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Invisible development of everyday humanity: Psychology, Biology and Culture

Desenvolvimento invisível da humanidade cotidiana: Psicologia, Biologia e Cultura

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ABSTRACT
This work is organized as a theoretical study whose objective is to debate the implications of the split between natural and human sciences for the field of developmental psychology. It is reiterated that this thoughtless split has been pernicious both for the construction and for the interpretation of research results, especially in the context of those studies dedicated to the development of higher psychological functions. We intend to rescue the ballast of Soviet Psychology as well as some interlocutors of contemporary neuroscience to emphasize that the need to overcome this rupture has already been announced and, in many ways, continues to be encouraged. We emphasize the language arena as a guiding framework for this analysis as it brings together dimensions of the synthesis between Biology and Culture. The consequences of this understanding contribute, especially, to discussions in the field of Psychology and Education.

Keywords: Developmental Psychology. Culture. Psyque.

RESUMO
Este trabalho organiza-se como um estudo teórico, cujo objetivo é debater as implicações da cisão entre a ciências naturais e as ciências humanas para o campo de estudos da Psicologia do Desenvolvimento. Reitera-se que esta cisão irrefletida tem sido perniciosa tanto para a construção quanto para a interpretação de resultados de pesquisas, especialmente, no âmbito daqueles estudos dedicados ao desenvolvimento das funções psicológicas superiores. Pretendemos resgatar o lastro da Psicologia Soviética bem como alguns interlocutores da neurociência contemporânea para acentuar que a necessidade de superação desta ruptura já havia sido anunciada e, de muitas maneiras, continua sendo incentivada. Enfatizamos a arena da linguagem como marco orientador desta análise na medida em que aglutina dimensões da síntese entre Biologia e Cultura. Os desdobramentos desta compreensão contribuem, especialmente, com discussões no campo da Psicologia e da Educação.

Palavras-chave: Psicologia do Desenvolvimento. Cultura. Psiquismo.

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1 Opening words

This work does not claim to be innovative; rather, it focuses on the challenges posed by the past that persist in our daily lives. Additionally, it examines the small revolutions in which we engage daily. The present discussion aims to delve into the enduring dichotomy that characterizes the realm of scientific endeavor, particularly the division between the humanities and the so-called natural sciences, and the frequent separation of history from both.

To this end, an initial exposition will be offered, elucidating the historical nuances underpinning the establishment of psychology as a scientific discipline, thereby illuminating its affiliations and commitments that have contributed to its ascription of scientific status. This article presents a theoretical study that explores the implications of the division between the natural sciences and the human sciences for the field of developmental psychology. The study is anchored in the background of Historical-Cultural Psychology and the perspectives of contemporary Neuroscience, highlighting the ongoing emphasis on transcending this division. It is imperative to note that the objective of this study is not to provide a comprehensive survey of the current state of the field, nor is it to undertake a historical examination of psychology.

The objective is to establish a synthesis that can identify the primary implications of this division for practices at the intersection of psychology, education, and neuroscience. In this regard, we have selected the domain of language as a potential epistemological unit capable of transcending dichotomous analyses in the context of content that integrates natural and psychological dimensions, precisely because it focuses on the human condition. To this end, we have underscored the materialist monism present in Historical-Cultural Psychology as a methodological criterion capable of guiding this discourse. We have retrieved research in the field of Neuroscience to compare it with this criterion, and we argue that this work of synthesis points to the necessary overcoming of the old rancid dichotomy that still surprises us in this scenario.

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If monist materialism is regarded as the foundational principle that guides us, it is imperative to acknowledge, as the Stanford Encyclopedia of Philosophy emphasizes, that "There are numerous monisms, and what they share is that they comprehend the constitution of phenomena as unities; what they differ on is what they attribute to the genesis of this unity" (ZALTA, 2022). Consequently, the present article does not aspire, nor could it aspire, to address the various ontological and epistemological frameworks established in psychology.

It is acknowledged that the objects of study in psychology vary due to the diversity inherent in the field. However, the present study will commence with the synthesis proposed by De Vos (2019), who elucidates his personal experience as an observer of these objects within the context of psychological literature. According to his elaboration, when confronted with these objects, he perceives himself as a contemporary Diogenes, brandishing a torch in his hands as he seeks what is human: the psyche.

To comprehend the contributions of psychology to the development of humanity, it is necessary to explore its historical underpinnings, recognizing that history is shaped by the actions and interactions of individuals in the world. This exploration entails a deliberate unveiling of psychology within the context of history. Within the limitations of this work, our objective is to articulate this position. A thorough examination of this topic has already been conducted by our affiliated scholars (TOASSA, 2017).

Here in this work, we insist on the following object of study: the constitution of everyday humanity, which is not divided into the biological and the social. We therefore emphasize social-historical psychology and its legacy as the source of this unity. In this sense, we postulate that recent research in the field of neuroscience should not shy away from absorbing this legacy. However, we also applaud those who are already doing so. This is where the study by Yasnitsky, Van Der Peer, Aguilar, and García (2016) comes in. The authors offer us an encounter with an unpublished Vygotsky, scattered in a vast and deep collection of letters and drafts. There he appears with astonishing exuberance in what would have been his last note, written on the eve of a foolishly brief death: "This is the last thing I will do in

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psychology-and I will die on the mountaintop like Moses, who glimpsed the Promised Land but could not reach it. Goodbye, dear creations. The rest is silence" (p. 314), he added, repeating Hamlet's words.

This text, then, is an effort to collaborate with those who open up the seemingly invisible so that silences can be heard and utopias can be lived. We are also committed to recovering the Vygotsky who is so often forgotten, distorted, and rejected by psychology itself (MARQUES, 2015). At the same time, we reveal his presence, albeit unexplained, in contemporary neuroscientific studies and research. For the humanities, it is a defense of the materialist foundation. For neuroscience, it is an invitation to recognize the importance of recognizing that any research should never shy away from its task of historical analysis. We believe that this is a crucial step in the defense of the dialectic so dear to cultural-historical psychology. The non-biologization of psychological phenomena requires a definitive understanding of the unity between biology and culture.

2 Psychology in History

Since ancient times, the field of psychology has been intricately linked to the fundamental questions that have long captivated philosophy: What is the nature of the human condition? How does human cognition function? What are the underlying motivations behind our actions, both those we actively pursue and those that we would prefer to avoid? Given that history, as the result of human activity, is shaped by and, in turn, shapes social and economic determinants, we find ourselves ensnared in a dominant narrative of daily life. The scientific paradigm that we currently recognize is the product of a Eurocentric movement. In this sense, psychological knowledge is deeply rooted in the German intellectual landscape (WALSH; TEO; ABDALA, 2014).

Notwithstanding the controversies surrounding this assertion, it is evident that before the 18th century, psychology was not conceptualized as an independent academic discipline. As Walsh, Teo, & Abdala (2014) further

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elucidate, the seminal work of the German philosopher Rudolf Goclenius, entitled "Psychology," marked a pivotal moment in the institutionalization of the field. Before the establishment of Wundt's laboratory, widely recognized as a pivotal institution in this regard, universities in Prussia offered courses in psychology and pedagogy for prospective teachers.

However, the professionalization of psychology, marked by the emergence of a specialized professional workforce with distinct knowledge and competencies, did not occur until the 20th century. This development coincided with the rise of Nazi militarism, a period that witnessed significant advancements in psychology, particularly in the United States. In this context, psychology was regarded as the discipline capable of providing resources to treat the veterans of the massacre (ARAÚJO, 2016; WALSH; TEO; ABDALA, 2014).

However, these influences, however significant they may be, do not determine the development of a unified history. Psychology, or "psychologies," as some historians prefer, evolves differently in different regions, such as Brazil, China, or South Africa (SMITH, 2005). In any event, a discipline that becomes professionalized within a Nazi regime accrues enduring marks (and debts).

The study by Walsh, Teo & Abdala (2014) alerts us to this multiplicity of marks and, consequently, to the varied objects of psychology. For many years, the word "psychology" has referred to the study of the soul, consciousness, behavior, the mind, or the brain. However, a closer examination reveals two predominant schools of thought within the discipline. The first, rooted in a natural science's orientation, aims to predict, control, and investigate cognitive or brain functions. The second, grounded in human sciences, focuses on the study of experiences, emotions, will, and subjectivity.

These two forces are indicative of a protracted dispute regarding the delineation of procedures that are deemed scientific. The assertion that equates science with the observation of facts is frequently accompanied by its antithesis, which posits that any human activity constitutes science. Both of these positions are imprudent and express a pernicious tendency. Science, as a rational practice, is one of the human activities that engender and perpetuate existence.

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However, it is imperative to acknowledge two salient points: first, not every quotidian practice can be considered scientific, and second, science has undergone specific refinements in accordance with its role in the division of economic and social powers (DE WALL, 2015).

This underscores the necessity for a thorough examination of the distinct characteristics that define science, and the manner in which its principles differ from other domains of knowledge. To that end, it is imperative to elucidate the foundations that interconnect scientific production with the emergence of capitalism as a mode of production, thereby establishing science as an activity that engenders and perpetuates social inequalities. To comprehend this phenomenon, it is imperative to examine, for instance, the construction and accessibility of scientific resources in the domains of warfare and technology, particularly during the Second World War, or the role of science in the post-war era, when eugenic disciplines were established within universities in England and the United States (DE WALL, 2015).

The history of the establishment of scientific psychology, as has been demonstrated, is characterized by these distinguishing characteristics. There appears to be an emphasis on identifying as scientifically valuable that, which is aligned with the natural world, often at the expense of human-related considerations. It is imperative to question the extent to which we can disregard the human element. Science is an activity conducted by people, and it is essential to acknowledge its inherent connection to and dependence on human involvement. Consequently, it is not the laboratory that determines what is scientific; neutrality is not a possibility, and objectivity means unity between cognition and affect. This statement must be accompanied by the necessary reflection on the delineation of what humanity is because this is often obscured by a veil of spontaneous relativism (HOJHOLT; SCHRAUBE, 2019).

In the domain of psychology, there has been an international surge in research and discourse concerning the nexus between the study of the humanities, capitalism, and the purported neutrality of scientific inquiry. These studies have already repudiated neutrality, while underscoring the imperative

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for rigor and objectivity in the realm of psychological science. These works thus encourage the adoption of a psychology that is implicated, recognizing that economic and social interrelationships represent the distinctive characteristics of human subjectivity (PARKER, 2017; HOJHOLT; SCHRAUBE, 2019).

In Brazil, the situation is analogous. Research in psychology, or at the interface between psychology and education, has historically focused on the synthesis between biology and culture within specific social contexts to understand the human psyche (MAGALHÃES; MARTINS, 2020). This research is inherently rooted in historical-cultural psychology. At the core of the seminal contributions of Luria (1979), Vygotsky (1991), and Rubinstein (1978) lies a persistent emphasis on the synthesis of biological and cultural elements, reflecting the ongoing conquest of culture over biology. Since his seminal text "The historical significance of the crisis in psychology," Vygotsky (1927/1991) has underscored the critical risk of the separation of biological and cultural dimensions in any psychological analysis. This perspective, when taken up in this analysis, elucidates a common underpinning of the organization of this unit: the role of language, particularly the spoken and written word.

3 The arena of language

According to Bakhtin (1997), the assertion that language is not everything, yet it permeates all aspects of human existence, is substantiated by its inherent role in human action. This dialogic movement, characterized by the presence and absence of sound, respectively defined as orality and thought, culminates in the acknowledgment of the other, with whom or about whom one engages in discourse. This domain encompasses both the articulated and the unarticulated, drawing upon significant and ideological, economic, and social substances. It underscores the potential for the exercise of power.

In this sense, language can be regarded as a manifesto of the absence of neutrality, a concept that traverses our evolutionary history, incorporating elements of biology that are continually refined by historical and cultural conflicts.

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For this reason, we have identified language as a potential unveiling unit for the perils stemming from the division between the Natural Sciences and the Human Sciences. Consequently, it can be regarded as a pivotal entity capable of safeguarding a philosophical-methodological position that accentuates the constitution of language as a process of human development. This is predicated assuming culture transforms biology.

Science, or at least science that does not shy away from this understanding, embraces history and courageously lays the evolutionary perspective. As Wiessner (2015) observes, the advent of fire control, occurring between 400,000 and 1 million years ago, profoundly altered the course of human evolution. The mastery of fire, with its allure of mystery, transcended its practical uses, such as cooking and predator defense, to become a symbol of artificial illumination, thereby extending the temporal boundaries of day by creating an artificial light.

Wiessner (2015) investigated the language habits of a South African tribe of hunters and gatherers, the Ju'/hoansi (!Kung) Bushman, who maintain a way of life that is strikingly similar to that of our ancestors. The biological ancestry that connects us to people like this has indisputable research value. The results of the study revealed significant differences between conversations that take place in daylight and at night. Thematic analysis of daytime conversations reveals a collective elaboration of economic and bureaucratic subjects, which govern social interaction. In contrast, nighttime conversations, characterized by campfires, are predominantly storytelling-based, accounting for over 80% of the observed interactions. This collective structure, governed by storytelling, facilitates the transmission and protection of information deemed essential for the survival of the group. It fosters the creation and maintenance of emotional bonds, addresses conflicts arising during daylight hours, and establishes the foundations of trust and cooperation necessary for the group's continued existence.

A considerable body of research has already been published on the impact of cooking food on human diets and, consequently, on the anatomical structure of the human body and brain (see ZINK; LIEBERMAN 2016;

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CARMODY et al, 2016). However, the significance of the day prolonged by fire for the establishment of culture and society was not fully recognized until Wiessner's work (2015). The presence of fire in the context of darkness has been observed to elicit a unifying, soothing, and invigorating effect on individuals; thereby underscoring its profound influence on human behavior. The impact of fire on circadian rhythms has been a subject of considerable interest, highlighting the necessity for a deeper understanding of the phenomena that transpired within this specific fire-lit environment. According to the findings of Wiessner (2015), the presence of fire has been shown to facilitate the awakening of the human imagination, thereby enabling the development of cognitive capacities that foster emotional bonds among individuals. Moreover, narratives are identified as pivotal elements in the establishment of human affections and emotions. The synthesis of these possibilities is attributed to the function of imagination.

Psychological perspectives posit that storytelling facilitates the construction of meaning in both the world and our lives (FIVUSH et al., 2017). Storytelling enables navigation of the social world, facilitating the development of a coherent and organized narrative about events experienced over time, particularly regarding emotional aspects (MAR, 2018).

Ribeiro (2019) proposes that the earliest dream plots emerged from the fireside dialogues of our earliest ancestors, serving as the origin of narratives concerning dreams, fears, and desires. The act of storytelling, facilitated by the presence of a communal fire, brought people together, offering a sense of security and community. These gatherings served as a platform for the sharing of personal dreams, contributing to the development of a shared cultural narrative.

It is noteworthy that dreams have played a pivotal role in the evolution of human storytelling, (p. 42). The urge to discuss dreams was a catalyst for the development of our capacity for “memorization, recollection, and retelling” (p. 42).

This, in turn, led to the innovation of written records, such as cave markings and clay tablets. Writing thus emerged as a conduit for transgenerational communication, a phenomenon that Sponville (1997)

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characterized as occupying the liminal space "between speech and silence, between communication and solitude" (p. 35).Writing immortalizes desire and amplifies the efficacy of transmission, transcending mortality and thereby giving form to culture itself.

Recent studies have provided significant insights into the fundamental interface of this discussion, illuminating the concept of language as a unifying entity between biology and culture. This concept underscores the transformative force of human development driven by this synthesis. In light of these findings, there is a compelling rationale for revisiting the contributions of Vygotsky, whose theoretical framework offers a comprehensive understanding of language as a powerful symbol of human identity. Consequently, our endeavors are directed towards substantiating the monist criterion within materialist philosophy as a delineator of the unity that ought to have remained intact in research conducted within the domains of Neuroscience and Psychology. The failure to consider this criterion engenders what we have termed "biologization" and "psychologization." This understanding, though seemingly evident, obscures the fundamental psychological underpinnings of these developments.

Consequently, from the onset of language, it becomes imperative to trace its origins back to its developmental origins in childhood. In his seminal work "The Prehistory of Language" (1931/2000), Vygotsky underscores the pivotal role of the development of the written word in the evolution of higher psychological functions. He elucidates how this process underscores the historical and cultural determinants of human development, emphasizing the significance of context in shaping cognitive abilities. In contrast to the characteristics of learning the spoken word, which is inextricably linked to the social environment that welcomes us from birth, learning to write is an artificial process because it depends on external procedures for linking the sound elements of speech to specific symbols written on stone, clay, or paper.

From the perspective of child development, it is understood that acquiring literacy necessitates the presence of an external system of media,

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thereby transforming into a psychic function of the child itself, constituting a dimension of its unique behavior. This assertion posits that the "written language of humanity must become the written language of the child" (VIGOTSKI, 1931/2000, p. 185). This process, characterized by a transition from universality to singularity, illuminates the fundamental principles of Historical-Cultural Theory. It further underscores the necessity to delineate the aforementioned concept: culture supersedes biology, metamorphosing and revolutionizing it (MARTINS; LAVOURA, 2018).

The "prehistory of written language," defined as the period preceding the development of the motor act that inscribes strokes on external surfaces, is founded on primitive dimensions, laden with the potential for its acquisition at the juncture when the child initiates the production of initial visual signs, their inaugural mediated interactions with the surrounding environment, sustained by processes of signification that will subsequently enable the discernment of the nuances of their subjectivity. According to Vygotsky's (1931/2000) theory, gesture serves as the initial visual sign produced by the child, representing the origin of the written word. As he expounds in his elaborations, "Gesture is writing in the air, and the written sign is often the gesture that ensures itself" (p. 186).

The manner in which materialist philosophy elucidates the genesis of consciousness is predicated on the notion that there is no subjectivity that is divorced from the materiality of everyday life. Similarly, there is no aspect of everyday life that is not subject to the influence of previously constituted subjectivities. The transformation of nature through labor results in the creation of the conditions and circumstances—both objective and subjective—that shape human existence (Kopnin, 1978).Language, therefore, emerges as the genesis of culture, which requires the biological apparatus as a condition and subsequently inundates it with the full potential for existence.

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4 The sensitive soul

A recent and intriguing study by Simona Ginsburg and Eva Jablonka (2019) prompts us to contemplate the nature of human consciousness by posing the provocative title, "The evolution of the sensitive soul: learning and the origins of consciousness." In the preface, the authors underscore the intimate, cherished, and elusive nature of what is termed "subjective experience," or more specifically, "consciousness" (GINSBURG; JABLONKA, 2019).

The study and potential definition of human consciousness stands as one of the most contentious undertakings in the realm of psychology and various other fields of knowledge, ranging from philosophy to neuroscience, and, prior to that, the quotidian knowledge produced in the world. The concept of consciousness emerges in our reflections on our ancestors, on fire, on the narratives we weave, and on the economic bonds that shape our subjectivity (DE WALL, 2015).

In the scope of this article, it is not our intention to delve exhaustively into each of the issues we have raised. However, if we return to the objective that guides us, it becomes clear that we need to announce the interconnections between evolution, language, and consciousness.

The historical organization of psychology has both embraced and rejected the possibility of consciousness being taken as its object of study. In general, the German genesis of psychology viewed positively the idea that the study of consciousness, or at least the mental activity of subjects, should be taken as a subject of investigation. Conversely, the initial American psychological traditions repudiated the prospect of examining consciousness, perceiving it as enigmatic and inaccessible. This rejection enabled psychology to establish itself as a discipline aligned with the natural sciences and, consequently, with science itself (WALSH; TEO; ABDALA, 2014).

Throughout history, a recurring pattern of struggle and opposition has been observed, seemingly necessitating the guarantee of psychology as both inherently human and inherently natural. This phenomenon, akin to a field dispute as conceptualized by Bourdieu (2004), appears to be a fundamental aspect of human specificity.

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Since the inception of this research, we have asserted that endeavors to transcend this schism are in effect and predominantly grounded in materialist ontology, dialectical logic, or monist philosophy. This perspective is exemplified by the studies of Vygotsky and his interlocutors (YASNITSKY; VAN DER PEER; AGUILAR; GARCÍA, 2016), and the contributions of Martín-Baró (1986/1998), the notes of Freire (1979), and even the work of Damasio (2021) have attempted to organize themselves, albeit controversially.

Studies that adopt this perspective posit that the brain apparatus, from its most primitive components to the emergence of the most recent prefrontal cortex, constitutes the foundational basis for human existence. Conversely, it is acknowledged that cultural processes have functioned and continue to function as a propulsive envelope for the most singular specificities of this existence (WENTE et al., 2016; VANDERVERT, 2018).

Consequently, the demand to overcome the old (and still new) dichotomies emanates from science itself, especially at the interface between psychology and biology. However, it is noteworthy that there is a paucity of studies that focus precisely on this interface without, however, delving into the human substance from a perspective that does not slip back into the aforementioned schism.

In this regard, we underscore a study that reveals that the act of caring for children exerts a specific influence on brain circuitry, particularly limbic and subcortical regions implicated in vigilance, reward, and empathy processes. This suggests that the experience of motherhood or fatherhood leads to substantial modifications in the brains of mothers and fathers. However, in addition to these shared changes, mothers who assume the position of primary caregiver, when in a relationship with men who act as secondary caregivers, show an exacerbated activation of the amygdala, a brain structure strongly related to emotional processing. This alteration is exclusively female. However, when the study includes homosexual couples whose care is shared between two men, the same hyperactive activation of the amygdala is observed, as with mothers who are primary caregivers

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(ABRAHAM; HENDLER; SHAPIRA-LICHTER; KANAT-MAYMON; ZAGORY-SHARON; FELDMAN, 2014).

In light of these findings, it is imperative that we reflect on the implications of such research, particularly in the context of our discussions. This research offers a glimpse into the intricate relationship between the physiology of the brain and the nuances of care, highlighting the need for a more comprehensive understanding of the complex interplay between biological processes and human behavior. However, when we become entrenched in the divide that separates us as representatives of the natural sciences or supporters of the humanities, there is a clear risk. A hasty interpretation of this result could imply that, for men, fathers, all that is necessary is the will to be present and engaged caregivers.

The study of the category of will in the human and social sciences has historically been approached from various epistemologies. The perception of gender, the societal structure divided into classes, the organization of formal and informal work, access to health and assistance policies, and numerous other crucial factors are of significance. A fundamental question that emerges is whether the concept of will is best understood as an innate or extra-material virtue, or if it is more appropriately viewed as an integral component of a system of psychological functions that are dialectically organized based on activity and materially determined relationships. For the latter perspective, which aligns with our own, it is insufficient to merely present or interpret scientific evidence without engaging in a thorough examination of the concept of will. The crux of the issue lies not in apportioning blame or neglecting certain aspects, but rather in comprehending the inherent complexities of the concept of will.

In this regard, the extensive corpus of studies in Historical-Cultural Psychology emerges as a pivotal source of insight into the nature of will. While a thorough exploration of this subject would necessitate a separate investigation, it would deviate from the present objective. The crux of our argument is the recognition that the manifestation of a physiological change in response to a given situation in everyday life cannot be construed as an

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independent entity, divorced from the broader psychological context of the evolution of higher functions. Conversely, neglecting the physiological aspect would result in a psychological interpretation capable of discerning only the superficiality of the phenomenon.

This synthesis delineates the contours of human existence itself, establishing the boundaries of consciousness, personality, thought, and volition between the limits of matter and subjectivity. For a considerable period, the dynamics of this existence have been understood solely in the context of the synthesis between culture and biology. However, it has only recently become known that science cannot do without this consistent substrate, which rests on a universe of symbols whose magnitude defines the intricacies of the brain's own circuitry (RUBINSTEIN, 1978).

In this sense, it is remarkable that the symbolic universe has an indisputable foothold in the neural processes within which the dream substance is based. It is noteworthy that contemporary neuroscience experiments have acknowledged the potential for research at this nexus. In addressing this subject, Ribeiro (2019) invokes the narrative of Sitting Bull, the indigenous leader who guided his people in their confrontation with the United States Army through dream interpretation. Bull belonged to the Bison society, a group of mystical dreamers who received premonitions.

From a scientific perspective, devoid of any sense of superiority, guiding questions emerge that, from a materialist standpoint, facilitate our understanding of the role of dreams in organizing the memories that underpin learning processes, the scientific organization that explains intuition, and the nuances contained within emotional processing. Scientists welcome what is known as premonition, a concept that is universal to the human experience, and, through the evidence they find, ultimately refute it. However, by considering it as an object of study, researchers enter the domain of synthesis, which understands premonition as essential for the psychological meanings that are constituted from everyday experience. This underscores the importance of investigating how the ideas of premonition, dreaming, or storytelling emerge as expressions of higher psychological functions.

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It is imperative that we revisit this content, which serves as a crucial conduit between science and the full spectrum of human potential: psychological theories. It has been acknowledged for some time that this divide was not formed randomly. We align with those who advocate for the necessity of this unity and perceive its presence within the framework of Cultural-Historical Psychology (Luria, 1979).

It should be noted that this argument is not intended to unduly amalgamate such disparate theoretical frameworks. The foundational principles underpinning these disparate theoretical frameworks stem from contrasting conceptions of history, divergent social contexts, and varied methodological objectives. The objective is to establish feasible syntheses or to advocate for indispensable multidisciplinary studies that do not discard the notion of unity, a concept indispensable to dialectical logic. Adjustments and revisions would be imperative. Nevertheless, cognizance of this intricacy should not absolve us from the undertaking ahead. As Ginsburg and Jablonka (2019) emphasize, the sensitive soul is founded on an understanding of its evolutionary underpinnings, and it is through the transformation of these evolutionary processes that the sensitive soul comes into being. This transformation, therefore, is the central challenge.

5 To continue the debate

The initial effort to organize this work is actually an invitation to reflect, hopefully collectively. Isn't humanity (or the humanities) constitutive of all that is considered natural? Isn't what we take for granted about human beings an expression of the biology-culture synthesis? Isn't the sensitive soul the ever-evolving, ever-moving consequence of evolution as a biological law linked to the sophistication of culture? Doesn't consciousness dwell in the interstices of this connection?

It is worth reading and re-reading the powerful words of Vygotsky (1934/2001) at the end of his last great work:

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> Consciousness is reflected in the word, like the sun in a drop of water. The word is to consciousness as the small world is to the big world, as the living cell is to the organism, as the atom is to the cosmos. It is the little world of consciousness. The conscious word is the microcosm of human consciousness (VIGOTSKI, 1934/2001, p. 486).

The demand for this synthesis must not be equated with a relativistic impulse. We have defended the importance of recognizing and establishing a cohesive criterion based on materialist philosophy. It is imperative to distinguish between the essence of dialectical movement as the driving force behind the development of psychological functions and the fallacious understanding that any direction and condition assumed by this development is equally healthy. Throughout the developmental process, characterized by this understanding, there is evolution and regression; however, the impulse must always be taken care of and directed towards its maximum possibilities for development. This necessitates ensuring that each child relates to and appropriates the content produced by our cultural universality in the arts, mathematics, science, and literature. This requires support and intentionality without coercion. Psychology professionals must develop a comprehensive understanding of psychological functions and their developmental trajectories across the dimensions of emotion, will, and self-regulation.

According to this understanding, the concept of "will" does not manifest in individuals who are detached from their tangible circumstances of existence, be they adults, children, or even those in familial structures that deviate from traditional notions of parenthood. It is not sufficient to assert that this seemingly spontaneous "will" is sufficient for a father to fulfill his role, for mothers to fully actualize their identity, or for us to ascertain that these principles apply uniformly to children raised by two fathers, two mothers, or within diverse family configurations. The concept of will, as glimpsed in the adults we aspire to emulate or live with, inhabits the possibility of development for the children we educate and care for. Will is social and political potentiality, and, essentially, it is the exercise of thought as a guide

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to a certain course of action. Consequently, it also permeates the organization of the state. Conversely, it is important to acknowledge the influence of evolutionary processes on the cerebral circuitry that underlies this will.

The concepts presented herein, ranging from Psychology in History to its potential and promising interactions with the domain of Neuroscience, evoke the notions propounded by Charles Percy Snow. According to Snow (2015), the human sciences sometimes repudiate concepts that are purportedly under the purview of the natural sciences. Natural scientists, regarded as the authentic scientists, are purportedly oblivious to the psychological, social, and ethical dimensions inherent in scientific predicaments.

The implications of this synthesis are extensive and beneficial, particularly in the domain of psychology and education. As Davidov (1988) previously asserted, to the extent that the laws of psychic development serve as the focal point of study in psychology, the pedagogical process is structured as its underlying condition. Similarly, pedagogical endeavors, which represent the focal point of pedagogy, are predicated on the development of psychological functions. This underscores the significance of a synthesis of biology and culture in understanding psychology, which in turn significantly affects the resulting pedagogy. Recognizing the persistent influences that shape our understanding and the valuable initiatives that aim to address these influences is crucial for our approach in this work. The emphasis on everyday life, as articulated by Hojholt & Schraube (2016), serves as a crucial conduit between individuals and the social structures that envelop them, underscoring the necessity of this approach rather than mere redundancy.

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Desarrollo invisible de la humanidad cotidiana: psicología, biología y cultura

RESUMEN:
Este trabajo se organiza como un estudio teórico, cuyo objetivo es discutir las implicaciones de la escisión entre las ciencias naturales y las ciencias humanas para el campo de estudios de la Psicología del Desarrollo. Se reitera que esta división irreflexiva ha sido perjudicial tanto para la construcción como para la interpretación de los resultados de la investigación, especialmente en el contexto de aquellos estudios dedicados al desarrollo de las funciones psicológicas superiores. Pretendemos rescatar el lastre de la Psicología soviética así como de algunos interlocutores de la neurociencia contemporánea para enfatizar que la necesidad de superar esta ruptura ya había sido anunciada y, en muchos sentidos, continúa alentándose. Destacamos el campo del lenguaje como marco orientador de este análisis en la medida en que reúne dimensiones de la síntesis entre Biología y Cultura. Los desarrollos de esta comprensión contribuyen, especialmente, con discusiones en el campo de la Psicología y la Educación.

Palabras-Clave: Psicología del Desarrollo. Cultura. Psiquismo.

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