Patto, 1997; Guzzo, 2007; Antunes, 2008; Marinho-Araújo, 2010).

In Brazil, the ballast that underlies this important understanding has been established from a dialogue consistent with the bases of the Historical-Cultural Theory. Criticism, emerging from the materialisthistorical-dialectic epistemology, called us all, members of that interface, to a necessary reflection aimed at the relationship between learning and psychic development. A brief analysis of the scientific production organized by the area results in the understanding that the foundations of Soviet Psychology or its developments are linked, in many ways, to the elaboration of specific pedagogical practices in different circumstances (Patto, 1997; Guzzo, 2007, Antunes, 2008; Marinho-Araújo, 2010; Martins & Marsiglia, 2015; Beatón, 2015).

The attention to this relationship, as presented by Bozhovich (2009), arises on the occasion of the 1st Congress of Pedagogical Psychology held in 1906. From that moment until its second version, held in 1909, renowned Russian authors were involved in the historical analysis of elaboration of theoreticalmethodological foundations produced by Psychology, questioning its implication and responsibility with the organization of pedagogical practice. The clamor of those discussions aimed at delimiting experimental procedures that were capable of elucidating how the psychological functions developed from the schooling processes organized by pedagogical practices were constituted.

This consideration holds implications whose magnitude equals the risk we run of reducing it to distorted and superficial interpretations, and this is exactly the core of the discussions that we present as the object of this manuscript. It is indisputable that the work of Vigotski and his collaborators evolved and improved over the years that characterized the development of the nucleus of Historical-Cultural Psychology. At the same time, it is equally indisputable that the main Brazilian interlocutors in the production of Soviet authors take a different position regarding the continuity or discontinuity of the theories elaborated by Vigotski, Leontiev and Luria (Toassa, 2016).

Thus, although Davidov is not considered a member of Vigotski's circles, we are aware that, from the point of view of the foundations of Soviet Psychology, the reflection we propose crosses this juncture and we must therefore mention it (Bovo, Kunzler, & Toassa, 2019). We are interested in contributing to the theoretical debate whose genesis lies at the heart of this production despite its possible similarities and divergences. In other words, we insist on reflecting on the methodological synthesis whose unity permeates the singular elaborations within the universality of the so-called Historical-Cultural Theory.

IS EXPERIMENT THE ANTITHESIS OF QUALITY IN RESEARCH IN PSYCHOLOGY AND EDUCATION?

In the set of texts organized under the title "Thought and Language" and written in 1934, Vigotski (1934/2001, p. 152) states about the methodological procedures: [there is] "clarity that only experimental analysis can provide". For him, the really effective method to capture the movement of psychological development that integrates biology and culture could be named "morphological-functional-experimental-genetic" (p. 154).

This clarity, emerging from a genetic-experimental analysis, appears, if we could say so, as a guiding criterion for their work and that of their collaborators. His insistent invitation for a concrete Psychology whose methodological procedures were capable of setting in motion the psychological functions or phenomena one wished to study is evident.

However, little is known about the organization or content of these experiments to which the author refers, referring to their results. In this regard, Yasnitsky (2009) emphasizes that Vigotski's experimental science remains a mystery for most of those who dedicated themselves to knowing or studying his work. In his words "this is a loss for the history of psychology and it is an even greater loss for psychology as a contemporary practice (p. 21)"

If, on the one hand, Vigotski's experimental science remains a mystery insistently added to our efforts to understand it, on the other hand, these same efforts bring us closer to understanding what appears to be an ontological question for the Soviet author. In the recent publication Routledge organized by Yasnitsky and Van der Veer, Zavershneva (2016) recovers the conjuncture of what was established as a psychophysical problem for Vigotski. In one of his lectures, which deals with the location of higher psychic functions, Vigotski criticizes Pavlov and his understanding that thought is a function specifically associated with the frontal lobe. At that time, he already proposed that functions are dynamically organized along the brain surface, adding a series of structures that can vary with the content or purpose of the task that the subject performs.

It is important to consider, briefly and, without escaping the scope of this work, that the most recent studies carried out by Neuroscience return to the concern shown by Vigotski when, for example, they show that processes such as the Theory of Mind or the elaboration of play by children depend on connections that involve a variety of brain structures, along domains that are sometimes generalized and sometimes specific, such as the temporoparietal junction and the cerebellum (Vandervert, 2017; Saxe & Baron-Cohen, 2006).

This means that Vigotski fought the presence of dualistic conceptions for the explanation of psychological phenomena, understanding them as resulting from a body-thought unity. This dualist conception is based on Wundt's propositions, who decided to name the existence of two psychologies: the psychophysiological psychology, measurable and concrete, and the subjective one, destined to the descriptive study of the processes of language, myths and customs. The ballast of this division assigned the legacy of the experiment to the first psychology and the leftovers of interpretive activity to the second (Walsh, Teo, & Abdala, 2014). Thus, more than the methodological split, we still carry the belief that one fights the other. However, if the review studies present us with the words of Vygotsky himself, let us approach them, through the presentation of Zavershneva (2016, p. 136): "Only people who belong to our recent European culture can separate the psychological and the physical as we do. A person is dancing. Do we really have muscle movements on the one hand and joy and inspiration on the other?"

Thus, it is evident that throughout his work, at many times, Vigotski addresses this methodological discussion emphasizing, at the same time, the necessary criticism of the fragmented meanings of the use of experiments within Psychology, but also the urgency of overcoming this understanding towards a dynamic and dialectical conception (Vigotski, 1931/2000a).

When we dedicated ourselves to this analysis, we observed that the Soviet literature, from many perspectives, proposed the execution of experiments as the realization of the genetic method, that is, as the possibility of raising and, thus, monitoring the development of a situation or, more precisely, the development of the psyche.

It is exactly this foundation that is also reflected in the work of Davidov (1988a) from the elucidation of the so-called formative experiments. This procedure should serve the need to research psychic functions as they are fostered during the investigation itself. In this sense, for the author, the formative experiment was constituted as a unit between the investigation of the processes of children's psychic development and the organization of the pedagogical elements of teaching.

However, in Brazil, the literature produced by Psychology based on Historical-Cultural Theory seems to oscillate in terms of understanding the nature of this issue. It is common to face elaborations (Ribeiro, 2012; Paiva, Araújo, & Cruz, 2019) that associate any type of experimentation with reductionist or, frequently, positivist positions. In this sense, it is as if only the use of the word positivism were able to define a universe of atrocities and, therefore, should be consistently avoided. The development of higher psychological functions is supposed to be a succession of events that can be observed and described, never investigated, because any experimentation would be ominously positivist.

In order to refine the argument, we have been building, when we consulted the CAPES theses and dissertations database from the keywords "historicalcultural psychology" + "qualitative research," in 2019 alone, we found 1,400 productions. On the other hand, if we use the keywords "historical-cultural psychology" + "quantitative research", we find 162 works. Although this is not a bibliographic review work, this analysis offers an indication of the tendency of the field to split the dimensions of quality and quantity within the methodological designs.

This reveals what Martins (2009) explained when he said that a qualitative approach is chosen in the composition of analyzes whose objects would be complex, the quantification would be superficial or the quality would be the only possible way to accommodate the investigated processes. In this case, since the formulations made by Godoy (1995), the so-called qualitative approaches supposedly suppress any dimension of experimentation or quantity as a guarantee that they effectively access the complex human phenomenon (Mariano, 2019; Lemos, 2019; Pereira, 2019; Fernandes, 2019; Kasper, 2019).

Thus, such understandings culminate in the explanation of the Historical-Cultural Theory as a kind of missionary framework whose objective is to oppose any process of experimentation or empiricism, reducing the robustness of the theoretical proposal of the Soviet authors to an amalgamation of practices that confuse the characteristic intra-interpsychic of the development of higher psychic functions as a set of practices aimed at organizing activities that must be developed in groups or to the use of so-called active methodologies. Therefore, from the collective dimension of the process of elaboration of the psyche, its rigorous historical and dialectical materialist value is deprived. Thus, this understanding results in apparently innocuous theoretical misunderstandings, but whose consequences lead, for example, to confusion about the concept of mediation when taking it from the notion of what interposes between two objects or situations and not from its instrumental value capable of internally organizing the flow of development (Miranda, 2005; Navarro & Prodócimo, 2012; Martim & Martins, 2018).

With this analysis, we unveil what seems to establish itself as a contradiction. The necessary criticism of the liberal impact that imposed on Psychology the demand for aseptic experimentation methodologies capable of guaranteeing its scientific purpose (Patto, 1997) seems to have culminated, for some researchers, in the imperative of rejecting any dimension of quantity in the scope of research in this scenario (Freitas, 2002; Rhoden & Zancan, 2020).

On the other hand, it is necessary to consider that we observe the emergence of a movement in the opposite direction. Although carrying out an analysis of the state of the art on research dedicated to the investigation of the relationship between Historical-Cultural Psychology and experimental methodologies in the midst of historical-dialectical materialism is not the main objective of this work, we dedicate ourselves to a brief review whose results reveal a recent emphasis on this specificity.

Thus, a query to the Academic Google platform guided by the keywords "Vigotski" + "Formative Experiments", considering the last 20 years, results in a total of 319 articles. On the other hand, by choosing the terms "Vigotski" + "Proximal Development Zone"¹ as keywords, the search reaches 15,800 productions. The enormous difference that is drawn here constitutes a significant indication of the problem we have announced.

These recent studies often present the perspective of formative experiments elaborated by Davidov (1988a) and they are dedicated to the organization of research that investigates the relation among the didactic structure, the intentionality as a characteristic of the teaching activity and the process of development of psychic superior functions (Longarezi, 2017; Kravtsov & Kravtsova, 2019; Ferracioli, Trindade, & Magalhães, 2020)

Therefore, we delimit the delicacy of the announcement we make because, at the same time that the growth of researches that take the notion of experimentation within the Historical-Cultural Psychology, especially in the field of education, it is noted that the appropriation this notion, sometimes, does not include it in the scope of methodological discussions that seem to split experiments and qualitative reflections.

This essay, through which we ventured, fulfills the task of welcoming this delicacy. It is like an unveiling of the contradiction capable of taking us beyond the dilemma that seems to associate the possibility of criticism with what is defined as a qualitative intervention. In this sense, we take up and add to the research that has already established the differences between qualitative epistemologies and historical-dialectical materialism (Martins, 2009; Marsiglia, Martins, & Lavoura, 2019).

In any case, it is clear that this is not a defense of positivism or its (also) significantly superficial appropriations. These words are organized, only, in the sense of a clamor for the use of the dialectical logic that inspires us so much. It is quite true that the positivist movement cannot be overlooked as a philosophical position that founded the foundations of the scientific organization of knowledge, just as it is equally true that it distances itself from the assumptions of Historical-Dialectical Materialism. Now, it is up to us to understand that reductionist postures, instead of advancing our study and research efforts, end up moving us away from the commitment that has already been assumed by the area for some time since the announcement of the importance of materialist foundations for the organization of research and performance in Psychology and Education in Brazil (Patto, 1997).

We do not depart from this story and recognize its theoretical and political value. If history advances and produces, by incorporation, leaps in the quality of understanding of certain phenomena, we cannot avoid the new and different problems that arise from there, as well as the resizing of some old issues that, historically, in us brought to this dichotomous position with regard to the understanding of the role of experiments within research in Historical-Cultural Psychology.

From within this context, we insist on the importance of verifying the increase in studies and research whose objective is the recovery and reproduction of experimental models suggested by Soviet authors, especially by Vigotski. Those who do seem to point to important dimensions regarding the study of the development of higher psychic functions based on the criteria of the genetic method, especially the need for these functions to be investigated throughout their process of establishment, use or reconfiguration (Martins, Abrantes, & Facci, 2020).

These works, especially when endorsed by the Cuban organization about teaching and didactic procedures, confront us with the assertion that we can

¹ At this point, we will not dwell about the important questions concerning the translation of the term ZDP in Vigotski's work. Nor, to the necessary discussion about the different forms of spelling that involve the name of Vigotski. We know that this discussion is solidly carried out in the valuable work of Dr. Zoia Prestes.

no longer avoid organizing research of this nature if we want to achieve an effective restructuring of teaching based on the fundamentals of the Historical-Cultural Theory (Aquino, 2017). It is absolutely wrong to imagine that these fundamentals can guide daily didactics in classrooms without educational experiments being carried out. For this misunderstanding not to surprise our actions, however, it is necessary to know that not every experiment is intended to be positivist, nor neutral.

Fortunately, the realization of the need to face these problems - which, in some way, concern the way we understand and use the foundations of Historical-Cultural Psychology in its relations with Historical-Critical Pedagogy - has been announced within the area (Tuleski, 2004; Martins & Marsiglia, 2015). In addition, some studies have been dedicated, especially, to the organization of proposals or intervention models that delimit the role of the school psychologist. These researches somehow announce the characteristic of experimentation for the very definition of the professionals' work in the Psychology and Education interface (Magalhães, 2016).

Thus, if Patto (1997) criticized psychometric reason some time ago, we should not waste her arguments relegating them to the dualistic limbo she intended to criticize. In this way, the lucid position of Pedrinho Guareschi (1998), also from some time ago, about the false quantitative *versus* qualitative dichotomy may inspire us, on this path that we need to tread. In this sense, here is the synthesis we defend: quality and quantity are not opposite dimensions in the constitution of any psychological phenomenon and, therefore, carrying out experiments in research in Psychology, especially in the interface with Education, is not something that should be fought in the name of a distorted understanding that equates them with superficiality or methodological inadequacy.

THE MONIST PATH TO METHODOLOGICAL DESIGNS IN PSYCHOLOGY AND EDUCATION

For the dualist deception, the remedy already exists and rests on the monist understanding of the social situations of development and its necessary and consequent research processes. Nikolai Veresov, one of the important interlocutors about this theme in the contemporary scenario, recently published a content that concerns exactly the object of this debate that we propose. Veresov (2014) defends the consistency of the theoretical foundations of the Experimental Genetic Method. His understanding is that a new experimentation proposal, capable of involving the quantitative and qualitative aspects of any psychological phenomenon, must be structured based on this method. It is necessary to develop experiments that are capable of accessing the empirical aspects of the phenomena, adding them, however, to the necessary qualitative analyzes that concern them. In the author's words:

> However, a theory, even a highly developed one, without the recourse to an experimental method is nothing but words. Theory without experiments is a voluntary mind game; and experiment without theory is a knife without a handle. The researcher needs not only concepts as theoretical tools of analysis, but also an appropriate experimental method whose instruments are equally adequate (p. 133).

When we look at Vigotski's texts (1930/2000) dedicated to the study of methodological elaborations, we notice his insistence on delimiting that the Experimental Method does not reflect in a speculative way the real process of development, but rather its genetic essence, throughout the training process. This experimental structure makes Vigotski and the members of his Circle reach, in this case, the possibility of studying the genesis of higher psychic functions and not just their descriptive aspect.

However, this pressing feature in Vigotski's work seems, at times, diluted in a kind of misunderstanding of his main foundations. Dedicating herself to the elaboration of dimensions of this conjuncture, Toassa (2014) announces the "persistence of a superficial and unsatisfactory reading of what is Marxist in the author [...] because sometimes Vigotski is an ingredient for the mixtures of constructivism and sometimes for the orthodoxy of the Marxism-Leninism" (p. 49).

Thus, it seems to us increasingly important to emphasize the monist principle that supports Vigotski's theoretical production from an intimate connection with dimensions of philosophy and social sciences. Now, it is not rare that we are faced with varied circumstances in which the foundation of Historical-Cultural Psychology is assumed as a need for the physical organization of environments in group or collective spaces. The group itself is taken as a tool to enhance learning and play is taken as an opposition to the "unpleasant" teaching activity (Guarda, Luz, Rodrigues, & Beltrame, 2017).

This kind of mistaken distortion seems to be the result of a hasty appropriation that his interlocutors make of the content of the author's work. It has been reiterated that Vigotski's intention was related to the elaboration of a general, particular and concrete Psychology project. He was interested in the socalled particular psychologies, such as studies about children, to be raised through abstractions useful to the understanding of the "general human". And, there, between the particularities and possible universal abstractions is the need to analyze the formation of inter-intrapsychic connections, in the movement of constitution of the humanity concreteness (Toassa, 2014).

The methodology that is able to access the dynamics of constitution of higher psychological functions can reach the movement established along the connections between society and the subject while their individuation process takes place. It contains biological, political and sociological elements that engender possible personalities. The Psychology, in order to dedicate itself to this type of study, lacks a methodological proposal that does not admit being relegated to reductionist appropriations of dialectical logic.

Davidov's words (1988b), when explaining the constitution of the formative experiment, certainly help us to understand how experimentation processes do not equate to static and superficial evaluations:

The formative experiment method is characterized by the researcher's active intervention in the mental processes he studies. In this respect, it differs substantially from the observation experiment, which focuses only on the state, already formed and present, of a particular mental formation. The realization of the formative experiment presupposes the projection and modeling of the content of new mental formations to be constituted, the psychological and pedagogical means and the ways of their formation (p. 187).

The monist determination constituting the theoretical framework of Historical-Cultural Psychology should lead us to a more rigorous understanding of the methodological designs of the research to which we dedicate our efforts to carry out. We cannot admit that the ideas of experiment, diagnosis and evaluation fit only interpretations loaded with inferior meanings. We need to save ourselves from this ambush, because it entails a theoretical and political project opposed to what the Soviet authors professed. And so, unaware, we can collaborate with the opposite of what we aim to build.

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