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традиции и инновации

Cultural-Historical Psychology:
Traditions and Innovations

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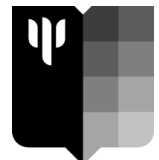
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Cultural-Historical Psychology: Traditions and Innovations

Guest Editors: K. Plakitsi, O.V. Rubtsova

Contents

Содержание

CULTURAL-HISTORICAL PSYCHOLOGY: TRADITIONS AND INNOVATIONS
КУЛЬТУРНО-ИСТОРИЧЕСКАЯ ПСИХОЛОГИЯ: ТРАДИЦИИ И ИННОВАЦИИ

Editors' Foreword

Over a century ago Lev Vygotsky founded a Theory that was later elaborated in the works of his disciples and became known as the Cultural-Historical Theory and Activity Approach. With the time, the Theory spread far beyond the boundaries of the country where it had originated, and started to be applied by scholars, coming from various theoretical backgrounds, and working in diverse areas of science. The special issue presents a collection of articles on the Cultural-Historical Theory and Activity Approach that highlight different elements of the sociocultural research field. In a sense, the articles offer an in-depth analysis of the Cultural-Historical Theory as the ground for dialogue and collaboration of researchers throughout the world. Within this frame, the special issue deals with the present state of the Cultural-Historical Theory and Activity Approach in psychology, discussing CHT as a "functional paradigm", considering its linkages with clinical psychology, as well as with the educational policy and activism. The articles focus on such aspects as the urgency of agency, the social situation of development, mental development, expansive learning, and social transformation. The papers highlight challenging scientific issues, triggering further academic discussions and making a serious contribution to the socio-cultural field of research.

This special issue is dedicated to the memory of Elena Olegovna Smirnova — an outstanding Russian scholar, specialist in child psychology, Professor, Head of the Centre for Psychological and Pedagogical Expertise of Games and Toys, a winner of the Russian government award in the field of education for the cycle of works "The system of the upbringing and development of children from birth to seven years old". She passed away on February 3, 2020.

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Critical Challenges in Cultural-Historical Activity Theory: The Urgency of Agency

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The article addresses the challenge of conceptualizing agency within a non-dichotomous, dialectical approach that gives full credit to the social roots of agency and does justice to it being an achievement of togetherness possible only in a communal world shared with others. Critical steps in this direction are undertaken by the Transformative Activist Stance (TAS) approach advanced by this article's author and further developed and applied to various topics by scholars from many parts of the world. This approach is firmly rooted in cultural-historical activity theory yet also moves beyond it in overcoming some of its impasses. The core elements of TAS are discussed to reveal how they coalesce on the nexus of social practices of self- and world-making. Agency is the process that enacts this nexus of ongoing, ceaseless social-individual transformations whereby people simultaneously, in one process, co-create their world and themselves so that each individual person makes a difference and matters in the totality of social practices. Ethical-political entailments of TAS are discussed to combat the legacy of passivity and inequality still permeating psychology and neighboring fields.

Keywords: transformation, nexus of social practices, Vygotsky, ethics, politics, ontoepistemology, equality.

> We are all actors: being a citizen is not living in society, it is changing it.
> *Augusto Boal*

> No society has yet lived up to the principle that everybody matters...
> *Kwame Anthony Appiah*

Introduction

In this paper, I address what can be consider to be one of today's major challenges in theorizing human development and mind including within cultural-historical activity theory and related approaches such as sociocultural, cultural, and critical frameworks in psychology, education, literary theory, and communication studies, among others. This challenge is how to conceptualize human agency yet not slip into the pitfalls of traditional approaches premised on assumptions about agency as an autonomous, solipsistic achievement of isolated individuals understood either as "free-will" subjects or, on another spectrum of views, as puppets of extraneous influences at the whim of powerful forces outside of one's control and even awareness. These traditional approaches, formed largely in the 19th century, are unfortunately increasingly powerful and popular, resurrected on the heels of advances in biological fields such as genetics and brain research (typically, with psychology and education uncritically borrowing from these fields) that are hailed as providing answers to all the core questions about human beings, while in fact being still in their infancy [69; 71] or, at best, adolescence [43].

The traditional approaches are exemplified especially in what I term, with a great dose of irony, the "new grand synthesis" [59; and see next section] with a focus on individuals as essentially isolated strivers, walled-in by self-interest and acting in a vacuum, a lonely and fictitious character equipped with inborn endowments and traits. The challenge I pursue in this paper and my other works is to unequivocally reject such understandings yet to do justice to every person's ability to make one's own decisions and determinations, chart one's own path in life and, generally, make a difference and thus *matter* in the world in one's own unique, inimitable way and from one's unique, irreplaceable position. All of this, importantly, is about persons mattering in the world that is existentially and profoundly, fully and to its very core social and communal, that is, *shared with others*. In other

words, the challenge is about theorizing human agency with an emphasis on individuality and uniqueness that are at the same time understood to be irrefutably and incontrovertibly, through and through, from start to finish, thoroughly collective and social, as instantiated in collaborative and communal, shared and distributed achievements of uniqueness through togetherness.

Why is this important? In my view, cultural and critical theories, including cultural-historical activity theory, still have to reckon with the long-lasting legacy of passivity — and closely related assumptions of inequality — in accounting for human development and social functioning, as expressed at its infamous and deeply flawed extremes in behaviorism and other mechanistic modes of thinking. This is not about merely stating that individuality and agency need and can be understood in social terms and that humans are not passive — there have been many general proclamations to this effect that remain hollow due to them not being supported by solid conceptual work showing how this is in fact possible and which specific processes are at play in such a view. What is required is a painstaking and detailed exploration into the philosophical, conceptual, and logical warrants and supports for, and implications from, this position.

Formulating such a task might sound paradoxical — after all, behaviorism is supposed to be done with and buried long ago, since severe cracks emerged in its foundation around the 1960s (typically associated with Chomsky's 1959 critical review of Skinner's book) followed by its subsequent gradual demise. However, the rumors of behaviorism's death, unfortunately, have been greatly exaggerated and, in fact, it has survived till today under various guises. It is not surprising to read the revelatory — and also deeply ironic — assessment proudly made recently by no less than the President of the Association for Psychological Science in the US that "... behaviorism is less discussed and debated today because *it actually won the intellectual battle*. In a very real sense, all psychologists today (at least those doing empirical research) are behaviorists" [50; emphasis added].

The residue of passivity consists in positing that people are shaped by the world (culture, biology or any other extraneous factors acting upon people from either outside or inside, or in some combination of both), depend on a "given" context, and act "under" its existing circumstances, in "responding" to these circumstances, after the fact of them impinging on us. Seemingly innocuous, the language of "stimuli" and "reactions," or of even just one term of this infamous pair (since no "reactions" exist without "stimuli" and vice versa) and of related terms such as of people "responding" to circumstances and situations in their lives is actually strongly suggestive and even emblematic of a number of deeply seated (albeit often unarticulated) assumptions directly affiliated with behaviorism. If these assumptions are made, and even if they are accompanied by general assurances that people are active rather than passive, there is no way to avoid ultimate surrender to viewing human beings as essentially shoved around by the all-powerful forces not under their control. This is what has happened again and again in conceptions of personhood and agen-

cy — including even those that profess co-determinism [see 81; 83; 69].

The assumptions of passivity are non-coincidentally related to a number of closely associated and deeply flawed ideas including about (a) the separation of human beings from the world/reality whereby a false sense of distance between them is created and, consequently, the need for people to "represent" and "access" reality through special channels or modes of connection is posited and (b) the inevitability of social hierarchies and inequalities according to which some modes of thinking and living, and even some people, are privileged over others, in line with psychology's colonialist heritage. These deeply harmful assumptions are concomitant with the legacy of passivity, behaviorism and other mechanicist and reductionist approaches still prevalent in modern-day mainstream psychology.

The need to overcome assumptions of passivity has to do with many conceptual considerations including that these assumptions fail to account for significant features of human development such as creativity, resistance, ingenuity, inventiveness, and spontaneity. These assumptions also fall far behind the realities on the ground when it is quite obvious (one could say, painfully obvious) that humans are shaping the world with unprecedented force, with our collective activities dominating the planet to a previously unthinkable degree and with drastic consequences, as reflected in the notion of Anthropocene. This is further illustrated with astounding clarity by the current pandemic, when human agency is front-and-center, revealing how we are all interconnected and interdependent, literally as a matter of life and death, requiring us all to be active agents who are conscious and conscientious, responsive and responsible — and implicated in the world's overall dynamics and change (see last section for details). Thus, the urgency of agency is by no means a theoretical notion only; in my view, at stake is the need for societies in which, and theories according to which, everyone matters and makes a difference.

This is in line with the egalitarian, non-hierarchical and anti-hegemonic ideals that do not erect barriers and status hierarchies among people, while privileging some and subordinating others, and instead validates and celebrates agency, creative powers, and infinite potential of *each and every person*. I understand that calls to developing theories premised on ideals of social justice and equality are currently not in favor with many scholars in Russia, including even those who are working within the legacy of Vygotsky, for whom this was a paramount concern [57; 68; 73; 82; 84]. Yet the world is finally awakening to such calls especially at this moment in history when, to quote Jameson [34, p. 86], "the present — and above all our current present, the [presumably] wealthy, sunny, gleaming world of the postmodern and the end of history, of the new world system of late capitalism — unexpectedly betrays us" (insert added). On the heels of recent events, including in hopefully learning from the current pandemic and the broader crisis of which it is a part, there is a hope for a strengthening of critical scholarship that is mindful and inclusive of ethical-political considerations exemplified, for example, by approaches

of resistance, striving to act as "a species of dialectical thought, a mode of critical engagement that refuses to leave the world unchanged and static in its hubristic and procrustean ways" [100, pp. 29—30].

The main argument in this paper is that although much progress has been made in cultural-historical activity theory and related approaches, now is the time to more resolutely address and capture the dynamism of transformation and change and the enormity of humans' role in this dynamism, while theorizing agency within complex relationships between the social constitution of human subjectivity and the possibility of social justice [cf. 1]. This approach puts premium on the radical-transformative agency of people understood to be agentive co-creators of social practices in their historical unfolding and endless transformations and thus co-creators of the world and, simultaneously and critically, of themselves. In this account, termed *transformative activist stance* [TAS; for detailed exposition, see 69], *agency is accorded no less than a world-forming and history-making role*. This approach suggests not merely that people are situated in the world, or co-constructed by it, but that they are its co-creators, who come into being precisely through their own acts of *real*-izing the world [i.e., literally making it real; cf. 8] — acts that are possible only in solidarity with others, in shared spaces and through joint efforts. Placing agency in such a radically central role as belonging to the foundations and even *the very fabric* of human development, society, and even the world/reality itself — yet staying on the grounds of a non-transcendental and non-individualist position — requires careful elaborations of worldview-level premises about not only human development but also the world and our position "in" it.

To reiterate, there is an important ethical-political component in this position, inextricably related to its conceptual-analytical components, together forming a seamlessly merged ethico-ontoepistemology [73]. This ethical-political component is the notion that *every person matters* in everything that is going on in the world — because the world *as a whole* is evoked, *real*-ized, and created by each and every one of us, in each and every event of our being-knowing-doing — notably, by us *as social actors and agents* of communal practices and collective history, who only come about within the matrices of these practices through realizing and co-authoring them in joint struggles and strivings. This position is a departure from the canonical interpretations of Marxism and also an expanded and critical take on Vygotsky's tradition in which agency was under-theorized for various reasons including political ones [58; 69]. At a deeper level, the key premise of ethical-political nature is that all individuals are endowed with equal potential for social achievement, intelligence, creativity, and any and all other capacities and faculties. That is, all individuals are truly considered equal, not just in their legal and moral rights, nor only in opportunity, but in their fundamental capacities and abilities — albeit as these can and have to be brought to realization within shared collaborative practices and communities. This further implies that all human beings have unlimited potential — and are thus profoundly equal precisely in the *infinity of their potential* regardless of any putatively "natural" endowments and ostensibly "intractable" deficits. This potential, however, needs to be actualized by individuals themselves, as an "achievement" (with no connotations of either finality or predetermined norms) of togetherness, while being provided with access to requisite cultural tools and spaces for agency within the collaborative dynamics of shared community practices [69; 71].

Building on the heels of relational approaches and moving beyond them

There have been important developments on the topic of agency, including by a group of interrelated approaches focusing on the role of context, situativity, embodiment, historicity, and interactivity including collaborative, situated, and distributed cognition theories; dynamic systems and actor-network theories; participatory learning approaches; and theories of embodiment, enactment, and cultural mediation [e.g., 18; 53; 36; for recent overview, see 21]. Several of these approaches, in addition, focus on the continuously unfolding, historically situated, and culturally mediated developmental dynamics of human embodied acting in environments. Typically, these approaches emphasize relational co-constitution of human beings and the world. This includes highlighting that all phenomena of human development are dynamically relational and contextually situated in thus stretching beyond the person alone. Given such emphasis, these approaches are de facto aligned with the recently influential *relational* perspective (or relational ontology), sometimes dubbed as standing for a conceptual revolution in psychology and neighboring disciplines [40; 60].

At the core of relational approaches is the notion that people evolve and develop within continuous relations with their surrounds and with other people, rather than as separate, self-contained "thing-like" entities with fixed inner essences unfolding from some primordial sources and following pre-programmed scripts or rules. Instead, people and their environment are posited to have shared existence, emphasizing mutual co-construction, co-evolution, continuous dialogue, belonging, participation and similar processes of relatedness and interconnectedness, blending and meshing — the "coming together" of individuals and their world that transcends their separation. Relational perspective, in its overcoming the Cartesian dualism, can be considered to be one of the staples and major achievements of the 20th century in psychology and neighboring disciplines. For example, all three major theories of human development of that century — those by Piaget, Dewey and Vygotsky — represented relational perspective that aimed precisely at overcoming the subject-object dualism and therefore, bearing much similarities, juxtaposed with significant differences, across them [59; 69]. Relationism is influential in developmental psychology [47], cultural anthropology [31], social psychology [27], studies of communication and cognition [11; 15], and educational ethnography [37], among others.

These developments are important and laudable especially as they represent a much-needed front of resistance against the all-powerful trends of biologically reductionist frameworks. These latter frameworks are recently uniting, in what can be termed, tongue in cheek, a "new grand synthesis" [59].This synthesis is drawing together the resurrected tenets of sociobiology, innatist linguistics, narrowly conceived neuroscience, orthodox modular cognitivism, with the impoverished and ineffectual test-and-control, knowledge-transmission education models following suit. The biggest irony of this "new grand synthesis" (and associated brainism) is that there is nothing new and nothing grand about it except for extraordinary ambitions and pompous declarations about its capacity to explain everything — from altruism, criminal behavior, motivation, religious beliefs to even political choices and affiliations, not to mention learning and development [for critique, see 3; 40; 48; 59; 75; 78].

In my works through the past years, including in collaboration with other scholars, I have drawn attention to both strengths and limitations within relational approaches to agency including a residue of passivity present in them. As an illustration, I have analyzed influential works on agency by Giddens, Bourdieu, Archer, Emirbayer and Mische, and especially Biesta and his colleagues to expose their reliance on the notions that make them susceptible to assumptions of passivity and, in terms of ethico-political implications, those of accommodation to the status quo and political quietude [69; 77; 83].

In order to overcome this residue, as I will further elaborate herein, it is important to reconstrue no less than the very basic premises about human development including about how we are and how we can be in the world, what constitutes humanness, what is reality and, most critically, what could a humane and just society be in which this humanness is possible, together with a set of closely and non-coincidentally related ethical-political issues. What is needed, in other worlds, is a philosophically grounded revision and re-articulation of the major assumptions about human development away from assumptions of passivity, accommodation, quietism, and adaptation to the status quo.

These are monumental questions and shifts and they are typically supposed to be the province of a "big philosophy" and "big theory" — approaches advanced by hero-figures, such as Hegel or Marx, or by a select coterie of currently prominent elite scholars who offer solutions that are then followed and implemented by rank-and-file researchers. Most researchers and educators are unfortunately trained to not count themselves among such elites and typically tend to stay away from formulating their own answers to philosophical questions they inevitably encounter, relinquishing efforts to advance *their own* worldview-level conceptions and notions. However, in my view, this goes against the spirit of what science and research are arguably all about: An open-ended, free-spirited, personally responsible, endlessly creative, unending adventure at the edge of uncertainty filled with contestation and dissensus [to paraphrase Bronowski; cf. 72]. That is, science and research are uncertain and unsettled through and through — constituted by processes of questioning, critiquing, exploring, confronting, deconstructing, falsifying, refashioning, reimagining, refuting, and interrogating — wherein no answers can be used ready-made and treated as pregiven recipes. Since the processes of questioning, interrogating and moving beyond the status quo are the very fabric of knowing, we cannot expect ready-made answers from the classics or from anybody else, for that matter. Instead, *each and every researcher has an obligation and privilege to come up with one's own answers* (however provisional and incomplete they might be), including on core philosophical questions. Certainly, this is not about inventing such answers from scratch or in a vacuum but rather, about hard work based in a critical and in-depth personal engagement with the legacy and views of those who one deems important to dialogue with, though never accepting everything *in toto* as a "final truth."

Accordingly, although carried out in continuation of Vygotsky's tradition, the approach I am developing also critically reassesses and moves beyond it. Vygotsky's project cannot be employed to develop novel approaches without expansive critique and creative elaboration — which, of course, is very much in the spirit of this project itself, given its Marxist legacy, with its celebration of critique as a major, indispensable premise and a methodological condition without which it ceases to exist. This approach to Vygotsky's legacy is consonant with what has been captured by Osip Mandelstam — a striving to advance "a resilient tradition that *draws from the very sources it is intended to combat*" [quoted in 9, p. 11; emphasis added]. This is also what Boris Eikhenbaum captured in his notion of the ongoing "battle with the craft" of other poets (and, I would add, scholars). In his words, those who wish to learn from others must likewise be prepared to do battle with them: "you must conquer Mandelstam [or any other predecessor-AS]. Not study him" (ibid.). Thus, the strategy I am using is to navigate and balance two opposite attitudes towards historical legacy and tradition, namely, the notion that "none of the systems, none of the doctrines transmitted to us by the great thinkers may be convincing or even plausible" anymore [2, p. 12], on the one hand, and the notion that "our classics are like a powder keg that has not yet exploded"[1] [41, p. 308], on the other. The expansive elaboration of the worldview-level premises seeks to overcome a number of polarities especially with regards to the status of reality and change in conceptualizing human development, the role of human agency in enacting them, and the notions of contribution and commitment to the sought-after future as central to human ways of being, knowing, and doing.

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[1] This expression sounds really great in the orginal Russian: "Наши классики — это пороховой погреб, который еще не взорвался".

The transformative worldview and agency

In building upon the legacy of Vygotsky's project — combined with insights from contemporary critical scholarship (e.g., philosophy of practice, critical pedagogy, postcolonial and feminist perspectives, new materialism, and science studies, among others), and also works by Bakhtin, Gramsci, Fanon, Sartre and others — my proposal has been to dialectically expand ideas about human development, as a relational and situated process, through the notions of transformation and agency while exposing and drawing connections to ethical-political dimensions indelibly present in these matters. That is, human development, in addition to being relational and situated, and even more originary, needs and can be understood as grounded in purposeful and answerable — in other words, *agentive* or *activist* — contributions to the dynamic and ever-shifting world-in-the-making composed of shared communal practices colored by visions of, stands on, and commitments to, particular sough-after futures at the core of various transformative pursuits (or projects), always ethico-politically non-neutral. This position, termed Transformative Activist Stance (TAS), places agency that all human beings exercise (whether they know it or not) at the core of not only human nature and development but also — most critically and quite contentiously (vis-à-vis both Vygotsky's school and Marxism) — of reality itself. The focus is on the bidirectional and dynamic nexus of social practices simultaneously realizing human development, social life, and reality — while at the same time placing emphasis on these practices being realized by people contributing to social change at the intersection of individual and collective agency across the time dimensions (and with a particular emphasis on the sought-after future), while exactly through this process, and simultaneously, also creating themselves as agents and co-authors of the world.

Some of these themes and notions, or their elements, might appear to be immediately familiar to many researchers knowledgeable about or working within critical sociocultural frameworks and Vygotsky's tradition. For example, the emphasis on collaborative practices is present, in addition to approaches in the Marxist tradition, in works by Foucault, Bourdieu, the feminist and standpoint theories, some currents of pragmatism and, quite centrally, Freire's critical pedagogy, among others. Within Vygotsky's lineage, this emphasis can be found, for example, in [13; 20; 31; 51; 98], among many others. Many Russian scholars in Vygotsky's school or working in affiliation with it made similar points — most prominently, Alexei N. Leontiev, Evald V. Ilyenkov, Vassily V. Davydov, Alexey A. Leontiev, and Valdimir P. Zinchenko (in his early works) and their followers. As I will discuss, the ways to concretely fashion and then proceed from such broad premises can still differ in many respects. To paraphrase Viveiros de Castro [97]: admitting the familiar is one thing; it's a very different kettle of fish drawing from it all the possible consequences. Adding to this, I would say: The devil is truly in the details.

One of the specific elaborations in my works has to do with vigorously, consistently, and unequivocally explicating and ascertaining the role of collaborative transformative practice/activity as an *ontological foundation* for human development and, importantly, also reality itself. This entails positing such practice — that unfolds and gradually expands in time connecting each human being with everybody else and each generation with all others — as a new relation to the world, precisely *as a new form of life* unique to humans that has brought about their emergence in evolution and that continues to constitute the foundation for their development in all its expressions, dimensions and facets. This ontologically primary realm can be understood as the "lived world" [жизненный мир-Rus.; for a recent analysis, see 39], but not in the sense of people merely being situated or dwelling in it as a given, nor in its present status quo. Instead, this realm is, in my view, better designated as the "*lived struggle*" — an arena of human historical and life quests and pursuits, enacted as collective efforts at becoming fraught with contradictions and conflicts — infused with dimensions of values, interests, struggles, power differentials, and intentionality including goals, visions, and commitments to the future. Because of its grounding in collaborative social practices, that is, in people acting and doing things together while co-producing their life, the designating term for this realm, I would suggest, can be *act*uality [in its etymology deriving from the term *act* in many languages, in addition to English — *Wirk*lichkeit (German), *действи*тельность (Russ)]. This is a realm where human activities, actions, and deeds form the ultimate grounding for the world that is not discovered, nor merely experienced, but instead enacted and realized (or co-created) by people themselves.

That is, ontologically, the world is understood as a constantly shifting and continuously evolving terrain of social practices constantly enacted and reenacted by people acting together in performing their individually unique and authentically authorial, or answerable, yet deeply and profoundly social, deeds. Each person entering, or rather joining in with, this collective forum, right from birth, is the core condition and foundation for personal becoming and development. The radical import of this position is that the human subjectivity and agency extend to the very core of reality because nothing exists outside of the temporal fabric woven by human communal practices and deeds [cf. Bakhtin; 46].

The second and related proposition is that a close synergy between ontological (what reality is taken to be) and epistemological (what the process of knowing about reality is taken to be) aspects or dimensions of the transformative worldview is ascertained. That is, the process of knowing is understood to be contingent on activist involvements in, and contributions to, collaborative transformative practices and thus, *a form of practice itself that is coterminous with being and doing.* This is in line with the well-known Marxist maxim that in order to know the world, we have to change it. However, this maxim draws attention to and has been typically interpreted only in its epistemic dimension, as suggesting that humans know the world through changing it. While fully accepting this premise, the suggested expansion goes beyond the epistemological level alone to instead link it to the on-

tological one by stating that while there is indeed no gap between changing one's world and knowing it, there is also no gap between changing one's world and being (becoming) a unique person, with both processes simultaneously created as people agentively change conditions and circumstances of their lives. There is, in other words, no knowledge and no person that exist prior to and can be separated from a transformative activist engagement with the world (including, importantly, with other people and oneself), with knowing being fully reliant on how we position ourselves vis-a-vis ongoing social practices and their historically evolved structures and conflicts and on us taking a stand vis-à-vis them. Moreover, knowing is inextricably related to being and doing — representing a practically relevant, ideologically saturated, and politically contingent, that is, *agentive endeavor* that partakes in and directly contributes to changing, and thus co-creating the world (if even sometimes unbeknownst to its creators), always in collaboration with others. For example, to know oneself in a new way means simultaneously to be altered in that very act of knowing — to be literally a changed person who emerges in the act of knowing that alters what it contemplates [17]. The process of knowing, thus understood, is profoundly imaginative and creative, passionate and partisan, as well as deeply personal and authorial, yet also social through and through, because it involves a simultaneous work of self-understanding, identity development, and world-making. Thus, the resulting transformative *onto-epistemology* operates with the notion of knowing-being-doing as a unified (though not uniform) process.

A third, and perhaps most critical, suggestion has been to emphasize the *transformative* nature of collaborative practices, in their status of the primary onto-epistemology of human development, as their key formative feature, thus more explicitly integrating notions of *social change, agency, and activism* into the most basic descriptions of the very reality of human development and the world itself. The analytical import of taking transformation to be the core characteristic of social practices as it has been suggested (though not fully explicated) by Marx, is actually enormous, implying a conceptual shift in theorizing human development and society that is no less radical than the import of Darwin's revolution in biological sciences [62; 69]. The conceptual and analytical shift consists in positing the *very mode of existence* of social practices and their products — and therefore, of reality itself — as the dynamics of ever-shifting and moving, continuously re-structuring and re-organizing movements and flows of ceaseless changes, transformations, transmutations, and reassemblages. In this perspective, it is not only that the world is constantly changing, which is quite a trivial assumption currently accepted by many approaches across the board. Instead, a more conceptually radical conjecture is that *changes and transformations in social communal praxis is what exists* and what substitutes for the world in its fixity and "givenness." The change, in other words, is *ontologically primary*, whereas stability and static forms, structures, and patterns are derivative of what is the primary reality comprised of ubiquitous and ceaseless changes and

transformations in the ever unfolding and dynamic *flow of reality*. Importantly, social change and transformation enacted in moving beyond the given is taken to be no less and, in fact, *more real* than what is often believed is the abstract and neutral, "brute" reality of the world as it exists now, in its status quo and its seemingly unalterable givenness reified in the taken-for-granted states, structures, circumstances, and "facts." This insistence on seeing change and agentive movement beyond the given as foundational to human development and the world itself is in sync with what Fanon [23] described as the true leap that consists *in introducing invention into existence* [cf. 99].

Fourth, the notion of individually unique contributions to the ongoing communal dynamics and changes in the inherently social, distributed, collaborative practices — at the interface of social and individual levels of human life and development — is highlighted to overcome the traditional polarization of persons and societies/communities. In particular, the collective and open-ended collaborative practices, although social through and through, are understood to be realized through unique contributions by individual agents acting from their own, uniquely irreplaceable positions and inimitably authentic stances. Importantly, each person not only enters communal social practices, but agentively realizes them while making a difference in them, thus gradually *co-authoring* these practices, and therefore oneself too, through enacting and transforming them in view of one's own unique strivings, struggles, and agendas. This process not only coincides but is fully merged with people becoming agentive actors of the communal world shared with others. The transformative onto-epistemology of social praxis — augmented by the notion of individual contributions to this praxis as its carriers, embodiments, and enactments (i.e., its operational units) — is used to supersede the very distinction between collective and individual levels of social practices and life. What is offered instead is one unitary realm in need of new terms to convey the dialectical amalgamation of the social and the individual — such as the "*collectividual*" practice and agency [64]. This move indicates a resolute break with the dualism of the individual and the social, so that each and every individual human being is conceived as in fact instantiating common history and the totality of humanity in all their vicissitudes (albeit in local expressions), realizing and carrying them on, as well as bearing responsibility for their future. This invitation to see history and society embodied and expressed in, even co-created through, the deeds of *each and every single person* — albeit ultimately in the form of collective processes to which these deeds contribute — is a truly challenging task that still requires much attention and elaboration.

Fifth, the TAS elevates the dimension of the *future* ontologically and epistemologically by rendering future-oriented goals and endpoints integral to and constitutive of knowing-being-doing in the present. More specifically, this critical expansion concerns the centrality of the *forward-looking activist positioning* — what people imagine, deem important and strive for in the future — and

a commitment to bringing this future into reality. The critical point is that we cannot locate ourselves in the present and its history unless we imagine the future and commit to creating it and nothing is determinate outside such imagination [69]. Moreover, commitments grounded in values, principles, and ethical projects, guided by a *sought-after future*, are critical to human development understood as an activist project of becoming. The notion of commitment foregrounds specifically the struggle for the future, rather than its mere anticipation or expectation as is alternatively expressed in the notions of hope, utopia and political imagination. In addition, though similar to the notion of prolepsis [12; 52] used to highlight that the future affects the present, the TAS posits a more agentive and activist notion of human deeds as *enactments of the future in the present* via their predication on commitments to the future. Thus, the process of creating the future in the present is understood as a reality in its own right. In this approach, "analyses of the past, present and future are not split into independent inquiries, but are instead lodged... within each other and carried out in light of their synthetic amalgamation infused with the ethics" [79, p. 6]. This position is in stark contrast especially with many of today's trends in social sciences and psychology such as postmodernism that continue to predominantly focus on the "historical present" without much regard for how the future might be implicated in shaping the present. Indeed, for example, Butler is unequivocal in stating that "the critical point of departure is *the historical present*" [6, p. 8]. This position is also typical of American pragmatism according to which knowledge is inseparable from human action, yet action itself is understood as embedded within and defined by the immediately given context in its situational concreteness [69].

The sixth point — last but certainly not the least one — is the notion that ethical-political dimensions belong right into the very fabric of reality including processes of knowing-being-doing. The ethical dimensions come to the fore because the transformative praxis/engagements are taken as ontologically and epistemologically supreme, and given that transformation can only be achieved from a certain position and with certain sought-after futures in view. In simple terms, a human being who in order to be and to know needs to act in the world that is constantly changing and, moreover, that is *changing through our own deeds,* cannot be neutral or uncertain because such acting (unlike reacting or passively dwelling) presupposes knowing what is right or wrong, and which direction one wants and needs to go next.

In the transformative worldview, any and all acts/deeds entail and carry "the right" and "the wrong" directly in them, because they inevitably change the world for better or for worse, for oneself and for others, albeit that the incurred changes are sometimes not immedi-

ately transparent even to the actor herself. The ethical is therefore a distinctive and inherent characteristic of human activity, rather than some sort of an extraneous add-on to it that comes about in some "special" circumstances such as when people are solving moral dilemmas. Ethical and purposeful dimensions inhere in how we do things in the world in the first place — that is, they are integral to acting and realizing the world in collaborative transformative practices and, therefore, to knowing and being as well.

With the gap between ethical dimensions and onto-epistemology eliminated, they all can be merged into one amalgamated ethico-ontoepsitemology. That is, epistemology enters the realm of "ontological politics" [44] pertaining to questions not merely about what there is in the world — because nothing simply is, in light of the world being ceaselessly changed by us! — but instead about *how the world can be changed in light of what there should be*, given our commitments and ideologies, our politics and ethics. This implies that all acts, including those of knowing and being, presuppose a forward-looking striving and activism — acting with the purpose of changing the world in view of a sought-after future.

These points, taken together (as they should be, since they all presuppose and implicate each other, making sense almost exclusively in light of each other) have various implications and applications[2], summarized in large part in [69], such as for education and pedagogy [5; 25; 26; 28; 61; 67; 72; 92—96], creativity and play [66; 76; 80; 87], literacy and critical literacy practices [7; 19], child-adult interactions and child's agency [30], online communication [22], social movements and activism [52], disability [49; 88], social care work [16], health issues and health inequalities [14; 24], history of psychology [57; 58; 82; 84; 86; 89], as well as for theoretical debates such as on agency [42; 77; 83; 90], personhood and identity [63; 64; 65; 81; 85], cultural mediation [4], language development [55; 56], sociological understandings of power [54], natureculture/epigenetics [60; 62; 71; 74; 75; 78], the concepts of work and learning [91], and methodology [10; 29; 69; 70], among others.

Explorations at the nexus of self- and world-realization

The resulting *transformative ethico-ontoepistemology,* as follows from the discussion in the previous section, suggests that it is directly *through* and *in* the process, and moreover, precisely *as* the process of people constantly transforming and co-creating their social world and thus *moving beyond the status quo* (rather than as an addition to it) that people simultaneously

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[2] I am providing a selected (non-exhaustive) list of works where the TAS approach is used as a grounding framework. With the exception of several authors (Hougaard, Podlucká, Sawyer, and Vianna), these are not works by my current or former Ph.D. students. Note that the authors working with TAS are located in various parts of the world — in addition to the US, in Brazil, Denmark, Sweden, South Africa, New Zealand, Italy, India, England, Scotland, and the Netherlands.

create and constantly transform their very life, therefore also changing themselves in fundamental ways while, also in and *as* this very process, becoming individually unique and gaining knowledge about themselves and the world.

Critical, in my view, is to focus on the notion of the dual and ceaseless dynamics at the *shifting nexus* between people collaboratively transforming their world and thus bringing it into existence through the process of agentively contributing to collaborative modifications of existing realties and, at the same time, in this very process and *at once* — without any gaps in either spatiotemporal, experiential, ontological, or any other terms — being themselves changed and de facto constantly created as unique individuals who are social agents and actors of communities and the world shared with others. The proposition of focusing precisely on the nexus of these processes might easily slip attention if not duly explicated and elaborated, as de facto continues to happen in existing interpretations. To highlight again, at stake is the centrality of the nexus of people changing the world and of themselves being changed in this very process — as poles of *one and the same* (as "duo in uno"), bi-directional and recursive co-constitution of people and the world in a continual and ceaseless communal process of self- and world-realization. People exist while creating themselves in and through transformative practices of creating the world, at the nexus of these processes — suggesting that there is no neutral, separate world and no isolated, detached individuals. Instead, there is one process of people simultaneously co-creating themselves and the world, as a nexus of these two currents within communal, historical praxis (composed of social practices) realized through individually unique contributions by actors of this praxis.

It is the *simultaneity*, or in even stronger terms, *the unity* of human transformative practice on the one hand, and the process of becoming (and being) human and of knowing oneself and the world on the other, that is conveyed in the TAS. Human beings come to be themselves and come to know their world and themselves *in the process and as the process* of changing their world (while changing together with it), in the midst of this process and as one of its facets, rather than outside of or merely in some sort of a connection with it. In this dialectically recursive and dynamically co-constitutive approach, people can be said to realize their development *in the agentive enactment of changes that bring the world, and simultaneously their own lives, including their selves and minds, into reality*.

Therefore, it is the process of co-creating, co-authoring, and inventing social practices and the world itself, all embodied in the struggle to change the world and the ways in which it is shaping us — in the acts of taking a stand, staking a claim, making a commitment, and claiming a position; and thus coming to know and to exist, while working and laboring to realize them — that is rendered foundational to human development and subjectivity. That is, the core constituent of human development and teaching-learning is posited to consist in taking stands and staking claims on ongoing events, conflicts and contradictions in view of the goals, commitments, and aspirations for the future — the process of *making up one's mind* as literally a process through which human subjectivity, including mind, and processes of teaching-learning, come about and which they are made up of. From this position, psychological processes have to do with people *authorially taking up* social practices, in contributing to changing them, by individuals qua actors of society and history in always creative, novel, agentive, and transformative — that is, *activist* — ways.

The term *activism* conveys the sense that all individuals and communities are immersed within, and are always contributing to, not just the neutral contexts or environments that somehow peacefully "surround" them. Instead, human development is part and parcel of the unfolding drama and struggle that constitute the world infused with conflicts and contradictions, dilemmas, and challenges — which even in their daily expressions and everyday contexts are always about the struggle for transformation of the world (cf. critical pedagogy).

From this position, not only are agency and human subjectivity this-worldly parts of the natural world (as claimed already by James [33]), but the world and reality are not some neutral, unitary, unchanging realms separate from us. Instead, the world is imbued with human dimensions including struggle, rupture, disputability, contestation, commitment, and imagination. Importantly, the primary emphasis is on struggle and striving — on people en-*countering*, con-*fronting*, and overcoming the circumstances and conditions that are not so much given as *taken up* by people within the processes of actively grappling with them and, thus, realizing and bringing them forth in striving to change and transcend them.

This approach insists that any contact or encounter with the world has a form not of a neutral relationality and rationality but of active (and also emotional and passionate) striving and struggle, even confrontation. Therefore, from the TAS position, people do not just find themselves within the conditions and circumstances of the world. Any contact with the world is only possible based in people playing partial, even "partisan," roles and occupying non-neutral positions, directly implicating issues of power and social antagonism but also, and equally importantly, issues of belonging and care. In this sense, reality is not "given" — rather, it is *taken* by persons as social actors, that is, as community members who are simultaneously creating themselves and the world — always in collaboration with others and with the tools that communities provide. More precisely, one could say that *reality is given in the act of taking it*.

The key premise in setting up this approach is that human agency in carrying out and realizing changes in the shared, communal practices of the social world is a natural part of the material reality and the key dimension of ontology and epistemology of human development and the mind. Within the broadly transformative-dialectical worldview, human agency

and subjectivity — including hope, imagination and commitment — find their place not merely as linked to social practices, but as themselves a transformative material-semiotic process that emerges as part (or dimension, layer) within the matrix of social practices and makes this matrix possible. That is, all forms of human subjectivity are understood to be a genuine part of our world — embedded within and composed of the material fabric of social practices, as full events of social praxis imbued with histories and meanings. This means that subjectivity is simultaneously a form of acting, knowing and being by people collaborating in active pursuits of social transformations. In this rendition, the mind is posited to be not ontologically distinct from, though not identical with, the other processes of people engaging with their world (based in elaborations of L.S. Vygotsky's and A.N. Leontiev's ideas).

This approach avoids the extremes of mentalist views that limit the mind and agency to individual mental constructs, neuronal processes in the brain, and computation or information processing — even if these are acknowledged to be embodied and situated in context and augmented with external tools. However, it also overcomes limitations of relational approaches — including ecological, dynamic, distributed, situated, and embodied cognition theories, and theories of participatory and situated learning — that fuse the mind with the context and relatively disregard agency and other forms of human subjectivity. The intention is to open ways to advancing a fully non-mentalist, situated, and dynamic approach to mind and agency while also capitalizing on their transformative power and relevancy in realizing communal forms of social life and human development.

Instead of conclusions: Agency and the Covid-19 pandemics

The current situation with the pandemic is a magnifying lens with which to address the dramatic and drastic social dynamics — at the nexus of collective and individual layers of social practices and with human agency at the forefront — that typically remain hidden from view. At a first glance (for many in the general public and even among policy-makers, unfortunately, this remains the only glance), the pandemic is caused and driven by purely biological forces that have spawned and then spread a new virus, Covid-19, due to virus jumping from animals to people, subsequently attacking vast human populations and unleashing havoc around the globe. However, nothing can be farther from the truth in terms of the actual scope, driving forces, contingences, and complexities of the processes at the core of the pandemic. In particular, all pandemics are very far from being just, or merely, biological — in fact, they are and have always been geopolitical, historical, financial, and sociocultural. That is, *pandemics are phenomena and products of human practices, the fruits of our own doing*. This does not mean that viruses are nor real or that they are literally man-made (as some conspiracy theories speculate). Instead, this means that a pandemic cannot be brought down to, nor explained, by biological factors as such, taken *alone,* since it is what people do, their collective practices unfolding in history, that is the core reality at stake in the pandemic. These collective practices are the "fabric"[3] into which biological factors are absorbed to then be reassembled and refashioned in their effects and relevancy *within* this fabric and in line with its dynamics and driving forces. As Lavell et al. [38] formulate, "In the same way that people do not die from earthquakes but from poorly designed and constructed houses that fall when strong earthquakes strike, the disasters and catastrophes currently enveloping the public health systems in many countries..., and their social and economic consequences cannot be understood only as a consequence of a virus."

First of all, a virus "jumping" from animals to people (an official expression in epidemiology) is not a common event and, counterintuitively, it happens predominantly due to human activities, such as animal habitat erosion and destruction of various ecosystems. The emergence and spread of zoonoses (human infections of animal origin) has to do with industrial-scale farming and the resulting destruction of millions of small farms. Through these and other human practices such as urbanization, road-building, mining and so on, "we have created a global, human-dominated ecosystem that serves as a playground for the emergence and host-switching of animal viruses..." [45].

Second, the specific effects of the virus and its advancement to the pandemic level are, too, directly contingent on a variety of effects and contexts of human practices (drawing on [38]). While Covid-19, as a sickness, or the capacity of health systems, can be analysed from the perspective of public health and medical science only, they are also, and quite critically, "the materialization of socially produced risk in time and in space" (ibid.). Actually, the infectious agent (virus) per se is not a direct hazard, unless it is transported and spread in ways that expose large numbers of people. With the current pandemic, it is quite obvious that the vector that spreads the virus is directly attributable, chiefly, to global air travel. There is a plausible hypothesis that the rapid spread of virus "would not have been possible except through the increasingly dense network of transport corridors and air routes that connect territories, countries and continents and with China at the centre of many global supply and value chains" (ibid.) — with globalization and the move of much industrial production into China away from many countries, especially the US, as the major culprit.

Third, the impact of the virus is also mediated through the territorial structure of societies and their social and cultural patterns (building from ibid.). For

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[3] As in the expression *The fabric of cosmos*, see book with this title.

example, in the proximity conditions of people living in crowded, densely populated areas and mostly using public transport, exposure to Covid-19 is dramatically magnified. Fourth, individual health vulnerabilities (e.g., previous illness, low immunity etc.) are known to exacerbate virus effects. However, there are many vulnerability factors that are socially constructed, for example, through dietary habits, cultural acceptance and accessibility of substances such as alcohol, tobacco and other drugs, and lack of physical exercise, among others. Finally, and most drastically, there seems to be a close relationship between vulnerability to Covid-19 and vectors of socio-politically constructed daily risks such as unemployment, lack of income, addictions, social and personal insecurity, poor housing and habitat, a lack of access to basic services (water or drainage) and, quite critically, an absence of health and social protection. As Lavell et al. [38] state, "Social construction of vulnerability is also concatenated with lack of access to and the quality of public health services. Being able to rapidly access good quality and affordable health care can quite dramatically reduce vulnerability. ... In the United States, there are broad sectors of society that simply do not have access to public or private health services due to lack of insurance and due to not being entitled to paid sick leave."

Thus, what people suffer from with the current pandemic is not merely a new virus attacking us but a complex and multi-layered, socio-economically and politically-historically constructed reality within which the virus is impacting people the way it does. This is a human-made pandemic and its effects are far from restricted to biological factors. What is a at stake here is not some fleeting phenomenon of an airy, fanciful social construction as this notion is often interpreted in the sense of such construction being unreal and intangible, made up in our minds only and fully at our whim. On the contrary, socially constructed phenomena such as the current pandemic are actually as solid, substantial, and consequential as it gets; in a sense, they are *more real than real*, if reality is reduced to rigid thing-like entities impacting us from outside and irrespective of our own social practices and actions. The pandemic is also clearly beyond any one person's control and will as it is contingent on socio-politically and economically coordinated policies and actions. The outcomes of the present struggle come down to our collective agency, ingenuity, and creativity — or, as the late Nobel laureate Joshua Leder-

berg observed, "It's our wits versus their genes" (meaning the viruses' genes; see [45]).

However, the role of individual agency in the pandemic has also been highlighted with unusual clarity. Although the solutions, to reiterate, can only be found in collective actions and policies, the pandemic also gives us a chance to recognize that our health and lives are completely and inextricably linked to our fellow human beings and all of humanity. This is a situation where it is truly obvious that everyone matters and makes a difference, for everyone else, across far and wide contexts and circumstances. In particular, as one illustration, it has been shown that one person with the coronavirus passes it on average onto three people, and those three people pass onto three more people and so on (based on current data, estimates can change with subsequent analysis and more data collected). If this continues for ten cycles, as it often does, there will be 59,000 infections stemming from one person (for a drastic visual illustration, visit https://www.vox.com/future-perfect/2020/3/26/21193851/coronavirus-covid-19-staying-home-social-distancing). As Montgomery, director of the Institute for Human Health and Performance at University College London, puts it, "If you are irresponsible enough to think that you don't mind if you get the flu, remember it's not about you, it's about everybody else," illustrating the importance of self-isolating to slow the spread of the Covid-19 disease around the world (ibid.).

The pandemic has brought home the message as to an extraordinary responsibility we bear toward each other and the future, our role in all the events including catastrophic ones that we encounter and co-create, and how this responsibility and the future we are creating together depends on each and everyone. Indeed, in beautiful words of Martin Luther King Jr., "all mankind is tied together, all life is interrelated, and we are all caught in an inescapable network of mutuality, tied in a single garment of destiny. Whatever affects one directly, affects all indirectly" [35]. At the same time and simultaneously, as emphasized in this paper (and argued throughout my works), it is also the case that everybody matters, and people are not only agents of communal practices for whom "things matter" and who are faced with the challenges of a rapidly changing society, but *who themselves matter in history, culture, and society* — being directly implicated in and co-authoring everything that is going on, including how societies are changing, now and in the future.

References

1. Amsler S. The education of radical democracy. London: Routledge, 2015.

2. Arendt H. The life of the mind. San Diego, CA: Harvest Book, Harcourt,1971/1977.

3. Arievitch I. M. Beyond the brain: An agentive active activity perspective on mind, development, and learning. Boston/Rotterdam: Sense Publishers, 2017.

4. Arievitch I. M., Stetsenko A. The "magic of signs": The developmental trajectory of cultural mediation. In A. Yasnitsky, R. van der Veer and M. Ferrari (Eds.), *The*

Cambridge Handbook of Cultural-Historical Psychology (pp. 217—244). New York, NY: Cambridge University Press, 2014.

5. Bartolini Bussi M.G. Early years mathematics: Semiotic and cultural meditation. In Carlsen M. (eds.), *Mathematics education in the early years.* Cham, Switzerland: Springer (pp. 1—22), 2020.

6. Butler J. Gender trouble: Feminism and the subversion of identity. New York, NY: Routledge, 1999.

7. Caffreya G., Rogers R. Students taking social action: Critical literacy practices through school-as-museum learning. *Berkeley Review of Education*, 2018, 8 (1), pp. 83—114.

8. Castañeda C. Figurations: Child, bodies, worlds. Durham, NC: Duke University Press, 2002.

9. Cavanagh C. Osip Mandelstam and the modernist creation of tradition. Princeton, NJ: Princeton University Press, 1995.

10. Chimirri N.A., Pedersen S. Toward a transformative-activist coexploration of the world? Emancipatory co-research in Psychology from the standpoint of the subject. *Annual Review of Critical Psychology*, 2019, 16, 605—633.

11. Clark A. Supersizing the mind: Embodiment, action, and cognitive extension. New York: Oxford University Press, 2008.

12. Cole M. Cultural psychology: A once and future discipline. Cambridge, MA: Harvard University Press, 1996.

13. Cole M., Engeström Y. A cultural- historical approach to distributed cognition. In Salomon G. (ed.), *Distributed cognitions* (pp. 1—46). Cambridge: Cambridge University Press, 1993.

14. Collins C., McCrory M., Mackenzie, M., McCartney G. Social theory and health inequalities: Critical realism and a transformative activist stance? *Social Theory & Health,* 2015, 1—20.

15. Costall A. Introspectionism and the mythical origins of scientific psychology. *Consciousness and Cognition,* 2006, 15, 634—654.

16. Darley S. Learning as a process of personal-social transformation: Volunteering activity in health and social care charities. *Mind, Culture, and Activity*, 2018, 25, 199—215.

17. Eagleton T. Why Marx was right. New Haven, CT: Yale University Press, 2011.

18. Edwards A. Relational agency: learning to be a resourceful practitioner. *Int. J. Educ. Res.*, 2005, 43, 168—182. DOI:10.1016/j.ijer.2006.06.010

19. Enciso P., Edmiston B., Volz A., Lee B., Sivashankar N. "I'm trying to save some lives here! Critical dramatic inquiry in the aftermath of Hurricane Katrina. *English Teaching: Practice & Critique,* 2016, 15 (3), 333—354.

20. Engeström Y. Learning by expanding: An activity-theoretical approach to developmental research. Helsinki: Orienta-Konsultit, 1987.

21. Eteläpelto A., Vähäsantanen K., Hökk Ä.P., Paloniemi S. What is agency? Conceptualizing professional agency at work. *Educational Research Review,* 2013, 10, 45—65. DOI:10.1016/j.edurev.2013.05.001

22. Etengoff C. Transvlogs: online communication tools for transformative agency and development. *Mind, Culture, and Activity*, 2019, 26(2), 138—155. DOI: 10.1080/10749039.2019.1612438

23. Fanon F. Black Skins, White Masks (Translated by C.L. Markham). New York: Monthly Review Press, 1967.

24. Friedman S.R. et al. Theory, measurement and hard times: Some issues for HIV/AIDS research. *AIDS and Behavior,* 2013, 17, 1915—1925. DOI:10.1007/s10461-013-0475-3

25. Gade S., Forsgren T.L. Realizing transformative agency and student identity: meaningful practical activity based formative intervention at grade eight. *Cultural Studies of Science Education.* Published online 22. January 2019. DOI:10.1007/s11422-018-9907-8

26. Garraway J., Morkel J. Learning in sites of practice through a CHAT lens paradigms. *Journal for Research and Innovation in Teaching and Learning,* 2017, 20, pp. 40—47.

27. Gergen K.J. Relational being: Beyond self and community. Oxford University Press, 2009.

28. Gibson M. Crafting communities of practice: the relationship between making and learning. *International Journal of Technology and Design Education*, 2019, 29, 25—35. DOI:10.1007/s10798-017-9430-3

29. Goessling K.P. Youth participatory action research, trauma, and the arts: designing youthspaces for equity and healing. *International Journal of Qualitative Studies in Education,* 2020, 33 (1), 12—31, DOI: 10.1080/09518398.2019.1678783

30. Hichenberg N.M. Emily meets the world: Child agency encounters adult imperialism. Dissertation Abstracts International Section A: Humanities and Social Sciences, 2019. Vol. pp. 80 (11-A).

31. Holland D., Lachicotte W., Skinner D., Cain C. Identity and agency in cultural worlds. Cambridge, MA: Harvard University Press, 1998.

32. Holland D., Lave J. Social practice theory and the historical production of persons. *Actio: An International Journal of Human Activity Theory,* 2009, 2, 1—15.

33. James W. *Pragmatism: A new name for some old ways of thinking*, 1907. Available at: www. gutenberg.org/ fi les/ 5116/ 5116-h/ 5116-h.htm (accessed July 10, 2016).

34. Jameson F. Marx's purloined letter. *New Left Review,* 1995, 209, 75—109.

35. King M.L., Jr. Commencement address for Oberlin College, June, 1965. Oberlin, Ohio. Available at: www. oberlin.edu/ external/ EOG/ BlackHistoryMonth/ MLK/ CommAddress.html (accessed July 10, 2016).

36. Kumpulainen K., Kajamaa A., Rajala A. Understanding educational change: agency-structure dynamics in a novel design and making environment. *Dig. Educ. Rev.,* 2018, 33, 26—38. DOI:10.1344/der.2018.33.26-38

37. Lave J., Wenger E. *Situated learning: Legitimate peripheral participation*. New York: Cambridge University Press, 1991.

38. Lavell A., Mansilla E., Maskrey A., Ramirez F. The social construction of the COVID-19 pandemic: Disaster, risk accumulation and public policy. *LA RED (Network for Social Studies on Disaster Prevention in Latin America*), 2020. Available at: https://www.desenredando.org/covid19/Social-construction-of-the-COVID19-pandemic-disaster-risk-accumulation-public-policy-RNI-LA-RED-22-04-2020.pdf (Accessed April 21, 2020).

39. Leont'ev D.A. Chelovek i zhiznennyi mir: ot ontologii k fenomenologii. *Kul'turno-istoricheskaya psikhologiya*, 2019, 15, no. 1, pp. 25—34.

Леонтьев Д.А. Человек и жизненный мир: от онтологии к феноменологии. *Культурно-историческая психология*, 2019, 15. № 1. С. 25—34.

40. Lickliter R., Honeycutt H. Biology, development, and human systems. In Lerner R.M. (ed.), *Handbook of child psychology and developmental science* (pp. 162—207). New York: Wiley, 2015.

41. Mandel'shtam O.E. (1990). Soch. v 2 tt. T. 2. M.: Khudozhestvennaya literatura. Elektronnaya publikatsiya — RVB, 2010—2020. Versiya 2.0 ot 3 oktyabrya 2019 g. Available at: https://rvb.ru/20vek/mandelstam/dvuhtomnik/01text/vol_2/01prose/0668.htm (Accessed April 21, 2020).

Мандельштам О.Э. (1990). Соч. в 2 тт. Т. 2. М.: Художественная литература. Электронная публикация — РВБ, 2010—2020. Версия 2.0 от 3 октября 2019 г. Available at: https://rvb.ru/20vek/mandelstam/dvuhtomnik/01text/vol_2/01prose/0668.htm (Accessed April 21, 2020).

42. Martínez-Roldán C.M. (in press). *Narrating Erasure, Narrating Agency. Towards A Transformative Activist Stance Educational Project.*

43. Miller G. Growing pains for fMRI. *Science*, 2008, 320, 1412—1414.

44. Mol A. Ontological politics: A word and some questions. In J. Law and J.Hassard (eds.), *Actor network theory and after* (pp. 74—89). Oxford: Blackwell, 1999.

45. Morens D.M., Daszak P., Taubenberger J.K. Escaping Pandora's Box — Another Novel Coronavirus. *New England Journal of Medicine,*2020, 382, 1293—1295. DOI:10.1056/NEJMp2002106

46. Morson G.S., Emerson C. Mikhail Bakhtin: Creation of a prosaics. Stanford, CA: Stanford University Press, 1990.

47. Overton W. F. Embodiment from a relational perspective. In Overton W. F (eds.), *Developmental perspectives on embodiment and consciousness* (pp. 1—18). New York: Erlbaum, 2008.

48. Oyama S. Evolution's eye. Durham, NC: Duke University Press, 2000.

49. Podlucká D. Transformative anti-ableist pedagogy for social justice: Charting a critical agenda for inclusive education. *Outlines — critical practice studies,* 2020. Vol. 21, no. 1, 69—97.

50. Roediger H.L. What happened to behaviorism? *APS Observer,* 2004.

51. Rogoff B. The cultural nature of human development. New York: Oxford University Press, 2003.

52. Sales L.L., Vianna E., Fontes F.F., Yasui S. (2020). Prefigurative Brazilian ativismo through the lens of the transformative activist stance: Renewing radical political imagination through "collectividual" agency. *Mind, Culture, and Activity, 2020.* DOI:10.1080/10749039.2020.1740935

53. Sannino A. The emergence of transformative agency and double stimulation: Activity-based studies in the Vygotskian tradition. *Learning, Culture, and Social Interaction,* 2014, 4, 1—3. DOI:10.1016/j.lcsi.2014.07.001

54. Sawchuk P., Stetsenko A. Sociology for a non-canonical activity theory: Exploring intersections and complementarities. *Mind, Culture and Activity,* 2008, 15 (4), 339—360.

55. Sawyer J., Stetsenko A. Lev Vygotsky's approach to language and speech. In P. Brooks and V. Kempe (eds.), *Encyclopedia of Language Development* (pp. 663—666). Thousand Oaks, CA: SAGE, 2014.

56. Sawyer J., Stetsenko A. Revisiting and problematizing Marx and Vygotsky: A transformative approach to speech internalization. *Language Sciences,* 2019, 70, 143—154. DOI:10.1016/j.langsci.2018.05.003 0388-0001/

57. Stetsenko A. Introduction to "Tool and sign" by Lev Vygotsky. In R. Rieber & D. Robinson (Eds.), *Essential Vygotsky* (pp. 501—512). NY: Kluwer Academic/Plenum, 2004.

58. Stetsenko A. Activity as object-related: Resolving the dichotomy of individual and collective types of activity. *Mind, Culture, & Activity,* 2005, 12 (1), 70—88.

59. Stetsenko A. From relational ontology to transformative activist stance: Expanding Vygotsky's (CHAT) project. *Cultural Studies of Science Education,* 2008, 3, 465—485.

60. Stetsenko A. Vygotsky and the conceptual revolution in developmental sciences: Towards a unified (non-additive) account of human development. In Fleer M. (eds.), *World Year Book of Education. Constructing childhood: Global-local policies and practices* (pp. 125—142). London: Routledge, 2009.

61. Stetsenko A. Teaching-learning and development as activist projects of historical Becoming: Expanding Vygotsky's approach to pedagogy. *Pedagogies: An International Journal,* 2010, 5 (1), 6—16.

62. Stetsenko A. Darwin and Vygotsky on development: An exegesis on human nature. In Kontopodis M. (eds.), *Children, Culture and Education.* (Springer/ Series: International Perspectives on Early Childhood Education and Development) (pp. 25—41). New York: Springer, 2011.

63. Stetsenko A. Personhood: An activist project of historical Becoming through collaborative pursuits of social transformation. *New Ideas in Psychology,* 2012, 30, 144—153.

64. Stetsenko A. The challenge of individuality in cultural-historical activity theory: "Collectividual" dialectics from a transformative activist stance. *Outlines — Critical Practice Studies,* 2013a, 14 (2), 7—28.

65. Stetsenko A. Theorizing personhood for the world in transition and change: Reflections from a transformative activist stance. In Martin J. (eds.), *The Psychology of personhood: Philosophical, historical, social-developmental, and narrative perspectives* (pp. 181—203). Cambridge, UK: Cambridge University Press, 2013b

66. Stetsenko A. Creativity in all of us: Dialogue with Vera John-Steiner. In Lake R. (eds.), *Constructing a Community of Thought: Letters on the Scholarship, Teaching and Mentoring of Vera John-Steiner* (pp. 129—133). New York: Peter Lang, 2013c.

67. Stetsenko A. Transformative activist stance for education: Inventing the future in moving beyond the status quo. In T. Corcoran (Ed.), *Psychology in Education: Critical Theory~Practice* (pp. 181—198). Rotterdam, The Netherlands: Sense, 2014.

68. Stetsenko A. Theory for and as social practice of realizing the future: Implications from a transformative activist stance. In Martin J. (eds.), *The Wiley Handbook of Theoretical and Philosophical Psychology: Methods, Approaches, and New Directions for Social Sciences* (pp. 102—116). New York: Wiley, 2015.

69. Stetsenko A. *The transformative mind: Expanding Vygotsky's approach to development and education.* New York, NY: Cambridge University Press, 2016a.

70. Stetsenko A. Vygotsky's theory of method and philosophy of practice: Implications for trans/formative methodology. *Revista Psicologia em Estudo,* 2016b, 39, 32—41.

71. Stetsenko A. Putting the radical notion of equality in the service of disrupting inequality in education: Research findings and conceptual advances on the infinity of human potential. *Review of Research in Education,* 2017a, 41, 112—135.

72. Stetsenko A. Science education and transformative activist stance: Activism as a quest for becoming via authentic-authorial contribution to communal practices. In Bryan L. (eds.), *13 Questions: Reframing Education's Conversation: Science* (pp. 33—47). NY: Peter Lang, 2017b.

73. Stetsenko A. Research and activist projects of resistance: The ethical-political foundations for a transformative ethico-onto-epistemology. *Learning, Culture and Social Interaction.* April 2018 a. DOI:10.1016/j.lcsi.2018.04.002

74. Stetsenko A. Confronting biological reductionism from a social justice agenda: Transformative agency and activist stance. *Literacy Research: Theory, Method, & Practice,* 2018b. Vol. 67, pp. 44—63. DOI:10.1177/2381336918787531

75. Stetsenko A. Natureculture in a transformative worldview: Moving beyond the "interactionist consensus." In G. Jovanovich and C. Ratner (Eds.), *The Challenges of Cultural Psychology* (pp. 37—57). London, UK: Routledge, 2017c.

76. Stetsenko A. Agentive creativity in all of us: An egalitarian perspective from a transformative activist stance. In Connery M.C (eds.), *Vygotsky and creativity: A cultural-historical approach to play, meaning making, and the arts* (pp. 41—60). Peter Lang, 2017d.

77. Stetsenko A. (2019a). Radical-transformative agency: Continuities and contrasts with relational agency and implications for education. *Frontiers in Education,* 2019a, 17. DOI:10.3389/feduc.2019.00148

78. Stetsenko A. Cultural-historical activity theory meets developmental systems perspective: Transformative activist stance and natureculture. In Edwards A (eds.), *Cultural-historical approaches to studying learning and development: societal, institutional and personal perspectives* (pp. 249—262). London: Routledge, 2019b.

79. Stetsenko A. Hope, political imagination, and agency in Marx and beyond: Explicating the transformative worldview and ethico-ontoepistemology. *Educational Philosophy and Theory*, 2019c. DOI:10.1080/00131857.2019.1654373

80. Stetsenko A. Creativity as dissent and resistance: Transformative approach premised on social justice agenda. In Lebuda I. (eds.), *The Palgrave Handbook of Social Creativity* (pp. 431—446). London, UK: Springer., 2019d.

81. Stetsenko A. Personhood through the lens of radical-transformative agency. In Sugarman J. (eds.), *A Humanities Approach to the Psychology of Personhood.* London, NY: Routledge, 2020a.

82. Stetsenko A. Transformative-activist and social justice approaches to the history of psychology. Oxford Research Encyclopedia, Psychology (oxfordre.com/psychology). Oxford University Press. Subject: History and Systems of Psychology Online Publication Date: Feb 2020b. DOI: 10.1093/acrefore/9780190236557.013.466

83. Stetsenko A. Radical-transformative agency: Developing a transformative activist stance on a Marxist-Vygotskyan foundation. In Neto A.T. (eds.), *Revisiting Vygotsky for social change: Bringing together theory and practice* (pp. 31—62). London etc.: Peter Lang, 2020c.

84. Stetsenko A., Arievitch I. M. Vygotskian collaborative project of social transformation: History, politics, and practice in knowledge construction. *The International Journal of Critical Psychology*, 2004a, 12 (4), 58—80.

85. Stetsenko A., Arievitch I. The self in cultural-historical activity theory: Reclaiming the unity of social and individual dimensions of human development. *Theory & Psychology*, 2004b, 14 (4), 475—503.

86. Stetsenko A., Arievitch I.M. Cultural-historical activity theory: Foundational worldview and major principles. In J. Martin and S. Kirschner (Eds.), *The Sociocultural Turn in Psychology: The Contextual Emergence of Mind and Self* (pp. 231—253). New York: Columbia University Press, 2010.

87. Stetsenko A., Ho P-C.G. The serious joy and the joyful work of play: Children becoming agentive actors in co-authoring themselves and their world through play. *International Journal of Early Childhood*, 2015, 47 (2), 221—234.

88. Stetsenko A., Selau B. Vygotsky's approach to disability in the context of contemporary debates and challenges: Charting the next steps (Introduction to the *Special Issue — Vygotsky's Defectology*). *Educação Revista Quadrimestral. Porto Alegre*, 2018. Vol. 41, no. 3, pp. 315—324, set.-dez.

89. Stetsenko A., Wille Ch. Kulturhistorische Schule [Cultural-historical school]. In Haug W.F. (eds.), *Historisch-kritisches Wörterbuch des Marxismus* (Vol. 8/I, col. 378—392). Hamburg: Argument-Verlag, 2012.

90. Sugarman J., Sokol B. Human agency and development: An introduction and theoretical sketch. *New Ideas in Psychology*, 2012, 30, 1—14. DOI:10.1016/j.newideapsych.2010.03.001

91. van Dellen T. Learning for work, from the past, in the present, and into the future? *Studia paedagogica,* 2018. Vol. 23, no. 2, pp. 9—24. DOI:10.5817/SP2018-2-2

92. Vianna E., Stetsenko A. Connecting learning and identity development through a transformative activist stance: Application in adolescent development in a child welfare program. *Human Development,* 2011, 54, 313—338.

93. Vianna E., Stetsenko A. Research with a transformative activist agenda: Creating the future through education for social change. In J. Vadeboncoeur (ed.), Learning in and Across Contexts: Reimagining Education. *National Society for the Studies of Education Yearbook*, 2014, 113 (2), pp. 575—602.

94. Vianna E., Stetsenko A. Expanding student agency in the introductory psychology course: Transformative activist stance and critical-theoretical pedagogy. In Obeid R. (eds.), How We Teach Now: The GSTA Guide to Student-Centered Teaching. Retrieved from the Society for the Teaching of Psychology, 2017. web site: http://teachpsych.org/ebooks/

95. Vianna E., Stetsenko A. Turning resistance into passion for knowledge with the tools of agency: Teaching-learning about theories of evolution for social justice among foster youth. *Perspectiva*, 2019, 38 (4), 864—886. October-December.

96. Vianna E., Hougaard N., Stetsenko A. The dialectics of collective and individual transformation: Transformative activist research in a collaborative learning community project In A. Blunden (ed.), *Collaborative Projects* (pp. 59—87). Leiden, the Netherlands: Brille, 2014.

97. Viveiros de Castro E. After-dinner speech at 'Anthropology and Science', the 5th Decennial Conference of the Association of Social Anthropologists of Great Britain and Commonwealth, 14 July 2003.

98. Wartofsky M. The child's construction of the world and the world's construction of the child: From historical epistemology to historical psychology. In Kessel F.S. (eds.), *The child and other cultural inventions* (pp. 188—215). New York: Praeger, 1983.

99. Wynter S. Unsettling the coloniality of being/power/truth/freedom: Towards the human, after man, its overrepresentation — An argument. CR: *The New Centennial Review,* 2003, 3 (3), 257—337.

100. Yancy G. Through the crucible of pain and suffering: African-American philosophy as a gift and the countering of the western philosophical metanarrative. *Educational Philosophy and Theory,* 2015, 47 (11), 1143—1159.

Критические проблемы
в культурно-исторической теории деятельности: неотложность субъектности

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Статья посвящена проблеме осмысления субъектности (agency) в контексте недихотомического, диалектического подхода, в рамках которого уделяется полное внимание социальным корням субъектности и подчеркивается её статус как достижение совместности, возможное лишь в мире разделенном с другими. Существенные шаги в этом направлении предпринимаются в рамках теории «трансформирующей позиции активизма» (TAS), предложенной автором настоящей статьи и разрабатываемой

многими исследователями из разных странах. Этот подход уходит корнями в культурно-историческую теорию деятельности и в то же время выходит за её пределы, позволяя преодолеть некоторые её ограничения. В статье раскрываются ключевые положения TAS, показано, как они фокусируются на сплетении в единую цепь социальных практик ко-конструирования человека и мира. Субъектность является-ся процессом, запускающим эту цепь непрерывных социоиндивидуальных трансформаций, в которых люди симультанно, в едином процессе, совместно конструируют мир и самих себя таким образом, что каждый человек вносит свой вклад и оказывается значимым в совокупном пространстве социальных практик. Этические и политические следствия TAS обсуждаются с целью преодолеть наследие пассивности и неравенства, по-прежнему пронизывающих психологию и смежные области.

Ключевые слова: трансформация, сплетение социальных практик, Выгосткий, этика, политика, онтоэпистемология, равенство.

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Cultural-Historical Activity Theory in the Framework of the "Functional Paradigm"

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The aim of the paper is to highlight the peculiarity of the present state of the Cultural-historical activity theory (CHAT) in psychology, as compared to previous periods of its development in the general context of theory development in psychology. The author sees this peculiarity in that CHAT exemplifies an anti-Aristotelian paradigm which suggests that the actual functioning of living systems cannot be fully deduced from a priori existing morphological and psychological structures. This emphasis unites CHAT with two other influential approaches to the explanation of human conduct, existentialism and the systems approach to autoregulating systems, which can be found from early cybernetics to synergetics and the theory of complexity of our own day. Although they each occupied marginal positions in human sciences in the middle of the last century, all three approaches now find themselves articulating the same message in different words; basic similarities between them allow us to speak of their confluence into what may be called the functional paradigm. The functional paradigm states the primacy of the process, actual functioning, activity, or existence, the absoluteness of uncertainty and changeability, and thus seems to be the most relevant paradigm for the challenges of our times.

Keywords: Cultural-historical activity theory (CHAT), regulation, self-regulation, autoregulation, cybernetics, existentialism, agency.

Introduction

The conceptual foundations and thesaurus of the Cultural-historical activity theory (CHAT) have been rather stable for decades; nevertheless, the foci of theoretical and empirical research shifted through its history from one to another problem and concept.

Vygotsky's emphasis in the late 1920s—1930s was on the relation between individual mind and culture, on the issues of social and cultural mechanisms of shaping the human mind, on the problems of social and genetic psychology. Alexey N. Leontiev's emphasis, during the early stages of the construction of activity theory in the late 1930s-1950s, was on the relation between activity and consciousness, on the issues of emerging consciousness and mind at large as a phenomenon of life, and on the problems of genetic, comparative and educational psychology. At the next stage, in the late 1950s—1970s, the emphasis shifted to the relations between activity, action, and operation, to the issues of activity structure and actual genesis, its executive mechanisms, to the problems of general and cognitive psychology.

Since the late 1970s a new shift of emphasis became visible, a shift toward the relations between activity and personality, to the issues of activity regulation and self-regulation and its ontogenetic development. Mikhail Kotik [22] and Oleg Tikhomirov [37] were among the first authors who introduced the ideas of regulation and self-regulation of object-related activity, including the thinking activity, to the context of activity theory; both authors stressed the role of personal meanings in regulatory processes. Somewhat later, Vyacheslav Ivannikov [18] launched his studies of voluntary activity regulation and a large group of authors ([2; 4; 7; 35; 36; 38]) contributed to the development of the theory of regulatory function of personal meanings and meaning formations (see [24; 25] for details).

Probably the first scholar to have noticed this last shift and to have given it a conceptual shape was Bluma Zeigarnik, who published a paper entitled "Mediation and self-regulation in norm and pathology," in which she characterized these two concepts as central ones for the given period of the activity theory approach ([43]; see

also [44]). Her understanding of mediation as the stable modus of behavior in the mature person and her analysis of mediation distortions in different mental pathologies allowed her to proceed from activity regulation to self-regulation. The latter was conceived as the functional capacity of the whole person as an active agent, possessing multiple degrees of freedom regarding her activity.

Since then, the issues of regulation and self-regulation have become and still remain one of the central problem fields in CHAT. Specifically, this refers to cognitive processes (Boris M.Velichkovsky, Tatyana Kornilova, a.o.), motivation (Tamara Gordeeva, Ekaterina Patyaeva, a.o.), personality (D.Leontiev, Vadim Petrovsky a.o.), developmental psychology (Elena Smirnova, Katherine Polivanova a.o.), clinical psychology (Elena T. Sokolova, Elena Rasskazova a.o.), etc. The aim of this paper is to reveal the methodological status of the self-regulation approach as a part of what may be called the functional paradigm in the psychology of the 21st century, and highlight the place and the meaning of CHAT as an important part of this paradigm today.

Two competing paradigms in modern psychology

Every meaning, including the meaning of a scientific theory, is defined by the context. Nowadays, the purity of a scientific school is not as important as it used to be some 50 years ago; on the contrary, a broader integration and broader contexts are required to see the meaning of our work better. The leaders of CHAT refer to the failure of essentialist thinking, focus on change, future-mindedness, probabilistic world, self-organization, and so on (e.g. [3]).

The classical psychology of the 20th century was based on the idea that individuals maintain a stable identity and are equal to themselves. This essentialist naturalistic explanatory paradigm proceeds from Aristotle, who stated that all bodies behave in accord with their underlying inherent nature; the point is to 'cognize' this nature that would allow us to predict all its individual manifestations.

James Bugental, prominent existential therapist, coined a metaphor of human life referring to a comic strip published in a newspaper: in the cartoon a small child is asking his parents whether we are alive or on tape. This is the main question, are we alive or on tape, because our experiences accumulated through our lifetime are being recorded on multiple tapes (today we would call them files or routines). Traits, drives, instincts are examples of such mental tapes. Recorded stereotyped responses can be reproduced in an appropriate situation. There is however an alternative which Bugental called being alive, which means doing something above and beyond the tapes. Being "alive" means the capacity of changing one's action at any moment independent of the pre-existing patterns, the capacity of being different at any moment; this is something that cannot be recorded on tape [8].

Human personality refers to being alive rather than being on tape. Russian philosopher Pavel Florensky

wrote about a hundred years ago that both human personality and human activity emerge through overcoming the logical law of identity, a being equal to itself [13, p. 80]. That means that personality emerges at the point at which a person stops being equal to themselves, stops being predictable and manageable.

True, the challenge of the 20th century was making sense of human psychological consistency, but the challenge and demand of the 21st century is making sense of human psychological change. The essentialist paradigm is no longer satisfactory and this became clear even by the middle of the last century. Gordon Allport [1] said that "personality is less a finished product than a transitive ptocess" (p. 19). George Kelly [20] introduced the concept of ontological acceleration, meaning by this that a human being changes, and this refers not only to ontogenetic or functional development but what changes is rather the human being as the species; our theories describe the human being of yesterday rather than the human being of today. Erich Fromm [15], having analyzed the problem of human nature, concluded that it consisted of the lack of any fixed nature. Recently Alexander Asmolov [2] stated that the target of psychology of our days is studying the changing person in the changing world (p. 365).

What can be the essence of this new paradigm, which is coming to replace the essentialist one? Jean-Paul Sartre phrased it in terms of his famous statement, "existence precedes essence" [34]. This means that there are no stable essences which would help to explain what is actually going on in the course of our existence. Alexey N. Leontiev [23] expressed the same idea in a somewhat different way, saying that all mental structures emerge and take shape through intentional activity. This statement had multiple empirical proofs. One more phrasing of the same fundamental idea belongs to the prominent physiologist, Nikolai Bernstein [5], who summarized his studies of human physiology, which he called the physiology of activity, in this way: "the task gives birth to the organ".

All three approaches remained rather marginal through the 20th century; however, they seem to be most relevant for the new challenges of our century. More than this, the underlying principle of all three approaches is essentially the same, and it constitutes the most contemporary paradigm which may be called the functional explanatory paradigm (see [26]). It says: an individual resides in a permanent stream of changing relations to the world. These relations precede any sustainable mental structures of mind and personality and explain their emergence and change.

The functional explanatory paradigm

The word "functional" in this context was borrowed from Norbert Wiener [42], who used it to oppose his approach to behaviorism. Another prominent author, Ilya Prigogine (see [30]), preferred the word "processual" for the same idea. Functional, or processual views, are being thus opposed to essentialist, reactive,

and dispositional views. For the former, the focus is on change. The functional explanatory paradigm says that all living creatures are in a constant motion toward a better state of affairs and evolve in the course of this motion, motivated by the challenge of adaptive change: improve or fail. We can speak of a functional sustainability as a special form of sustainability, which means keeping balance in movement, dynamic equilibrium rather than homeostasis, which is specific to the essentialist paradigm.

The functional paradigm consists of three confluent streams of thought in human sciences and the sciences of living processes. The first stream started with models of self-regulated activity in the biological sciences (Nikolai Bernstein, Pyotr Anokhin a.o) and continued in the post-war technical and information sciences as cybernetics and general systems theory (N. Wiener, W. Ross Ashby, L. von Bertalanffy a.o.); in our days it is being exemplified most pointedly by synergetics and the theory of complexity. The second stream was based on the existentialist ontology of being in the world (M. Heidegger, J.-P. Sartre, K. Jaspers, M. Bakhtin, L. Binswanger, P. Tillich, R. Laing, R. May, M. Mamardashvili, J. Bugental a.o.). CHAT, especially as developed in A.N. Leontiev's activity theory approach, is the third stream (A.N. Leontiev, B. Zeigarnik, O. Tikhomirov, V. Zinchenko, A. Asmolov, V. Ivannikov, F. Vasilyuk a.o.).

Multiple parallels and mutual references can be found between these three approaches. The penetration of the self-regulation principles into CHAT has been briefly sketched in the introductory part of the paper. During the 1970s through 1990s, there were multiple theoretical and experimental studies in activity theory on emotional activity regulation, meaning-based regulation, volitional regulation, etc. The parallels between activity theory and existentialism have been noticed and explicated more than once, both from the side of existential phenomenology (Hans Thomae, Alfried Längle) and from the side of activity theory (A. Asmolov, E. Subbotsky, F. Vasilyuk), which explicitly stated this parallel. The parallels between cybernetics and systems theory are also documented. Ludwig von Bertalanffy wrote that his views on the spontaneous activity of the living organism was a more realistic articulation of what existentialists tried to express in their very fuzzy language [6]. And Norbert Wiener [42] also stated says that he was basing his views on premises similar to those of the existentialists, being however more optimistically disposed.

Autoregulation as an explanatory framework

The regulated process we are dealing with in psychology is activity that bridges an individual to the world. This embraces not only observable behavior but also mental activity without directly externalized products. In the most general formulation, life as the process developing between a living creature and the environment, or the world, should correspond to the way the creature exists and to the way the world exists. Vasily Davydov

[11] called this double imperative the bilateral plasticity of human activity; in a sense, Freud's [14] famous distinction between the pleasure principle and the reality principle refers to the same bilaterality. One is to 'fit,' both to reality and to oneself. If our activity fits to the world in line with the reality principle, we are realistic; if not, we are narcissists. If what we do corresponds to what we are, the activity is authentic, and if it does not, it is alienated (see also [28]).

The key idea of the autoregulation principle is that of the circular process which is directed by the perceived divergence between the desired and the actual state of affairs. Nikolai Bernstein was the first scholar who published this circular model as early as in 1929. Arguing with Ivan Pavlov's reflex arc model, Bernstein introduced the idea of feedback reflecting the divergence between the actual and the desired, and proposed the model of a reflex circle instead of reflex arc (see [5]). His colleague, physiologist Pyotr Anokhin, published a competing, though essentially similar model of a functional system in 1934. However, the works of both scholars became known worldwide much later, and it is Norbert Wiener who is usually referred to as the pioneer of the regulation paradigm (see [31]).

The structure of an autoregulated process, as suggested in all of the above-mentioned models, must include the following functional elements: 1. The process to be regulated. 2. The criteria of the desired. 3. The monitoring subsystem, providing the feedback on the actual course of the process. 4. The matching subsystem that evaluates the process of fitting to the criteria and eventually calls for corrections. 5. The correcting subsystem, implementing corrections of the process for better fitting the criteria. Autoregulation thus can be defined as the functional capacity of moving from less desirable outcomes to more desirable ones through ongoing monitoring and correcting of the current activity. The explanatory principle of regulation provides an alternative to the principle of linear determinism and the essentialist paradigm depicted above, which presumes that human activity is determined by the multiplication of stable internal (dispositional) and external (environmental) forces.

Jan Valsiner [39] reasonably argued for the term autoregulation instead of self-regulation, for the former does not imply a reference to an essence like the self. Often self-regulation is conceived as synonymous to self-control over impulses, forceful imposing superordinate regulatory principles upon oneself. A broader meaning of the term seems however more insightful. The process may be autoregulated if monitoring and corrections are provided by the same system and the results of monitoring automatically cause necessary correcting actions. Autoregulation is an inalienable property of all living creatures, as well as of quasi-living artificial systems directed by goals or other superordinate criteria of the desirable. It suggests that the system strives to keep its functioning up to these criteria, and makes necessary corrections when the process diverges from the criteria.

Personality development as the growing self-mastery: The person as autoregulated agent

An important aspect of the psychological explanation of autoregulation in terms of the functional paradigm is viewing personality development as progressive autoregulation [16], from the most basic capacity to control immediate impulses, whether bodily or behavioral, to the privilege of autodetermination, that is, being the origins of one's action and decisions, capable of choosing the course of conduct based not only on situational feedback but also on field-independent higher motivations and value orientations [12; 33], including the capacity to reconstruct the highest regulatory instances at one's own discretion [17].

The dichotomy of being autoregulated vs. being driven, conditioned, programmed, or a zombie has been articulated as long ago as in 1892 by Russian philosopher Vasily Rozanov: "Human life may be twofold: either unconscious, or conscious. By the former I mean life controlled by causes, by the latter life controlled by a goal" [32, p. 21]. These two regimes of living however are not just a matter of individual differences, but also a matter of intraindividual temporal fluctuations — whether we are determined and driven by "tapes", or, whether we are directed to some goal and navigate the way toward it, staying alive, that is, capable of any change. "We can always oppose our own unpredictability to any surrounding uncertainty" (Alexander Asmolov, personal communication, 2019).

Rozanov's philosophical statement, as well as Bugental's metaphor of tapes vs. living, has multiple analogues in psychological theories. A number of recent dual-system psychological models distinguish two types of human regulatory systems, one of them being unconscious and automatic and the other deliberate and self-controlled (e.g., "hot" and "cool" systems in [29]; "reflexive" and "reflective" systems in [9; 10]; "fast" and "slow" systems in [19]). Essentially, all of them are reincarnations of what Vygotsky offered in the early 1930s in terms of the distinction between higher and lower mental functions ([40]; see [21]). Lower functions are common to all animals, which act by means of inherent uncontrollable mechanisms. Higher functions develop over the course of our cultural development and take control over lower ones. Vygotsky emphasized the emerging and developing capacities of communication and self-reflection: "If we look at the significance of self-reflection for mental life at large, we shall see a profound difference between a nonreflective, naïve personality structure, on the one side, and a reflective one, on the other" [41, p. 238].

The higher levels of organization in humans are thus deliberate and self-controlled ones. The development of agency and psychological mechanisms of self-determination refers to the emerging self-regulatory capacities. Humans widely vary in this capacity of self-governance or mastery over their own lives. An individual's potential for autoregulation has been conceptualized in terms of personality potential [27], which refers to the system of stable personality variables that account for the successful autoregulation in various domains of living, i.e., seeking and maintaining the way of acting that leads to the desired outcomes and changing the way of acting that diverges from them. The basic level of its development suggests acquiring the capacity of controlling one's impulses and following non-biological urges; further development suggests the developmental transition from being determined to self-determination, from the competition of biological and social drives to the self-determined person investing their efforts into one's own development. A mature human being becomes the agent of one's own development above and beyond universal biological mechanisms and social institutions supporting this development and giving it a direction.

Conclusion

The message of the paper suggested that (1) cultural-historical activity theory at the present stage of its development is focused primarily on the issues of activity regulation and self-regulation (autoregulation); (2) its main tenet essentially coincides with those of existentialism and cybernetics and all three may be combined into the functional paradigm as a generalized approach to the explanation of living systems, specifically human beings, in their interaction with the environment (the world); the functional paradigm states the primacy of the process, actual functioning, activity, or existence, the absoluteness of uncertainty and changeability, and thus seems to be the most relevant paradigm for the challenges of our times; (3) individual differences and developmental succession as they refer to human psychological characteristics reflect the differences and progression of the mechanisms of autoregulation.

This paper presents only a brief argument in the most general heuristic formulation. Its explication and empirical support require more than a single study; its initial elaboration has been published in [27]. I hope that it will help in finding a relevant place for cultural-historical activity theory in the psychology of our days.

References

1. Allport G.W. Becoming: Basic Considerations for a Psychology of Personality. New Haven: Yale University Press, 1956.

2. Asmolov A.G. Psikhologiya lichnosti [The Psychology of personality]. Moscow: Moscow University Press, 1990. (In Russ.).

3. Asmolov A.G. Vygotsky today: on the verge of non-classical psychology. New York, NY: Nova Science, 1998.

4. Asmolov A.G., Bratus B.S. O nekotorykh perspektivakh issledovaniya smyslovykh obrazovanii lichnosti [On Some Prospect of Studying Meaning Formations in the Person]. *Voprosy Psikhologii*, 1979, no. 4, pp. 35—46. (In Russ.).

5. Bernstein N.A. The Co-ordination and Regulation of Movements. Oxford: Pergamon Press, 1967.

6. Bertalanffy Ludwig von. General system theory — A Critical Review. General Systems, 1962. 7, pp. 1—20.

7. Bratus B.S. Anomalies of Personality. Orlando, FL: Paul Deutsch, 1990.

8. Bugental J.F. Outcomes of an existential humanistic psychotherapy: A tribute to Rollo May. *The Humanistic Psychologist*, 1991. Vol.19, no. 1, pp. 2—9. DOI:10.1080/08873 267.1991.9986748

9. Carver C.S., Johnson S.L., & Joormann J. Serotonergic function, two-mode models of self-regulation, and vulnerability to depression: What depression has in common with impulsive aggression. *Psychological Bulletin*, 2008. Vol. 134, pp. 912—943. DOI:10.1037/a0013740

10. Carver C. S., Johnson S. L., Joormann J. Two-mode models of self-regulation and serotonergic functioning: Divergent manifestations of impulse and constraint. In Sokol B.W. (eds.), *Self-regulation and Autonomy: Social and Developmental Dimensions of Human Conduct.* (pp. 255—278). New York, NY: Cambridge University Press, 2013. DOI:10.1017/CBO9781139152198.018

11. Davydov V.V. Kategoriya deyatelnosti i psikhicheskogo otrazheniya v teorii A.N. Leontieva [The categories of activity and mental reflection in A.N. Leontiev's theory]. *Vestnik Moskovskogo universiteta. Ser. 14. Psikhologiya*, 1979, no. 4, pp. 25—41. (In Russ.).

12. De Charms R. Personal Causation. New York, NY: Academic Press, 1968.

13. Florensky P.A. Stolp I utverzhdeniye istiny [The Pillar and the Affirmation of The truth]. In 2 vols. Moscow: Pravda, 1990. (In Russ.).

14. Freud S. Beyond the Pleasure Principle. *The Standard Edition of the Complete Psychological Works of Sigmund Freud, Volume XVIII (1920—1922): Beyond the Pleasure Principle, Group Psychology and Other Works,* 1920, pp. 1—64. DOI:10.1037/11189-000

15. Fromm E. The Heart of Man. Its Genius for Good and Evil. New York, NY: Harper & Row, 1964.

16. Grouzet F.M.E., Sokol B.W. Muller U. Self—regulation and autonomy: An introduction. In B.W. Sokol, F.M.E. Grouzet, U. Muller (eds.) Self-regulation and Autonomy: Social and Developmental Dimensions of Human Conduct. (pp. 1—16). New York, NY: Cambridge University Press, 2013. DOI:10.1017/CBO9781139152198.003

17. Harre R. Personal Being: a Theory for Individual Psychology. Oxford: Blackwell, 1983.

18. Ivannikov V.A. Psikhologicheskie mekhanizmy volevoi regulatsii [Psychological Mechanisms of Volitional Regulation]. Moscow: Moscow University Press, 1991. (In Russ.).

19. Kahneman D. Thinking, Fast and Slow. New York, NY: Farrar, Straus, Giroux, 2011.

20. Kelly G. Clinical Psychology and Personality: the Selected Papers of George Kelly. Maher B. (ed.). New York, NY: Wiley, 1969.

21. Kinnucan C.J.E., Kuebli J.E. Understanding explanatory talk through Vygotsky's theory of self-regulation. In Sokol B.W. (eds.), *Self-regulation and Autonomy: Social and Developmental Dimensions of Human Conduct.* (pp. 231—252). New York, NY: Cambridge University Press, 2013. DOI:10.1017/CBO9781139152198.016

22. Kotik M.A. Samoregulatsiya i nadezhnost cheloveka-operatora [Self-regulation and the reliability of an operator]. Tallinn: Valgus, 1974. (In Russ.).

23. Leontiev A.N. Problems of the Development of the Mind. Moscow: Progress Publishers, 1981. (Originally published in 1892).

24. Leontiev D. Psikhologiya Smysla [The Psychology of Personal Meaning]. Moscow: Smysl, 1999. (In Russ.).

25. Leontiev D. The Phenomenon of meaning: How can psychology make sense of it? In Wong P.T.P. (eds.), *The Positive Psychology of Meaning and Spirituality*. Abbotsford, BC: INPM Press, 2007, pp. 33—44.

26. Leontiev D. Samoregulatsiya kak predmet izucheniya i kak obyasnitelnyi printsip [Self-regulation as an object of study and as an explanatory principle]. In Morosanova V.I. (ed.), *Psychologiya samoregulatsii v XXI v.* [The Psychology of Self-regulation in the 21st Century] (pp. 74—89). Saint Petersburg: Nestor-Istoria, 2011. (In Russ.).

27. Leontiev D. (ed.), Lichnostnyi potentsial: struktura i diagnostika [Personality Potential: Structure and Diagnostics]. Moscow: Smysl, 2011. (In Russ.).

28. Leontiev D. Why we do what we do: The variety of human regulations. In Leontiev D. (ed.), *Motivation, Consciousness, and Self-regulation* (pp. 93—103). New York, NY: Nova Science Publishers, 2012.

29. Metcalfe J., Mischel W. A hot/cool-system analysis of delay of gratification: Dynamics of willpower. *Psychological Review*, 1999. Vol. 106, no. 1, pp. 3—19. DOI:10.1037/0033-295X.106.1.3

30. Prigogine I., Stengers I. Order out of Chaos: Man's New Dialogue with Nature. Toronto: Bantam Bks, 1984.

31. Rosenbluth A., Wiener N., Bigelow J. Behavior, Purpose and Teleology. *Philosophy of Science*, 1943. Vol. 10, pp. 18—24. DOI:10.1086/286788

32. Rozanov V. Tsel' chelovecheskoi zhizni [The goal of human life]. In Gavrushin N.K. (ed.), *Smysl Zhizni: Antologiya* [*The Personal Meaning of Life: an Anthology*]. Moscow: Progress-Kultura. 1994, pp. 19—64. (Originally published in 1892) (In Russ.).

33. Ryan R.M., Deci E.L. Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness. New York, NY: The Guilford Press, 2017. DOI:10.7202/1041847ar

34. Sartre J.P. Existentialism and Humanism, trans. Philip Mairet. London: Methuen, 1948.

35. Stolin V.V. Samosoznaniye lichnosti [The Self-consciousness of Personality]. Moscow: Moscow University Press, 1983. (In Russ.).

36. Subbotsky E.V. Izucheniye u rebyonka smyslovykh obrazovaniy [The Study of Personal Meaning Structures in the Child]. *Vestnik Moskovskogo universiteta, Ser. 14. Psikhologiya*, 1977, no. 1, pp. 62—72. (In Russ.).

37. Tikhomirov O.K. The Psychology of Thinking. Moscow: Progress Publishers, 1988.

38. Vasilyuk F. The Psychology of Experiencing. Moscow: Progress Publishers, 1988.

39. Valsiner J. Process Structure of Semiotic Mediation in Human Development. *Human Development*, 2001. Vol. 44, pp. 84—97. DOI:10.1159/000057048

40. Vygotsky L.S. Istoriya razvitiya vysshikh psikhicheskikh funktsii [The history of the development of higher mental functions]. *Sobraniye Sochineniy* [*Collected Works*] (Vol. 3, pp. 6—328). Moscow, Russia: Pedagogika, 1983. (Originally published in 1931). (In Russ.).

41. Vygotsky L.S. Sobranie Sochineniy [Collected Works], Vol. 4. Moscow, Russia: Pedagogika, 1984. (In Russ.).

42. Wiener N. Cybernetics, or Control and Communication in the Animal and the Machine. New York, NY: The Technology Press and John Wiley & Sons, Inc. 1948. DOI:10.1063/1.3066516

43. Zeigarnik B.V. Oposredstvovanie i samoregulatsiya v norme i patologii [Mediation and self-regulation in norm and pathology]. *Vestnik Moskovskogo universitets, Ser. 14. Psikhologiya*, 1981, no. 2, pp. 9—15. (In Russ.).

44. Zeigarnik B.V., Kholmogorova A.B., Mazur E.S. Samoregulatsiya povedeniya v norme i patologii [Behaviour self-regulation in norm and pathology]. *Psikhologicheskii Zhurnal*, 1989. Vol. 10, no. 2, pp. 122—132. (In Russ.).

Культурно-историческая психология деятельности в контексте «функциональной парадигмы»

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Цель данной статьи состоит в раскрытии специфики нынешнего состояния культурно-исторической теории деятельности (КИТД) в психологии по сравнению с предыдущими этапами ее развития в общем контексте развития психологической теории. Автор усматривает эту специфику в том, что КИТД воплощает в себе анти-аристотелевскую парадигму, исходящую из того, что актуальное функционирование живых систем не может быть полностью выведено из существующих априори морфологических и психологических структур. Такой подход объединяет КИТД с двумя другими влиятельными подходами к объяснению человеческого поведения, экзистенциализмом и системным подходом к саморегулируемым системам от ранней кибернетики до сегодняшней синергетики и теории сложностности. Занимая маргинальное положение в науках о человеке середины прошлого века, сейчас все три подхода оказываются выражающими разными словами один и тот же тезис; фундаментальное сходство между ними позволяет говорить об их слиянии в то, что может быть названо функциональной парадигмой. Функциональная парадигма говорит о первичности процесса, актуального функционирования, деятельности, или существования, об абсолютности неопределенности и изменчивости, и оказывается наиболее релевантной вызовам нашего времени.

Ключевые слова: культурно-историческая теория деятельности (КИТД), регуляция, саморегуляция, кибернетика, экзистенциализм, субъектность.

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Construction of a Scale for Investigating Pre-School Children's Social Situations of Development: Focusing on Activities instead of Abilities

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This paper discuss principles for the design of a tool to screen 3- and 5-year-old children's social situation of development in Greenland. We describe this tool as radical-local, building it on a theory of child development that focuses on children´s activities as cultural, anchored in local conditions and traditions, where play is seen as the core activity for preschool children. In constructing Investigating children's situation of development (Undersøgelse af børns udviklingssituation — UBUS 3 and UBUS 5) we have aimed at creating an instrument that can be used to evaluate children's health, wellbeing and activities in their everyday settings of day-care and at home in Greenland. The assessment focus on interaction with care-persons and other children, not on children's abilities as isolated and independent features. For preschool children these conditions and their participation in these conditions create the child's social situation of development.

Keywords: screening, situation of development,3 years, 5 years, age periods, zone of concerns.

Introduction

In this article we will discuss the principles for evaluating preschool children's social situation of development in day-care. The discussion take departure in a project that constructed screening tools for 3- and 5-year-old children in Greenland. The background for the project was that in 2008 the Danish welfare Institute investigated 0—14-year-old children and their families' wellbeing in Greenland [3]. This investigation resulted in a depressing report about everyday life conditions for children in Greenland. These results led to initiatives by the Greenland Home-rule Government to create institutional practices for preschool children. In 2012 also a law about screening 3- and 5-year-old children was passed, and a task force group were established led by Naussunguaq Lyberth to realise the law. Mariane Hedegaard became a consultant for this group. Drawing on Vygotsky's cultural-historical theory and the day-care tradition in Greenland, the task force group constructed an instrument to evaluate 3- and 5-year-old children's social situation of development focusing on the activities children particpated in, rather than children's functions and abilities.

The result of the task force's work became the screening tools UBUS 3 and UBUS 5 [13; 14][1] that reflected the competences and activities that the educational system in Greenland evaluated as important. A child's social situation of development covers both the child's activities and the conditions that pedagogues and careers give to enable the child to take him or herself forward as a learner. The assessment was directed at six areas, the first (1) was connected to the child's *health and wellbeing*. Focus of health were (1.1) vision, (1.2) hearing, (1.3) physical health (1.4) height and weight and (1.5) wellbeing. The following five were connected to how the child relates to other people participating in shared activities: these were (2) *Social interaction and competences*. Focus area: how the child relates to other people and creates contacts. (3) *Communication and language competences*. Focus area: how the child relates to other people through communication and language. (4) *Sensation and movement*. Focus area: how the child relates to other persons by moving

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[1] The task force project lasted nearly three years as it included testing of the material several times in different daycare-institutions.

around and paying attention. (5) *Cooperation and initiation of activities*. Focus area: how the child contributes to shared frameworks and child-led activities. (6) *Knowledge of nature and culture*. Focus areas: how the child relates to nature and cultural activities in Greenland. Through such an evaluation it is possible to point to *areas of concern* in a child's social situation of development.

In the following we will present the cultural tradition for testing in Denmark and Greenland and a critique that led to using the cultural historical theoretical tradition initiated by Vygotsky as the foundation for constructing the screening material The aim has been to construct tools that assess children's situation of development through the activities they participate in. It is then possible both to point to areas of concern in a child's developmental situation and also to get ideas to overcome these concerns.

In the last section we will illustrate how one can use the results of investigating children's social situation of development to meet found concerns. This also has implications for identifying the kinds of support needed for preparing children's transition from home or nursery to preschool and from kindergarten to school.

Finding a way to accept screening of children as an important activity

In the 1960ties and 1970ties exploring children's development was in Denmark oriented to cognitive test, (Binet, WISC, Cattel's infant intelligence scale) and clinical test (Rorschach and CAT). When daycare institutions in the Scandinavian countries became more common, other types of material more oriented to pedagogical analyses of children's difficulties and school readiness came on the market to help both teachers and psychologists evaluate children' way of functioning. Several were based on Piaget's theory, favouring a one-dimensional scale for evaluation. Marx Wartofsky [17] questioned Piaget's stage description arguing that Piaget used an essentialist ontology of childhood where the child is conceptualized as a genetically fixed and determinate entity. In opposition he argues:

What is needed instead is a radically cultural conception of *childhood*, one that acknowledges the historicity of the conception, and therefore also the extent to which the category essentially transcends the biogenetic char-

acterization; and that also acknowledges the extent to which the biogenetic characterizations themselves mirror different cultural and historical norms. [17: 192]

In line with this argument Hedegaard [6] had formulated *the interaction based observation method* as an alternative evaluation material for young children that also was advocated as a research method for Early Childhood Education and Care (ECEC) [10]. This method is based on the conception that to evaluate children's development one has to evaluate the child in his/her everyday settings. This can be done by participating in the child's everyday life situations observing and interacting with the child, recording the activities and then interpret the recordings to find out what the child is intentional oriented to and the demands that is put on the child.

This method though requires too many resources when the development of all children 3- and 5-year-olds have to be evaluated every year in Greenland. Instead it was used as a method to evaluate a sample of children when testing the screening material (UBUS 3 and UBUS 5). The difference between *the interaction based observation method* and the screening material, the task force constructed, is that the screening material cannot evaluate children´s intentions in actual activity (get the child's perspective), instead the screening material (UBUS 3 and UBUS 5), evaluate children's interaction with other children and adults in daily activities, thereby focusing on children's social situation of development from the educational (societal) perspective.

Before deciding to construct their own material the task force reviewed 13 of the latest materials for evaluating preschool children's development to find a tool that could evaluate children' s development from a cultural an educational perspective in Greenland.[2] Some of these were already in use in Greenland (TRAS, a Norwegian scale; RABU, a Danish scale; Børne-linealen, a Danish — Greenlandic scale; Kuno Beller's Developmental Description, a Danish-German evaluation system). The task force group came to the conclusion that these materials focus too much on children's functions independent of the environmental and cultural conditions, therefore these materials gave little possibility to evaluate children's social situation of development, in a way that informed relevant educational initiatives in their social situations. The screening results we argued should be tools for finding areas of concern and give direction for how to support and motivate children to participate in activities with other

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[2] The materials evaluated were:
1. TRAS (Tidlig Registrering af Sprogudvikling) a Norwegian scale, by U. Espenak & J. Frost, 2003.
2. RABU, a Danish scale used by school psychologists in Greenland.
3. Børne-linealen, a Danish – Greenlandic scale, created and used by health nurses in Greenland.
4. Kuno Beller's Developmental Description, a Danish-German evaluation system.
5. TRASMO, Early registration of motoric competences, a Norwegian scale, by U. Espenak & J. Frost.
6. MPU (Motoric –perceptual development) a Danish scale, 1977.
7. SPU (School readiness test) by L. Pearson & J. Quinn,1986, used by school psychologists in Greenland.
8. SDQ (Strength and Difficulty Questionaries') by R. Goodman, 2015, used by school psychologist in Greenland.
9. EDI (Early Development Instrument) by M. Janus, 2000.
10. CBCL (Child Behavior and Emotional screaming system) by T. Acherbach & I. Rescorla, 2000.
11. BASC-2 (Behavioral and emotional screaming system) by R.W. Kamphaus & R. Reynolds, 2006.
12. ASQ (Age stage questioner) by J. Squires, D. Bricher & E. Twombly, 2002.
13. BESS (Behavioral and Emotional Screening System) by T. Acherbach & I. Rescorla.

children within the areas of concern. Therefore the task force decided to construct screening materials (UBUS 3 and UBUS 5) that were relevant for 3- and 5-year-old children in Greenland focusing on the activities that one expects 3- and 5-year-old children in Greenland should be able to enter into. The challenge then became to construct a material that are relevant for *all* 3-and 5-years in Greenland that also could meet the UN criteria for children's development, to support that children could grow up to become world citizens.

The task force accepted the ideas that the screening of children 3- and 5-years in Greenland should not serve the neutral content free evaluation of children but should become relevant for children in their actual concrete society and be a tool that supports children in difficult situations. Therefore, the task force decided to use the cultural-historical approach from Vygotsky as foundation for constructing the screening material.

The theoretical foundation for constructing a screening material to evaluate children´s social situation of development

The cultural-historical approach forwards the view that a child should not only be seen as an entity in itself, but that the contextual conditions and the child are a unit. Vygotsky [16] express it this way:

One of the major impediments of theoretical and practical study of child development is the incorrect solutions of the problem of environment and it role in the dynamic of age when the environment is considered as something outside with respect to the child, as circumstance of development, as aggregate of objective conditions existing without reference to the child and affecting him by the fact of their existence. The understanding of environment that developed in biology as applied to evolution of animal species must not be transferred to the teaching on child development. [16: 198]

Leontiev [12], described the relation between humans and the social conditions in which they are situated as united as a dynamic relationship with each other, where children finds the motive and goals for activity.

Humans do not simply find external conditions to which they must adapt their activity. Rather these social conditions bear with them the motives and goals of their activity, it means and modes. [12: 47—48].

In line with this Hedegaard point out, when evaluating a child's development, one has to be aware of the demands the child meets and how these demands interact with the child's motive orientation [8]. From this perspective Hedegaard argued in the task force for evaluating children in their everyday activities.

To understand children age periods as cultural constructed we used Vygotsky's [16] *concept of the child's social situation of development.*

We must admit that at the beginning of each age period, there develops a completely original, exclusive, single and unique relation, specific to a given age, between the child and reality, mainly social reality, that

surrounds him. We call this relation the *social situation of development* at the given age. [16: 198]

The term 'a given age period' depicts what is expected from a child in different periods in life. These periods are connected to the different institutions and their different practices in which the child comes to participate in over the life-time. In a given society a child's nominal age often fits with the age period, because the way family and care person in the different practices (daycare, school, high school) interact with most children falls inside the range of the social situations at the given age period [1; 4; 7].

The theoretical conceptions from the cultural-historical approach to children's development are that children's age period reflects societies expectation and that the demands and motives are interconnected. These conceptions became the foundation for the task force's construction of the screening tool. Evaluation of children from this perspective has to be seen as an educational evaluation for supporting children to develop their activities within the age period of 3 respective 5-year-olds that reflected the demands and expectation to this age group.

Across the Nordic countries there are some shared views that also are reflected in the institutions in Greenland, on what should be expected of a 3-year-old and a 5-year-old child. At 3-years, children are expected to be ready to go to day-care, which means that the children are able to control their own movements, imitating other people and starting to play with other children. At 5-years, they are expected to take initiatives in shared activities and play and start to orient themselves to school activities, which they start as 6-year-olds.

Expectations of 3- and 5-year-old children are built into institutional practice in daycare and the routines children meet here. Consequently, we cannot evaluate a child's competences in isolation. There can be cultural differences in the same nation as there is in Greenland but daycare and school practice have to aim at giving children possibilities for development so they can enter into the institutions that give equal opportunities for education independent of where they live in Greenland. To construct an as assessment tool like UBUS 3 and UBUS 5, it is important that it captures central Greenlandic values in characterizing children's development in the two age periods. Therefore, the task force had to represent different institutions related to child-care in Greenland. The group had several meetings to find a way to construct instruments that evaluate children's social situation of development in the two different age periods where the focus should be on the child's activities, instead of focusing on their functions and abilities in isolation from environment. Such an approach to assessment also gives insights into possibilities for interventions in a child´s developmental situation pointing to the kind of support needed for preparing children's transition from home or nursery to preschool and from kindergarten to school.

Constructing the screening material

The content of the first versions of UBUS 3 and UBUS 5 related to the learning goals formulated for

preschool education in Denmark[3] and modified by the task force group to fit to what were seen as important in Greenland. This content was formulated as questions about a child's participation in the mentioned activity that the evaluators could judge as 'can', 'can partial' (to some degree), 'cannot'. This version was tested in selected kindergarten and day-care institutions in each of the different counties in Greenland[4]. Experience from this testing was used to reformulate several of the questions

One of Vygotsky's [15] most important theoretical points is that children with disabilities also have developmental processes where the community and social situation are crucial for their development into different age periods. After the first versions of UBUS 3 and UBUS 5 were constructed we realised that we missed a category about children's health because a child's health may influence the child's participation in activities with other children. Therefore, health and wellbeing became the first point of evaluation, in the final versions with health containing, vision, hearing, physical health and height and weight. The development of children with physical impairment or health problems in early childhood must be supported to recover. Children with more permanent disabilities have to be supported so that they can develop their social competencies needed to participate in activities that are valued in society to get a dignified life. Children with physical disabilities in early childhood Bøttcher [2] point out, need both support and opportunities to play and have fun as other children.

We revised the versions three times. Parallel with the testing, the staff from the Government's Center for ECEC visited the different day-care institutions to follow the kinds of problems that the early-care-workers had with using the screening tools, and the ECEC staff also made interaction-based observations of selected children to test and validate the screening results against the direct observations. The difference in the questions used to evaluate 3- and 5-year-old children will be illustrated with two question areas (Tab. 1) and (Tab. 2).

The zone of concern: How to use the results from UBUS 3 and UBUS 5

Since staff can answer: 'can', 'partial' or 'cannot', in their assessment of children's activities, it is possible to draw a profile for a child that shows the way the early-care-worker evaluates the child's competences to participate in activities (see Fig. 1 and Fig. 2).

The evaluation of the first area: *children's health and wellbeing,* needs to be positive (the first area in the final version), otherwise the early-care-worker, who evaluate the child must take immediate action to get medical help. The parents also need to be involved, so that shared care can be started. If the score for one of the other five areas is negative or if there are more than two partial scores the early-care-worker should suggest interventions to

Table 1
Showing the difference in area 2) *social competence and interaction* between 3- and 5-year-old children in how they make contacts and establish friendships

	UBUS 3 area 2	UBUS 5 area 2
Question 1	The child may play with others	The child contacts other children with ideas for play activity
Question 2	The child contacts other children to participate in play	The child accepts decisions and is led by shared rules (i.e., accepting guidelines and rules in play and games)
Question 3	The child accepts being close to adults	The child accepts bodily contact as well as contact at a distance, and can express wishes for nearness or create boundaries for this

Table 2
Showing the difference in area 4) participation in sensation and movement activities between 3- and 5-year-old children in how they relate to other persons in moving around and paying attention

	UBUS 3 area 4	UBUS 5 area 4
Question 1	The child can differentiate between warm and cold, small and large	The child is aware of own body and act if s/he is too hot or cold or has pain
Question 2	The child can climb stairs and mountains, dance and jumps	The child experiments with balancing and climbing (i.e., in the mountains)
Question 3	The child can perform movements (i.e., use building block, drawing materials and dress and undress)	The child can climb , jump, dance, draw, dress and undress (using buttons),

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[3] Pr. 1 August 2004, in Denmark, all day care services according to the Service Act must prepare Educational curricula that focus on:
- the child's versatile personal development
- social competences
- language
- body and movement
- Nature and natural phenomena
- Cultural expressions and values

[4] For an overview of testing the material see Hedegaard & Lyberth (2019) The difference between the first and the third revised version can be seen in the difference between the profiles presented in Fig. 1 and Fig. 2.

be realised immediately and a new screening should be done after three months. If the same concerns remains the day-care institution should contact the social service center. If there are more than 2 cannot the social service center should be contacted immediately. The following two cases illustrate differences in scorings that lead to different forms of intervention.

Evaluation of a 3-year-old girl — Stella's[5] developmental situation

The first case is a 3-year-old girl from the first testing round of UBUS 3, where health questions are not in the material. The profile from the early-care-worker's answer to the screening questions (Fig. 1) shows that the early-care-worker had concerns about the child's *movement and sensation (area 3) cooperation in activities (area 4)* and *cultural activities (area 5)*. The instruction to UBUS 3 says that the kindergarten staff has consider a child if possible, in their educational plan for all children, while ensuring that the specific child in concern is particularly supported. After three months they have to evaluate the progress of the child in concern by making a new screening, to see if their interventions have supported the child.

As shown in the profile Stella only partially master body activities, for example, taking clothes on and off, drawing, making puzzle, jumping, singing and dancing (3). She does not cooperate well in play (4) and she only partially participate in singing, musicking and dansing (5).

Educational advice from Center for ECEC:

The early-care-workers should pay attention to Stella when she takes clothes on and off to support her in doing this. They should initiate play in small groups so the girl together with other children may come to play different adult roles (i.e., father, mother, child, doctor, shop keeper). The adults also may initiate doctor plays where Stella may explore her body and initiate play where she together with other children may jump, roll, dance (i.e., play dogs, monkeys and other animals). The early-care-workers should initiate song play to support Stella's imitation and play as well as cultural knowledge. After three months the girl should be screened again.

Evaluation of a 5-year-old boy — Anda's developmental situation

The second case to illustrate how concerns may be met is from the third testing round of UBUS 5, where health together with wellbeing are now in the first area to be questioned. The early-care-worker's answers to the screenings questions about Anda, a 5 year old boy, result in the profile shown in Fig. 2. The profile shows that the Anda's social situation of development is very concerning.

The ealy-care-worker that filled out UBUS 5 wrote the following comment:

He has difficulty accepting directions, for example, that he must not go outside the playground's fence despite explanations. He will not always wash hands before eating time. Nor does he want to participate when we are singing in the group or doing shared activities. After half a year in the kindergarten, the boy still cannot name the children and the adults. The boy never tells anything about what they do at home or in holidays. The adults find it hard to understand the boy when he talks.

The profile shows that Anda seems healthy and in general happy (1). His way of communicating with the other children and adults are not the best, and he does not play with words or talk about his experiences (2). He knows that one has to accept rules in play and games, but he do not negotiate about these in play and he cannot distinguish between reality and fantasy in hearing stories and in play. (3) He does not accept decision and will
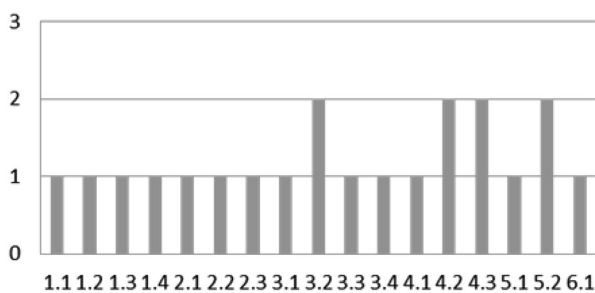
Fig. 1. UBUS 3, profile of a 3-year-old girl
The vertical axe illusrate the answer can (1), partial (2) and cannot (3). The horisontal axis depicts the six areas: 11.1—1.3 social interaction and competences, 2.1—2.3: communication and language competences, 3.1—3.3: sensation and movement, 4.1—4.3: cooperation in activities, 5.1—5.2: knowledge of nature and culture, 6.1: well being[6].
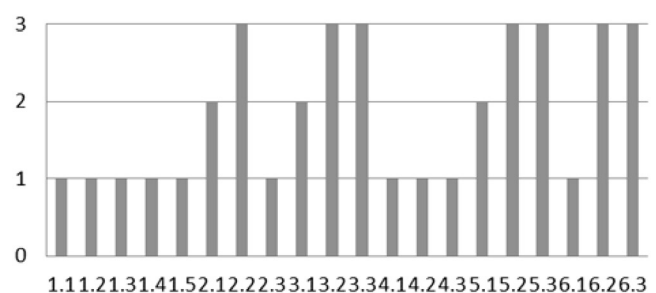
Fig. 2. UBUS 5, profile of a 5- year-old boy
The vertical axis illusrate the answer can (1), partial (2) and can not (3). The horisontal axis depicst the six areas. (1.) health and well being, (2) social interaction and competences, (3) communication and language competences, (4) sensation and movement, (5) cooperation and initiation of activities (6) knowledge of nature and culture.

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[5] We do not use children's real names.
[6] Notice: In the first trial in the construction of the screening material the order of evaluation areas as different than in the final (third) version with fewer questions in area 5 and 6.

not be guided by decisions in a play group. (5). He does not know the seasons of the year and cannot tell about animal or plants. He does not participate in cultural activities such as imitating singing or dancing (6).

Educational advices from CECE:

While consulting the social service center in accordance with the municipality's rules, the advice is that special pedagogical precautions must be taken immediately focusing especially on Anda's communicative and linguistic development. In cooperation with the parents, a plan of action should be drawn up on how to teach Anda to participate in joint activities. The early-care-workers have to support the boy to participate in small groups where he can learn to accept shared rules. The early-care-workers have to take Anda out into nature together with other children and support the boy's learning about nature. They also have to engage him in shared cultural events in the community together with other children.

Follow up

As a result of the initiative of contacting the school psychology center Anda got a pedagogical helper. Also, the Head of the Center for ECEC visited the boy's kindergarten as part of testing UBUS 5. She used the interaction-based observations to validate the screening. She made two observations in the morning- and lunch sessions. We will present an extract of the second observation here.

Observation december 9th
Observer: Naussunguaq Lyberth,
Head teacher K, pedagogical helper M
(second day at work)

K contacts Anda and invites him to be with them. She talks to the kids about what color things are. Anda has found a watch and chooses to give the watch to M and sits down with her. K is now doing letter recognition with the kids. Anda knows A and says Anka (Uncle). Anda then walks out of the room but comes back a little later and bring a long stick, which he uses as a cane and walks like an "old" man. Sometimes he looks at what the other boys are doing and sometimes he says the same letter sound as the others say. He contacts K by first touching her bottom and then her body. He takes a book and sits on the floor where M goes over to him. They read the picture book together and M asks Anda to tell what they see. They talk about what's in the book and laugh. As they finish reading, Anda contacts two boys playing picture lottery. He says "do you play", and asks "can we play together?".

A conflict arises between Anda and two boys, where it is clear that Anda would like to join their picture lottery game. He takes one of their pieces and starts playing in the boys' games, without taking into account, what the two boys are doing. They try to take the piece back. They tell K and she intervenes. Anda gives the piece back. He then walks out of the room. He comes back with a lego airplane and flies with it and shouts very loudly with a 'soprano voice', he probably doesn't know how loud it sounds and smiles happily. M asks him to

go out and wash his hands as they will soon be having lunch. She takes him to the bathroom. Out there, he starts screaming loudly and scolding M. M quietly answers him. K and M enter the room without Anda, and he continues with loud noises outside, but is ignored, after a while he says something to K from the outside and she answers that they are having lunch now. Anda answers again from the outside. K goes out to him and comes back alone. Anda comes in and plays with the airplane and shows it to K. K says if he doesn't eat, he will get hungry and the kitchen lady also tells him he will get tired if he doesn't eat. Anda tries to catch the other boys' attention, he lands his airplane on a boy's head. K says, he has to stop. Anda goes away and comes back a little later. He continues to disturb the other children, and the adults quietly try to make him quit. Then he grabs a key in a string and swings it around (it looks dangerous). The kitchen lady is worried and says aloud, that now he has grabbed a key. K goes to him to get the key and M wants to help K. Anda throws the key and runs away. K sits down at the boys' lunch table and tries to get Anda to sit down. Since he still does not want to eat, she starts preparing some food he can eat later and tells him that he can eat it when he gets hungry. Anda looks at her but says nothing. Then he starts playing with K's hair, then he jumps up on the table and K takes him down quietly, then runs out of the room and M follows him where he throws something, and M says he shouldn't

The observations show that: Anda can accept demands and seems content to have contact with the staff in the kindergarten, also the new helper M. He orients for a while to the teacher's activity about hearing which words start with different letters. He plays role play (i.e., he's an old man with a cane). He also looks for a while with M in a book where they take turns saying what they see. He knows that the airplane he has in his hand is not his, although he initially says it is. He touches others and plays with the K's hair

The observations indicate: that Anda wants to have contact with the other children, but he has an inappropriate way of making contact. He can follow the teacher's instructions, but when he does not, conflicts take over. It is quite clear that he must have help to contact and communicate with the other children so that they accept that he joins their activities. It is also important that teachers help him avoid conflicts, and stay with him until conflicts are resolved, as the bathroom example illustrates. He tries here to stay in contact with the adults, even though he is outside the room where they have lunch. Anda is demanding in these conflict situations but he need support to find a way forward.

Discussion

The aim in this article has been to discuss how it may be possible to formulate screening material to evaluate preschool children's social situation of development. This discussion has been illustrated with the Greenlandic screening material UBUS 3 and UBUS 5. With this material the idea has been to construct an educational

tool to support children in areas of concern in their social situation of development, so they may become included in shared activities in their daycare practice. In this article the aim has been to discuss principles for how such a material may be constructed[7].

UBUS 3 and UBUS 5 are screening materials developed in Greenland relating to Greenland's daycare laws about daycare practices that contain the values for children's social situation of development in early childhood. It means that the material cannot be directly transferred to other nations' daycare but has to be interpreted in relation to other nations values for early childhood development and daycare traditions. It may though be relevant to get inspiration from UBUS 3 and UBUS 5 to construct screening material for other nations' kindergartens, since UBUS 3 and UBUS 5 are based on ideas from the cultural-historical psychology for children's development. By using a cultural-historical understanding of children's development the child and its environment are seen as a unit. A child's social situation is created in interaction with its caretakers and the conditions society gives for their interaction.

To illustrate how the specific conditions in a society may influence the type of questions that are possible to ask, we will take the area of *nature and culture*. Because the see, the mountains, snow and ice are the central part of the Greenlandic nature, therefore it will be relevant to evaluate children's knowledge about these areas and children's way to participate in activities in nature dominated by these characteristics. Also, it will be relevant to evaluate children's knowledge about the cultural tradition related to the nature in Greenland, where transport goes by water, where children may participate in collecting berries and follow parents in hunting either reindeers or seals. It would have been impossible to made fair evaluation that relate to local values of nature if it only has been based on the consultant's knowledge from Denmark about nature in forest, meadows and fields. On the other side she contributed with her theoretical knowledge, that may be characterized as radical transcending the local. The instruments UBUS 3 and UBUS 5 can be seen as *radical-local* [9] because it builds on a wholeness theory of child development that focuses on children´s learning and motive orietation as cultural, anchored in local conditions and traditions that become the foundations for general concepts.

The evaluation shown in a child's screening profile creates a useful visual image that the daycare staff can share with the child's primary carers. It can therefore be used as a point of departure for creating common knowledge between home and daycare, coordinating what matters both for parents and for daycare staff, allowing differences in practice at home and in daycare. If the different care persons in home and daycare acknowledge the importance of each way of relating to the child and the activities in each place supports the child's social situation of development (Edwards, 2010, 2017). It can also be used so that the different practitioners within the supporting systems of ECEC, medical specialists and the school psychologist with their different strengths and orientation to what matters can act together when supporting a child's within areas of concern. To support transitions from home to daycare and from daycare to school we see UBUS 3 and UBUS 5 as a tools that can be used to create common knowledge for parents, daycare staff and teachers to offer support that respects the traditions of both home and the different educational setting of daycare and school. It is important that those involved in supporting the child are able to support each other. Our argument throughout this chapter has been that those adults who are central in the child's learning and development need to pay attention to helping the child create social situations of development that allow them to overcome the difficulties to be found in areas of concern.

References

1. Bozhovich L.I. The social situation of child development. *Journal of Russian and East European Psychology*, 2009, 47, pp. 59—86.
2. Bøttcher L., Dammeyer J. Development and learning of young children with disabilities growing. A Vygotskian perspective. New York: Springer, 2016.
3. Christensen E., Kristensen L.G., Baviskar S. Børn i Grønland. En kortlægning Af 0-14-årige børns og familiers trivsel. København: SFI — Det Nationale Forskningscenter For Velfærd, 2008.
4. Edwards A. Being and expert professional practitioner. Switzerland: Springer, 2010.
5. Elkonin E.D. Toward the problem of stages in the mental development of children. *Journal of Russian and East European Psychology*, *37* 1999, no. 6, pp. 11—30.
6. Hedegaard M. *Beskrivelse af småbørn*. Aarhus, Denmark, Aarhus University Press, 1992.
7. Hedegaard M. Analyzing children's learning and development in everyday settings from a cultural-historical wholeness approach. *Mind Culture and Activity*, 2012. Vol. 19, pp. 1—12.
8. Hedegaard M. The significance of demands and motives across practices in children's learning and development: An analysis of learning in home and school, *Learning, Culture, and Activity*, 2014, no. 3, pp.188—194.
9. Hedegaard M., Chaiklin S. Radical local teaching and learning. Aarhus: Aarhus University Press, 2005.
10. Hedegaard M., Fleer M. Studying children. A cultural-historical approach. London: Open University Press, 2008.
11. Hedegaard M., Lyberth N. Radical-local screening of preschool children's social situations of development — from abilities to activities In Hedegaard M. (eds.), *Support for children, young people and their carers in difficult transitions: working in the zone of social concern*. London: Bloomsbury, 2019, pp. 67—90.
12. Leontiev A.N. Activity, consciousness, and personality. Englewood Cliffs, N.J.: Prentice-Hall, 1978.
13. Lyberth N., Lund A., Hedegaard M., Pedersen A.L. Undersøgelse af Børns udviklingssituation til 3 årige:

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[7] There is copyright on the material, so it is not possible to translate the whole material.

UBUS 3. Grønlands Selvstyre. Nuuk: Uddannelsesstyrelsen Undervisningsmiddelforlag, 2017a.

14. Lyberth N., Lund A., Hedegaard M., Pedersen A.L. *Undersøgelse af Børns Udviklingssituation til 5 årige: UBUS 5. Nuuk: Uddannelsesstyrelsen Undervisningsmiddelforlag, 2017b.*

15. Vygotsky L.S. Problems of general psychology: The collected work of L.S. Vygotsky, vol. 1. New York: Plenum Press, 1987.

16. Vygotsky L.S. Child psychology. The collected works of L.S. Vygotsky, vol. 5. New York: Plenum Press, 1998.

17. Wartofsky M. The child's construction of the world and the world's construction of the child: From historical epistemology to historical psychology. In Kesse F.S., Siegel A.W. *The child and other cultural inventions. Houston Symposium 4.* New York: Praeger, 1983, pp. 188—215.

Разработка методики для диагностики социальной ситуации развития дошкольников: от способностей к деятельности

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Статья посвящена принципам создания методики для скрининга социальной ситуации развития 3- и 5-летних детей, живущих в Гренландии. Мы охарактеризовали данную методику как «радикально-локализованную», поскольку она базируется на теории детского развития, в центре которой — представления о детской деятельности как культурно-опосредованной, укорененной в местных условиях и традициях, а также о том, что ведущей деятельностью в дошкольном возрасте является игра. Разрабатывая методику «Исследование социальной ситуации развития детей» (Undersøgelse af børns udviklingssituation — UBUS 3 and UBUS 5), мы ставили своей задачей создание такого диагностического инструмента, который помог бы оценить деятельность, здоровье и благополучие детей в привычной для них повседневной обстановке, в детском саду и дома. В фокусе нашей диагностики — не отдельно взятые, изолированные качества и способности того или иного ребенка, а взаимодействие детей с воспитателями и сверстниками. В дошкольном возрасте привычная среда и взаимодействие в рамках этой среды и создает социальную ситуацию развития ребенка.

Ключевые слова: скрининг, ситуация развития, 3 года, 5 лет, возрастные периоды, круг забот.

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Cultural-Historical Activity Theory Travels to Greece: Actors, Contexts and Politics of Reception and Interpretation

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This article explores how socio-cultural, cultural-historical and activity theory approaches to education and psychology have traveled to Greece over the last three decades. It explores the history of introducing these approaches in the Greek context while identifying key dimensions of the process, such as: diverse interpretation of original works, key actors in academic teaching and research and linkages with educational policy and activism beyond the university spaces. Greece with its specific history of military dictatorship, constitutional change, varied struggles for democracy within the university, European integration, and current crisis and neoliberal reforms is seen as a sample case; taking this case as a point of departure, the authors develop a meta-theoretical frame on how to discuss the various ways in which socio-cultural-historical approaches have traveled across socio-cultural, historical, institutional, political, regional, and also, increasingly globalized contexts of education.

Keywords: activity theory, cultural-historical psychology, A.N. Leontiev, A.R. Luria, socio-cultural approach, translation, L.S. Vygotsky, globalization, traveling theory.

Introduction

The theoretical and methodological perspectives that were first formulated in the 1920s and 1930s by such scholars as L.S. Vygotsky, A.N. Leontiev and A.R. Luria have gained popularity, albeit in non-uniform ways, in education, psychology and social work by academics, activists, teachers and policymakers in diverse settings and with diverse purposes in the second half of the 20th century. A few more authors are often considered as *classic* ones, in this frame, depending on the specific context and one's interpretation e.g. M. Bakhtin, V.N. Voloshinov and S.L. Rubinshtein. A common point of reference that appears in most, if not in all, of these scholarly works is a focus on the study of mental processes as culturally-historically and collectively developed, mediated through the use of tools and signs and established through participation in social practice.

The translation and interpretation of these classic texts has not been unproblematic, which, in turn, has created much debate in the relevant academic spaces. It took several years for example for English-speaking scholars to understand that *Mind in Society* (1997) has never been published as one such book with this title in Russian. It also took several years for *Thought and Language* [77] to be translated as *Thinking and Speech* [78], which seems to be a more accurate translation [15; 29]. While the list of such examples can become very long, it seems that the choice of titles and terms has often reflected the implicit epistemological as well as cultural understandings, and, sometimes, even the political preferences of the involved authors and translators within quite diverse schools of thought, such as: cognitivism, discursive and cultural psychology and Activity Theory [54]. There is little agreement even on how to refer to

the sum of the relevant classic texts with various terms in use (Activity Theory, cultural psychology, socio-cultural approach, etc. [23; 12; 81].

When moving beyond the Anglo-American academia, the complexity increases, as for example, in China, Vygotsky's and Leontiev's work have been received through the specific prism of the long Chinese cultural history, including the cultural revolution, and most recent political, ideological and economic developments [32]. Theoretical concepts, such as *activity, mediation, zone of proximal development,* have become instrumental in child therapy, teacher education and curriculum reform in the German Democratic Republic during the 60s and in Brazil in the last 15 years, in yet different ways than this happened in anglophone settings [28; 37].

Two oppositional approaches are often juxtaposed in the aforementioned context: On the one hand, a rather *dogmatic effort* to interpret the classic texts in the correct way takes place, thereby claiming that one particular version is the right one as opposed to all others. On the other hand, one may encounter an over-simplified *mosaic approach* to theory use running the danger of suggesting that all possible theoretical appropriations are legitimate. However different these two positions might appear at a first glance; they overlook the fact that the traveling of theory from one context to another is itself an activity embedded in socio-cultural practices and context politics. Translation, reception and interpretation of texts do not take place in a vacuum but within networks and institutions that facilitate but also shape processes of interpreting and appropriating key ideas and concepts in diverse localities and subject areas [67].

How could a broader conception of *translation,* as a socio-cultural process and not a purely linguistic endeavor, help us explore, the multiple ways socio-cultural-historical approaches have moved and traveled in the locality of Greece while considering a range of cultural, historical, institutional and ideological factors that have influenced this move? In the present article, we aim to make a first step to map the rather fragmented landscape of relevant theory use in Greece and outline a meta-theoretical frame for further work in this area. The paper is organized in four sections. After this introductory section, we move to discuss *traveling theory* as a theoretical lense in the second section. The third section describes the methodology of our inquiry, which then leads to the subsequent mapping of key actors and the analysis of relevant practices and contexts of interpretation.

Traveling theory

According to Said [66], when theories travel i.e. move into new contexts, they enter a constant process of transformation, as an effect of given differences in place and time. The concept of *traveling theory*, often employed in post-colonial studies, could be particularly important, indeed, in understanding the ways in which socio-cultural, cultural-historical and activity approaches to education and psychology have traveled to Greece and elsewhere over the last few decades. Instead of struggling to account for a direct one-to-one implementation of theory, when employing this concept, one may focus on the manifold socio-cultural encounters taking place *across space* and also *in time*, and therefore analyze the multiple transformations of a theory, as it becomes re/appropriated in the local context.

Translation practices of theory traveling involve mediating devices, interpreting and creating texts, networking, funds, and infrastructures, as well as, personal motives and interpersonal synergies within the realms of academic and, eventually, broader institutional politics. The notion of *traveling theory* provides a fruitful meta-theoretical framework for such an analysis — in this case, capturing theory travels across multiple temporal layers from Russia, the UK, US, central and east Europe to Greece. In our analysis below, we trace the travel of socio-cultural-historical approaches to psychology and education across a range of practices, such as the translations of original works into the Greek language, the delivery of university-based courses in education and psychology, the conduct of research, the employment of relevant theory for educational policy and activism beyond the academia. Each of these practices may deserve more attention and could become a separate area for further investigation in the near future.

Methodology: Texts, contexts, actors and interpretation

Based on our collective knowledge of published work and our own experiences and discussions with key informants, our investigation entailed the following steps: Initially, we engaged into discussing our research questions (i.e. appropriation of socio-cultural-historical approaches in the local context of Greece) in varied occasions and with different audiences (International Society of Cultural-historical Activity Research invited symposium in Rome [18] and regional ISCAR conference in Crete [20; 60]. At the same time, we searched for all relevant published work such as books, journal articles, conference proceedings papers, etc. and created a timeline of major relevant works in the Greek language (a total volume of about 700 pages i.e. 30 books from 1990 to 2019, see Appendix and Bibliography).

We identified the key Greek scholars, who have determined the interpretation of the classic texts in Greek through the lenses of their training and academic knowledges shaped in diverse contexts such as Russia, Poland, the UK, and the US. In parallel, we analyzed all relevant texts and textual interpretation that we could have access on with discursive methods [35]. Finally, we explored issues of homogeneity/ heterogeneity and tried to explain and contextualize the different interpretations by focusing not only on explicit but also on implicit or hidden aspects of communication and practice in the academic community and beyond. Therefore, we have included higher education courses, networks of scholars, implementation of theory in guidelines for curricular reforms and links to activism beyond academia [42].

When referring to *theory traveling*, we could not circumvent reflecting on our own status as researchers, who also have traveled, and continue traveling, in-between diverse localities. It is important for us to consider ourselves as part of what we study. We have studied and worked in different parts of the world (i.e. Dafermos in Soviet Union/Russia; Chronaki in the UK & Sweden; Kontopodis in Germany & the UK). We all have studied and employed Vygotskian theory in our different disciplines during our early studies (philosophy, mathematics education, and psychology, respectively). Engaging in this research paper has been a long process of synthesizing our different theoretical ideas, methodological tools, and viewpoints while reflecting on our own distinct trajectories within the landscape of socio-cultural-historical approaches to psychology and education.

Classic texts and translation in Greek

It was not before the late 1980s that socio-cultural-historical approaches to psychology and education were introduced to Greece. This was slowly achieved by Greek scholars trained in diverse settings in countries such as the UK, the US, France, Poland and Russia. When returning to Greece to obtain academic positions and develop teaching and research there, these scholars resorted on socio-cultural-historical theorizing in their quite diverse disciplines, such as: psychology, educational science, anthropology, philosophy, art history and linguistics. Vygotsky [79; 80] was therefore not the only author translated, and many other Russian and Soviet scholars were given significant attention such as Bakhtin [2], Voloshinov [71; 72], Luria [49; 50], etc.

As the translation of these classic texts began around 1990 in Greece (i.e. much later than in Germany, the US and the UK.), their translation has often not been from the original Russian text but from already translated texts in English, German, or French. Common mistakes that have recently been identified in the English translations happened also in Greek (e.g. *thought* instead of *thinking*; etc. [70]. Unfortunately, the original text(s) in Russian were not easily accessible — at least in the first years. Currently, increased access to primary resources (as well as the problematization of translation itself) has become easier, and historiographical and etymological/philological knowledge is increasingly available.

Key actors and academic disciplines

University-based pedagogical departments, i.e. Departments of Primary and Early Childhood Education, were amongst the first in the early 90s to adopt socio-cultural-historical approaches to psychology and education in academic teaching and research.

Yiannis Papamichael at the Department of Education of the University of Patras explored the relationships between learning and teaching in neo-Piagetian and Vygotskian frameworks [56]. At about the same time, Christos Frangos was among the first at the De-

partment of Early Childhood Education at the Aristotle University of Thessaloniki to introduce Vygotskian theory. Frangos [26] tried to develop a teaching model based on ideas of Socrates, Vygotsky, and Piaget and became quite active in ECERA (European Early Childhood Research Association).

A few years later, Luria's *Cognitive Development* was translated from English into Greek by M. Terzidou and Anastasia Kostaridou-Eukleidi in 1995 (Department of Psychology of the Aristotelian University of Thessaloniki). Kostaridou-Eukleidi [38] argued for a necessary move from Piagetian to Vygotskian research as a more adequate frame to explain cognitive development in terms of a cultural-historical approach. Along similar lines, Vosniadou [75] has edited a collection of core essays in cognitive science and was a founding member of the newly convened journal, *Noesis*. As series editor of *Psychology* with Gutenberg publishing house, she has also promoted the publishing of books on socio-cognitive aspects of learning ([34], dialogical perspectives on learning [55]: on the zone of proximal development in Vygotsky's theory, etc.).

Both Stella Vosniadou and Anastasia Kostaridou-Efkleidi and their collaborators have played an important role in framing discourses on cognitive (and socio-cognitive) development, school learning, epistemology and educational psychology through their internationally acknowledged research work. It is important to mention that both scholars, back in the early and middle 90s, placed attention on socio-cultural work and became active towards editing the translation of major works such as *Mind in Society* (1997) and *Cognitive Development: Its Cultural and Social Foundations* (1995) in Greek. At the same time, politically engaged intellectuals outside the university published the first translations of classic texts [49; 80].

Still, the first time a systematic undergraduate course devoted to the study of cultural-historical psychology took place in 2002 at the Department of Psychology, University of Crete. Manolis Dafermos's book *The Cultural-Historical Theory of Vygotsky* [in Greek] was the basis of this course. Psychology students having enrolled this course claimed that cultural-historical psychology opened for them a different route as compared to the dominant paradigms taught until then. Soon after, *The Development of Children* by Cole, Cole & Lightfoot [13] was translated and used as a textbook in many departments of psychology and education in Greece.

Establishing a more specific focus on science education, the work by Katerina Plakitsi and her students has been significant in introducing Activity Theory at the Department of Preschool Education, University of Ioannina. Their "@Formal Informal Science Education Group" consisted of senior researchers, postdoctoral, PhDs and postgraduate students and has proposed to re-examine STEM Education from the perspective of the cultural-historical activity theory [58; 59].

Major socio-cultural-historical works have also been translated by engaged political groups and public intellectuals interested in making use of socio-cultural-historical approaches for ideological and socio-political purposes. Michalis Kouvelas, member of the Greek

Communist Party, and Elissaios Vagenas are amongst the main intellectuals, who edited and published translations of classic works and collections of various classic texts [39; 40; 69]. We consider this trend as distinct from other streams mentioned above since its explicit purpose has been to enable access to socio-cultural-historical approaches for purposes of political critique, political activism, and intervention from a Marxist perspective.

In a broader, interdisciplinary, critical, and cross-theoretical perspective, Marios Pourkos at the University of Crete (initially in the Department of Psychology and since 2000 at the Department of Early Childhood Education) along with other scholars linked with him, has advanced theoretical aspects of Vygotskian and Bakhtinian studies with an emphasis towards discussing epistemological and philosophical issues, as well as with a focus on qualitative research methodology [61; 62; 63; 64]. Along similar lines, the work by Anna Chronaki at the University of Thessaly brings together socio-cultural theory in mathematics education with a focus on situated knowledges, hybrid learning identities, gender studies and post-structuralist approaches [6; 7; 8; 9; 10].

Most recently, Patelis and Kakarinos [57] have tried to situate cultural-historical and activity theory in the broader context of Soviet Psychology by highlighting its relationships with other trends. They argue that the theory should not be perceived as a tool for propaganda, but as an extremely important, yet under-researched, theoretical, methodological tradition that, potentially, opens new horizons for understanding, learning and action in the direction of radical social and political transformation.

Context(s) of interpretation

Without going into many details, modern Greek history is currently characterized by strong opposition amongst two distinct tendencies: market-driven modernization vs. radical political activism that resists neoliberal practices. At the same time, contemporary life in Greece is still weaved with the histories of a strong leftist movement and a civil war after the World War II; a military dictatorship from 1967 to 1974; the dilemmas of a so-called *European Integration* during the last 40 years and the most recent debt crisis and austerity measures.

The Greek University, as an institution, has historically played an important role against the military dictatorship of the 70s when the students' radical action along with leftist activists paved the way against the military junta. For this, the University has until recently been considered the institution *par excellence* for democratic engagement and free circulation of ideas towards even radical forms of political thought and action. At the same time, university-based academics have been the driving force of the market-oriented modernization of the Greek society, too. In this context, more and more universities have been established across metropolitan and peripheral locations and many academics, who were educated in countries as diverse as the US, Canada, the UK, France,

Germany, Sweden and Russia/Soviet Union therefore representing a wide range of theoretical and research trends and traditions, have been employed in Greece. As such, it is not accidental that our analysis has identified very different ways of how socio-cultural-historical approaches to psychology and education were appropriated in the Greek context.

A first approach aims explicitly to promote socio-cultural thinking in the academic teaching of cognitive science, educational psychology and school psychology. This way of appropriating socio-cultural-historical theory follows similar developments from the 70s and 80s in the US, where socio-cultural-historical approaches were linked to varied forms of *cognitivism* and *constructivism* as part of a critical reaction to behaviorism. Greek universities have since the late 90s increasingly reproduced the dominant North Atlantic scientific paradigm of research. Often in this frame, translations of classic Russian texts in Greek, were based on the English translation, and followed a rather positivist epistemology without any explicit reference to distinct political issues and values linked with the Soviet school [68].

As technology became more important in education and society, the focus shifted slightly from *cognition* in terms of brain research to so-called *distributed cognition* [31] or the system humans-technology-activity [7]. University courses with a specific focus on Science, Technology, Engineering and Mathematics education (STEM) have been developed. Cultural-historical activity theory and other socio-cultural-historical approaches have been significant here and often provided the frame for the organization of large-scale teacher training programs especially in technology use in subject specific domains.

The academic discourse on socio-cultural approaches to psychology and education was consequently appropriated in an oversimplified and instrumental jargon by the Greek Ministry of Education and Research. Key Vygotskian concepts were introduced in curricular reform guidelines for school teaching and learning, echoing similar developments across the European Union and elsewhere in the world. Socio-cultural approaches to psychology and education became in this frame a *recipe* for teaching with a specific focus on ZPD, not as a complex socio-cultural-historical unit but as a socio-cognitive formula that can be used in practice in (uncritical) combination with a variety of other concepts and methods stemming from a different pedagogical and psychological theories [53]. For example, the former president of the Greek Pedagogical Institute, which determines curriculum content, suggested that:

The art of teaching and of learning — an adaptive constant reflection on the following parameters: the learning environment, learning methods, and pedagogical principles — can be applied for example on verbal or audiovisual learning in accordance with the conclusions theory of the programmed learning of behaviorist approaches (Skinner), active and constructive learning, and the socio-cultural context (Piaget, Vygotsky, Bruner) [1, pp. 108—109].

Previously unrelated concepts and theories are now rather unproblematically combined here in their application on educational practice without significant reflection on the epistemological premises, theoretical underpinnings and practical limitations of such combination. However, teachers tend to oppose such unreflective uses of theory as we have experienced in studying how teachers learn to appropriate technology in their subject didactics in a long-term training course [11]. In this course, centrally organized by the Greek Ministry of Education, teachers had to employ Vygotskian concepts (such as tool, ZPD, mediation, scaffolding) and plan their teaching and learning practice: A few weeks after the training course was completed, and as teachers go back to their daily school duties and routines, the discussion continues at a personal level of interviewing concerning the issue of 'teacher change'. Although teachers were able to consider 'change' as a more complex experience that cannot be detected at a behavioral level, they also talked about 'change' as something that cannot be really achieved as one noted through humor:

Teacher: When Axxx (a tutor) was asking during the last day of the course how 'technology' has changed us, he (Teacher A) said: '*Why do you ask? Don't you see me?*' We now have used this as our slogan. When we talk with other colleagues, we ask '*How do you see me? Have I changed?*' (laughter)

Contrary to the good intentions of the educational reform, the teacher resists the discourse of a smooth 'change' simply by means of technology-use based on a Vygotskian approach of teaching and learning. Along with colleagues the teacher jokes about the possibility of noticeable 'change' and humor becomes their ally to denote the challenges of attempting to bring a theory into a complex educational terrain where technology serves many more other interests than just teaching and learning [11].

Last but not least, another distinct approach to socio-cultural-historical thinking in Greece has emphasized its potential for *criticality*. In academic discussions this perspective entailed a focus on epistemological critique while, when moving beyond academia, the emphasis has been on implications in terms of practice and political activism (see [9], [19]: awareness of cultural differences in education, [69]: political and ideological critique]). Even if there are significant differences among the various scholars, to whom we refer here, in terms of epistemological and political positioning (e.g. with regards to feminist vs. universalist understandings of the human); this last trend can be linked to the opening of the Greek society and the university to new ideas and paradigms in the post-dictatorship era, as briefly referred to above. It echoes similar developments in other countries, where socio-cultural-historical approaches have worked towards inspiring scholars to critically reflect on the links between education and broader socio-political transformations (for example in West Germany in the 1980s and in Brazil in the post-dictatorship period there [51; 4; 36].

The aforementioned ways of interpreting and employing socio-cultural-historical approaches in Greece are clearly distinct from each other and they involve different motives, epistemological beliefs or, even, political and ideological values. As such the theory cannot be considered as a closed and neutral system of research tools and methods but as a rather open-ended framework that is being shaped by the social, cultural, historical and political, local dynamics.

How do theories travel? Conclusionary remarks & meta-theoretical reflection

According to Daniels, Cole, and Wertsch, studying Vygotsky *in context* means that we should define two different historical eras and multiple social milieus — the context of the Soviet Union in the first half of the 20th century and the context in different parts of the world of the 21st century [21]. As outlined above, not only are more than two spaces and temporalities involved [3]: one needs to closely document, analyze, and meta-theorize a series of processes that make possible for a theory to *travel* through particular *space*, as well as, *in time*.

It is important to situate the employment of concepts and the use of theory in research practices, academic networks, educational interventions, national policymaking, and other settings. Translation and historiography in a certain sense can cumulatively — i.e. almost objectively — always become richer, more detailed, and "better" [15]. However, when referring to the uses of theory, complex meta-theoretical tools are needed in order to explore, distinguish, and eventually evaluate them. The context of theory use is not only textual/semiotic, but it might also involve micro-political strategies for academic or other recognition, material needs and resources, ideological values, as well as political and aesthetic preferences.

Considering the local contexts into which a theory travels has been argued as paramount for encountering the relations amongst theory, literary texts and culture. In this sense, attention shifts from what a theory *is* to what a theory *does*. From this perspective, one may move "... from the position occupied by translations in various cultures to the way in which socio-cultural factors, poetics, ideology, politics, ethnic and gender identity, have shaped translations at different times and in different geographical areas" [22, p. 12].

We believe that apprehending the Greek context's dynamics and complexity can support us to understand the reception, interpretation and, eventually, also the limitations in the manifold uses of socio-cultural-historical approaches to psychology and education in Greece. The dynamics of marketization vs. radical socio-political engagement is ultimately related, explicitly or implicitly, on how socio-cultural-historical approaches to psychology and education have been used in praxis with human and non-human actors, reassembled and re/appropriated in Greece.

We suggest that one needs to reflect on and explicitly account for one's political aspirations or interests,

when using the theory in one way or another. Even if one claims of using this highly politicized theoretical corpus in "neutral"/ "non-political" ways, this is still a political act. Thus, we have no easy and general solutions to suggest here; we can only claim that transparency and dialogue concerning political, aesthetic, and ideological criteria and values are required in all interpretation work and would be pivotal for further theory-building in the future. The "original" text or the "original" context cannot be the only reference point in this undertaking because of the two-level distinction that we have attempted to introduce above. New biopolitical challenges are currently emerging in Greece and all over the world, to name a few: global pandemics such as the current Convid-19 happening as we now write this paper, environmental crisis, debt crisis and educational privatization. The open question for the future is how existing theoretical discus-sions, endeavors, and works inspired by socio-cultural-historical approaches will flourish and deepen in order to address such challenges.

In conclusion, the application of the concept of *traveling theory* in exploring the reception and inter-pretation of socio-cultural-historical approaches to psychology and education in Greece has enabled us to trace important aspects of the relationship between knowledge production, on the one hand, and the local society and cultural history, on the other. We hope thus, that the notion of *traveling theory* may also pro-vide the much-needed meta-theoretical framework to investigate the various ways in which socio-cultural-historical approaches to psychology and education have moved and continue to travel through disciplin-ary boundaries and regional, socio-cultural contexts in an increasingly globalized, interdisciplinary aca-demic landscape.

Appendix: Timeline of Key Publications in Greek

1981: A.N. Leontiev's *Activity, Consciousness, Personality* was translated and published in Greek (by Xenopoulos).

1990: K. Levitin's book *One is not Born a Personality* is translated and published in Greek. In this book, profiles and works of major socio-cultural-historical approaches and educational psychologists are presented (Vygotsky, Leontiev, Luria, Meshch-eryakov, Davidov) (Transl. English to Greek by L. Karsera).

1993: *Thought and Language* is translated and published in Greek (Transl. German to Greek by A. Rodi, Ed. P. Kondylis).

1995: Luria's *Cognitive Development* is translated from English by M. Terzidou (Ed. Kostadidou-Eukleidi) and published in Greek.

1997: Vygotsky's *Mind in Society* is translated and published in Greek (Transl. English to Greek by A. Bibou, Ed. S. Vosniadou).

1998: Voloshinov's *Marxism and Philosophy of Language* is translated and published in Greek by V. Alexiou.

2000: Bakhtin's *Problems of Dostoevsky's Poetics* is translated and published in Greek (Transl. from English A. Ioannidou).

2002: Luria's *The Man with a Shattered World* is translated and published in Greek (Transl. English to Greek by N. Aggelo-poulos).

2002: M. Dafermos publishes the book *Cultural-Historical Theory of Vygotsky: Philosophical, Psychological and Pedagogical Aspects* [in Greek].

2003: Publication of an anthology of translated key texts on socio-cultural-historical approaches with the title *Socio-Cultural-Historical Approaches and Child Development* (from Russian to Greek by E. Vagenas).

2007: M. Kouvelas's book *Dialectical psychology. On the footsteps of Vygotsky* [in Greek] is published.

2009: Voloshinov's *The Word in Life and the Word in Poetry* is translated from Russian and published in Greek by V. Alexiou & M. Dafermos.

2009: The book *General Psychology: Dialectical-Materialistic Approach* [in Greek] is published (by M. Kouvelas, Ed., Transl. Russian to Greek). This is a handbook of translated works by various Russian socio-cultural-historical psychologists on crucial psychological issues (the development of mind, Activity Theory, personality, cognitive functions, etc.).

2009: K. Papadopoulou's book *The Zone of Proximal Development in the Theory of Vygotsky* [in Greek] is published. Papado-poulou argues that the zone of proximal development is connected with the development of psychological functions and not the acquirement of knowledge or learning skills.

2012: Special issue of the Greek journal *Utopia* on socio-cultural-historical approaches. This issue includes contributions by several Greek researchers on cultural-historical psychology and activity theory.

2013: K. Plakitsi edits the volume *Activity Theory in Formal and Informal Science Education* [in Greek]. This collective volume focuses on the application of Cultural Historical Activity Theory (CHAT) in formal and informal science education.

2018: M. Dafermos publishes in English the book *Rethinking Cultural-historical Theory: A Dialectical Perspective to Vygotsky*. This book reconstructs Vygotsky's research program as a developing process focusing on his creative and dramatic journey and his attempt to overcome multiple difficulties and crises (social, scientific, personal, etc.).

2019: D. Patelis and G. Kakarinos publish the book *From Soviet Psychology to the Logic of History* [in Greek]. This book ex-plores the most important characteristics and main directions of Soviet Psychology and its links to the *Logic of History* school of thought.

References

1. Allahiotis S. Biology of education and education of interdisciplinary. Didactics of physical sciences and new technologies in education. In G. Tsaparlis (Ed.), *5th Conference Proceedings* (Vol. 1, pp. 101—116). Athens, 2007.

2. Bakhtin M.M. *Problems of Dostoevsky's poetics* (Transl. from English by A. Ioannidou). Athens: Polis, 2000. (In Greek).

3. Bhabha H. *The location of culture*. New York and London: Routledge, 1994.

4. Bock B.A.-M., Gonçalves M.G.M., & Furtado O. (Eds.), *Psicologia sócio-histórica: Uma perspectiva crítica em psicologia*. São Paulo, Brazil: Cortez, 2002.

5. Chaiklin S. The role of 'practice' in cultural-historical science. In M. Kontopodis, C. Wulf, & B. Fichtner (Eds.), *Children, development and education: Cultural, historical, anthropological perspectives* (pp. 227—246). Dordrecht: Springer, 2011.

6. Chronaki A. Learning about 'learning identities' in the school arithmetic practice: The experience of two young minority Gypsy girls in the Greek context of Education. *European Journal of Psychology of Education,* 2005, Vol. 20, No 1, pp. 61—74. DOI: https://doi.org/10.1007/BF03173211

7. Chronaki A. The Challenge of geometry and technology in the early ages. The medium and the message of the system human-technology-activity. *Themes in Education*, 2006. Vol. 7, No 1, pp. 23—51.

8. Chronaki A. An Entry to Dialogicality in the Maths Classroom: Encouraging Hybrid Learning Identities In M. César & K. Kumpulainen (Eds.), Social Interactions in Multicultural Settings (pp. 117—143). Sense Publishers Press, 2009.

9. Chronaki A. '"Troubling" Essentialist Identities: Performative Mathematics and the Politics of Possibility'. In M. Kontopodis, C. Wulf, & B. Fichtner (eds.), *Children, Development and Education: Cultural, Historical and Anthropological Perspectives* (pp. 207—227). *Springer Science*, 2011.

10. Chronaki A. Arithmetic Problem Solving as Space for Identity-Work. *The Greek Review of Social Research*, 2012, Vol. 137—138 (A—B), pp. 173—200.

11. Chronaki A., Matos A. Integrating Technology into Teaching: Teachers' Narratives about Desiring/Resisting Identity Change. *Learning, Media and Technology*, 2013. Vol. 38, No 5, 1—19.

12. Cole M. (1996). *Cultural psychology. A once and future discipline*. Harvard: Harvard University Press.

13. Cole M., Cole S.R., Lightfoot C. *The development of children*. New York: Worth, 2005.

14. Dafermos M. *Cultural-historical theory by Vygotsky: Philosophical, psychological and pedagogical aspects*. Athens: Atrapos, 2002. (In Greek).

15. Dafermos M. Critical reflection on the reception of Vygotsky's theory in the international academic communities. *Cultural-Historical Psychology*, 2016. Vol. 12, No 3, pp. 27—46. DOI: 10.17759/chp.2016120303

16. Dafermos M. *Rethinking Cultural-historical theory: A Dialectical Perspective to Vygotsky*. Singapore: Springer, 2018.

17. Dafermos M. *The historical becoming of psychology*. Athens. Gutenberg. [in Greek], 2010.

18. Dafermos M., Chronaki A., Kontopodis M. What happens when socio-cultural-historical theory travels? Critical Perspectives from Greece and epistemological issues. Invited Regional Symposium for the ISCAR (International Society for Cultural and Activity Research). ISCAR Congress, Rome, Italy, 5—10 September 2011.

19. Dafermos D., Marvakis A., Triliva S. (De)constructing psychology in Greece. *Annual Review of Critical Psychology*, 2006. Vol. 5, pp. 180—191.

20. Dafermos M., Pourkos M. *Cultural-Historical, Activity and Sociocultural Research at Times of the Contemporary Crisis: Implications for Education and Human Development*. ISCAR Conference. Rethymno: University of Crete & University of Ioannina, 2016.

21. Daniels H., Cole M., Wertsch J. Editors' introduction. In H. Daniels, M. Cole & J. Wertsch (Eds.), *The Cambridge Companion to Vygotsky* (pp. 1—20). Cambridge: Cambridge University Press, 2007.

22. Dimitriou R. The many contexts of translation studies. *Lingua Culture*, 2015. Vol. 1, pp. 5—23. DOI:https://doi.org/10.1515/lincu-2015-0033

23. Engeström Y. *Learning by expanding: An Activity-theoretical approach to developmental research*. Helsinki: Orienta-Konsultit Oy, 1987.

24. Epitropoulos M.-F.G., Roudomet V. (eds.), *American culture in Europe: interdisciplinary perspectives*. Praeger Publisher, 1998.

25. Esping-Andersen G. Three worlds of welfare capitalism. Cambridge: Polity Press, 1990.

26. Frangos C. (1987). A European Teaching Model: From Vygotsky to Socrates via Piaget. Proceeding ATEE conference (pp. 1—8). University of Helsinki.URL: https://files.eric.ed.gov/fulltext/ED353048.pdf (Accessed: 30-03-2020).

27. Frangoudakis A. The impasse of educational reform in Greece: an introduction. *Journal of the Hellenic Diaspora*, 1981. Vol. 8, No 9, pp. 8—19.

28. Giest H. (ed.), *Erinnerungen für die Zukunft. Pädagogische Psychologie in der DDR*. Berlin: Lehmanns Media, 2005.

29. Gillen J. Versions of Vygotsky. *British Journal of Educational Studies*, 2000, Vol. 48, No 2, pp. 183—198.

30. Greeno J.G., Collins A.M., Resnick L.B. Cognition and learning. In D.C. Berliner & R.C. Calfee (Eds.), *Handbook of Educational Psychology*. New York: McMillan, 1996.

31. Honey M., Kanter D.E. (Eds). *Design, make, play: Growing the next generation of STEM innovators*. London and New York: Routledge, 2013.

32. Hong J., Yang N., Cheng L. Current situation and future development of Activity Theory in China. *Actio: An International Journal of Human Activity Theory,* 2007. Vol. 1, pp. 115—131.

33. Kalogeraki S. The divergence hypothesis in modernization theory across three European countries: The UK, Sweden and Greece. *Culture Unbound*, 2009, Vol. 1, pp. 161—178.

34. Karagiannopoulou E. On learning. Athens: Gutenberg, 2007. (In Greek).

35. Keller R.; Hornidge A.-K., Schünemann W. (Eds.) *The Sociology of Knowledge approach to discourse: Investigating the politics of knowledge and meaning-making*. New York & London: Routledge, 2018).

36. Kontopodis C. Wulf, B. Fichtner (eds.), *Children, Development and Education: Cultural, Historical and Anthropological Perspectives*. London New York: Springer Science, 2011.

37. Kontopodis M.; Magalhães M.C., Coracini M.J. (eds.), *Facing Poverty and Marginalization: 50 Years of Critical Research in Brazil*. Bern: Peter Lang, 2016.

38. Kostaridou-Eukleidi A. Preface. In Luria A. *Cognitive Development* (p. 9—11). Athens: Ellikika Grammata, 1995. (In Greek).

39. Kouvelas M. Dialectical psychology. On the footsteps of Vygotsky. Athens: Ellinika Grammata, 2007. (In Greek).

40. Kouvelas M. (ed.), General psychology. Dialectical-materialistic approach (Transl. from Russian by M. Kouvelas). Athens: Omilos Ekpaideutikou provlimatismou. [in Greek], 2009.

41. Lamprinidis L. *Investing to escape*. Athens: Kritiki, 2011. (In Greek).

42. Latour B. Science in action: How to follow scientists and engineers through society. Cambridge, MA: Harvard University Press, 1987.

43. Leontiev A.N. Activity, consciousness, personality. Englewood Cliffs, N.J.: Prentice-Hall, 1978.

44. Leontiev A.N. Activity, consciousness, personality (Transl. by E. Xenopoulos). Athens: Anagnostidi, 1981?. (In Greek).

45. Levitin K. One is not born a personality (Transl. from by L. Karsera). Athens: Syghroni Epochi/ Ellinika Grammata, 1990. (In Greek).

46. Liakos A. The Greeks and Europe: Interview to Frank Berberich. *Lettre International*, 2011. Vol. 95, pp. 19—24.

47. Liberali F. Student-teachers and teacher-educators experience new roles in pre-service bilingual teacher education in Brazil. In Abello-Contesse C (eds.), *Bilingual and multilingual education in the 21st Century: Building on experience* (pp. 231—255). Bristol: Multilingual Matters, 2013.

48. Lima E.S. Culture revisited: Vygotsky's ideas in Brazil. *Anthropology, 6 Education Quarterly,* 1995. Vol 26, No 4, Vol. 443—457.

49. Luria A. Cognitive development (Transl. from English by M. Terzidou). Athens: Ellikika Grammata, 1995. (In Greek).

50. Luria A. The man with a shattered world (Transl. from English by N. Aggelopoulos). Athens: Kastaniotis, 2002. (In Greek).

51. Markard M. Einführung in die Kritische Psychologie. Hamburg and Berlin: Argument, 2011.

52. Mouzelis N. Politics in the semi-periphery: Early parliamentarism and late industrialization in the Balkans and Latin America. London: Macmillan, 1986.

53. Newman F., Holzman L. Lev Vygotsky. Revolutionary scientist. London and New York: Routledge, 1993.

54. Papadopoulos D. Observations on Vygotsky's reception in academic psychology. In Tolman C. (ed.), *Problems of theoretical psychology* (pp. 145—155). North York, Ontario: Captus Press, 1996.

55. Papadopoulou K. The zone of proximal development in the theory of Vygotsky. Athens: Gutenberg, 2009. (In Greek).

56. Papamichael Y. (ed.), Socio-cognitive approach to the processes of teaching and learning of natural and logico-mathematical concepts in school. Athens: Gutenberg, 1984. (In Greek).

57. Patelis D., Kakarinos G. From Soviet psychology to the Logic of History. Athens: K.PS.M., 2019.

58. Plakitsi K. Activity Theory in formal and informal science education. Rotterdam, Boston: Sense Publishers, 2013.

59. Plakitsi K. Collective curriculum design as a tool for rethinking scientific literacy. *Cultural Studies of Science Education*, 2010. Vol. 5, No 3, pp. 577—590. DOI:10.1007/s11422-010-9288-0

60. Plakitsi K., Dafermos M. *Crisis in Contexts*. ISCAR Conference. Ioannina: University of Ioannina & University of Crete, 2019.

61. Pourkos M. (ed.), Socio-historical and cultural approaches in psychology and education. Athens: Atrapos Publications, 2006. (In Greek).

62. Pourkos M. (ed.), Perspectives and limits of dialogism in Mikhail Bakhtin: Applications in psychology, art, education and culture. Rethymno: University of Crete. 2008. (In Greek).

63. Pourkos M. (ed.), Literature, dialogism, psychology: Critical approaches. Athens: Atrapos Publications, 2007. (In Greek).

64. Pourkos M. (ed.), Psychological and psycho-pedagogical dimensions of art, play and narrative. Athens: Topos, 2008. (In Greek).

65. Roth W.-M., Goulart M.I.M., Plakitsi K. Science education during early childhood: A Cultural-historical perspective. New York & London: Springer, 2013.

66. Said E.W. Traveling Theory. In Said E. W. *The world, the text, and the critic* (pp. 226—247). Cambridge: Harvard University Press, 1983.

67. Spivak G.C. Translation as culture. *Parallax*, 2000. Vol. 6, No 1, pp. 13—24. DOI:https://doi.org/10.1080/135346400249252

68. Toomela A. Modern Mainstream Psychology is the best? Noncumulative, historically blind, fragmented, atheoretical. In Toomela A. (eds.), *Methodological thinking in psychology: 60 years gone astray?* (pp. 1—26). Charlotte: Information Age Publishing, Inc, 2010.

69. Vagenas E. (ed.) Socio-cultural-historical approaches and child development (transl. from Russian by E. Vagenas). Athens: Sychroni Epochi, 2003. (In Greek).

70. Van der Veer R., Yasnitsky A. Vygotsky in English: What Still Needs to Be Done. *Integr Psychol Behav Sci.*, 2011. Vol. 45, no. 4, pp. 475—493. DOI:10.1007/s12124-011-9172-9

71. Voloshinov V. Marxism and philosophy of language (Transl. from Russian by V. Alexiou). Athens: Papazisis, 1998. (In Greek).

72. Voloshinov V. The word in life and the word in poetry (Transl. from Russian by V. Alexiou & M. Dafermos). Athens: Papazisis, 2009. (In Greek).

73. Vosniadou S. Conceptual change research: state of art and future directions. In Schnotz W. (eds.), *New perspectives on Conceptual Change* (pp. 3—14). Oxford: Elsevier Science, 1999.

74. Vosniadou S. How children learn. The International Academy of Education (IAE), Palais des Académies. Brussels, 2001.

75. Vosniadou S. Cognitive Science: A new science of the mind. Gutenberg. Athens: Gutenberg. 2004. (in Greek).

76. Vosniadou S. The cognitive-situative divide and the problem of conceptual change. *Educational Psychologist*, 2007. Vol. 42, no. 1, pp. 55—66. DOI:10.1080/00461520709336918

77. Vygotsky L.S. Thought and language. Cambridge: The MIT, 1962.

78. Vygotsky L.S. Thinking and speech. In Rieber R.W. (eds.), *The collected works of L.S. Vygotsky* (Vol. 1, pp. 39—285). New York: Plenum Press, 1987.

79. Vygotsky L. Thought and language (Transl. from German by A. Rodi). Athens: Gnosi. 1993. (In Greek).

80. Vygotsky L. (1997). Mind in society (Transl. from English by A. Bibou). Athens: Gutenberg. (In Greek).

81. Wertsch J.V. Voices of the mind: A sociocultural approach to mediated action. Cambridge: Harvard University Press, 1991.

82. Yoshida R. Learners in Japanese language classrooms: Overt and Covert Participation. London: Continuum, 2009.

Культурно-историческая теория деятельности в Греции: действующие лица, контексты и политика принятия и интерпретации

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Статья посвящена анализу того, как идеи социокультурного, культурно-исторического и деятельностного подходов в образовании и психологии распространялись в Греции на протяжении последних 30 лет. Прослеживается история прихода этих идей в Грецию, их преломление в греческом контексте и ключевые факторы этого процесса, как то: широкая интерпретация источников, значимые фигуры в академической среде и науке, взаимосвязь с образовательной политикой и активизмом вне стен университетов. Специфика греческой истории с ее военной диктатурой, конституционными изменениями, борьбой за демократию, европейской интеграцией, новейшим кризисом и неолиберальными реформами — все это становится для авторов отправной точкой для выстраивания метатеоретической концепции, описывающей разнообразные способы, которыми социо-культурно-исторические подходы проникали в социокультурный, исторический, институциональный, политический, региональный и интенсивно глобализирующийся образовательный контексты.

Ключевые слова: теория деятельности, культурно-историческая психология, А.Н. Леонтьев, А.Р. Лурия, социокультурный подход, перевод, Л.С. Выготский, глобализация, теория путешествий.

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Concrete Psychology and the Activity Clinic Approach: Implications for Interventionist Research in the XXIst Century

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This paper discusses the project of concrete psychology, anchored in vital human drama, both for Vygotsky and Politzer, and its methodological implications, especially from within an interventionist, developmental, transformative perspective. How are the concepts of concrete psychology and drama related for Politzer and Vygotsky? How can we push the agenda of concrete psychology foward? What are the methodological implications of a Vygotskian concrete psychology for us today? After discussing both Vygotsky's and Politzer's views on concrete human psychology, we will introduce the French tradition of Activity Clinic, and argue that this approach, and its "organized frameworks," offers the potential to move one step forward in the direction of a concrete human psychology. We will analyze a short sequence of Cross Self Confrontation as a dramatic interaction potentially contributing to development. We conclude by reflecting on the implications of concrete psychology for XXIth century researchers. The paper thus aims at contributing to an urgent need to rethink an epistemology of psychology, which strongly anchors research in practice.

Keywords: activity clinic, concrete psychology, development, drama, methodology, cross self-confrontation.

Introduction

Vygotsky's writing has increasingly inspired psychology worldwide, ever since the partial translation of his writing into English, beginning in the 1960's. This worldwide reception provided an important impulse to further developments of the theory, methodology and practice of psychology and education in the long term, all the more as the understanding of this rich heritage outside Russia varied considerably. On the one hand, it was deeply influenced by the availability of texts and translation issues, as we clearly know now. The reader will unfortunately share some of our difficulties here, which will be reflected in our use of footnotes to keep the original French texts or present the French translations (from Russian) which we have to translate into English (instead of relying on the English translations, which might be weaker). On the other hand, it was received under specific local scientific, social and historical conditions. In this regards, the main reception of Vygotsky in France (or to be more precise, in the French-speaking countries in Europe, especially France and the French-speaking part of Switzerland) happened late, with the fist publication in French in 1985 of Vygotsky's masterpiece *Thought and Language* (in French, *Pensée et lan-*

gage, « langage » meaning both speech and language as in Russian) at the *Editions Sociales* (the official publisher of the Communist Party in France). *Pensée et langage* was translated by Françoise Sève, a meticulous and highly qualified translator, with the help of her husband, Lucien Sève, a well-known Marxist philosopher, who was also director of the Editions Sociales at that time. The French version was published with the original commentary by Piaget in French on the criticisms of Vygotsky regarding his own work (Piaget, 1962). Indeed, in all countries, the way in which Vygotsky was received depended on the local context of research on psychology and education. In France, the understanding of Piaget and other prominent French psychologists (including Wallon) strongly influenced the reception of Vygotsky. This story remains to be fully analyzed and reflected upon. Today, we would like to focus on two interesting aspects of the developments of Vygotsky's work in France. The publication of Vygotsky's Notebooks sheds new light on the interest of Vygotsky for Politzer's concrete psychology. We will discuss this in the first part of the paper. In the second part, we will briefly introduce the Activity Clinic, which for the unfamiliar reader is an interventionist approach in work psychology deeply inspired by the work of Vygotsky, and argue that its "organized frameworks" [1]

contribute to a concrete psychology approach. In the final part of the paper, we will show how some of Vygotsky's core ideas inspire a renewed way of conducting research in psychology. This paper contributes to an urgent need to rethink an epistemology of psychology, which strongly anchors research in practice.

1. Vygotsky and Politzer on Drama and Concrete Psychology

In his fragmented notes on historical psychology, or concrete human psychology, Vygotsky (1929, first published in French in 2004) discusses the development of higher psychological functions as the famous principle of sociogenesis, and calls for a "sociogenetic" method for studying this development, that is still to be fully developed, following for example Veresov's suggestions [2,3]. This important text was first published in English in 1986, and in French in 2004, in a first translation by Olga Anokhina and Michel Brossard [4]. It has been recently republished with a revised translation as an annex to the French edition of the History of Development of Higher Psychological Functions [5].

In this extremely dense although elliptic text, Vygotsky recapitulates some of his most famous theses, stating how these higher psychological functions are constructed through a process of social interaction and regulated by the human being through the use "for himself" (*pour soi*) of signs which were first used in social interactions, to act upon the others. He concludes: "the individual for human beings is not the contrary of the social, but its superior form[1]" [4, our translation, p. 236 in the French translation]. The "machine" model of the human brain, operating self-regulation of human behaviour to which Vygotsky has dedicated some of his major works is therefore considered to be the "social personality of the human being, i.e. conceived as a member of a social group. Conceived as a social being. As a being per se — for the others and for herself[2]" (ibidem, p. 242). Constructivism, conceived as the potential for human beings to construct themselves through the interiorization of social interactions into the building and hierarchy of higher psychological functions, which leads to their individual personality, is therefore the key mechanism explaining human development. In this context, Vygotsky introduced the concept of drama as the dynamic of a given individual: "the drama is woven with inner struggles[3]" (ibidem, p. 245), and concludes: "my history of cultural development is the abstract development of a concrete psychology[4]" (ibidem, p. 246).

The drama here is the conflict of the hierarchy of higher psychological functions, related to different social roles, in different social contexts. This concept of drama, for Vygotsky, is strongly related to Politzer's understanding of drama and concrete human psychology: "I want only to say that without the human being (the operator) as a whole, we can not explain the operation of the device (the brain); this is the human being who controls the brain, not the brain that controls the human being; without the person, we can not understand the person's behaviour, and psychology must be understood not in terms of process but in terms of drama[5]" (ibidem, p. 249). Vygotsky therefore connects the concept of drama, as internal conflict of social roles, and the concept of drama, as vital and meaningful experience of a human being, by the mediation of the construction and interplay of higher psychological functions and perezhivanie. In concrete psychology, relations between psychological functions are specific to a human being, emotionally situated in a historico-cultural, social environment. Following Politzer, Vygotsky grounds the perspective of a concrete psychology within drama, which would be the only scientific psychology relevant to the human beings, going beyond the scientific study of other animals who would only be able to deal with basic evolutionary functions. On a methodological plane, Vytgotsky's claims for a concrete and constructionist psychology urge us to follow research principles which are grounded in a sociogenetic and ecological experimentation.

In Vygotsky's Notebooks [6], we find two explicit mentions of the work of Politzer. On page 140 (notes written around October 1930), discussing psychological systems, Vygotsky quotes Politzer "it is not the muscle that works, but the person." Vygotsky writes that "a function is an organ in action" and introduces "consciousness and its owner" as the agent of human thinking: "hence, about all psychological activity we can say that it is a function of the brain. But that is a metapsychological designation. The intrapsychological designation must be another one. Which? The system is the basic concept of psychological analysis. Memorizing always fulfils some function in something more complex and changes when it is a part of different wholes. The eternal problem: *Ich denke* or *Es denkt*. Who is thinking? Consciousness and its owner." On page 368, Vygotsky writes "psychologie concrète" (in French) when he discusses psychology as a science: "NB! On the definition of psychology as the science of mental life. 1. Life not in a biological sense, but in the sense of a biography, a life description. After all, it is not breathing and blood circulation that form the topic of a biography, of one's existence, of a drama, of a novel, but the events of a human life, i.e. the

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[1] In the French translation: "L'individuel chez l'homme n'est pas le contraire du social, mais sa forme supérieure" (Vygotsky, 1929/2004, p. 236).
[2] In the French translation: "C'est la personnalité sociale de l'homme. De l'homme comme membre d'un groupe social déterminé. Conçu comme un être social. Comme un être en soi — pour les autres et pour soi" (ibidem, p. 242).
[3] In the French translation: "Le drame est tissé de luttes intérieures" (ibidem, p. 245).
[4] In the French translation: "Mon histoire du développement culturel est le développement abstrait d'une psychologie concrète" (ibidem, p. 246).
[5] In the French translation: "Je veux seulement dire ceci: sans l'homme (l'opératrice), pris sans sa totalité, on ne peut pas expliquer le fonctionnement de son appareil (le cerveau), que c'est l'homme qui commande le cerveau et non le cerveau qui commande l'homme, que sans l'homme on ne peut pas comprendre son comportement, qu'il ne faut pas appréhender la psychologie en termes de processus mais en termes de drame" (ibidem, p. 249).

problem of the *psychologie concrète* comes first." We may find another echo of Politzer's work later in the same note when Vygotsky writes that "the phenomenon of mental life and the psychological fact are synonyms."

For Georges Politzer [7], the concepts of drama and concrete psychology jointly define a renewed perspective on psychological research. He strongly criticizes the state of psychology in the 1920s, which he calls a "fog pod" or "lost science," in which psychologists gave up the understanding of the human psychic life for the safety of measurements. His criticisms of standard psychology remain relevant for some parts of modern psychology:

"As their scientific needs are satisfied by the use of scientific appliances, and by the finding of some statistics which usually do not survive their publication, they claim that science requires patience and reject any control or criticism as being metaphysics, which has nothing to do with science." (p. 2).

Although they are insufficient in his eyes, he credits Gestalt psychology with an attempt to keep the whole experience of the person, instead of cutting in into insignificant and static elements; behaviourism for suggesting a strong definition of a psychological fact with the concept of behaviour; and psychoanalysis as paving the way to a new, lively, and revolutionary psychology. Psychoanalysis rejects abstraction, understood as detachment of the psychological facts from the concrete life of real, singular subjects and their understanding as the product of impersonal processes:

"Abstraction eliminates the subject and assimilates psychological facts to objective facts, i.e. to 3rd person facts[6] " (p°38, our translation).

Commenting Freud on dreams, he appreciates the method:

"what characterizes, on the contrary, the way Freud brings up the topic of dream, is that he doesn't accomplish abstraction. He doesn't want to detach the dream from the subject who dreams it; he doesn't conceive it as a 3rd person state, he doesn't situate it in *a voice without a subject*. It is by binding it to the subject whose dream it is that he gives it its status of psychological fact[7]." (p°39, our translation and emphasis).

Politzer defines the human drama as the sole "psychological fact" and therefore object of a concrete psychology: "the point of view of the psychologist is that which corresponds to drama[8]" (p. 248, our translation). In other words:

"The drama concerns the human being in its entirety, and considered as the centre of numerous events, which, precisely because they imply a first person, have some meaning. The meaning related to a first person distinguishes the psychological fact from all natural facts. In short, the originality of the psychological fact is given by the existence of a properly human plane of existence and by the dramatic life of an individual happening there[9]" (ibidem, p. 250).

On a methodological level, the focus on the psychological facts, i.e the drama, requires a double level of psychological inquiry:

"the psychological fact is not the simple behaviour, but precisely the human behaviour, i.e. the behaviour related to both the events in which the human life is taking place, and the individual human being, as subject of this life. In short, the psychological fact is the behaviour which has a human meaning. However, to understand this meaning, we need data given by the subject and which come to us through narration: the purely motor behaviour becomes a psychological fact only after being enlightened by the narrative[10]." (p. 248—249).

Politzer's words suggest two implications for psychology as the science of "psychological facts" on a "properly human plane of existence": (a) drama as a unit of analysis allows us to keep "the human being in its entirety"; (b) a third-person point of view is deeply insufficient to understand the psychological fact, as the psychological fact is defined by the meaning that the human subject gives it. Therefore, Politzer urges us to analyse "the psychological fact" as being indissociably constituted by the act and its first-person meaning, which we can access only through the subject's narration. In our view, this double request for the scientific study of the truly human mental life remains an ongoing concern.

2. Activity Clinic: developmental intervention and research in work psychology

How can we push the agenda of concrete psychology forward? In this section, we argue that the Activity Clinic approach, developed at the Cnam (Conservatoire National des Arts et Métiers) in France since the 1980's by Prof. Yves Clot and colleagues, offers the potential to move one step forward in the direction of a truly concrete human psychology. In France, the reception of Vy-

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[6] Original in French: "L'abstraction élimine le sujet et assimile les faits psychologiques aux faits objectifs, c'est-à-dire aux faits en 3ème personne". (p°38).

[7] Original in French: "Ce qui caractérise, au contraire, la manière dont Freud aborde le problème du rêve, c'est qu'il n'accomplit pas l'abstraction. Il ne veut pas détacher le rêve du sujet qui le rêve; il ne veut pas le concevoir comme un état en troisième personne, il ne veut pas le situer dans un vide sans sujet. C'est en le rattachant au sujet dont il est le rêve qu'il veut lui rendre son caractère de fait psychologique." (p°39).

[8] Original in French: "Le point de vue du psychologue est celui qui coïncide avec le drame" (Politzer, 1928/2003, p. 248).

[9] Original in French: "Le drame implique l'homme pris dans sa totalité et considéré comme le centre d'un certain nombre d'événements qui, précisément parce qu'ils se rapportent à une première personne, ont un sens. C'est le sens rapporté à une première personne qui distingue radicalement le fait psychologique de tous les faits de la nature. Bref, l'originalité du fait psychologique est donnée par l'existence même d'un plan proprement humain et de la vie dramatique de l'individu qui s'y déroule" (ibidem, p. 250).

[10] Original in French: "Le fait psychologique n'est pas le comportement simple, mais précisément le comportement humain, c'est-à-dire le comportement en tant qu'il se rapporte, d'une part, aux événements au milieu desquels se déroule la vie humaine, et d'autre part, à l'individu, en tant qu'il est sujet de cette vie. Bref, le fait psychologique c'est le comportement qui a un sens humain. Seulement, pour constituer ce sens, on a besoin de données qui nous sont fournies par le sujet et qui nous parviennent par l'intermédiaire du récit: le comportement simplement moteur ne devient donc fait psychologique qu'après avoir été éclairé par le récit" (ibidem, p. 248—249).

gotsky was very fertile not only in the field of education but also in the field of work psychology. This may be due to the pre-existing strength in France of traditions of interventions and research in work milieux, conducted by both researchers engaged in the analysis and transformation of social practice in ergonomics and work psychology. The French social history of social transformation, which combines the efforts of workers, trade unions, and researchers, in the critical analysis of work situations, is the socio-historical context which supports this reception into the field of Work Psychology. The scientific context is also favourable. From the perspective of ergonomics, the notion of *activity,* which is at the core of the French-speaking ergonomics tradition of analysis and transformation of real work situations, could easily accommodate Leontiev's works on the dynamic hierarchical model of activity. The Cnam in Paris (with, in particular, Alain Wisner and Jacques Leplat) has played a prominent role in the reception of first Leontiev and then Vygotsky's works in this field. In this context, Vygotsky's works appeared to Wisner, as the theoretical foundation in psychology through which anthropotechnology could overcome some of the challenges experienced in the practice of technology transfers [8]. The remarkable reading of Vygotsky by Wisner testifies to his deep and early (compared to other researchers in France at least) knowledge of his work through the English translations. Vygotsky in France has therefore been received in the field of work psychology as a theoretician of practice, contributing to an epistemology of practice, which might help overcome some of its issues.

Activity Clinic builds on some of Vygotsky's core proposals: first of all, the tight relations between practice and theory. From its beginnings, the Activity Clinic approach has been dealing with both practice, in the form of developmental transformations in the work milieux, and research. This double temporality of Activity Clinic, articulating the time of action (and reflection on ongoing transformative action), called intervention, and the time of research, primarily defined as research on interventions and development though interventions, is an important defining character of this approach. Clot calls it "fundamental field research" ("recherche fondamentale de terrain", in French) [9] to overcome the unfortunate and well spread dichotomy between fundamental research, which deals with theoretical development, and applied research, which deals with the development of practice. Clot directly quotes Vygotsky, writing that "development is both an object and the method of psychology" [9]:

"On the research plane, from a Vygotskian point of view, development is simultaneously object and method. Development, its dead ends, conflicts, bifurcations, stops, unexpected resumptions, fundamental incompleteness, cannot be studied 'in chamber.' Taking care in the field of development without 'second thoughts' of research is therefore precious, to multiply and test the potentialities, push the real to its limits, look for the limits of action to roll them back. Our joint work with our interlocutors in the field allows to enrich the range of possibilities of human action, to discover what was impossible to imagine before. Here, development is a method for the production of practical findings which were unthinkable so far. Consequently, development, triggered that way, can be studied. Here, the status of the action in the field changes, to become a means for another action, the research itself. Its object is what has happened, that can be understood only from the point of view of another action: the production of knowledge on development" [5] (Clot, 2008, p. 69)[11].

The author also writes later:

"Doing research in Activity Clinic is coming back on the action that has been produced to study the mechanisms supporting its development or limiting this action. (...) With Vygotsky, we can claim that it is in movement that the body shows what it really is.[12]" (ibidem, p. 71).

Following Vygotsky [10], practice is seen as the cornerstone of theoretical engagement and development, and theory is simultaneously critical for the further development of practice.

Practice and theory are unified by a shared focus on development: development is the goal of the intervention, as well as an object of research. Therefore, the second core inspiration from Vygotsky is this focus, of the intervention as well as of the scientific activity, on the issue of *development.* From within this perspective, human development is understood in a Vygotskian sense as a process which is historically rooted, socially shared and culturally shaped. This of course requires a delicate expansion of the developmental psychology of Vygotsky, who mainly studied the development of children, to the lifelong development of adults. This point would deserve another paper. For the time being, let us highlight some of Vygotsky's points regarding the development of the child which are absolutely relevant to the development of humans in general, whatever their age: the source of development lies in the interactions of the subject with her environment, which are actively refracted through

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[11] Original French version: "Sur le plan de la recherche, d'un point de vue vygotskien, le développement est donc à la fois objet et méthode. On ne peut pas étudier "en chambre" le développement, ses impasses, ses conflits, ses bifurcations, ses arrêts, ses reprises inattendues, son inachèvement foncier. S'occuper sur le terrain du développement sans "arrière-pensée" de recherche est donc précieux pour multiplier et tester les possibles, pousser le réel dans ses retranchements, finalement chercher les limites de l'action pour les faire reculer. Le travail conjoint avec nos interlocuteurs sur le terrain permet d'enrichir la gamme des possibilités de l'action humaine, de découvrir ce qui, jusqu'ici, était inimaginable. Là, le développement est méthode de production de résultats pratiques éventuellement impensables jusque-là. Du coup, ainsi provoqué, on peut l'étudier. Mais là, l'action de terrain change de statut pour devenir moyen d'une autre action, la recherche elle-même. Son objet est ce qui s'est passé et qu'on ne peut saisir que du point de vue d'une autre action: la production de connaissances sur le développement" (Clot, 2008, p. 69).

[12] Original French version: "Faire de la recherche en clinique de l'activité, c'est revenir sur l'action produite pour étudier les mécanismes de développement ou d'empêchement de cette action. (...) Mais avec Vygotski, on peut soutenir que c'est en mouvement que le corps montre ce qu'il est réellement". (ibidem, p. 71).

the perezhivanie of the subject [11]. Of course, the nature of these interactions and subjective refractions vary greatly according to the age and kind of institutional milieux with which the subjects engage, and a school-age child will not have the same social situation of development than a worker in a given professional setting. The sociogenesis of psychological higher functions is visible in professional milieux: ways of reasoning, talking, moving, acting in working environments are learnt first in social relations before becoming personal skills. The distinction between spontaneous, or everyday, concepts and scientific concepts is also relevant to analyse the development of professional concepts. Of course, detailed analyses of the dynamic interrelation of these concepts in the workplace are needed [see for example 12; 13].

Activity Clinic also extends Vygotsky's writings with the works of Spinoza and Bakthin. Based, among others, on the French ergonomics tradition introduced earlier and on Spinoza's ethics, Activity Clinic frames development as the development of the subject's power to act [14]. Development is seen as a potentiality to act, to expand one's range of action, or to be more precise, of activity.

In multiple texts, Clot quotes this sentence by Vygotsky:

"Behaviour, as it is achieved, is a tiny fraction of what is possible. Man is full of unrealized possibilities every minute[13]" [15, p. 76].

Or this one:

"Behaviour is a system of victorious reactions ... at every moment, the individual is full of unrealized possibilities" [10, p. 266—267].

Based on these "unrealized possibilities," Clot conceptualises activity, i.e. human psychological activity, as exceeding the observable actions of the subjects: it also includes invisible psychological dimensions. Work activity is seen as a compromise: between what is required of the workers and what they think they should do in the situation, between the meaning and the effectiveness of the action, and between what has to be done and what else could be done [14]. Human action is the result of subjective arbitration between several possible actions. These tensions, these compromises, these unrealized possibilities play a role in the realized activity of the subject. What is actually realized, but also what could have been, could be, or will be realized is present in the worker's subjective activity. Clot distinguishes between, on one hand *the realized activity*, which is what the worker does that can be observed, and, on the other hand, *the real of activity,* which refers to these unrealized possibilities: what workers don't do but would like to do, what they aim to do without succeeding, what they abandon doing, what they think they would do under different conditions, or even what they do to avoid doing what is expected of them... The real of activity is full of unresolved conflicts, which are entry points for development dynamics [16; 14].

With this psychological depth, Clot [16] conceptualizes the psychological activity of the human subject as being both directed towards the objects of the world, towards the relation of Others to this object, and to the Subject him/herself — wherein development of the subject may result from development of any of its parts. The development of the power to act of the subject is therefore possibly a development of one's power to act upon oneself, upon others and/or upon the world.

In our analyses, these dimensions are linked. A development of the activity of the subject on one of these poles frequently triggers development of their activity on other poles [17], which can be schematized in the diagram below (the subject is the vertex S in the schema, the object of the activity is vertex O and the others to whom this activity is addressed are vertex A). These relations are mediated by technical and psychological tools, including the work tools, procedures, and collaboration rules.
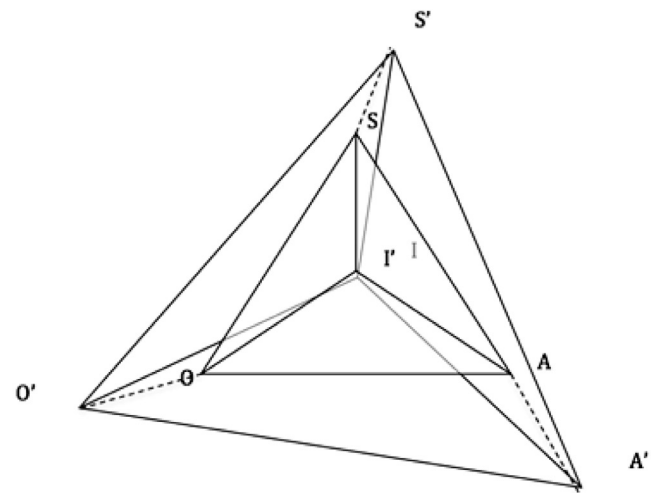
Fig. 1. Development of human activity

This psychological activity, with its internal conflicts, is both a useful concept and a unit of analysis for looking at the work activity in the field. It is a "water drop," which presents all characteristics of the whole work activity in a smaller form, thereby enabling scientific abstraction while keeping the properties of the whole phenomenon under study [18, p. 500].

The psychological activity takes place within the larger collective work activity, and in this context, can be analysed at four levels [14]: the personal, interpersonal, transpersonal and impersonal dimensions of the activity. The personal dimension is the subjective engagement of each worker in their job, with their skills, knowledge, life history, professional experience, preferences, values, moods, expectations, worries, goals, hopes, and desires. The interpersonal dimension refers to collaboration at work, to the multiple participants in work activity, past, present and future colleagues, peers, managers, customers, mentors, and

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[13] In the French translation: "Le comportement tel qu'il s'est réalisé est une infime part de ce qui est possible. L'homme est plein à chaque minute de possibilités non réalisée" (Vygotsky, 1924/2003, p. 76).

experts — all potential addressees of the professional action. All this happens in a professional milieu which has a history. The collective memory of the place, providing each worker with resources for present action and anticipation of the future, is called the professional genre [14] that is, the usual ways of acting and interacting, speaking, doing, relating to people and things in a professional way that are established in a specific work environment. Such a historical heritage functions both as a collective constraint on, and a collective resource for, individual action. It contributes to the *transpersonal* dimension. The transpersonal dimension is a binding characteristic across generations and individuals, always at risk of disappearing if it is not reconstructed in the course of personal and interpersonal activities. Finally, the *impersonal* dimension appears through the diverse elements of the official work organization: social laws organizing work, collective conventions, job profiles, definition of tasks, procedures and operating rules, evaluation standards, performance indicators, professional training, and division of labour... The impersonal dimension of the trade plays an extremely important psychological role, allowing each individual to structure and assess what they are doing, to collaborate, and to imagine what they could become and do in the future.

One last key inspiration from Vygotsky for the Activity Clinic approach has been the importance of methodological creativity and *indirect methodologies to support development* [19]. Activity Clinic is widely known for its structured use of Cross Self-Confrontations, a methodology initially created to help the researchers and the participants understand the work activity by supporting collective reflection on video images among a group of workers [20]. This methodology has been explained in details in different publications in English [17; 21; 22]. It is complex, with a double track and 3-step process. The first track is focused on conducting a co-analysis of the work activities with a group of volunteers. This detailed analysis of actual work activities is conducted with volunteer subjects, who constitute the associated research group. On the second track, this detailed co-analysis triggers and frames the discussions between managers, workers, researchers, and experts in the steering committee formed for the intervention. The co-analysis with workers becomes an instrument to act upon the work organization and transform the conditions of the dialogue within the company.

In Cross Self Confrontation, the observations, videorecordings and work analysis produced are not a focus *per se* of the research, but instead a mediation, useful insofar as it enables workers to view their activity differently, to transform organizational problems into new resources for development, and to renew the links among the different architectural dimensions of their collective activity (personal, interpersonal, transpersonal and impersonal dimensions).

In the following section, we will introduce and discuss a short interaction in Cross Self Confrontation happening during an Activity Clinic intervention in relation to drama, as a dramatic interaction which constitutes a potentially developmental event. We will then consider implications of concrete psychology for 21st century research.

3. Creating dialogical frameworks for dramatic interactions

In this section, we would now like to discuss Cross Self Confrontations in relation to drama (in Vygotsky's and Politzer's term). To do so, we will introduce a very short vignette, presenting a moment in which two nurses (and the researcher) watch and discuss videorecordings of their own activity on a sensitive professional task: the bathing of elderly, dependant patients. This moment of the working day has been previously selected as an interesting moment for the co-analysis by the group of workers participating in the research, and the two nurses have volunteered to begin this co-analysis by a video-recording and discussion in simple then cross self-confrontation. So the researcher has been following the two volunteer nurses in their everyday activities and has been recording, with their full approval as well as the approval of the patient, the sequences in which they perform, individually or in pairs, this intimate duty. These sequences now get watched and discussed by the two nurses. This small excerpt takes place in a long process of intervention in this French Public Health Institution, hosting dependant older people and disabled adults. We have been working with two different units for many months, with the goal of supporting the activity of reflecting collectively on one's practices and changing the modalities of professional dialogue within the units and between the management and the workers. In short, our action aimed at documenting some real situations in details (for example here : the toilet or bathing of the patients), and engaging the workers in a sustained reflection on what they could see themselves and the others do or not do in these situations. This patient work articulating close observation, questioning, and dialogue, may open up the field for personal, interpersonal, transpersonal and impersonal transformations at work.

Short vignette
The videorecording presented in this part of the Cross Self Confrontation is 70 seconds long. One of the nurses participating in the research, let's call her Clara, is visible. She is greeting an old lady lying in her bed, preparing her for the bathroom, which weekly — today — includes washing her hair. Then one of her colleagues enters and says that the bathroom has been booked for another patient, and asks if Clara wants to request a change. However, washing the hair of the patient requires a special treatment, advised by the doctor, which should have been anticipated. Looking closely at the state of the hair of the patient, the two nurses try to analyze whether this treatment has been done or not, and conclude with some disappointment that "it doesn't look like it would be unstuck, nothing is unstuck." They finally decide to give up on the hair wash for today, despite the fact that the patient looks like it would be much needed. Both nurses now act together to continue taking care of her in her bed.

During the Cross Self Confrontation, Clara and another nurse, let's call her Emilie, are watching selected videorecordings of this activity. At this time of the

Cross Self Confrontation, all participants are watching Clara's videorecording, and the researcher gave Emilie the instruction to stop it whenever something strikes her or interests her, to comment on it or ask questions of her colleague. The two nurses have been watching this part of the videorecording seriously, but Emilie doesn't stop it. The researcher stops the videorecording and addresses Emilie, telling her that Clara previously expressed her concern about being sure of what had been done or not with patients, and asks her if it is also a concern for her. The discussion which follows is 2 minutes 30 long. In her first interpretation of the situation, Emilie links this lack of coordination in the treatment of the patient to the shortcomings of collective communications and transmissions within the home, especially uncertain communications with the doctor. However, Clara's explanations show that the problem lies in the work organisation of shifts which are more and more composed of external workers, who by definition can not follow the patient's health and well-being over time. She concludes that "it should be done anyway." At that point in the conversation, both Clara and Emilie look silently at the frozen video, scratching their head. Then they continue looking, commenting on the feasibility of doing the treatment and washing anyway, looking concerned and now playing with their own hair. Clara says, both to herself and to her colleague in the Cross Self Confrontation setting, "if you see the state of her hair ... In addition, I say it aloud!" (this last comment refers to the videorecording, in which she also comments on the state of the patient's hair to her other colleague). The tone of the two similar comments, on the state of the hair, are different: defensive, with some anger, in the work setting; serious, with professional concern, in the Cross Self Confrontation setting. Consequently, Emilie bursts out laughing, commenting: "it is the reality, it is not our fault, Clara!" Both nurses laugh together.

Analysis of this short interaction as drama

The Cross Self Confrontation setting carefully organizes a framework for the joint investigation of the problems, challenges, satisfactions or enigmas of everyday work activity. To do so, it combines detailed observation of the work activity through the use of videorecordings, and a triangular dialogue (first nurse, second nurse, the researcher) in relation to these images. The researcher creates and maintains the rules and functioning of this dialogical and analytical collaborative framework. She also aims at supporting the development of reflection among the workers, by further externalizing some internal reflections of the first nurse, or by encouraging the second nurse to make her own views explicit, allowing the first nurse to contradict them and delve further into the shared understanding of the situation. Soliciting B to help A think is an indirect strategy. This is only one way of doing, a close analysis of other vignettes would show many different actions of the researcher, but with a constant positioning as an instrument for the development of the professional activity of the workers. This critical analysis,

which first happens in the social relations in the Cross Self Confrontation framework with the help of the researcher, can be appropriated by the participants for their own sake. The textual description in the vignette aims at showing something that is obvious in the videorecording of this Cross Self Confrontation interview: the fact that this process of co-analysis triggers both affective and cognitive dimensions. We can describe this short sequence as a dramatic interaction: the real life displeasing event, soon forgotten or denied despite its painful and shameful repetition in the work setting, gets transformed into a different psychological event, with a new status, through its inscription in the socio-material setting of the Cross Self Confrontation. Its potential developmental power depends upon the future history of this new event (the event formed by the original event as recorded on the video and its discussion in the Cross Self Confrontation setting). With the help of the researcher or of other participants, it could be further discussed and finally turned into an instrument for an extended discussion with the management — which has been the case in the intervention, based on the creation of an edited video with different sequences of patients' bathroom times and their comments.

In this sequence, the participants are engaged in a close analysis of their work activities. Their psychological activity is complex, mixing an activity of observation, an activity of dialogue, an activity of analysis. The professional task becomes a significant social and psychological object through various narrations, which get transformed with the variation of social contexts and meanings. The transformation of the social meaning of these professional tasks may then transform its psychological meaning, as well as the transformation of its psychological meaning may transform the social situation. The participants are obviously affected by what they see. Non-verbal as well as verbal behaviour reflect this. However, these emotions may trigger development only through a process of interpersonal discussion and elaboration. The researchers mediate this process through first the creation of a very specific dialogical situation, and secondly their actions to sustain a certain kind of dialogical activity in this specific dialogical framework. Finally, they edit the videorecordings to create short films which can be shared with different audiences (the workers whose activity has been filmed, the group of workers participating in the research, the steering committee of the research with the managers of the place, the colleagues from the two participating units, the funding body of this health institution, etc.) The edited films are re-worked to incorporate the reflections and controversies emerging in the dialogical setting, based on emotional refractions. In so doing, the researchers attempt to simultaneously trigger transformative *perezhivanie* for the workers and decision-makers, by sharing with them both the original images and the thoughts and new meanings elaborated by the workers. The goal is to create a new kind of collective, interprofessional, cross-hierarchical activity in which all participants are engaged in truthful dialogue on real-world work problems.

Conclusion: Implications of Concrete Psychology for Interventionist Research in the 21st Century

Modern psychology can sometimes appear more closely related to Viktor Frankenstein's dream of reconstructing life by sewing cut pieces of flesh and blood, than to Politzer's call to humanize psychology. However, Politzer's proposals draws a minimal line of action for psychologists in order not to be "below the floating line" of a psychology of human beings: considering the person as a whole, as the active subject of his or her history and activity, minimally requires us to study "psychological facts," defined by the inseparable unity of the human act and of its meaning from within a first-person perspective. This requires us at a minimum to take seriously both the human action and its interpretation through narration by the subject (excluding a large part of our experimental colleagues unfortunately). From a Vygotskian perspective, concrete psychology enters into a fully new phase: a developmental phase. The challenges of studying human life and drama in their temporal and social dynamics, i.e.

as they develop through time and engagement in social activities, are even more complex. This requires us not only to carefully observe a single human action and collect its narration by the subject, but to grasp the process of the development of these acts and their meaning. Multiple accounts in time are therefore needed for any chance of understanding development. Vygotsky provides us with a safer way for those who wish to study development scientifically: provoking development, for example by offering new cultural instruments to the child, to help him overcome unsolvable tasks in a collaborative setting [5]. The Activity Clinic approach adopts such an exciting perspective in the field of work psychology and professional development. Creating dialogical or "organized frameworks" [1], we may be able to transform some everyday experiences into new psychological events- into dramatic interactions with some developmental potential. Almost a hundred years later, the Vygotskian form, fully renewed by its developmental dimension, of the Politzer's call for a concrete psychology, is a solid bedrock for an epistemology of a collaborative *psychology for social change* that we deeply need more than ever.

References

1. Cole M., Kobelt E., Packer M. Research Methodology for a Concrete Psychology: The Fifth Dimension Research. *Psicología, Conocimiento y Sociedad*, 2014. Vol. 4, no. 2, noviembre, pp. 28—61.

2. Veresov N. Introducing cultural historical theory: main concepts and principles of genetic research methodology. *Cultural-historical psychology*, 2010, no. 4, pp. 83—90.

3. Veresov N. Refocusing the lens on development: towards genetic research methodology. *Visual Methodologies and Digital Tools for Researching with Young Children* (pp. 129—149). Springer International Publishing, 2014.

4. Brossard M. *Vygotski, Lectures et perspectives de recherches en éducation*. Presses Universitaires du Septentrion (Text by Vygotsky from 1929, first published in 1986, in A.A. Pouzyrei (Ed), Vestnick Moskowskogo Uniwersiteta, Psychologija, Serija 14, 11), 2004. (in French).

5. Vygotski L. Histoire du développement des fonctions psychiques supérieures. La Dispute, Paris. 1931/2014. (In French).

6. Zavershneva E. et Van Der Veer R. Vygotsky's notebooks. Springer, Perspectives in cultural-historical research, 2018. Vol. 2.

7. Politzer G. Critique des fondements de la psychologie. PUF, Quadrige. (1928/2003). (In French).

8. Wisner A. Aspects psychologiques de l'anthropotechnologie. *Le travail humain*, 1997, pp. 229—254. (In French).

9. Clot Y. La recherche fondamentale de terrain : une troisième voie. *Éducation permanente*, 2008, pp. 67—77.

10. Vygotski L. S. La signification historique de la crise en psychologie. Lausanne, Delachaux et Niestlé. 1927/1999. (In French).

11. Vygotsky L.S. The problem of the environment. In Vygotsky et al. *The Vygotsky reader*. Basil Blackwell, 1994.

12. Kostulski K., Prot B. L'activité conversationnelle d'un jury de validation d'acquis: analyse interlocutoire de la formation d'un concept potentiel. *Psychologie française*, 2004. Vol. 49 (4), pp. 425—441.

13. Kloetzer L. Development of professional concepts through work analysis: Tech diving under the loop of activity clinic. *Mind, Culture, and Activity*, 2013. Vol. 20 (4), pp. 318—337.

14. Clot Y. La fonction psychologique du travail. Paris: Presses Universitaires de France-PUF, 1999.

15. Vygotski L. (1924, 1930, 1932/2003). Conscience, inconscient, emotions. Paris: La Dispute, 2003.

16. Clot Y. Le travail sans l'homme? Pour une psychologie des milieux de travail et de vie. Paris, La Découverte, 1995.

17. Kloetzer L., Clot Y., Quillerou-Grivot E. Stimulating dialogue at work: The activity clinic approach to learning and development. In Francophone Perspectives of Learning Through Work (pp. 49—70). Springer International Publishing, 2015.

18. Vygotski L. Pensée et langage. Paris: La Dispute, 1934/1997.

19. Clot Y., Faïta D., Fernandez G., Scheller L. Entretiens en autoconfrontation croisée: une méthode en clinique de l'activité. *Perspectives interdisciplinaires sur le travail et la santé*, (2—1), 2000.

20. Vygotski L. Défectologie et déficience mentale. Neuchâtel: Delachaux et Niestlé, 1994.

21. Clot Y., Kostulski K. Intervening for transforming: The horizon of action in the Clinic of Activity. *Theory & Psychology*, 2001. Vol. 21 (5), pp. 681—696.

22. Kloetzer L. VET as transformative, collaborative research: Cross self-confrontation, dialogical artefacts, and the development of organizational dialogue in a Swiss factory. *Nordic Journal of Vocational Education and Training*, 2018. Vol. 7 (2), pp. 63—83.

Конкретная психология и подход «клиники деятельности»: значимость для интервенционных исследований в 21 веке

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В статье обсуждается проект Выготского и Полицера по построению конкретной психологии, основанной на реальной жизни человека, «жизненной драме», и его методологическая значимость, особенно в контексте интервенций, развития и трансформации. Как соотносятся концепции конкретной психологии и драмы для Полицера и Выготского? Каким образом мы могли бы развить идеи конкретной психологии? Какова методологическая значимость конкретной психологии Выготского для современного исследователя? В статье последовательно изложены взгляды и Выготского, и Полицера на конкретную психологию человека, а также представлена французская концепция «клиники деятельности»: мы полагаем, что данный подход с его «организованными рамками» потенциально может продвинуть нас в направлении конкретной психологии человека. Мы приводим анализ небольшого фрагмента кросс-самоконфронтационных интервью как примера потенциально развивающего драматического взаимодействия. В заключительной части статьи приведены размышления касательно значимости конкретной психологии для исследователей 21 века. Настоящая статья ставит своей целью внести вклад в переосмысление эпистемологии психологии, необходимость в котором давно назрела, и иллюстрирует укорененность научного исследования в практике.

Ключевые слова: клиника деятельности, конкретная психология, развитие, драма, методология, кросс-самоконфронтация.

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Learning Activity as an Effective Way to Develop Meta-Subject and Personal Competencies in Elementary School Students

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The article presents data from many years of research that confirms the fact that the system of teaching younger students based on the method of learning activity creates conditions for successful cognitive, social and personal development of children in primary school. Students aged 10—11 show a higher level of mastery of key competencies than their peers who study on the basis of traditional methods and techniques of organizing educational work. It is reliably established that the" developing educational environment” allows children to form higher results on such important indicators of learning ability as the ability to separate the known from the unknown and ask questions about the unknown. The indicators of development of the basics of theoretical thinking (content analysis, depth of planning, reflection) in children who study on the basis of the method of learning activity are higher than in children who study in a traditional school. The "developing educational environment”, in contrast to traditional schools, contributes more to the effective development of children's social competencies - the ability to interact, overcome cognitive conflict, and exercise mutual control and evaluation of actions performed.

Keywords: developing educational environment, educational environment based of traditional learning content, learning to learn, cognitive meta-subject results, social competence.

Problem

One of the key areas of the human activity theory is the theory of learning activity developed in line with the concepts of cultural-historical psychology. Created in the 1960s in the works of outstanding psychologists D.B. Elkonin and V.V. Davydov [1; 3; 4; 11; 19] learning activity theory has become a fundamental scientific platform for the development and implementation of a developmental learning system in Russia. The system was based on the principles of organization of learning that fundamentally differ from those underlying the traditional school.

So, in contrast to other methods of teaching according to V.V. Davydov [5], "the peculiarity of learning activity lies in the fact that in the process of its implementation, the student learns theoretical knowledge. Its content is the origin, formation and development of any subject. Conversely, if at school we observe a child assimilate such knowledge, which is already clearly articulated in advance and presented to him by the teacher in a ready-made form, and which content lacks moments of the origin and development of the studied subject, then we can surely affirm that in this case the child is not accomplishing learning activity. Given that with help of the illustrations and explanations offered by the teacher, he assimilates this or that empirical knowledge. Unfortunately, in a regular school, children most often learn just such kind of knowledge. Therefore, in a regular school a relatively small number of children is engaged in full-time learning activities... ” The learning problem is characterized by the accomplishment of special learning actions. The main one among them is the transformation of the problem situation in order to distinguish certain initial relationship (it serves as the general ground for solving the whole variety of particular problems). Through the accomplishment of learning self-control and self-evaluation activity, schoolchildren regulate their work in the situation of learning problem solving, perform analysis and planning of a solution search.

Relying on numerous studies conducted within the framework of learning activity theory system of concepts,

V.V. Davydov articulated a number of provisions that allow us to consider the system of learning activity as a universal way of organizing the learning work of the adult and the children, the way that differs from traditional teaching methods in its goals, means and results. So, the full-fledged learning activity of primary schoolchildren is associated with the solution of particular learning problems that differ from all other tasks in the following. The process of learning problem solution is aimed at student searching and mastering a general way (approach) to specific practical problems of a certain grade. In the process of this search the agents, mastering certain methods of action, are being changed themselves (D.B. Elkonin). "Firstly, schoolchildren learn theoretical knowledge and corresponding abilities and skills when solving learning problems. Secondly, the solution of such problems allows students to assimilate somewhat "common" even prior to assimilating its particular manifestations. Thirdly, the main method of schooling should be the method of introducing children to the situation of learning problems and the organization of learning activities, in brief — *the method of learning problems solving by students*. These attitudes are opposite to those of the theory and practice of traditional school education " [5, p. 7]. In the 1960s the principles of learning organization by type of learning activity were the basis for the development of educational courses and developmental learning programs for elementary school students. Later on educational courses for elementary school implementing the principles of learning activity theory were created. These programs continue to be created and improved nowadays with account for modern technological advances and modern requirements for the development of children.

Moscow school No. 91, where the principles of developmental learning were piloted and put into practice, is also currently working on the basis of learning activity method. It remains the main platform for conducting extensive research on the psychological and pedagogical patterns of the formation of learning activities in children, platform for studying the particular aspects of learning problems solving and the aspects of the of schoolchildren learning activities performance.

Unlike schools that work according to traditional curricula, in this school:

— certain requirements to the educational content are presented: the content should reproduce the logic of scientific knowledge, i.e. should ensure the derivation of concepts and their interrelations in the course of school problems solving by schoolchildren, should provide students with the opportunity to experiment with model and subject material;

— the teacher's most important task is to create a problem situation at the lesson that encourages children to search for and explore, put forward hypotheses, test them and evaluate their sufficiency in terms of problem solving;

— the lesson is organized in the form of joint activity through meaningful interactions between the teacher and the children, as well as interactions among the children themselves. Hypothesizing and hypotheses testing, assessment of their sufficiency build the basis of a group discussion. The teacher should ensure that most students in the class are included in a meaningful discussion, where hypotheses on how to solve the problem, which have to be tested in practice, are being developed;

— the formation of meaningful criteria for self-evaluation and evaluation of one's actions in children is a logical result of the organization of the learning process in the form of joint solution of learning problems. They learn to control and evaluate their learning activity and the actions of others as a contribution to solving a learning problem.

From developmental learning theory perspective the traditional school has virtually made no changes in the content of the curricula. Although at present several basic coursebooks for elementary education have been adopted, the analysis shows that they are designed according to same general principle: the formulated rule and many similar examples, i.e. ready-made knowledge, orientation on reproduction and memorization, as well as on training and strengthening of skills and abilities. The learning environment of a traditional school can be characterized by different goals, yet in all the cases, the method of organizing teachers' and students' educational work does not meet the requirements of learning activities.

Experimental study

The presence of at least two methods of organizing the learning of elementary schoolchildren, which are different in their theoretical foundations, makes the study, aimed at identifying the relationship between the teaching method and the level of the development of primary education meta-disciplinary results, relevant.

The hypothesis of this study was to show that the change in the content of education from traditional to reflectively — active, characteristic of D.B. Elkonin—V.V. Davydov system of developmental learning, creates conditions relevant to the successful cognitive and social development of children 10—11 years old.

The main *objective* of the study was to qualitatively and quantitatively assess the impact that the type of school educational environment with a given method of learning organization has on the development of basic competencies in children — learning skill, cognitive abilities and social competencies.

Sample:

The study involved students of three schools different in their ways of organizing education, i.e. children, who were engaged in different educational conditions and from this perspective represented different educational environments.

• Environment 1. In this sample, we included the students, who finished elementary school, which is implementing a developmental learning program. The sample consisted of two groups. The first group comprised of students from school No. 91. Three years of data were examined (2016, 2017, 2019). A total of 124 people participated in the study. The second group included school students, where the developmental learning program was implemented only in one out of four cohort of same

year students. In total, this group included 20 children (data from 2019).

• Environment 2. In this sample, diagnostic data are presented for the students from seven Moscow schools working according to traditional educational programs. The students finished elementary school. A total of 342 people (data from 2016).

• Environment 3. This sample presents diagnostic data for the students of the fourth grades from a special school for gifted children. The school conducts strict annual selection of children admitted to the first grade with help of special "giftedness tests". Learning in this school is conducted according to the uniquely designed program for gifted children. In 2017, cognitive and social meta-subject results diagnostics was carried out among two classes of same year students from this elementary school. The study involved 45 people.

Results

1. — *The study of the dependence of learning to learn on the way of learning organization of younger students*

Learning to learn is an essential meta-subject educational result, that among other things to a great extent determines the success of further learning.

According to research, the learning to learn is a characteristic of the agent of learning able to independently transcend the limits of one's own competency for searching ways of acting in new situations [16]. The person, who can learn, should be able to discover what kind of particular knowledge and skills for solving the task given are missing (reflective element of learning to learn), to find the knowledge missing and to master the missing skills (search element of learning to learn).

A developed learning to learn is an educational objective that can be achieved by the end of the main stage of education. It was established that for the successful implementation of this objective in elementary school it is necessary to form two basic prerequisites: the ability to separate the known from the unknown and ask questions about the unknown, and also the skill of using a hint. The ability to separate the known from the unknown allows us to distinguish the solvable tasks from the underdetermined ones and ask a question about the missing conditions for action. This skill is diagnosed with help of the "Underdetermined Tasks" test [10]. The test is based on the material of simple textual mathematical problems, methods to solve them were carefully worked out during mathematics classes in elementary school. The student must first determine what type the task belongs to, i.e. whether it is "solvable" or "with missing data", and, in the second case, must independently supplement the condition, so that the problem can be solved. The number of tasks correctly assigned to "solvable" or "underdetermined" (indicator "distinction") and the number of correctly made supplements to the conditions of underdetermined tasks (indicator "correctness of supplement") will be important for assessing the learning to learn skill. The test includes 10 tasks, five of which are solvable, and the other five require additional determination.

The diagnostic results for these indicators in various environments are presented in Fig. 1.
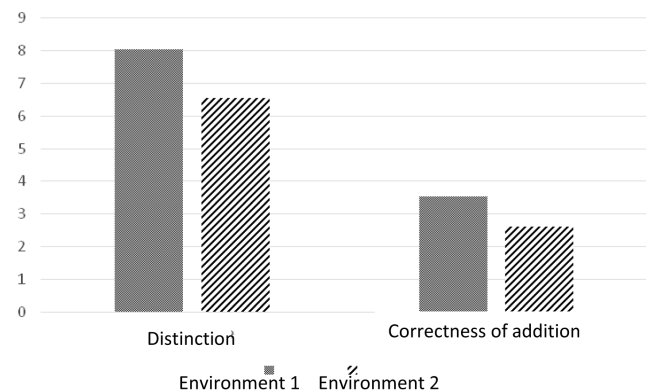
Fig. 1. Level of learning to learn development among the students, who finished elementary school, in various environments[1]

The differences between the samples are statistically significant (the significance of the differences was determined by Mann—Whitney U test; U_{dist}= 13530.5, p <0.01, U_{supp} = 15232.5, p <0.01).

Can it be considered proven on the basis of the data obtained that the formation of learning to learn is affected specifically by the type of school educational environment (in terms of the ability to separate the known from the unknown and ask questions about the unknown)? Or school No. 91, which implements the method of learning activity, has some other mechanisms that impact the formation of the learning to learn, in addition to a special curriculum and the corresponding forms of educational process organization? A comparison of the data obtained in two different groups of environment 1 with help of the test "Underdetermined tasks" was made to answer this question. Recall that the first group included students from school No. 91. The second group included students of the school, which implements D.B. Elkonin—V.V. Davydov program only in one out of four cohorts of same year elementary school students. The rest of the classes worked in line with traditional curricula. The data of the comparative study of the learning results in two groups of schoolchildren are presented in table 1.

T a b l e 1

Comparative data on the results of different schools students learning within the framework of D.B. Elkonin—V.V. Davydov program (on average per child) according to the test "Underdetermined tasks"

	Distinction	**Correctness of addition**
Group 1	8,02	3,53
Group 2	7,71	3,71
	The differences are not significant	The differences are not significant

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[1] The maximum values of the "distinction" indicator and "correctness of addition" indicator are 10 and 5 grades respectively.

According to the data, the results of the two schools are not statistically different. This suggests that it is the factor of the curriculum aimed at organizing learning activity that has a significant impact on the learning to learn formation from primary school graduates.

In addition, the "Underdetermined Tasks" test presents two important indicators — "distinction", which shows whether a child can distinguish a solvable task from an underdetermined one, and "correctness of supplement", which shows whether he or she is able to understand what the task is, what is missing, what needs to be added to the conditions, so that the task becomes solvable. The frequency distributions of grades obtained by the students for each of these two indicators are presented in Fig. 2.

The histograms show that the frequency distribution of scores for both indicators in Environment 2 received by the students, who finished elementary school, for performing the tasks of the diagnostic technique "Underdetermined tasks" "splits" into two parts ("double-humped distribution"). Such a "wrong" distribution denotes that there are children, who have learned to distinguish tasks with sufficient data and tasks with missing data, and there are children, who have not learned to do this, among the

study participants in schools with a traditional curriculum (Environment 2). As well as some of the children were able to correctly determine the condition of the problem so that it could be solved, and some were not.

A different situation was observed in students of schools with a developmental learning environment (Environment 1). The histograms show a "one-humped distribution" that shifted towards higher values, which indicates a rather high level of learning to learn formation in these children.

2. The study of the dependence of cognitive competencies development on the elementary schoolchildren students' way of learning

When analyzing cognitive competencies in this study, we relied on the provision about two types of cognitive activity, which were most consistently elaborated within dialectical logic and actualized in the works of V.V. Davydov [3; 4; 6] and in the studies of his followers [2; 9; 11; 12; 16; 17; 18]. They affirm that a person, who cognizes the surrounding reality can be both aimed at reflecting the internal connections and relations of objects and phenomena, thereby actualizing theoretical, substantial, rational knowledge, and at reflecting their external connections
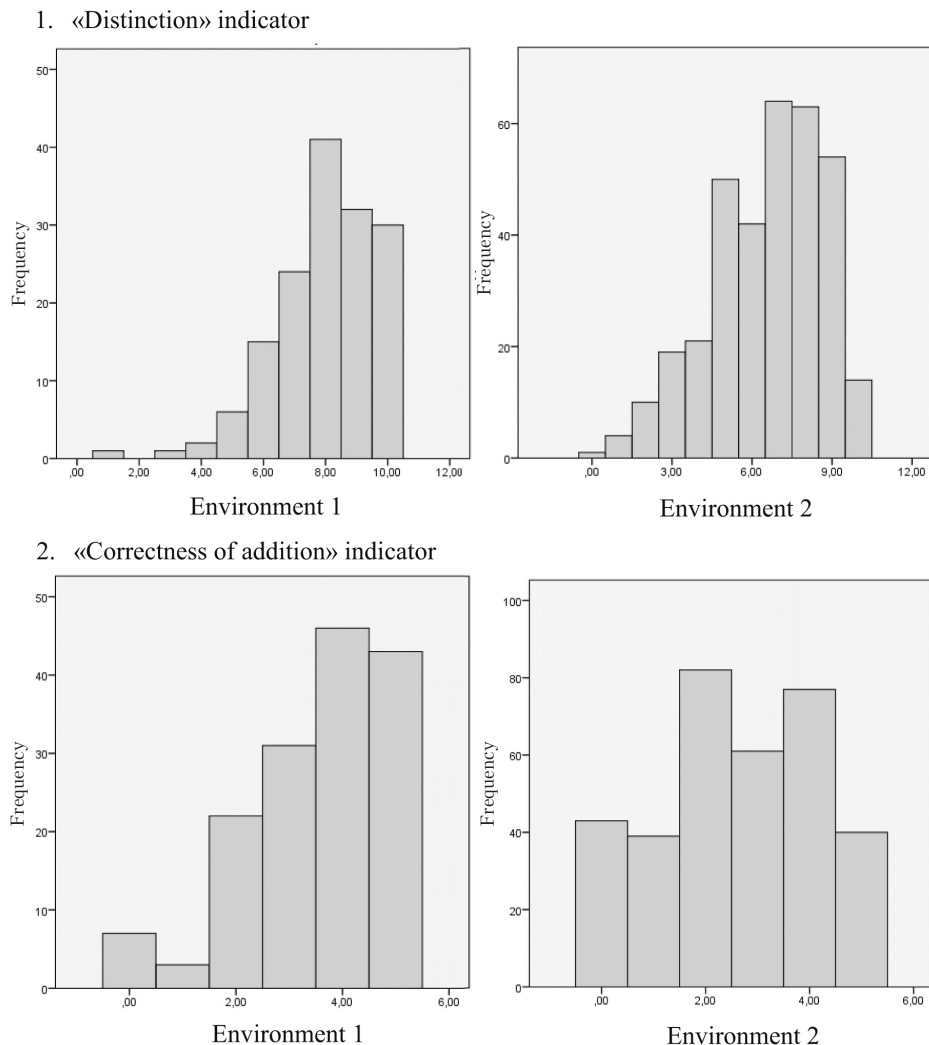

Fig. 2. Frequency distribution of grades by learning to learn indicators in different educational environments

and relations, and therefore actualizing empirical, formal, rational knowledge. In the first case, the result of the activity is associated with the identification of the reasons underlying the changes in the knowable object. In the second case, the result of the activity is the description and classification of the externally presented characteristics of changes in objects of cognition. Based on this distinction, the features of cognitive competencies were substantiated, and "Transposition" technique was developed to conduct qualitative and quantitative assessment of the competencies [7; 8; 10].

The "Transposition" technique allowed us to determine the method children used for solving search-related tasks. With the empirical way of task solving, the essential and non-essential relations in the conditions of the task are usually not distinguished, the solution is realized by way of trial and error — the method itself is either not recognized, or recognized is only a specific set of operations performed within the task solving process without elaborating any general scheme of action. With the theoretical way of task solving, essential relations in the conditions of the task are singled out, the solving process is planned in its entirety and implemented, mainly, without trial and error. Successful task solving method implies recognizing not only specific operations, but, most importantly, its connection to the essential relationships of the object studied. In this case, the solution of the problem includes both theoretical (when the content of the problem is studied with help of special cognitive actions) and practical parts (when a concrete result is really achieved). A special analysis made it possible to identify a number of special actions that characterize a generalized approach to task solving. They are:

— cognitive action associated with the study of the task conditions aimed at determining the essential relationships among them (substantive analysis itself);

— regulatory action related to the child awareness of the task solving method of action and its generalization on the ground of prior identifies essential relationships (substantive cognitive reflection);

— regulatory action associated with mental experimenting in order to develop an integral

"Transposition" technique allowed us to assess whether these actions were present in children. The technique included a set of tasks presented in a visual form. Each task consisted of two matrices similar to a chessboard with a reduced number of cells. In different tasks the number of cells ranged from 4 to 12. The cells of one matrix contained numbers inscribed inside. The cells of the second one had simple geometrical figures (circle, rhombus, pentagon, etc.). Given a limited number of re-arrangements (from 1 to 3, as indicated in each task) the child was offered to arrange the figures in the same way, as were the numbers in the example sample. Moreover, the rearrangements had to be carried out the mind — they could not be drawn, and it was necessary to write down in the protocol, which cells participated in each rearrangement. The non-subject content of the tasks of this technique was specifically selected to eliminate any possibilities of the result being impacted by the degree of subject knowledge proficiency.

The technique consisted of 3 tasks.

Task 1 allowed us to determine the level of development of the initial forms of cognitive reflection. The children were asked to solve three problems: two of them (No. 3 and No. 5) were designed over one same principle, and one (No. 4 — on a different principle). Then it was necessary to choose one out of five proposed opinions about the tasks. A substantive generalization of noted tasks solving method of action is associated with the choice of the following wording: "... tasks 3 and 5 are similar, and task 4 is different from them...". Such a choice indicates that the child knows the foundations of his or her actions (in contrast to knowing just only their external characteristics).

Task 2 is intended to determine the level of development of ways to solve search-related tasks. Children were invited to solve three problems, built over a single principle, but expressed in a different specific set of actions. The successful solution of all three tasks indicated substantive analysis of their conditions (in contrast to the formal analysis).

Task 3 made it possible to assess the level of development of skill to act "in mind". This is a starting point for the formation of regulatory universal learning actions in children, actions related to planning, control and evaluation of subject-specific learning activity. In this assignment, children were asked to solve tasks where, in contrast to previous ones, there were more figures presented in the conditions of the situation and more combinatorial actions were required. The aforementioned conditions significantly complicated mental operations with the elements set in the task conditions (geometric figures and numbers). The quality of the solution and the number of tasks solved in this assignment characterizes the level of development of their ability to act "in mind" (partial or complete).

When analyzing the results of cognitive competencies development (reflection, analysis, planning), we compared the data obtained in schools that implement various educational technologies: the technology of learning activity, the traditional curriculum and the program for gifted children (see above). The comparison of the data from the school practicing developmental learning (Environment 1) with the results of the school for gifted children (Environment 3) made it possible to put forward an assumption about the mechanisms of certain levels of cognitive competencies development within the process of learning in elementary school. Figure 3 presents the primary indicators for the entire range of competencies.

The data presented in the diagram demonstrate that in terms of all three indicators of cognitive development, the results of the school with developmental learning surpass not only the results of schools with traditional educational environment, but also the results of the school, which via competition selects intellectually gifted children. The significance of the differences is indicated by the data given in table 2.

As follows from the data in table 2, the development of individual cognitive competencies can be rightfully associated with environmental factors. So, it is legitimate to as-

sume that the traditional educational environment is less effective in terms of cognitive development of younger students than the developmental environment. But at the same time, from the perspective of reflection development, students learning at school for gifted children are at the same level as children from a traditional school. In terms of analysis and planning, students from two schools with different educational settings and programs (a school for developmental learning and a school for gifted students) also gained similar results. Thus, it can be assumed that the educational environment of the school with developmental learning creates such conditions for its students that it allows all students to achieve the same high level of development of cognitive meta-subject results as that of the students from school, which selects them through giftedness competition uses special curricula focused on gifted children.

To verify this assumption, we compared the results of the study of two groups of students enrolled in developmental learning school (Environment 1). The first group consisted of the students, who completed elementary school, where D.B. Elkoni—V.V. Davydov program was implemented. The second group included a class work-

ing under the same program at school, where the other classes of same year students studied according to traditional programs. The data is presented in table 3.

The data presented in table 3 indicate that the development of reflection, analysis and planning in children is indeed a consequence of the curriculum implemented in a particular school or class and related to the following factor — this program is introduced with help of learning organization method, that is with developmental type of educational environment.

In order to determine the sustainability of the obtained results in all three indicators of students' cognitive development, we compared reflection, analysis and planning diagnostic results at school No. 91 for the last several years. The results of this analysis are represented in table 4.

According to the data presented in table 4, in one same educational environment that employs learning activity method, from year to year students were showing similar (and relatively high) results for all indicators of cognitive development. The only statistically significant change there is, is represented by the growth of indica-
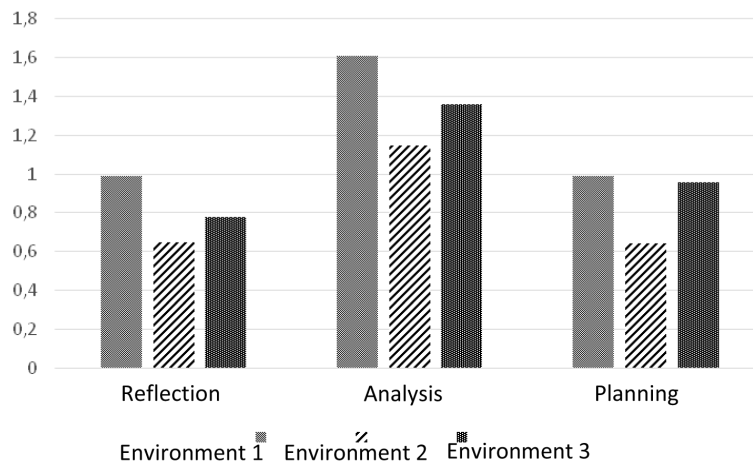
Fig. 3. The level of reflection indicators formation, the development of ways to solve search-related tasks (analysis) and the ability to plan among students engaged in different educational environments

Table 2

The significance of differences in the level of the development of cognitive indicators among the students in different educational environments

	Reflection	**Analysis**	**Planning**
Environment 1/ Environment 2	The differences are significant, p<0,01	The differences are significant, p<0,01	The differences are significant, p<0,01
Environment 2/ Environment 3	The differences are not significant	The differences are significant, p<0,05	The differences are significant, p<0,01
Environment 1/ Environment 3	The differences are significant, p<0,05	The differences are not significant	The differences are not significant

Table 3

The comparison of the students from different schools working within D.B. Elkonin's and V.V. Davydov's system of developmental learning

	Reflection	**Analysis**	**Planning**
Group 1	1,067	1,867	1,289
Group 2	1,080	1,720	,920
	The differences are not significant	The differences are not significant	The differences are not significant

T a b l e 4

The dynamics of the cognitive indicators of meta-subject educational results of students in school No. 91[2]

	Reflection	Analysis	Planning
2017	1,07	1,47	0,84
2018	0,91	1,52	0,98
2019	0,98	1,82	1,22

tor 2, and denotes an increase in the ability of students of the experimental school to analyze and distinguish significant relationships in the task.

These data made it possible to assert that the educational program employed and corresponding learning style based on mastering learning activity methods make a decisive influence on the development of cognitive meta-subject educational results.

3. *A study of social competencies development depending on the method of learning activity organization.*

It is known, that the new junior school standards devote great attention to the requirements for the social and communicative competencies of schoolchildren finishing elementary school. The new educational standard includes such components of this ability as the capability of a group of children to set a common goal, to agree on methods of action, to get out of a conflict situation and to constructively overcome it. A well-organized joint activity leads not only to the development of students' relations with adults and their own peers expressed in the form of business cooperation, but also contributes to the development of such important learning activities as modeling, evaluation and control. The development of cognitive competencies is impossible without them. Group work during the class, as shown by the data, encourages the development of communication among children, the construction of comprehensive detailed communication and leads to the improvement of their self-esteem. Various perspectives are being recognized and agreed upon in the course of this interaction, which enables the participants of joint activity to discuss the search for learning task solution from different angles and escape conflict situation.

As it is known, within the system of developmental learning joint work of students, group discussion, mutual control and mutual assistance — these are the most important elements of a full-fledged educational process organization based on the method of learning activity. Therefore, we assumed that in terms of social competence, the results of the children studying in the context of learning activity will differ from the same results of students attending other schools.

We developed the "Conflict" technique [10] to assess the social development of students. The technique allows us to diagnose capabilty of children, who completed elementary school, to jointly solve a visual-logical task, to overcome the substantive conflict that arose in the context of interaction when searching for the way to solve learning problems

The essence of the task was as follows: a group of four people, solving a visual-logical problem, had to select suitable pictures and include them in an incomplete picture system, and the location of the pictures was not random, but corresponded to a certain regularity (see Fig. 4). The technique was carried out in two stages. At first, the children solved the problem individually, that is, each child selected the necessary pictures, choosing them from the given set of numbered pictures, and fixed their numbers in empty cells of the given system of an individual form.

Fill in the empty cells of the table with the correct pictures, extending these rows. Choose pictures from the set and put their numbers in in the appropriate rows.
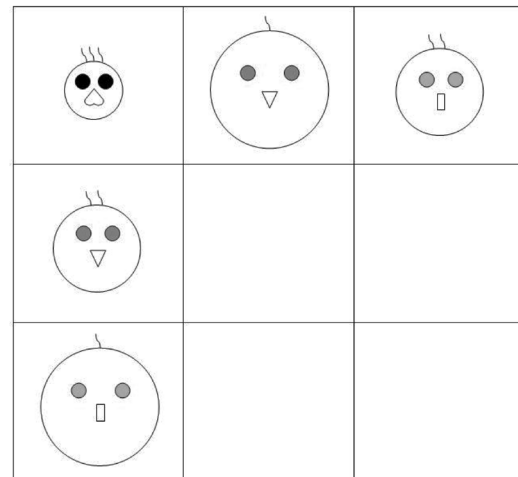
Fig. 4. «Conflict» technique blank sheet

At the second stage, immediately after individual solutions, the children got into groups of four people, they were asked to solve the same problem together by refilling the empty cells on the form with suitable drawings of "faces".

The conflict in the situation was posed by the fact that at the first stage of individual work, the pictures themselves and their number in the set for each individual participant coincided, but the same pictures were located at different places in the sets of individual participants and therefore had different serial numbers. Below is a sample of one of the four sets of pictures that were given to individual participants at the first stage (Fig. 5).

At the first stage, in the process of an individual solution, each child formed his or her own idea about the correct way of filling the matrix with certain pictures. When starting to work together the children faced the fact that the numbers of drawings ("faces") in empty

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[2] In indicator 2, the differences are statistically significant (2018—2019), p <0.01 (the Mann—Whitney U-test).

cells that each of one them had were different. This led to the inevitable clash of children's perspectives regarding the choice of just one correct picture for each cell. The group needed to fix and coordinate the positions of individual participants and agree on what exactly the participants, working together, would place in each empty cell. In that case when the group found the right common solution for all empty cells, it could be considered that the group successfully coped with the conflict and effectively solved the problem together.

The level of development of this cooperative was determined in the study through the ratio of success indicators for individual and group solutions. The results are shown in Fig. 6.

The circles indicate the results of the developmental learning school (Environment 1), the triangles indicate the traditional school (Environment 2).

According to the results, the students of the traditional school were worse at solving the visual-logical tasks given to them in the mode of individual action than the students of the school of developmental learning, yet these differences are not statistically significant. It is important that during the transition to group work, these students showed a slight increase in terms of the solution effectiveness measurement, that is, the association of students in a group did not significantly affect the quality of the solution to the problem. Students of a school with a developing educational environment, working in an individual mode, showed results close to those of students from a traditional school. However, in the transition to a group solution, the effectiveness of their joint action doubled. Therefore, grouping for children studying in a developing educational environment is an important factor determining the effectiveness of solving a learning problem.

These data proves that the educational environment whilst relying on learning activity method creates favorable conditions for the development of such social competences as ability to overcome cognitive conflict in the process of joint learning tasks solving. It is the presence of this competence that characterizes the ability of children to interact with each other, to participate in a joint search for a solution, to analyze and coordinate individual actions in cooperative.

Conclusions

The data obtained in the study on the whole confirm the fact that the educational system for elementary schoolchildren based on the method of learning activity creates psychological and pedagogical conditions for the successful cognitive and social development of children in elementary school. According to the study results, 10-11 years old students demonstrate a higher level of mastery of key competencies in comparison to their peers learning on the basis of traditional methods and techniques of learning organization. Thus, the study reliably established that:

• "developing" educational environment allows to form higher results in children by such important indicators of learning to learn as the ability to separate the known from the unknown and ask questions about the unknown;

• indicators of the development of theoretical thinking fundamentals in children (meaningful analysis, depth of planning, reflection), studying on the basis of learning activity method, are higher than those in children studying in a traditional school;

• "developing" educational environment, in contrast to the traditional school, to a greater extent contributes to the effective development of social competencies in children — the skill of interaction, ability to overcome cognitive conflict, develop a common way for task solving, exercise mutual control and evaluation of the actions performed.
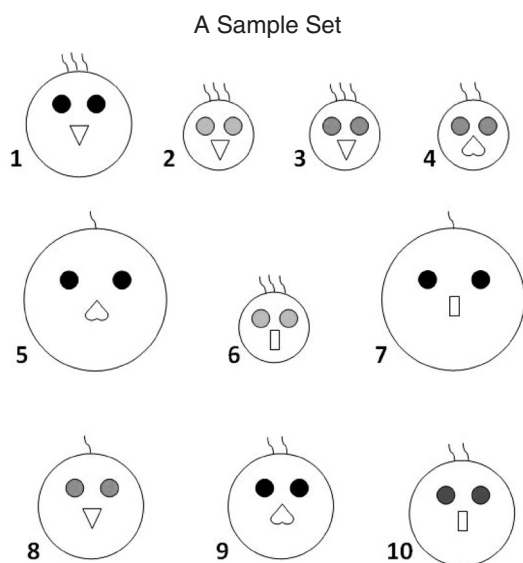

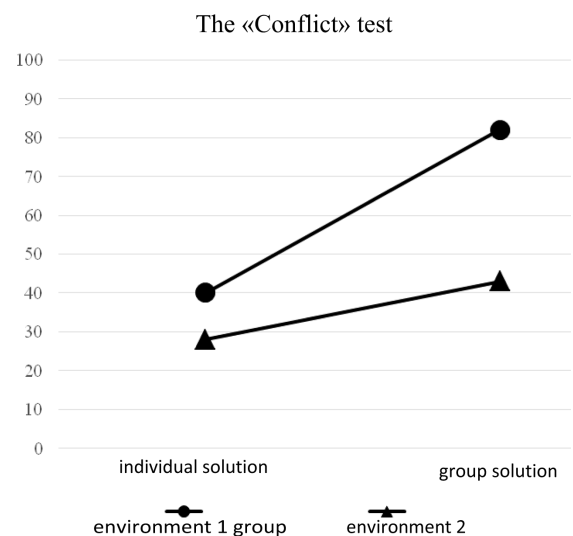*Fig. 5.* A sample set of "pictures" for an individual solution of the "Conflict" technique task

Fig. 6. Individual and group results of solving "Conflict" technique tasks at the school with developmental learning (environment 1) and with traditional educational environment (environment 2)

References

1. Voprosy psikhologii uchebnoy deyatel'nosti mladshikh shkol'nikov [Issues of Psychology of Learning Activity of Elementary School Students]. El'konin D.B. (eds.). Moscow, 1962. 287 p.

2. Voprosy teorii i praktiki razvivayushchego obrazovaniya [Issues of the Theory and Practice of Developmental Learning]. Guruzhapov V.F. (ed.). Moscow: ANO «Tsentr "Razvivayushchee obrazovanie"», 2002. 130 p.

3. Davydov V.V. Kontseptsiya gumanizatsii rossiyskogo nachal'nogo obrazovaniya (neobkhodimost' i vozmozhnost' sozdaniya tselostnoy sistemy razvivayushchego nachal'nogo obrazovaniya [The concept of the humanization of the Russian primary education (the necessity and possibility of making a holistic system of developmental primary education]. *Nachal'noe obrazovanie v Rossii: innovatsii i praktika* [*Primary Education in Russia: innovations and practice*]. Moscow, 1994.

4. Davydov V.V. Teoriya razvivayushchego obucheniya [The Theory of Developing Learning]. Moscow: INTOR , 1996. 544 p.

5. Davydov V.V. Uchebnaya deyatel'nost': sostoyanie i problemy issledovaniya [Learning activity: its condition and problems of research]. *Voprosy psikhologii* [*Psychology Issues*], 1991, no. 6, pp. 5—14.

6. Davydov V.V., Slobodchikov V.I., Tsukerman G.A. Mladshiy shkol'nik kak subyekt uchebnoi deyatel'nosti [The younger student as an agent of learning activity]. *Voprosy psikhologii* [*Issues of Psychology*], 1992, no. 3—4. pp.14—19.

7. Zak A.Z. Diagnostika razlichiy v myshlenii mladshikh shkol'nikov [Diagnostics of differences in the thinking of primary schoolstudents]. Moscow: Genezis, 2007. 150 p.

8. Zak A.Z. Usloviya formirovaniya intellektual'nykh deistviy u chetveroklassnikov [Conditions for the development of intellectual actions in fourth-formers]. *Obrazovanie i nauka v Rossii i za rubezhom* [*Education and Science in Russia and Abroad*], 2019, no. 2. Vol. 50, pp. 102—111.

9. Razvivayushchee obuchenie na puti k podrostkovoy shkole [Developing Learning on the way to the Adolescent School]. El'konin B.D. (eds.). Moscow: Evrika, 2004. 240 p.

10. Otsenka metapredmetnykh kompetentsii vypusknikov nachal'noi shkoly [The Assessment of Meta-subject-related Competences in Junior School Graduates]. Ulanovskaya I.M. (ed.). Moscow: GBOU VPO «MGPPU». 2015. 169 p.

11. Razvitie osnov refleksivnogo myshleniya shkol'nikov v protsesse uchebnoy deyatel'nosti [The development of the Bases of the Reflective Thinking of Schoolchildren During the Learning Activity]. Davydov V.V. (eds.). Novosibirsk, 1995. 227 p.

12. Rubtsov V.V. Osnovy sotsial'no-geneticheskoi psikhologii [Fundamentals of socio-genetic psychology]. Moscow: Voronezh: NPO «MODEK», 1997. 384 p.

13. Rubtsov V.V., Ivoshina T.G. Proektirovaniye razvivayushchey obrazovatel'noy sredy shkoly [Designing the Developmental Educational Environment of the School]. Moscow, 2002. 272 p.

14. Tekhnologiya otsenki obrazovatel'noy sredy shkoly [The Technology for Assessing the Educational environment of the School]. Rubtsov V.V. (eds.). Moscow: Publishing House of PI RAE, 2009.

15. Ulanovskaya I.M. The Formation of Meta-subject-related Competencies by means of School Subjects [Electronic resource]. In Vysotskaya E.V., Ulanovskaya I.M., Yanishevskaya M.A. *The Book of abstracts: the Twenty Sixth European Congress of Psychology* (ECP 2019) (2—5 July, 2019, Lomonosov Moscow State University, Moscow), p. 1307. https://ecp2019.ru › doc › Book_of_Abstracts_ecp_2019 (Accessed 10.04.2020).

16. Tsukerman G.A. Chto takoe umenie uchit'sya i kak ego izmeryat' [What is a learning skill, and how to measure it?]. *Voprosy psikhologii* [*Issues of Psychology*], 2015, no. 1, pp. 3—14.

17. Tsukerman G.A., Sukhoversha L.A. Kak mladshiye shkol'niki stanovyatsya subyektami uchebnoi deyatel'nosti? (tri goda longityudnogo issledovaniya)[How primary schoolchildren become the subjects of learning activity? (three years of the longitudinal research)]. *Psikhologicheskaya nauka i obrazovani*e = *Psychological Science and Education*, 2000. Vol. 5, no. 1.

18. El'konin B.D. Sobytie deistviya (Zametki o razvitii predmetnykh deystvii II) [The event of action (Notes on the development of object-related actions II)]. *Kul'turno-istoricheskaya psikhologiya* = *Cultural-historical psychology*, 2014. Vol. 10, no. 1, pp. 11—19.

19. El'konin D.B. Psikhologiya obucheniya mladshego shkol'nika [The Psychology of Teaching a Younger Student]. Moscow, 1974. 63 p.

Учебная деятельность как эффективный способ развития метапредметных и личностных компетенций у младших школьников

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В статье приведены данные многолетних исследований, подтверждающих тот факт, что основанная на методе учебной деятельности система обучения младших школьников создает условия для

успешного когнитивного, социального и личностного развития детей в начальной школе. Учащиеся 10—11 лет обнаруживают более высокий уровень овладения ключевыми компетенциями, чем их сверстники, обучающиеся на основе традиционных методов и приемов организации учебной работы. Достоверно установлено, что «развивающая» образовательная среда позволяет сформировать у детей более высокие результаты по таким важным показателям умения учиться, как умение отделять известное от неизвестного и задавать вопросы о неизвестном. Показатели развития основ теоретического мышления (содержательный анализ, глубина планирования, рефлексия) у детей, обучающихся на основе метода учебной деятельности, выше, чем у детей, обучающихся в традиционной школе. «Развивающая» образовательная среда, в отличие от традиционной школы, в большей степени способствует эффективному развитию у детей социальных компетенций — умения взаимодействовать, преодолевать когнитивный конфликт, осуществлять взаимный контроль и оценку выполняемых действий.

Ключевые слова: развивающая образовательная среда, образовательная среда традиционного обучения, умение учиться, когнитивные метапредметные результаты, социальные компетенции.

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Using CHAT to Address the Nature of Scientific Knowledge Aspects on a PD-Program for Greek Science Teachers as a Cycle of Expansive Learning

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A Science Teachers' Professional Development (PD) Program on Nature of Scientific Knowledge (NOSK) aspects is designed, implemented and evaluated, based on the cycle of expansive learning. A needs analysis showed that NOSK is not explicitly included in Greek Science classes and its integration might be a solution to students' indifference towards them (questioning phase). A relevant literature review highlights three approaches to teach NOSK: through History of Science (HOS), Scientific Inquiry (SI) and Socio-scientific Issues (SSI). The PD-program includes all three, in that order, to provide the 49 participant-teachers alternative paths to embed NOSK in more school science units, designed according to the community of trainees' Cultural-Historical characteristics and the Principles of Adult Education (analysis and modelling phases). Teachers examine and test the new model (4th phase) through a voluntary assignment to design and present a lesson plan to the plenary. The implementation phase consists of teaching in the classroom and a 5th meeting, finishing with a 6th meeting (reflecting phase). Arisen contradictions are dealt to evolve the whole activity system. Works for evaluation are included in all phases. Results to that point show that the PD-program is successful.

Keywords: cycle of expansive learning, nature of scientific knowledge, continuing professional development, secondary school.

Introduction

The importance to include Nature of Science (NOS) aspects in science teaching is acknowledged among all researchers. The arguments for this are: a) better understanding of the limitations of science, b) increase interest in the classroom, c) achieve better understanding of scientific knowledge and d) achieve scientific literacy (related to citizen education) [35; 34]. Scientific literacy is widely adopted worldwide in science curricula [4; 33]. However, even though researchers and curricula designers agree that NOS needs to be taught — and specifically in an explicit way [34; 35], there is no consensus on a common list of NOS aspects [35; 39; 9; 3; 37; 17; 50].

As for Greece, even though there is academic work in the field [40; 41; 49; 25], a survey [28; 30] showed that NOS is not included in the Greek secondary education and graduates have naïve views on it.

In the present work, the design, implementation, works for evaluation and initial results of a Professional Development (PD) program on teaching NOS aspects to 49 science teachers are presented. We prefer to use the term "Nature of Scientific Knowledge" (NOSK), to communicate more accurately what is meant by NOS [35], by referring to the characteristics of scientific knowledge that are inherently derived from the manner in which it is produced (Scientific Inquiry) and are suitable for K-12 students to learn about.

We adopt Cultural Historical Activity Theory (CHAT) [14; 16] as a guiding framework for the design and analysis of the PD-program, which is in agreement with Roth and Lee's view [45]: *"adopting CHAT as a guiding framework allows for a questioning of the structural determinations of current educational practices"* and has been used by many other researchers in the field of Curricula design and teacher training, in science and other fields [26; 27; 44; 22; 10].

Education is a complex, multi-parametric activity system, that interacts in network relations with other systems, via the conceptual tools it has developed [14], where they merge as *"a constellation of two or more activity systems that have a partially shared object"* [16]. CHAT was selected so that we can deal with the complexity of education's activity system. For example, the analysis of the interaction between the trainer and the trainees, using tools (educational means) to teach an object (a common ternary relation) is not an analysis of the activity system of education. The framework of Activity Theory suggests that the excess of the directly visible dual and ternary relations among the nodes of the system define the way in which the other nodes are present and influence the examined condition [27].

Nature of Scientific Knowledge (NOSK) aspects

For the past 100 years, the definition of Nature of Science (NOS) and its aspects has been a matter of constant debate between philosophers/historians/sociologists of science and educators. Still, there is no consensus among them, but they all agree that it is necessary to be included into Science teaching [34; 41]. In the present work, we prefer to use the term "Nature of Scientific Knowledge" (NOSK) to refer to the characteristics of scientific knowledge that are inherently derived from the manner in which it is produced (Scientific Inquiry). Those characteristics are [34]:

(A1) Scientific knowledge is empirical, observations and inferences are different

Scientific knowledge is based on/derived from empirical data. Observations are descriptions of natural phenomena that are directly accessible to the senses, or an expansion of them. They are subject to limitations of existing equipment and the dominant theory, but observers usually reach consensus on what they see-hear-feel etc. Inferences are the explanation of observations and same observations could lead to different inferences, according to researchers' background.

(A2) Scientific knowledge is creative

Scientific research — opposite to common belief — is not a rational and orderly procedure. It requires scientists' creativity and imagination in all parts of research: design, data collection and invention of explanations, similar to the creation of an artistic work.

(A3) Even though objectivity is the goal, subjectivity within scientists is unavoidable

Each individual scientist is affected — during interpretation of results, observations, and research design — from his/her personal commitments, previous knowledge, training, expectations and etc. Even though through history of science, objectivity is the goal (through standard scales and precision in measurement), subjectivity is unavoidable. Science is also a social activity: Scientists are interacting with each other through scientific publications; their consequent criticism and continuous testing enhances its objectivity.

(A4) Scientific knowledge is durable, but subject to change in the light of new evidence

Scientific knowledge is reliable and durable, however not absolute and certain. There is always the chance to alter it, either due to evolution in technology and new instruments that lead to new evidence, or because old evidence is re-interpreted.

(A5) Science's socio-cultural embeddedness

Science is a human endeavor that affects and is affected from all societal, cultural, philosophical, religious, political and economic factors.

(A6) Scientific laws and theories are different kinds of knowledge

Laws are generalized descriptions of relationships among observable phenomena and are based on many observations. They describe what happens in the (usually idealized) natural world, but never explain why. Those inferred explanations are theories.

Cultural-Historical Activity Theory (CHAT)

CHAT is a "cross-disciplinary framework to study how humans purposefully transform natural and social reality, including themselves, as an ongoing culturally and historically situated process [45]. There is a big spectrum of socio-cultural theories where CHAT was always included. Its origins are traced in the classical German philosophy (from Kant to Hegel), in the writings of Marx and Engels, and in the Russian studies in psychology of Vygotsky, Leontiev, and Luria. They saw behaviorism and analytical psychology as unable to manage the material and cultural reality which was then on the scene. The concept of activity became very important in the societal setting, and the focus was on activity as the unit of analysis. Two kinds of activity element were distinguished: the cultural-historical and the material [41]. The cultural-historical activity theory was expanded, organized, and increasingly used to create contemporary research environments with emphasis on the studies of human activity [14]. There was an increase in international interest in Activity Theory during the 1990s, while today the theory holds a significant role in many scientific fields such as psychology, work research and education, in many countries worldwide [16; 25; 43]. Furthermore, international journals and books are dedicated to cultural studies of science education, and the ISCAR.ORG international society supports a thematic section on Socio-Cultural approaches to Science Technology Engineering Mathematics (STEM) Education (https://www.iscar.org/organisation/sections/thematic-sections/).

In the specific field of science education, some scholars underline that teaching and learning science transcends the transmission of knowledge and facts and go even beyond participation in the community; they consider science education as contribution by both teachers and learners in an agentive, authorial, authentic and activist way, to the gist of science [49].

Learners become engaged in science activities and they use artifacts, that is, material objects or processes which are products of human activity [8] in order to deal with a scientific concept. Furthermore, they interact with one

another as well as with tools and means into the community of learners and work on the construction of knowledge with outcomes that are scientifically accurate [14].

Engeström (1987) presented Leontiev's views, using the triangle for human activity systems, (see Figure 1 [5; 43].
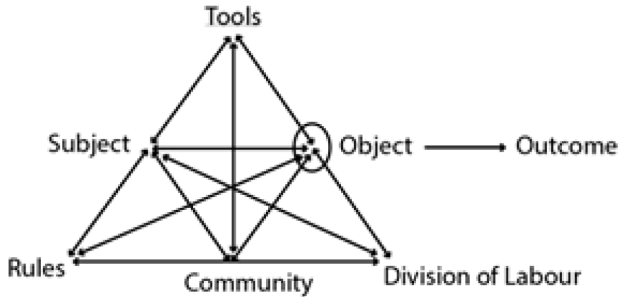

Fig. 1. The structure of a human activity system

The relations between the Subject (usually people, but lately they are also corporations that are moving towards a desired goal) and the Object (the goals of the activity) are mediated through tools, community, rules and division of labor [19]. Tools and artifacts are culturally produced means that subjects use to perform the activity. They may be material, like a magnet, a telescope, or mental, like language. Community refers to all the participants who share the same object, and shapes and directs individual actions to the collective activity. Division of labor refers to the way subjects i.e. members of the community divide their responsibilities during an activity. The triangle of the activity system refers both to the horizontal actions and interrelations between the members of the community and the vertical distribution of power, resources and relative societal or professional status [43]. The nodes of an activity system are not static and isolated to each other, but they are dynamically connected; the system is regarded as a unity [18].

Then, Engeström [14] moved beyond the barriers of one activity system, including minimally two activity systems that interrelate, promoting multiple perspectives, dialectics, and networks for collaboration (see Figure 2, [14]).

Contradictions and tensions that might appear would play a crucial role as the most important motive for development of human actions, transforming both the activity and the outcome [43]. Engeström's suggestions could be summarized in the following five principles:

an activity system a) is the unit of analysis, b) is multi-voiced, c) its problems and potentials can be understood against their own history, d) contradictions are the driving force of change and e) through the cycle of expansive learning it is possible to study the transformations of the activity system, while it is reconceptualized to embrace a radically wider horizon of possibilities than in the previous mode of the activity [14].

Engeström and Sannino [16] give an ideal-typical sequence of actions in an expansive cycle, which is presented in detail, because the whole PD-program was designed and implemented based on the cycle of expansive learning:

• The first action is that of questioning. Participants in an activity system are criticizing or rejecting some aspects of the accepted practice and existing knowledge. Primary contradictions appear, within each and any of the nodes of the activity system.

• The second action is an analysis of the situation to identify systemic tensions or contradictions within and between activity systems. Secondary contradictions appear between two or more nodes, e.g. a new object and an old tool.

• The third action is that of modeling, to construct an explicit, simplified model of the new idea that explains and offers a solution to the problematic situation.

• The fourth action is about examining and testing the model to establish its potential and limitations

• The fifth action is implementing the model by means of practical applications, enrichments, and conceptual extensions. Tertiary contradictions appear, between a newly established mode of activity and remnants of the previous mode.

• The sixth and seventh actions are those of reflecting on and evaluating the process and consolidating its outcomes into a new stable form of practice. Quaternary contradictions appear, between the newly recognized activity and its neighboring activity systems.

• The above are illustrated in Figure 3 [16].

The process of expansive learning should be understood as construction and resolution of successively evolving contradictions. In expansive learning learners are involved in constructing and implementing a radically new, wider and more complex object and concept for their activity and implement this new object and concept in practice. It is worth mentioning that all strategic actions presented in Fig. 3 are an indicative series of steps and not a "universal formula" that follow each other automatically. Some steps might be skipped [43; 16].
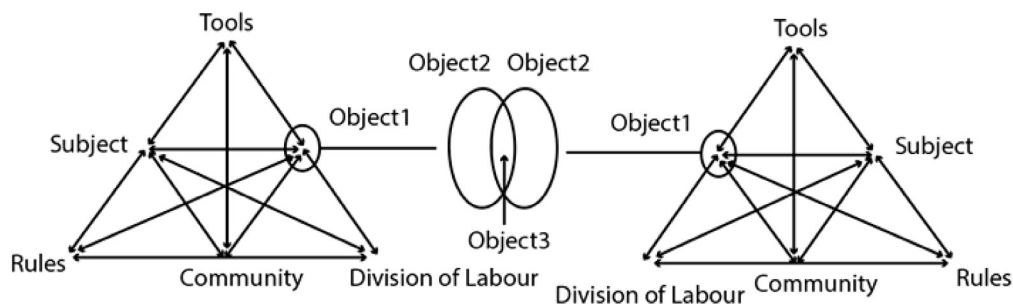

Fig. 2. Two interacting activity systems [14]

The process of expansive learning should be understood as construction and resolution of successively evolving contradictions. It is worth mentioning that all strategic actions presented in Fig. 3 are an indicative series of steps and not a "universal formula" that follow each other automatically because any step might be missed [43].

Design & Implementation of the PD-program

The PD-program was co-organized with the 4 Lab Centers (EKFE) of Thessaloniki. Forty-nine science teachers participated voluntarily; their average age was 50 years old and they worked in education for 10—30 years. It took place in twilight courses and during mornings teachers followed their regular program at school: that was deterring for a long-lasting program. It was decided to have four 3-hour meetings, one per fortnight. The first one took place on April 2018. At the end of the 4th meeting, teachers asked for a 5th meeting, which took place on December 2018 and lead to another one, on May 2019. The first writer, after the required permission, observed 9 of the above teachers in their classrooms during the school year 2018—19. The PD-program was designed, implemented, and took its final form and presented as a cycle of expansive learning (see Fig. 3).

Before the first meeting between teachers and the research group there were two separate activity systems, one of the Greek educational system and one of the research group. Through the interaction between those two systems, we target expansive learning: both teachers and researchers participate in the design and implementation of a radically new, wider and processed object for their activity.

Each one of those systems are presented below, including the shared system of teachers and researchers through the cycle of expansive learning.

1. Activity system of a Greek science teacher

Earlier surveys [28; 30] pointed out that the Greek Science Curriculum does not include teaching of NOSK aspects. Textbooks prompt. in a small degree, to discuss only some of them and, teachers have not learned them during their studies, thus they intuitively refer to some of them, without assessment, and finally students have naïve views on NOSK aspects. Success in national exams to enter university is a major value among Greek families, therefore students' preparation for the exams begin many years before. As a result, parents are an integral part of the community, who press teachers and students for good grades and success in tests. Teachers end up focusing on the body of knowledge (definitions, laws, equations) and solving mathematical problems, which is what is examined in the national exams. Teachers have primary contradictions with the above, because students don't participate actively in classes, claiming that school is far from their interests.
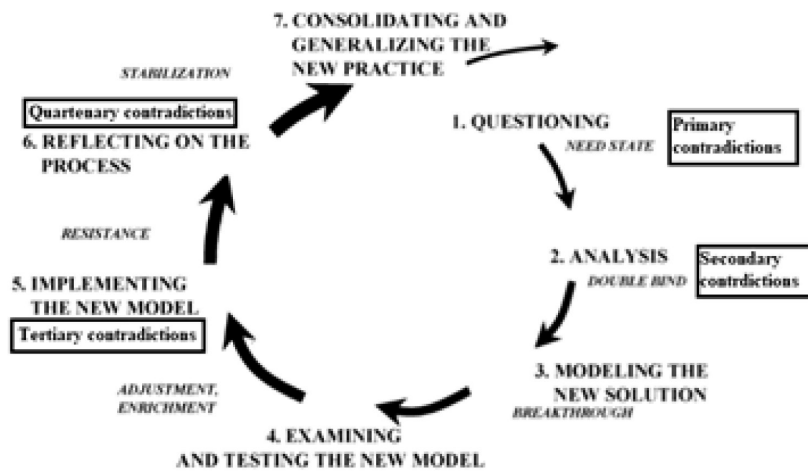

Fig. 3. Actions and corresponding contradictions in the cycle of expansive learning [16]
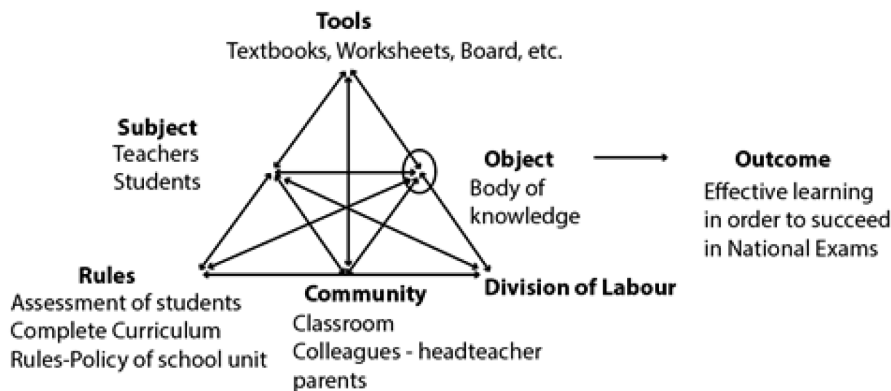

Fig. 4. Activity system of the Greek science teacher

2. Activity system of the research group

Researchers in their own activity system have recorded three approaches to teach NOSK aspects, through a) History of Science (HOS), b) Scientific Inquiry (SI) and c) Socio-Scientific Issues [33; 39]. For each approach, there are advantages (i.e. [38; 1; 47; 2; 11; 51] and disadvantages [33; 7; 4]. Allchin et al [4] claim that the three approaches used at the same time can offset each other's disadvantages, and their combined approach promotes stronger learning than each one individually, regarding NOSK. Furthermore, according to Allchin [3], all teachers do not regard each approach to be as important as another, which was also a conclusion from our interviews with teachers [28]. In our opinion, it is justified from their different cultural characteristics.

Taking that into consideration, it was decided to include all three approaches in the PD-program. As for the order of presentation: teachers' interviews showed that most of them don't regard NOSK to be as important as the body of knowledge. This can be explained from their cultural characteristics as: they were trained in science departments, without any pedagogical instruction, and the activity system they lived in — both as students and teachers — was that of the national exams, the solution of advanced mathematical problems, without tasks that include or assess NOSK aspects.

In order to change their attitude, it is important to start the PD-program with HOS, to recognize NOSK aspects throughout the evolution of scientific knowledge, and to realize that NOSK is part of science. The SI approach follows, which is within the desired culture of Greek science education and teachers like to organize inquiry-based lessons. Finally, the PD-program closes with SSI, that our previous survey showed that is the most contradictory among the three for science teachers.

Apart from that, the research group included the basic principles of adult education in the design of the PD-program: a) adults learn more effectively when they participate in the learning process, when the content is focused on their needs, their previous knowledge and experience are used and b) adults prefer to learn in their personal manner, according to their special cultural characteristics and abilities [21].

3. Cycle of expansive learning
3.1. Questioning

At the beginning of the PD-program, teachers were asked why they attended the program. Their answer was a description of the classroom activity system, similar to the one described on paragraph 1. The primary contradiction to the accepted practice was that their students don't participate actively, which makes their job tiring. They attended the program, because they were already critical towards the existing system and they seek anything that could inspire their students to be more energized.

3.2. Analysis

Teachers knew the schedule of the program from its announcement. When the lecturer informed them that the goal was to a) learn NOSK aspects and b) be able to teach them themselves, thus secondary contradictions arose: a) in order to teach a new object they had to design new resources (tool), since there are none in the textbooks and b) there might be opposition, mainly from parents, if teaching is completely different from the standard.

Discussion lead to their suggestions, some of which were based on the inclusion of all three approaches of NOSK teaching. For example, teachers who already used HOS in their teaching, could add NOSK aspects to that content. Respectively, teachers who use SI and SSI could add NOSK aspects to what they already do, based on extracts vaguely derived from the textbooks. On the one hand teachers could design lesson plans easier and on the other students would not attend completely different classes than the ones they were used to. The suggestion to include all three approaches provides more chances to teach NOSK, using the existing books in the present curricula. Finally, it was decided not to do any intervention in the 12th grade, the exams year.

3.3. Modelling the new solution

Each one of the first three meetings was dedicated to a NOSK teaching approach (HOS/SI/SSI). Their content was both original tasks and adjustments from the literature. The PD-program began with an induction to NOSK aspects.

1st meeting: HOS approach. The evolution of the concept "pressure" from 1638 to 1662 was presented. The choice was made firstly because the same phenomena are interpreted through different inferences: a) the partial abhorrence to a vacuum (Galileo), b) the weight of the air (Torricelli and Pascal), the infamous experiment on Puy-de-Dome being a crucial experiment and c) the "springs of air" (Boyle) developing the air-pump for the crucial experiment [31] and secondly because of the intense effect of the new philosophical stream (mechanical philosophy). Before the presentation, teachers were asked to recognize and note down NOSK aspects. By the end of the lesson, these aspects were summarized in a table.

2nd meeting: SI approach. Teachers participated in a black box activity [29] and recognized NOSK aspects during its solution. Black boxes' computer applications and other classification tasks were also included [6]. The meeting ended with a task where different inferences came from the same observations[1].

3rd meeting: SSI approach. The topics were a) different inferences from interpreting the same diagram for the reasons of climate change [20], and 2) advantages and disadvantages of using nuclear energy versus coal for electricity [46].

3.4. Examining and Testing the new solution

Teachers knew from the announcement of the program that they had to present a lesson plan as a final assignment, based on any school unit they wished, using NOSK aspects explicitly. The assignment was not mandatory, so that teachers with increased responsibilities were not discouraged to participate in the program.

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[1] https://scienceonline.tki.org.nz/Nature-of-science/Nature-of-Science-Teaching-Activities/Conflicting-theories-for-the-origin-of-the-Moon

Even though the assignment was voluntary and occurred on the end of May, a season with increased responsibilities for teachers, 30 out of 49 teachers delivered 29 lesson plans (2 teachers cooperated). Twenty-one of them were successful. The other 8 teachers' lesson plans were either an incomplete application of the new model of activity or the old model remained. Seven of them were presented in the 4th meeting. Discussion followed each presentation between teachers and researchers. Questions, claims, different opinions and suggestions were heard. The program ended with teachers asking for a 5th meeting by next winter, after they would teach NOSK in their classes.

3.5 Implementing the new solution

Throughout school year 2018—19, the first of the writers observed 9 of 49 teachers in the classroom, in order to study how they embedded NOSK in their teaching. It was found that, in some occasions, there was disharmony between the suggested tasks for NOSK teaching and the daily school practice (tertiary contradiction). That was the theme of the 5th meeting (December 2018), where two videotaped lessons on NOSK teaching — of different character — were shown, analyzed and discussed. Through them and teachers' experience in NOSK teaching, contradictions appeared for some teachers between the object of the activity and its motive, which lead to upgrades of the activity.

3.6. Reflecting on the Process

The final 6th meeting took place on May 2019, where teachers whose lessons the first author observed, presented their experience to the plenary and discussion followed. Quaternary contradictions arose, directly connected to other network activity systems (See Figure 2), like the request to make changes in the curriculum and the textbooks. Teachers, having a first-hand experience themselves, have affected their schools and prepare for change.

3.7. Consolidating and Generalizin the new practice

We would reach that stage when the curriculum changes and NOSK aspects are included.

Evaluation of the program — results

In order to evaluate the program, participant teachers were given the following tasks: a) before the 1st meeting they completed the VNOS-D+ questionnaire (pre-test) and 10 of them gave semi-constructed interviews, b) in the 4th meeting they: i) delivered their designed lesson plan on NOSK teaching, ii) completed a post-training evaluation form and iii) completed the post-test VNOS-D+ questionnaire, c) throughout school year 2018—19 classroom observations took place on how NOSK is integrated in the Greek school reality, using a protocol (and taken field notes) d) in the 5th meeting they completed a questionnaire on the usability of the three approaches in NOSK teaching and e) in the 6th meeting they wrote a report on their activities through the whole year, any difficulty they came through, what helped them to overcome it and how they regard their results.

All the above are analyzed and initial results show that the PD-program improved their knowledge on NOSK, created a positive view towards its integration in the classroom, trained them to design their own lesson plan and teach NOSK. It is also positive that they asked for more interactive meetings, in order to exchange their views after their teaching experience.

Regarding the three approaches, they mention that a) students want variety in the tasks they are occupied with and b) more chances are given to teachers to embed NOSK aspects. Most of them mention that HOS is useful for teachers' training on NOSK, SI for students to perform tasks, and SSI is desirable for teaching to scientific literate citizens.

References

1. Abd-El-Khalick F. Lederman N.G. Improving science teachers' conceptions of nature of science: a critical review of the literature, *International Journal of Science Education*, 2000, Vol. 22 (7), pp. 665—701.

2. Akerson V. Hanuscin D. Teaching Nature of Science Through Inquiry: Results of a 3-year professional development program, *Journal of Research in Science Teaching*, 2007. Vol. 44 (5), pp. 653—680.

3. Allchin D. Evaluating knowledge of the nature of (whole) science. *Science Education*, 2011. Vol. 95 (3), pp. 518—542.

4. Allchin D. Andersen, H.M. Nielsen, K. Complementary Approaches to Teaching Nature of Science: Integrating Student Inquiry, Historical Cases and Contemporary Cases in Classroom Practice. *Science Education*, 2014. Vol. 98(3), pp. 461—486.

5. Barma S. A sociocultural reading of reform in science teaching in a secondary biology class, *Cultural Stud of Science Education*, 2011. Vol. 6 (3), pp. 635—661.

6. Bell R. *Teaching the Nature of Science through Process Skills, Activities for Grades 3—8*, 2008, Pearson Education Inc.

7. Bell R. Maeng, J. Peters, E. Teaching About Scientific Inquiry and the Nature of Science: Toward a More Complete View of Science. *The Journal of Mathematics and Science: Collaborative Explorations*, 2013. Vol. 13, pp. 5—25.

8. Blunden A. Unit of Analysis, 2013, Retrieved from http://wiki.lchc.ucsd.edu/CHAT/Unit_of_Analysis.

9. Clough M. Teaching the Nature of Science to Secondary and Post-Secondary Students: Questions rather than tenets, *The Pantaneto Forum*, 2007, Issue 25.

10. DeWitt J. Osborne J. Supporting Teachers on Science-focused School Trips: Towards an integrated framework of theory and practice, *International Journal of Science Education*, 2007. Vol. 29 (6), pp. 685—710.

11. Eastwood J.L. Sadler T. Zeilder D. Lewis A. Amiri L. Applebaum S. Contextualizing Nature of Science Instruction in SocioScientific Issues. *International Journal of Science Education*, 2012. Vol. 34 (15), pp. 2289—2315.

12. Engeström Y. Learning by expanding: An activity-theoretical approach to developmental research. Helsinki: Orienta-Konsultit, 1987.

13. Engeström Y. Expansive Learning at Work: toward an activity theoretical reconceptualization. *Journal of Education and Work*, 2001. Vol. 14 (1), pp. 133—156.

14. Engeström Y. Developmental work research: Expanding activity theory in practice. Lehmanns Media, Berlin, 2005.

15. Engeström Y., Sannino A. Studies of expansive learning: Foundations, findings and future challenges. *Educational Research Review*, 2010. Vol. 5, pp. 1—24.

16. Engeström Y. Foreword: Making use of activity theory in educational research. In Gedera D. (eds.), *Activity Theory in Education*, 2016, Sense Publishers, The Netherlands, pp. vii—ix

17. Erduran S., Dagher Z. Reconceptualizing the nature of science in science education. Dordrecht, The Netherlands: Springer, 2014.

18. Hasan H. Kazlauskas, Activity Theory: who is doing what, why and how. In Hasan H. (eds.), *Being Practical with Theory: A Window into Business Research.* Wollongong, Australia: THEORI, 2014, pp. 9—14.

19. Igira F.T. Gregory J. Cultural Historical Activity Theory. Handbook of Research on Contemporary Theoretical Models in Information Systems, 2009, pp. 434—454.

20. IPCC: Climate Change 2001: The Scientific Basis. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change [Houghton, J.T., Y. Ding, D.J. Griggs, M. Noguer, P.J. van der Linden, X. Dai, K. Maskell, and C.A. Johnson (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 2001, pp. 881

21. Jarvis P. Adult Education and Lifelong Learning: Theory and Practice. New York: Routledge, 2010, pp. 106—110.

22. Jóhannsdóttir T. Responsive Practices in Online Teacher Education. *Contemporary Approaches to Activity Theory: Interdisciplinary Perspectives on Human Behavio.* Publisher: IGI Global, Editors: Thomas Hansson, 2014.

23. Kampourakis K. The "general aspects" conceptualization as a pragmatic and effective means to introducing students to nature of science. *Journal of Research in Science Teaching,* 2016. Vol. 53 (5), pp. 667—682.

24. Kaptelinin V. Nardi. B. Acting with technology: Activity theory and interaction design. MIT Press, Cambridge, 2009.

25. Kaptelinin V., Nardi B. Activity Theory in HCl: Fundamentals and reflections (J.M. Carroll, Ed.). Synthesis, Morgan, Claypool, 2012.

26. Kolokouri E., Theodoraki X., Plakitsi K. A Cultural Historical Activity Theory Approach In Natural Sciences Education Laboratory Lessons Towards Reforming Teachers Training, *World Journal of Education*, 2012. Vol. 2 (2), pp. 23—40.

27. Kornelaki A. Educational program design in the field of science education for Informal settings under the prism of activity theory. Doctoral thesis. Ioannina, 2018

28. Koumara A., Plakitsi K. The nature of science in lower secondary school: the case of Greece. *Science Education: Research and Praxis*, 2017. Vol. 64—65, pp. 104—114.

29. Koumara A., Plakitsi K. Black Boxes in teaching Nature of Science aspects in Secondary Education, *3rd National Conference for Educational Resources on Science and Mathematics*, 2018, e-proceedings, pp. 409—418.

30. Koumara A., Plakitsi K. An Evaluation study of the extent that Nature of Scientific Knowledge aspects are included in science classes of Greek Secondary Schools, Florina, ENEFET National Conference, 2019.

31. Koumara A. History of pressure implemented in a Nature of Science Professional Development Program for Science Teachers, IHPST proceedings, Thessaloniki, 2019, pp. 396—405.

32. Lederman N.G., Abd-El-Khalick F., Bell R.L., Schwartz R.S. Views of Nature of Science Questionnaire: Toward Valid and Meaningful Assessment of Learners' Conceptions of Nature of Science. *Journal of Research in Science Teaching*, 2002. Vol. 39 (6), pp. 497—521.

33. Lederman J.S. Teaching scientific inquiry: Exploration, directed, guided, and open-ended levels. *National Geographic Science: Best Practices and Research Base.* Hapton-Brown, 2009, pp. 8—20.

34. Lederman N.G., Antink A., Bartos S. Nature of Science, Scientific Inquiry and Socio-Scientific Issues Arising from Genetics: A Pathway to Developing a Scientific Literate Citizenry. *Science & Education*, 2014. Vol. 23 (2), pp. 285—302.

35. Lederman N.G. Contextualizing the Relationship Between Nature of Scientific Knowledge and Scientific Inquiry Implications for Curriculum and Classroom Practice, *Science & Education*, 2019. Vol. 28, pp. 249—267

36. Matthews M.R. Editorial, Science & Education, 1997. Vol. 6, pp. 323—329.

37. Matthews M.R. Changing the focus: From nature of science (NOS) to features of science (FOS). In Khine M.S. (ed.), *Advances in nature of science research: Concepts and methodologies.* Dordrecht, The Netherlands: Springer , 2012, pp. 3—26.

38. Matthews M. R. Science teaching: The role of history and philosophy of science. (20th anniversary revised and expanded edition). New York, NY: Routledge, 2015.

39. McComas W. Understanding how Science works: The nature of science as the foundation for science teaching and learning. *The School Science Review*, 2017. Vol. 98 (365), pp. 71—76.

40. Piliouras P., Plakitsi K. Discourse Analysis of Science Teachers Talk as a Self-reflective Tool for Promoting Effective NOS Teaching. *World Journal of Education*, 2015. Vol. 5 (6), pp. 96—107.

41. Piliouras P., Plakitsi K., Seroglou F., Papantoniou G. Teaching Explicitly and Reflecting of Elements of Nature of Science: a Discourse-Focused Professional Development Program with Four Fifth-Grade Teachers. *Research in Science Education*, 2017, pp. 1—28.

42. Plakitsi K. Cultural-Historical Activity (CHAT) Framework and Science Education in the Positivistic Tradition. In Plakitsi K. (ed.), *Activity Theory in Formal and Informal Education*, Sense Publishers, pp. 17—26

43. Plakitsi K., Stamoulis E., Theodoraki X., Kolokouri E., Nanni E., Kornelaki A. Activity Theory and Science Education. Athens: Gutenberg, 2018.

44. Rodrigues A., Camillo J., Mattos C. Cultural-Historical Activity Theory and Science Education: Foundational Principals and Potentialities. *Scientific Papers*, 2011. Vol. 778, pp. 191—200.

45. Roth W.M., Lee Y.J. "Vygotsky's neglected legacy": Cultural-historical activity theory. *Review of Educational Research*, 2007. Vol. 77 (2), pp. 186— 232.

46. Sadler T., Barab S., Scott B. What do Students Gain by Engaging in Socioscientific Inquiry? *Research in Science Education*, 2007. Vol. 37, pp. 371—391.

47. Schwartz R., Crawford B. Authentic Scientific Inquiry as Content for Teaching Nature of Science. In Flick L.B. (eds.), *Scientific Inquiry and Nature of Science: Implications for Teaching, Learning and Teacher Education.* N.G: Springer, 2006, pp. 331—355.

48. Stefanidou C., Skordoulis K. Primary Student Teachers' Understanding of Basic Ideas of Nature of Science: Laws, Theories and Models. *Journal of Studies in Education*, 2017. Vol. 7 (1), pp. 127—153.

49. Stetenko A. Science education and transformative activist stance: Activism as a quest for becoming via authentic-authorial contribution to communal practices. In Bryan L. (eds.), *13 Questions: Reframing Education's Conversation: Science*. NY: Peter Lang, 2017, pp. 33—47.

50. van Dijk E.M. Portraying real science in science communication. *Science Education*, 2011. Vol. 95 (6), pp. 1086—1100.

51. Zeidler D.L., Sadler T. An inclusive view of scientific literacy: Core issues and future directions of socioscientific reasoning. In Linder C. (eds.), *Promoting scientific literacy: Science education research in transaction.* New York: Routledge/ Taylor & Francis Group, 2011, pp. 176—192.

Применение культурно-исторической теории деятельности для выстраивания программы повышения квалификации для греческих учителей «Основы научного познания» как цикла экспансивного обучения

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В статье описана разработка, внедрение и оценка программы повышения квалификации для учителей естественнонаучных дисциплин «Основы научного познания» (ОНП), спроектированной в соответствии с принципами экспансивного обучения. Предварительный анализ показал, что ОНП напрямую не представлены в школьном курсе естественнонаучных предметов и что их интеграция может помочь сделать предмет более интересным для учеников (фаза вопросов). Обзор литературы показывает, что существует три подхода к преподаванию ОНП: через курс «История наук», через курс «Научное изыскание» и курс «Вопросы науки и общества». Программа повышения квалификации включает в себя все три, предоставляя возможность 49 учителям-участникам выбирать из нескольких альтернативных способов интегрирования ОНП в школьные предметы, в соответствии с культурно-историческими характеристиками сообщества обучающихся и принципами образования взрослых (фазы анализа и моделирования). Учителя исследовали и апробировали новую модель (четвертая фаза) в рамках добровольных заданий по проектированию и представлению плана занятий. Фаза внедрения заключается в реализации придуманного непосредственно в классе, пятой встречи и завершающей шестой (фаза рефлексии). Возникающие в процессе противоречия используются для преобразования всей системы деятельности. На всех этапах проводится специальная работа по оцениванию. Полученные к настоящему времени результаты свидетельствуют об успешности программы повышения квалификации.

Ключевые слова: цикл экспансивного обучения, основы научного знания, непрерывное профессиональное развитие, общеобразовательные школы.

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Contemporary Adolescence through the Prism of the Cultural-Historical Theory: on the Issue of Experimenting with Roles

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The article focuses on the main aspects of understanding adolescence in the framework of the Cultural-Historical Theory. Such concepts as new formations, social situation of development and leading activity are discussed in relation to this age period. It is argued that controversies about the content of development in adolescence are due to the fact that so far no "ideal form" has been clearly indicated for this age. An attempt is made to discuss a little-known text by L.S. Vygotsky – "Concrete human psychology" – where the issue of social roles and the importance of investigating them in adolescence was highlighted. L.S. Vygotsky interpreted the notion of role as a key mechanism, responsible for the regulation of higher mental functions in various social interactions. For a number of reasons – particularly, historical – the concept of role has long remained almost neglected in Russian psychology. Thus, the article draws attention to the issue of role development in adolescence and focuses on the problem of experimenting with roles as a particular system of activities during this age period.

Keywords: adolescence, psychological age, new formations, social situation of development, leading activity, drama, ideal form, social role, experimenting with roles, role development.

Cultural-Historical Theory: main ideas

Cultural-Historical Theory is a concept that focuses *on the development of consciousness*, or, more particularly, on *the development of higher mental functions.* The key word here is ***development,*** as, in contrast to traditional psychological concepts, Cultural-Historical Theory (CHT) does not study the "stiffened" (already mature) products of human psyche, but the very process of their formation — in other words, ***genesis***. Understanding development in the framework of the CHT is rooted in German classical philosophy and, particularly, in Marxism. Therefore the founder of the CHT L.S. Vygotsky insisted that development represents *a holistic, lasting change of a system*, which should not be reduced to the development of its parts: *"development does not occur in a way that separate aspects of the child's personality change, resulting in the reorganization of the personality in general, — there is an inverse relationship in development: the child's personality changes as a whole in its internal constitution, and the laws of the changes of this whole determine the movement of each of its parts"[1]* [6, p. 256]. Thus, in the logic of the CHT, development results not in the emergence of new functions per se, but in the emergence of ***a new system of functions and relationships***.

L.S. Vygotsky formulated the general genetic law of development that underlies his theory: *"... every function in the child's cultural development appears on the stage twice, that is, on two planes — first on the social plane and then on the psychological plane; first among people as an inter-psychological category and then within the child as an intra-psychological category"* [5, p. 145]. According to M.G. Yaroshevsky, in contrast with J. Piaget, who referred to the image of a ladder to illustrate the idea of the stages of development, L.S. Vygotsky used the word "stage" as a dramaturgical concept, implying that the "drama of development" occurs as the result of collision between two "planes": individual and social [24].

N.N. Veresov draws attention to the concept of "category" that Vygotsky uses in the formulation of the general genetic law (and that was unfortunately omitted in the majority of translations into English). Veresov argues, that in Russian pre-revolutionary theatre vocabulary[2] the word "category" meant a *"dramatic event,*

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[1] All the translations from Russian in this paper are made by the author.
[2] In his youth L. Vygotsky was very much interested in theatre — particularly, he wrote critical reviews. According to M.G. Yaroshevsky, this interest later led Vygotsky to psychology [24].

a collision of characters on the stage" [30, p. 13—30]. In his opinion, Vygotsky *"had to use the word "category" to emphasize the character of the social relation, which becomes the individual function. The social relation he means is not an ordinary social relation between the two individuals. This is a social relation that appears as a category, i.e. as an emotionally colored and experienced collision, the contradiction between the two people, the dramatic event, drama between two individuals. Being emotionally and mentally experienced as a social drama (on the social plane) it later becomes the individual intra-psychological category"* [30, p. 6].

"The drama of development" for Vygotsky is not *"impersonalized external circumstances, but a dynamic system of mutual orientations, motivations and actions, which has its own "story line" (plot) and where personality is shaped as a participant of drama"* [24, p. 273]. The key constituent of this system is *perezhivanije*, which Vygotsky understands as a prism that *"determines the influence of the environment on the child's psychological development"* [4, p. 75].

For Vygotsky "perezhivanije" represents a unique bi-directional (both individual and social) unit that determines how external circumstances are subjectively experienced and lived through by the child. In other words, social situation as the source of development influences the developmental process, but it is *perezhivanije that gives direction to this influence* [4].

Vygotsky's idea *about the interaction of the real and ideal forms* is essential for understanding the logic of development in the framework of the CHT. According to Vygotsky, a child as a bearer of the "real" (present) form develops in the process of interaction with the adult (or an older child) as with the bearer of the "ideal" (already developed) form. This interaction is always mediated by cultural tools — that means, it is *sign-mediated*. It is in the very process of interaction between the "real" and the "ideal" forms that the child gradually acquires (internalizes) those functions that are already developed in the adult, and this determines *"the highest originality"* of human development, since in no other type of development *"it occurs that at the moment when the primary form emerges ... there is already the highest, ideal form, that should appear as the result of development, and that it directly interacts with the first steps that the child makes on the way of development of this primary or seed shape form"* [6, p. 395]. The interaction of the "real" and "ideal" forms creates the *zone of proximal development*, which is determined by the boundaries of what a child can do on their own and what — with the assistance of adult: *"Zone of proximal development — is the distance between the child's actual level of development, which is determined by the problems that a child can solve on their own, and the level of possible (potential) development, which is determined by the problems that a child can solve under adult guidance or in collaboration with more intelligent peers"* [7, p. 42]. *Zone of proximal development* represents the field of possibilities that the child discovers in the process of cooperation with the adult and that he/she will internalize in the process of this interaction: *"What the child is capable of doing today in collaboration, is what he/she will*

be capable of doing on their own tomorrow" [6, p. 264]. According to L.F. Obuchova, the concept of the *zone of proximal development* «*is a logical consequence of the general genetic law of development of higher mental functions, which first emerge in joint activity, in cooperation with other people, and gradually become the subject's inner mental processes. When a mental process emerges in joint activity, it is in the zone of proximal development; after its formation, it becomes a form of the subject's actual development* [15, p. 184].

Thus, in this sense Vygotsky considered social environment as a source of development, where any higher mental function or process first emerge as *a social relation between people*. In the process of interaction between the "real" and "ideal" forms this relation is later "internalized", that is, it moves from the external to the internal plane, and turns into the child's personal ability. It is important to highlight that not every social relation is "internalized", but only the relation that emerges an emotionally colored contradiction, as *"a small drama between people"* [3]. That is why Vygotsky argues that *"Drama is the dynamics of personality"* [3] and that development may be interpreted as *"a series of dramatic events"* [3]. Thus, the essence of the experimental genetic method, elaborated by Vygotsky for studying the development of consciousness, consists in *"experimental unfolding of a higher mental process into the drama, which happened between the people"* [5, p. 145].

Psychological age — a unit of analysis of the child's development

While talking about characteristic traits of a child's development in different periods, L.S. Vygotsky used the notion of *"psychological age"*, which he defined as *"a relatively closed loop of the child's development that has its particular structure and dynamics"*. The concept of *"psychological age"* was introduced by Vygotsky as a unit of analysis of the child's development. He argued that different psychological ages *"represent such kind of a holistic dynamic entity, such kind of structure, that determines the role and the importance of each particular line of development"* [6, p. 256].

Based on the character of development, Vygotsky divided psychological ages into two groups — *lytical* (stable), when development takes place in a form of *"microscopic changes in the child's personality"* [6, p. 249], that are accumulated and then reveal themselves in new formations, and *critical,* when development acquires a rapid, *"sometimes disastrous character"* and reminds *"a revolutionary scenario both in the speed and in the content of the changes taking place"* [6, p. 249]. Thus, critical ages are particular periods when "qualitative leaps in development" take place, leading to the reorganization of the existing system of links and relations. Vygotsky insisted on a dialectical understanding of crisis as of an inseparable unity of constructive and destructive aspects, where maturation of the "novel" is impossible without painful destruction of the "old". Therefore, in the logic of the

Cultural-Historical Theory, crisis is regarded as an integral constituent of the developmental process —without crisis there is no development.

According to K.N. Polivanova, Vygotsky's idea about the alternation of critical and lytical periods reflects **the dynamics of the mutual transitions of the "real" and "ideal" forms**. In her opinion, the crisis may be interpreted as *"an ultimate exposure, first of all for the child himself, of the always implicitly present co-existence of the real and ideal forms"* [17].

For describing the structure and dynamics of psychological ages L.S. Vygotsky introduced two more concepts — **"psychological new formation"** and **"social situation of development"**. Let us have a closer look at them.

Under **"psychological new formation (neoformation)"** Vygotsky understood *"a new type of the personality's structure and activity, those mental and social changes, that first occur at this age period and in the main and essential determine the child's consciousness, their relation to the environment, their internal and external life, the very course of their development at this stage"* [6, p. 248]. The key word here is "personality's structure", as the notion of "new formation" does not imply separate psychological functions, but *systems of functions and relations.*

L.S. Vygotsky used the term **"social situation of development"** to indicate *"an absolutely peculiar, specific for this age, exclusive, unique, one and only relationship between the child and the surrounding environment, first of all — social"*. Vygotsky argued that social situation of development *"represents the starting point for all the dynamic changes that take place in the course of this age period. It determines entirely and fully the forms and the ways, which the child follows in acquiring new and novel characteristics of personality, drawing them from social reality as from the main source of development — the very way itself, how social becomes individual"* [6, p. 258—259]. Thus, for Vygotsky, not every kind of relation between the child and the environment can be indicated by the notion of the social situation of development, but a very particular kind of relation, represented in the interaction of the "real" and "ideal" forms.

While talking about the "real" and "ideal" forms L. Vygotsky was mostly using the concept of "interaction". However, in some of his texts the concept of activity ("deyatelnost'") also appears. According to D.V. Lubovsky, Vygotsky, with *"his inherent Mozartian easiness",* left a sketch of a new direction of research that was later elaborated by his disciples — particularly, by A.N. Leont'ev — and became known as the "Activity Approach" [13]. *"We can certainly argue, whether the "psychological activity theory" of A.N. Leont'ev and his ... colleagues is a direct sequel and further elaboration of Vygotsky's understanding of activity ..., but there are no doubts that Vygotsky had repeatedly expressed these ideas"* [11, p. 8].

According to V.V. Davydov, A.N. Leont'ev, *"without distorting anything in the essence of Vygotsky's approach to the conditions of human development, replaced the word "social situation" by the notion of "development of activ-*ity*"* [9, p. 32]. Leont'ev argued that for every age period the so-called "leading activity" is to be indicated, which determines the course of development on a concrete age stage. The leading activity has the following characteristics [10]:

1) in this activity emerge and differentiate other, new types of activity;

2) in this activity certain mental processes are formed or reorganized;

3) it is on this activity that the main psychological changes of the child's personality, observed at a given period of development, depend.

Thus, according to A.N. Leont'ev, *"leading activity — is an activity, whose development determines the main changes in mental processes and psychological peculiarities of the child's personality at a given stage of their development"* [10, p. 285—286]. Interestingly enough, for a number of researchers the concept of the "leading activity" is identical to that of "social situation of development". For A.N. Leont'ev himself *"these two concepts — "leading activity" and "social situation of development" are almost synonyms"* [2]. V.V. Davidov shared a similar point of view, regarding the notion of the "leading activity" as a *"direct concretization of the notion of a child's social situation of development in a particular age"* [2].

According to D.V. Lubovsky and N.N. Veresov, for L.S. Vygotsky himself *"these two concepts differed in content and were intended for indicating different kinds of psychological reality"* [13], [2]. However, this discussion is beyond the content of this paper. The majority of contemporary scholars regard these concepts as independent, but interrelated characteristics of each age period (together with the concept of "new formation").

It is important to highlight that all the notions discussed — psychological new formations, social situation of development and leading activity — may be interpreted in the logic of the linear-stage approach, where development is regarded as a schematic process of change of the leading activities, which results in the emergence of psychological new formations and triggers shifts in the social situation of development. This point of view seems to be shared by many scholars who claim to elaborate CHT. However, in the light of Vygotsky's idea about drama and dialectical character of the process of development, such interpretation is clearly reductionist. D.B. El'konin himself constantly emphasized that the leading activity must not be considered in isolation from other activities that take place on different age stages: *"every period represents a system of various types of activities, with each type having a particular function"* and the leading activity *"being central in the structure and system of these activities"* [22, p. 510].

New formations, social situation of development and leading activity are unique for each psychological age. However, adolescence is probably the most controversial among the age stages, since in the framework of CHT there is still no consensus on these key constituents of this period of development. For example, L.S. Vygotsky indicated three new formations of adolescence — **theoreti-**

cal thinking, self-awareness and **reflection**[3]. Later such scholars as D.B. El'konin and T.V. Dragunova added to this list the so-called **"feeling of adulthood**[4]**"**, however, many researchers do not regard it as a new formation.

This article focuses on the classical approaches to leading activity of adolescents, existing in the framework of CHT, as well as on the attempts to give a novel interpretation to this phenomenon in the light of contemporary socio-cultural realities.

Contemporary views on the issue of leading activity in adolescence

The concept of "leading activity", introduced by L.S. Vygotsky, underlies the periodization of development, elaborated by D.B. El'konin. Describing the general direction of development in childhood, El'konin indicated a contradiction in the very system of the leading activity, which reveals itself between two aspects of the activity — **operationally-technical** and **emotionally-motivational**. In the process of the child's development these two aspects rise into the front one by one, triggering alternation of leading activities and determining the course of development on every particular age stage: *«All of the three ages — early childhood, childhood and adolescence — are built on the same principle and include two naturally interrelated periods. The transition from one age period to the other occurs with the apparition of discrepancy between operationally-technical possibilities of the child and those tasks and motives that they had emerged from»* [23]. Thus, each stage of childhood consists of two interrelated periods: during the first period the child primarily acquires tasks, motives and norms of human activity, while during the second period — means of actions with objects. Therefore, El'konin indicates two types of systems: system "child — social adult" and "child — social object" [23]. The alternation of these two types of systems is accompanied by the alternation of the leading activities in the course of the child' development.

As we know, D.B. El'konin considered that the leading activity of adolescence is the "*activity of personal communication*", which refers to the system "child — social adult" and consists in *"building relations with peers on the basis of particular moral and ethical norms"* [23, p. 17]. However, according to N.N. Veresov, strictly speaking, communication may not be regarded as a leading activity, as in A.N. Leont'ev's logic, leading activity should have a particular structure (tasks, actions, operations etc.), which has not been determined for the activity of communication [2]. K.N. Polivanova shares the same point of view, arguing that D.B. El'konin did not give an analysis of communication in the logic of the activity approach, leaving aside a whole range of essential questions: *«The issue of the mechanism of how the external activity of communication (interpsychological form) turns into a particular personal ability (intra-*

psychological form) remains unclear, as well as the issue of what ability can be regarded as a new formation of adolescence. Moreover, the question about the very content of the personal communication remains open (we do not know what the conversation between adolescents is about)» [16, p. 14].

Thus, many scholars do not share D.B. El'konin's point of view about personal communication being the leading activity of adolescence. The alternatives are: **socially-significant (socially meaningful)** activity suggested by V.V. Davydov, **socially-useful activity** proposed by D.I. Feldstein, **socially-psychological experimenting** indicated by G.A. Zuckerman, and **project activity** elaborated by K.N. Polivanova. There is also a point of view that adolescence is characterized by a number of various types of activities (V.P. Zinchenko, O.V. Lishin, B.G. Mesheryakov).

Interestingly enough, while discussing the leading activity of adolescence itself, many scholars agree on its essential characteristics. A.L. Liberman for example argues that the leading activity of this age period has to be *"play-like in its type, socially-modelling in its form and socially-meaningful in its content"* [12, p. 122]. It also should allow adolescents to try themselves in various socially meaningful roles and positions. K.N. Polivanova also highlights that the leading activity of adolescence *"has to ensure the formation (or emergence) of a particular type of subjectivity (similar to the one emerging in play)"* [16, p. 14].

The question is: why there are so many different opinions about the issue of the leading activity in adolescence in the framework of the same scientific school? There are at least two explanations for that:

1. As we know, the leading activity emerges in lytical, or stable ages. If, following L.S. Vygotsky, we consider adolescence a lytical period, then we may indicate its leading activity (keeping in mind that it is central in **the system** of other activities of this age). However, if we consider adolescence a critical period — following e.g. L.I. Boghovitch — then, we are not supposed to indicate any leading activity.

2. For indicating the leading activity of adolescence it is necessary to determine the "ideal form" of this period of development. If for early childhood "theoretical relation to reality" has been indicated and described as the ideal form (V.V. Davydov), this has not been done in relation to adolescence. Thus, one of the main questions remains open in relation to adolescence: interaction with which "ideal" form creates the "zone of proximal development" in adolescence and determines the course of development at this age period?

On the one hand, the answer to the question about the "ideal" form of adolescence seems to be obviously connected with the process of transition to the "world of adults" — that is, with socialization. On the other hand, while indicating socialization as one of the main tasks of this age period, almost none of the scholars indicates the

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[3] Понятийное мышление, самосознание и рефлексия.
[4] Чувство взрослости.

mechanisms of this process and does not describe it in the context of adolescent activities.

Thus, taking into consideration what has been said above, it is extremely interesting to discuss the issue of development in adolescence, considering the fact that adolescents' socialization presupposes their entering ***the system of role relations***. It is by acquiring new roles that adolescent becomes part of the adult world and tries to find their place in it. In this context ***the system of roles***, existing in the culture, where adolescent is brought up, may be regarded as the "ideal" form of adolescence. Interiorization of these roles determines the content of development in adolescence and takes place in the activity, which may be coined as "***experimenting with roles***". Experimenting with roles may be considered not just the leading activity of adolescence, but a system of activities, connected with "trying on" various social roles and types of role interaction [20].

Let us have a closer look at the possible interpretations of the concept of "role" and "role relationships" in the system of CHT.

Role as the "ideal" form of adolescence

According to J. Heiss, all the diversity of the existing role theories falls into two main groups, representing either structuralism or interactionism [27]. The first group relies on a sociological understanding of role behavior and studies its objectively observed manifestations (R. Linton, R. Merton, T. Parsons). The second group of theories mostly focuses on subjective, or personal aspects of role behavior, particularly on the social and psychological mechanisms and patterns of human's perception and realization of various roles (G.H. Mead, H. Blumer, T. Shibutani). A specific group of role theories is represented by the socio-dramaturgical approach, elaborated in the works of E. Goffman and his followers, who draw a bold parallel between social reality and drama, describing social interaction in terms of theatre (actor, stage etc.).

In Russian psychology the issue of roles was neglected for a long time. The interest for role concepts arose only in the 60—70s, and for many years the relation to the very idea of social roles remained radically negative. For some reason (one of them is connected with inaccurate translations of foreign texts into Russian), for a long time the term "social role" in Russian psychology was associated with a mask, which an individual *"puts on, hiding and breaking their real personality"* [14, p. 10—11]. Though this idea is far from the content of the majority of role theories, a negative attitude to role concepts has dominated in Russian psychology for years. E.g. A.N. Leont'ev wrote: *"... The idea of reducing personality to a set or "roles", performed by the human, is, despite all the reservations of its advocates, one of the most terrible"* [10, p. 193]. And further: *"The key objections against "role theories" are not the ones, which criticize particular aspects of understanding the place of roles in the structure of personality, but those, which reject the very idea of connecting personality with programmed behavior"* [10, p. 193].

Half a century later, the majority of Russian scholars still avoid speaking about roles in the context of developmental psychology (probably, with the exception of role in child play). The concept of role in Russian scientific tradition is primarily used by sociologists or by social psychologists, who regard it as a social function. The big Russian psychological dictionary defines role as *"forms of behavior (actions), expected from the subject due to their belonging to certain groups or social positions"* [1, p. 579]. Such definition reduces role exclusively to a socially determined pattern, which the individual reproduces in the process of social interaction. And each human is believed to have a particular "set" of roles that he or she performs depending on the social situation. Apparently, this kind of interpretation completely ignores personal (individual) aspects of role behavior — role is regarded exclusively as an instrument, that the human uses for efficient functioning in society. From this perspective there is no way to speak about development — thus, various aspects of role behavior are by default excluded from the field of interests of developmental psychology. However, could that be true, that roles, which literally permeate human existence, mediating social interactions, represent nothing but masks, which force the individual to passively perform programmed behavioral patterns? Does not it look like pure reductionism? And is there, probably, any other perspective, allowing to consider the issue of role in the context of development?

Strange as it might seem, the answer to this question was given by L.S. Vygotsky. It was the founder of the CHT himself who became one of the first Russian scholars to consider the issue of social role in an unprejudiced way. In his work "Concrete human psychology", which is almost unknown, L.S. Vygotsky pointed to the role as to ***a mechanism that regulates the relationship between higher mental functions***: *"Social roles (judge, doctor) determines the hierarchy of functions: that is, functions change hierarchy in different spheres of social life. Their collision = drama"* [3, p. 1030]. For explaining this idea Vygotsky gives an example of a judge, who has to pass judgement on his unfaithful wife and faces a collision of *"the professional complex and family complex"*. As a judge, he condemns his wife's wrong behavior (*"thinking regulates passion"*), as a husband he keeps loving her (*"passion prevails over thinking"*). The collision of the two "complexes" is a drama, which requires resolution. And, as we know, according to Vygotsky, drama is the key mechanism of development [3, p. 1030].

Thus, L.S. Vygotsky offers a completely different view on the issue of social role, which makes the idea of "masks" and "programmed behavior" in relation to roles totally unacceptable. For Vygotsky, social role represents a link between social environment and personality. Thus, on the one hand, roles regulate the hierarchy of functions depending on the social situation, determining certain aspects of the individual's behavior (e.g. the judge *has to* impose a sentence). On the other hand, the resolution of the emerging role collisions ("dramas" that are unavoidable since the individual is included into a complex system of roles and role relations), depends on the human, who

constantly faces the necessity of choice (what will prevail: professional duty or personal attitude?)

From here we can make at least two important conclusions. 1. Rejecting the interpretation of role as of an imposed "mask", it is possible to speak about the inseparable unity of personality and their roles. Role behavior is always refracted through the prism of personality. 2. "Role dramas" (conflicts, collisions) may be regarded as an indispensable constituent of the process of development.

Thus, studying "role dramas" is particularly important in adolescence, when the human for the first time gets actively involved in the system of role relations. L.S. Vygotsky draws attention exactly to the necessity of investigating the hierarchy of higher mental functions, and, consequently, roles, as their regulating mechanisms, in relation to adolescence: *"The task in adolescents ... to study different spheres of behavior (professional complex etc.), the structure and hierarchy of functions, their relations and collisions"* [3, p. 1031]. Therefore, Vygotsky points out, that investigating the hierarchy of functions, regulated by roles in various spheres of adolescent behavior, represents one of the key research aims. Without resolving this task, it is impossible to answer the question about the content of development at this age period.

Despite the fact that at the turn of the century numerous Russian scholars turned to the issue of roles (G.M. Andreeva, L.P. Bujeva, A.L. Groijsman, M.I. Enikeeva, L.G. Ionin, E.I. Kravchenko, R. Ch. Shakurov), the task, indicated by L.S. Vygotsky in relation to adolescence, still has not been resolved. This fact can be partly explained by the sociological understanding of role, which still dominates in contemporary Russian psychology, and, thus, by very few attempts to explain role behavior in its connection with personality. However, the necessity to study role development is imposed by the everyday reality of contemporary adolescent practices. As one of the leading Russian scholars of adolescence A.M. Prihozhan argued in 2015, *"experimenting with roles literally permeates adolescents' life — from testing the waters of allowable behavior, to setting and virtual resolving of life-meaningful tasks. The latter most often reveals itself in mental gaming of future professional and personal roles"* [18, p. 40]. Indeed, the life of contemporary adolescents is inseparably connected with "trying on" various patterns of role behavior. This experimenting seems to be not just an interesting way of spending time, but a means of resolving important age tasks. And here many research questions arise: what experimenting with roles is like in its form and in its content? What roles do adolescents try on? And how exactly this experimenting can create a zone of proximal development at this age stage?

"Experimenting" with roles takes different forms in contemporary adolescent practices. For example, adolescent subcultures, ("goths", "emos" etc.), as well as various role movements (e.g. "tolkienists"), which have gained extraordinary popularity in the last few decades,

offer adolescents particular philosophical and esthetic patterns and create conditions for trying on new looks, styles and images. However, the most popular cultural platforms for experimenting are now found in virtual spaces — particularly, in role play games and social networks, whose integral attributes include elaboration of virtual (cyber) identities.

Since adolescents face an objective challenge of entering the system of social roles and relations, existing in the society, they do need a culturally-organized space for preliminary "training". Thus, various kinds of adolescent activities, particularly games and communication in virtual spaces, may be regarded as forms of experimenting with roles. By this kind of experimenting adolescents resolve the task of "trying on" various patterns of role interactions. As pre-school children are willing to join a play and simulate scenarios from their everyday life, adolescents also eagerly emerge into a play or play-like situations, however, in contrast with pre-school children, they are not interested in simulating social relations, but in **modelling** them. Spaces of adolescent interaction represent a kind of "training platforms", where adolescents can experiment with roles and images. In this context the system of social roles can be regarded as the **"ideal, developed" form**, and the process of interaction with this form can create the zone of proximal development at this age period.

Research on experimenting with roles in adolescence: challenges and perspectives

In the past 10 years the author of this article has focused on the issue of adolescents and young adults experimenting with roles in various socio-cultural contexts. In 2012 the thesis "Overcoming the inner role conflict in late adolescence by means of role play" was defended. The empirical data, presented in the thesis, demonstrated that specially organized educational games, which offer the possibility of experimenting with various types of roles, represent an efficient means of resolving inner conflicts and contradictions, which contributes to adolescents' development and successful overcoming of the critical period [19].

In 2012—2014 in the framework of the international research project «Global Perspectives on Learning and Development with Digital Video-Editing Media: A Qualitative Inquiry in Everyday Lives of Marginalized Young People[5]», a research group from Moscow State University of Psychology and Education studied peculiarities of experimenting with roles in the learning process, mediated by digital technologies. On the example of a student with special educational needs, who was shooting an autobiographical film as a part of his graduation exam, the participants of the research group managed to demonstrate that experimenting with roles can contribute to the development of reflection [29].

In 2015 in the framework of a research project «Being Other: the Effectiveness of Arts-based Approaches in Engaging with Disaffected Young People», organized by the Department of Education of Oxford University, UK[6] the research group could observe the effects of applying various arts-based approaches including drama and role play games on disaffected and vulnerable adolescents and young adults. The research demonstrated, that experimenting with roles contributes to the development of communicative and reflective abilities, as well as helps adolescents to socialize and motivates them to study [26].

In 2015—2018 a series of research on experimenting with roles in virtual spaces — particularly, in social networks and videogames — was conducted by Moscow State University of Psychology and Education. The data obtained, demonstrates that on-line behaviors are closely connected with adolescents' personal characteristics (including inner contradictions, discrepancies between "real" and "ideal" self etc.) and that adolescents as well as young adults often use virtual spaces for various experiments with roles and identities [8], [21].

In 2019 a research project "Media-theatre" for adolescents was launched by Moscow State University of Psychology and Education in collaboration with School #1564 (Moscow, Russia)[7]. The project aims at elaborating an innovative model of a drama-based joint learning activity, designed for educating, socializing and developing adolescents in the framework of the Cultural-Historical tradition.

The empirical data, collected in this 10-year period, testifies, that experimenting with roles has an outstanding potential in the context of adolescent development and education. There are strong grounds to believe that specially organized cultural spaces, where adolescents could experiment with roles, may become an efficient developmental and educational resource. However, so far, the research on this issue remains scarce and the number of works, focusing on the phenomenon of experimenting with roles, is still rather limited.

Some concluding remarks

Summarizing what has been said, we can conclude, that rejecting a purely sociological understanding of role and considering this phenomenon from L.S. Vygotsky's point of view, gives a new perspective on the issue of development in adolescence. Indicating inclusion into the system of social roles as an essential task of adolescence allows to regard social roles as a kind of "ideal form" of this age period. The interaction with the ideal form takes place in the situation of experimenting with roles, which can be defined as a system of activities, connected with "trying on" different patterns of role behavior. Experimenting with roles takes different forms and may be performed both in real and virtual environment. At the same time virtual spaces may be more attractive for contemporary adolescents, as in reality they do not often find adequate conditions for this experimenting. From this point of view further theoretical and empirical research on the issue of role development is needed.

References

1. Bolshoi psihologicheskii slovar. Meshherjakov B.G., Zinchenko V.P. (eds.) Saint.-Petersburg: Prime-Evroznak, 2009. 811 p.

2. Veresov N.N. Vedushhaya dejatelnost v psikhologii razvitiya: ponjatie i printsip [Leading activity in developmental psychology: the concept and the principle]. *Kulturno-istoricheskaya psikhologija = Cultural-Historical Psychology*. 2005, no. 2, pp. 76—86.

3. Vygotsky L.S. Konkretnaya psikhologiya cheloveka [The Concrete Psychology of the Human] v *Psikhologija razvitiya cheloveka* [In: *The Psychology of Human Development*]. Moscow: Smysl; Jeksmo, 2005, pp. 1020—1039.

4. Vygotsky L.S. Lektsii po pedologii [Lectures on Paedology]. Izhevsk, 2001. 303 p.

5. Vygotsky L.S. Sobranie sochineniy: T. 3. [Collected works: T. 3.]. Moscow: Prosveshhenie, 1983. 363 p.

6. The Psychology of Human Development.. Sobranie sochineniy: v 6 t. T. 4. [Collected works: in 6 vol. T. 4.]. Moscow: Pedagogika, 1984. 433 p.

7. Vygotsky L.S. Umstvennoe razvitie detej v protsesse obucheniya [*Child Mental Development in the Learning Process*]. Moscow. M.-L.: Uchpedgiz, 1935. 135 p.

8. Dudnikov G.D et al. Vyjavlenie lichnostnykh osobennostey podrostkov na osnove statisticheskogo analiza ikh povedeniya v virtualnom igrovom prostrantve [The Identification of Personal Features in Adolescents Based on the Statistical Analysis of Their Behaviour in the Virtual Play Space]. *Neyrokompyutery i ikh primenenie: tezisy dokladov = Neurocomputers and Their Application: abstracts.* Moscow: Publishing house MSUPE, 2017, pp. 70—71.

9. Davydov V.V. Poslednie vystupleniya [The last public speeches]. Sbornik sostavlen Bertsfai L.V., Zeltserman B.A. [*Bertsfai L.V., Zeltserman B.A. (compl. and ed.)*]. Riga: Ped. centr «Eksperiment», 1998. 88 p.

10. Leontiev A.N. Izbrannye psikhologicheskie proizvedeniya: v 2 t. T. 2. [Selected psychological works: in 2 vols. Vol. 2]. Moscow, 1989. 320 p.

11. Leontiev A.A. Predislovie [Preface]. Vygotsky L.S. Psikhologija razvitiya cheloveka [In: Vygotsky L.S. The Psychology of Human Development]. Moscow, 2005. 1136 p.

12. Liberman A.A. K voprosu o vedushhey deyatelnosti sovremennykh podrostkov [On the issue about the leading activity of modern adolescents]. *Voprosy psikhologii* = Issues of *Psychology*, 2005, no. 4, pp. 118—124.

13. Lubovskiy D.V. Ponyatie vedushhey deyatelnosti v rabotakh L.S. Vygotskogo i ego posledovateley [The concept

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[6] Head of research — H. Daniels. Project research group: I. Thompson, V. Elliott, N. Dingwall, A. Tawell, K. Munk & O. Rubtsova. For full report see [26].

[7] For more information visit www.childhoodresearch.ru

of leading activity in the works of L.S. Vygotsky and his disciples]. *Kulturno-istoricheskaya psikhologiya = Cultural-Historical Psychology*, 2009, Vol. 5, no. 4, pp. 2—6.

14. Nosov P.V. Sotsialnye roli kak faktor organizatsii obshhestvennykh otnosheniy. Diss. kand. phil. nauk [Social Roles as a Factor in the Organization of Public Relations. PhD. diss.]. Moscow, 2009. 150 p.

15. Obukhova L.F. Detskaya psikhologija: teorii, fakty, problemy [Child Psychology: Theories, Facts, Problems]. Moscow: Trivola, 1995. 360 p.

16. Polivanova K.N. K probleme vedushhey deyatelnosti v podrostnichestve [On the issue of leading activity in adolescence]. *Psikhologicheskaya nauka i obrazovanie = Psychological Science and Education*, 1998, no. 3, 4, pp. 13—17.

17. Polivanova K.N. Psikhologicheskiy analiz krizisov vozrastnogo razvitiya [The psychological analysis of the crises of age-related development]. *Voprosy psikhologii = Issues of Psychology*, 1994, no. 1, pp. 61—69.

18. Prikhozhan A.M. K probleme podrostkovoy igry [To the problem of teenage play]. *Vestnik. RGGU. Seriya «Psikhologija. Pedagogika. Obrazovanie» = Bulletin of the Russian State University for the Humanities. Series "Psychology. Pedagogy. Education"*, 2015, no. 4, pp. 37—46.

19. Rubtsova O.V. Preodolenie vnutrennego rolevogo konflikta u starshikh podrostkov posredstvom syuzhetno-rolevoy igry. Diss. kand. psikhol. nauk. [Overcoming the internal role conflict in older adolescents through the roleplaying game]. Moscow, 2012. 119 p.

20. Rubtsova O.V Rolevoe eksperimentirovanie v kontekste vedushhey dejatelnosti podrostkovogo vozrasta [Role experimenting in the context of the leading activity in adolescence]. *Voprosy psikhologii = Issues of Psychology*, 2017, no. 5, pp. 42—51.

21. Dudnikov G.D et al. Statisticheskiy analiz povedeniya podrostkov v slozhnom virtualnom igrovom prostranstve. [The statistical analysis of adolescents' behaviour in a complex virtual play space]. *Neyrokomputery i ikh primenenie: tezisy dokladov = Neurocomputers and Their Ppplication: Abstracts*. Moscow: Publishing House MSUPE, 2017. p. 116—A.

22. Elkonin D.B. Izbrannye psikhologicheskie trudy [Selected psychological works]. Moscow: Pedagogy, 1989. 560 p.

23. Elkonin D.B. K probleme periodizatsii psikhicheskogo razvitiya v detskom vozraste [On the issue of the periodization of mental development in childhood]. *Voprosy psihologii = Issues of Psychology*, 1971, no. 4, pp. 6—20.

24. Jaroshevsky M.G. L.S. Vygotskij: v poiskakh novoy psikhologii. Mezhdunarodny fond istorii nauki [L.S. Vygotsky: in Search of a New Psychology]. St. Petersburg: International Foundation of the History of Science, 1993. 301 p.

25. Baykovskaya N.A., Rubtsova O.V. International Symposium: "The Scientific School of L.S. Vygotsky: Traditions and Innovations" and International ISCAR Summer University for PhD Students. *Kulturno-istoricheskaya psikhologiya = Cultural-Historical Psychology*, 2016, vol. 12, no. 3, pp. 280—289. doi:10.17759/chp.2016120317

26. Being Other: the Effectiveness of Arts-based Approaches in Engaging with Disaffected Young People (report) / Tawell A., [et al.]. University of Oxford, Department of Education, 2015. 39 p.

27. Heiss J. Social roles. Sociological Perspectives on Social Psychology. N.Y., 1981. 776 p.

28. Rubtsova O.V., Daniels H. The Concept of Drama in Vygotsky's Theory: Application in Research. *Kulturno-istoricheskaya psikhologiya = Cultural-Historical Psychology*, 2016, vol. 12, no. 3, pp. 189—207. doi:10.17759/chp.2016120310

29. Rubtsova O., Ulanova N. Digital filmmaking as a means for the development of reflection: a case-study of a disabled University student in Moscow. In: Global Youth in Digital Trajectories. London, 2017, pp. 53—68.

30. Veresov N.N. The Zone of Proximal Development: The Hidden Dimension? Published at: Ostern, A. & Heila-Ylikallio, R. (Eds.). Language as culture — tensions in time and space. 2004, vol. 1, vasa, pp. 13—30.

Современное подростничество в фокусе культурно-исторической психологии: к проблеме ролевого экспериментирования

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В статье рассматриваются основные представления о подростковом возрасте, сложившиеся в традиции культурно-исторической научной школы. Обсуждается, какие психологические новообразования, социальная ситуация развития и ведущая деятельность выделяются для данного возрастного периода. Выдвигается идея о том, что противоречия, существующие между представителями культурно-исторической теории в определении содержания развития в подростничестве, обусловлены отсутствием единого представления об «идеальной форме» данного периода детства. В статье обсуждается мало известная работа Л.С. Выготского «Конкретная психология человека», в которой основатель культурно-исторической теории указывает на проблему социальных ролей и на важность их изучения в контексте подросткового возраста. Л.С. Выготский рассматривал роль как ключевой механизм, отвечающий за регуляцию высших психических функций в различных социальных взаимодействиях. В связи с рядом причин — в первую очередь, исторических — понятие роли долгое время практически не разрабатывалось отечественными психологами. В статье предпринята попытка привлечь внимание к проблеме ролевого развития в подростничестве — в

частности, рассмотреть феномен ролевого экспериментирования как специфическую систему деятельностей, свойственных современным подросткам.

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L.S. Vygotsky's Ideas in the Clinical Psychology

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The present article discusses possible perspective trends of the development of the cultural-historical approach in the context of clinical psychology. This puts forward the thesis about the development of man in ontogeny as a result of his interaction with cultural environment which causes the transformation of natural mental functions into higher mental ones and the formation of the whole range of psychopathological abnormalities. It also discusses the voluntary regulation of higher mental functions, the determination of involuntariness and postvoluntariness of functions, the internalization of actions, the differentiation of affect and emotion (incl. as a higher mental function), the "cultural" socialization of non-mental functions (sexual, sleep, excretion) and the inconsistency of natural and "cultural" entity in a human. This paper confirms the statement that the basis of the development of man in ontogenesis is the emergence of subjectness like all the forms of higher activity through the encounter with cultural restrictions and requirements. It suggests extending the concept of "higher" functions by means of including physiological and bodily functions. The latter acquire the characteristics of higher mental functions during the socialization: the voluntary regulation, hierarchical structure and control. This considers the phenomena of alienation, conversion and dissociative disorders and voluntariness as a result of the complication and restructuring of natural functions. It also suggest trends for further investigations.

Keywords: socialization, the cultural-historical approach, voluntariness, a "cultural" body.

The higher forms of mental processes have a particularly complicated construction. They form during ontogenesis initially representing unfolded forms of object-centered activity, which gradually "reduce themselves" and obtain a kind of inner, mental action. As a rule, they rest upon a number of outward auxiliary means (language, bit number system) that have formed in the course of history. Mediated by these means they cannot be understood without their participation (L.S. Vygotsky, 1956, 1960), they are always linked to the reflection of the outer world during activity, and under deviation from this fact they lose any substance.

...This is an aspect of functional systems construction of the human brain, which L.S. Vygotsky (1960) called the principle of "extracortical" organization of complex mental functions. Implying the context with this quite uncommon term that the development of higher forms of human conscious activity is always fulfilled with the support on a number of outside auxiliary tools and means.

A.R. Luria. Reconsideration of the concept of localization, 76—77.

In his classical concept of higher mental functions presented in the epigraph, A.R. Luria formulates the main ideas of the cultural-historical approach in psychology. Having schematized these theses to the limit in order to separate out the principal and key points. We shall note that human development itself is considered a result of interaction of a human being and the cultural environment. It causes the transformation of natural innate mental functions into higher mental functions through the adoption and following internalization of special, social-by-origin tools. Their formation takes place in an immediate touch with the adult by way of the so-called interpersonal (shared) activity. There is a presumption that interpersonal activity is actualized in an object-centered, real form. When internalizing, it turns into a concealed, unobserved shape mediated by a psychological tool — a sign; and it is not aimed at outward objects, but, first of all, at management of other people, and then at its own conduct. The principal difference of higher mental functions from natural consists in the ability to auto- regulation, in their lifetime genesis, social origin, mediation of the construction by a psychological tool-sign, voluntariness, and awareness by way of their functioning, hierarchy and systemic entity [8].

Primarily speaking, the distinction between lower (natural) and higher mental functions take different hi-

erarchal places. It lies in that; there is a new intermediate element protruding in between the stimulus (which the behavior is directed to) and human reaction. The behavior loses its immediate character, and the unity of the stimuli and reactions turns out to be disruptive. The scheme of the formation of higher mental functions introduced by L.S. Vygotsky [23] is reproduced with almost no alterations in later psychological works in the context of the cultural-historical approach, although its several basic theses lack for definite clarifications.

Above all, there is still a problem of voluntariness remaining an obscure point that has been one of the most complicated aspects for explanation during all the history of philosophy and psychology. The problem of voluntariness, or in its philosophical meaning, "the problem of volition", has not had a single meaning yet, as there is absolutely an unintelligible moment of joining the incorporeal substratum of will and a material corpus. Any variant of its solution cannot help, but face the unsolved psychophysiological problem. A possible bypass that L.S. Vygotsky applies is the idea of sign-symbolical mediation — a universal instrument adopted during ontogeny. It enables to master one's own behavior by means of mastering stimuli managing this behavior. This idea borrowed from Hegel was to explain the resource of influence of the incorporeal substratum of will on a real conduct. Hegel employed the metaphor of "cunning" of reason that does not interfere with the actions of natural powers but allocates them in that consequence, which responds to the will of the subject without any violation of natural laws [5]. For instance, the existence of an airplane in no way breaks any decree of nature, however there are no planes in nature; it is the invention of humankind. Though there is no "natural airplane", the invention constructed in full accordance with decrees of nature (and what is more, it operates particularly due to these decrees) allowing human beings to do the act incompatible with their nature. Although decrees of nature are not violated, the result is a completely unnatural event. A real stimulus, which later on provokes the required behavior, may be substituted by its semiotic copy or signifier, thus representing the stage of transition to sign-symbolical mediation.

This is it what L.S. Vygotsky considers as a specifically human invention, as well as Hegel does in his metaphor of "cunning" of wisdom. Following him he underscores that there are no such cultural methods, which could not be separated into their constituent natural processes. The principal restriction of that explanation is that releasing the will from the necessity to make the material force does not completely clarify the problem of choice. After all, the problem does not consist in the inability to lift a stone with will, but with the necessary muscle force. The force ceases to be measured in kilograms but it remains unclear how the will may be determined, at all; and whether the doubling or even trebling of substances occurs in here: if voluntariness is determined by the use of psychological tool, thus how (what with) should its usage be determined? Yet, in an attempt for the non-contradictory solution of the problem of voluntariness, putting in voluntariness in the most studied

form in the context of the cultural-historical approach, A.R. Luria has to come to word juggling in the genre of dialectical materialism: "Refusal from the idealistic notion of higher mental functions like demonstration of some spiritual principle detached from all other natural phenomena, as well as refusal from the naturalistic approach to them as natural properties laid in the human brain by nature may be considered the main achievement of modern psychology" [8, p. 142]. Later, in the absence of content discussion of the problem of voluntariness this idea in neuropsychology transposes itself into the problem of cerebral localization of voluntary functions: "The mechanism of voluntary regulation of higher mental functions can be regarded as the substantive principle of cerebration whose derangement causes the whole aggregate of defects, or "'frontal lobe' neuropsychological syndrome." According to the observations and special investigations the voluntary speech regulation of higher mental functions is related predominantly to the left frontal lobe functioning" [6, p. 223].

In the scope of the cultural-historical concept of L.S. Vygotsky, voluntary control is fulfilled through internalization of externalized object-centered activity by means of mediating it with sign. One of the notions here requiring clarification is the idea of internalization. Originally, it appears in the works of E. Durkheim regarding it as the mechanism of socialization of a human being. Later, this term in the similar context, like a mechanism of adoption, transition into internal plan of outward actions is employed sequentially in the works of P. Janet, J. Piaget, L.S. Vygotsky himself, J. Bruner, P.Ya. Galperin, V.P. Zinchenko, remaining rather a metaphor than a real psychological mechanism. Perhaps, the exception is the theory of the gradual formation of mental actions by P.Ya. Galperin presenting the picture of action transition from a real through uttering to a mental action. Seemingly, in spite of the extremely gradual developmental work over the steps of such a transfer this theory does not read qualitative changes of the stages concerned, at all. De facto, it brings them to merely quantitative differences with a strong outlook on "inner speech" as a transitional form from speech to thinking. If nonverbal thinking can be fancied, for instance, in the type of Helmholtz's unconscious inferences, then speech with no thinking is nothing else than shouting.

Questioning about the essence of internalization, one discovers, that despite a widespread usage of this term its concrete mechanism remains mysterious. Literally, internalization is a transposition inwards of that what has been outside but it is impossible to comprehend as swallowing or putting something external (what in particular?) inwards one's head, brain, or psyche (what?). The comparative analysis of the usage of this notion displays that the difference in opinions concerns not only the theoretical understanding of the phenomenon of internalization, but also defining the range of the phenomena, which relate to internalization. This fact makes him presume that the term "internalization" implies several different notions linked more or less to one another, and combined non-critically [16].

One can attempt to illustrate internalization mechanism with addressing to the most elementary instance of internalization of outward object. The phenomenon of probe can be found in the works of A.N. Leontiev, N. Bohr, which was described for the first time by Aristotle under the name of "the stick of the blind person". This remarkably rich-for-interpretation phenomenon enables us to understand the simplest models, base laws of one of the most complicated psychological phenomenon of internalization.

Its entity lies in the following: when a blind man feels surface with his staff, and a surgeon tries to find a bullet in the wound by means of probe there occurs a wonderful thing. Their sensations do not localize at the boundary of hand-probe (where it is to take place because the probe is a foreign body, and the hand is a part of my body. The probe by way of effort affects, stresses upon cutaneous receptors, that is, the sensation is to localize exactly at my body's border), but in a paradoxical way at the extremity probe-object. This is a paradoxical thing because it turns out that the distant-receptor embodies into the corpus configuration becoming its extension and, as a matter of fact, becoming internalized. This internalization keeps until the probe shows its "rigidity", that is, predictability of possible changes. As soon as another person sets it in motion, or in an unpredictable way it changes its form and/or degree of subordinacy, it inevitably becomes externalized, and the sensation shifts to the boundary hand-probe.

The most important thing in this phenomenon is that the border of localization is straightly fixed with the limit of autonomy and predictability, dependence on the subject. Always provided, that the probe does not change its form, it is constant, and all its actions can be predicted and taken into account. In other words, the internalization of the probe in this example is its embodiment in body scheme. It is not in terms of putting it inside myself, but in the meaning of turning into a person's instrument, prosthesis by means of which actions are as much predictable and subject to us as our biological body's actions. Further still, stemming from this instance, the internalization-externalization ratio is not fixed, and it may dynamically change depending on conditions. Our own body is not immanently internalized; in some situations it shows uncontrollability and unpredictability felt like *estrangement* (intoxication, numbness, etc.). In the similar way, complex forms of instrumental extensions are internalized, they cease to be realized having the possibility to be taken into account and anticipated. In the given situation internalization is nothing else than the adoption of the scheme of relations with them (complex forms of instrumental extensions), the adoption of models of behavior, whereupon these extensions cease to be reflexed, to be the phenomenon of our consciousness, becoming unconscious. That does not mean that they cease to exist, after condition changing they can externalize again. So, in the phenomenon of "a stopped escalator" which in no way differs from an ordinary stairway a person suffers a drastic sensation of motor discomfort. In this case, there is an internalized model of a moving staircase, and we are prepared for the motions adapted to it in the form of a specific motor setting. As similar extensions, one can consider cognitive schemes, maps, measurements, language grammar, etiquette and so on. Considering such an interpretation, the internalization joins in the specific meanings of this term: 1) transformation of outward, observed forms of activity into inner (unobserved) processes; 2) transformation of the forms of joint (collective) activity into the forms of individual activity; 3) a person's adoption of norms, settings, values, etc. of a group [16]. This also enables mitigation of the problem of the transition of a material, outward action into an ideal, inner one for it is not an action but its scheme internalized. In this sense, the historical-cultural approach is not quite restricted essentially by mental functions, and it has a wide prospect of possible development.

However, within the confines of the present understanding of the psychological essence of internalization, the classical statement of cultural-historical theory for higher mental function to be an internalized outward activity becoming voluntary and realized is arguable. On the contrary, an authentically internalized activity even ceases to be realized and comes out of the extent of its voluntariness into the zone, which after N.F. Dobrynin can be called as post-voluntariness. With reference to N.F. Dobrynin the sphere of post-voluntariness is restricted with the function of attention and related to the loss of a voluntary effort in activity, and that becomes interesting. This idea is much richer and it may turn out to be alive for the development of cultural-historical theory itself. If we assume, that any function after passing the stage of de-automation of its involuntary, natural realization through an unfolded, interpersonal stage, and later conscious, reflexed interpersonal transits onto the post voluntary level which enables to considerably simplify and optimize complex forms of activity.

Post voluntary and involuntary functions in relation to their awareness are similar outwardly only. Involuntary functions are *primarily* "transparent" (unconscious) to the subject, they still may come opaque when being acquired; they are subject to logic mechanism and described in the language of tropisms. "Transparency" (*post voluntariness*) is *derivative*, the functions *have already become transparent* after their acquirement but the potential of becoming conscious reduced inside them reveals easily in different complicated cases.

The discrepancy of innate and "cultural" entity in a human being causes the gap in the space of which there appear and grow specific disorders related to the group of functional and conversion symptoms. The principal chance for their realization is determined by the mobility of I-boundaries, which make it possible to set up a specific configuration of "false boundaries" imitating organic pathology. Although this hypothesis needs a special discussion and argument, one may assume, that the mechanism of conversion and dissociative symptoms formation consists in that they display themselves only in the sphere of "semitransparent" functions acquired by a person (or fundamentally, that may be acquired). Movement disorder in case of abasia atactica, mutism, colitis, constipations, diarrheas, enuresis, dysphagia, emesis, dyspnea, aspiration, hysterical dumbness, aplasia,

deafness, functional amnesia, pseudo dementia, etc. does not occur on the anatomical or physiological level but just on the functional as control disorder, control zone shift. The indirect confirmation of this hypothesis is that there are no conversion disturbances of hematopoietic system, i.e. the work of the liver and kidneys. The core of conversion and dissociative pathology is in the failure of the management of these functions on the level of post voluntary realization (or, on the contrary, it lies in the introduction of a latent control over the early automatized functions) and shift of the subject's bounds from an outside contour to an inside one when the action gets directed not to the object but to the function itself.

One can single out a very interesting and promising field of analysis of the psychological and brain mechanisms of the unbalance of possibilities for one or another function realization on the different levels: involuntary, voluntary and post voluntary. With reference to L.S. Vygotsky there is a case of voluntary compensation in Parkinson's disease. "A parkinsonian is not able to make a step; when you tell him: "Take a step!" or lay a piece of paper on the floor, he takes this step. Everyone knows how well parkinsonians go up/down the stairs and how badly — on the even floor. One has to lay a number of pieces of paper on the floor in order to lead the patient to the laboratory. He wants to go but he can't influence upon his motility, this system is ruined in him. Why is a parkinsonian able to go when there are pieces of paper laid on the floor?" [21, pp. 129—130]. There is an explanation given by L.S. Vygotsky: "That system, which enables him to raise his hand, is now broken. But he can link one brain point with another by means of an outer sign" (ibid.) — it is not fully clear. What does the linkage "of one point of the brain with another" through an outside sign mean in this case? The more convincing interpretation of this phenomenon is given by A.R. Luria: "The compensation of movement disorders turns out to be possible on the basis of rearrangement of mental processes, which he used during his walk. The activity is transferred from the subcortical level where lesion foci are located to the level of safer cortex of cerebral hemispheres" [9, p. 110]. Notwithstanding it, there is no way to contend that walking represents an entirely involuntary, purely reflex act; as the minimum, it includes direction programming, but it is rather a post voluntary function that involves also purely reflex links and still extends further. As M.M. Bakhtin noted: "The person directing the hand to the object, of course, doesn't voluntarily manage clonuses necessary for the act of grasping, but a part of the movement towards the object is quite voluntary" [2, p. 134]. Likewise in Jackson's example of the patient, who is asked by the doctor's request to say "no", says: "No, doctor, I can't say no", one should recognize that the reflex basis of the action is quite safe (otherwise, no similar action could have been possible), but its inclusion in voluntary or post voluntary act is disturbed.

The clinical picture of Jill de la Tourette syndrome provides more demonstrative example of the disagreement of the ratio of involuntary, voluntary and post voluntary components. A.R. Luria writes about this syndrome: "Any progress in explaining Tourette syndrome fundamentally broadens our understanding of human nature on the whole... I don't know any other syndrome the meaning of which is commensurable with this" [15, p. 127]. The specificity of de la Tourette syndrome lies in the presence of manifold obsessions, tics, eschrolalia (yells related to obscene or sacrilegious vocabulary) occurring just in that situation where it is prohibited, for instance, in church. Though de la Tourette syndrome has got a hard organic ground, its interest for psychology is connected with the very moment of control: involuntary verbal product is pointedly linked to the efforts of its voluntary regulation and to culture through its content. A patient with this syndrome does not simply cry out any words but only those marked by culture as forbidden.

At this point, one more parallel manifests itself along conversion and dissociative disorders; that is obsession contrast content: when the patient shows obsessive ideas about the possibility to do the harm involuntarily exactly to the subject whom he or she doesn't want to do it to (for instance, the mother who is in fear to throw her child out of the window or kill the child). Although we have tried to describe the intricacies of these syndromes showing the close connection of voluntariness, organic or dynamic ground, the cultural context of symptom formation, and their psychological study in the scope of the cultural-historical approach in clinical psychology seems to be envisaging further development.

Introducing the child into the context of culture is connected with the particular practice of objectification of his strenuous activity, physiological manifestations, with the fixation of restrictions. Their further overcoming and "folding" are the way of socialization, development of voluntariness and derived "transparency" of corporeal functions. The build-up of "objects" on the way of the subject is a constantly flowing task of the new topology of the subject-object division. As to pathology, in this case it just confirms the existence of this already-concealed inner "bearing structure". Different cultures and historical epochs affixing specific attributions of responsibility and blame to the subject produce various configurations of the subject-object discontinuity and, thereafter, various types of concealed structures defining the pathomorphism of conversion disorders.

There is one more point that needs clarification; this is the substance of the interpersonal phase of the formation of higher (non-natural) function. In the classical version, it is a shared performance, which enables the child to master the forms of behavior inaccessible on his own. Generally, the ontogenesis history of "higher" human functions is expounded as the aggregate of reasonably "vegetarian" events. A little child in cooperation with the adult (as a representative and medium of culture) assimilates new forms and modes of activity joyfully getting them internalized (truly speaking, it is not always clear how he does) and transiting to a new level of mental functioning. Never-the-less, theoretical speculations, clinical observations, and even a trivial experience do not accord enough with that kind of grace. Even the acquisition of simple alimentary and hygienic habits does not run smoothly, and the phenomenon of punish-

ment itself in the broadest sense, which is principally irremovable from culture, makes the idea about the absolute harmony of the dyad of adult-child or subject-society questionable, at all. Eating with hands is much simpler than with a fork, skating, playing the violin and just simple readings are not physiologic; regulation activity of corporeal functions, inclinations and needs requires permanent and quite serious efforts. The acquirement of social and cultural norms differs little in principle from the acquirement of the law of gravity through the practice of falling, and of ability of contacting with matches properly through a painful burn.

Currently, in the theoretical and practical understanding it seems to be of significance principally to formulate and integrate a number of important notions into the context of the development of modern psychology, which correspond to the actual challenges of the cultural-historical process, and, subsequently, to the goals of psychological theory and practice. The notions of "violence", "effort" and (if to be more exact) their interrelation need in specification. The non-evident and wrong assumption lies in that the function that derived as a consequence of cultural transformation possesses indubitable advantages over natural. Even if we face some of its imperfections, they are the matter of the imperfection of its acquisition. The advantage of higher function over natural is not much obvious, yet. V.M. Allakhverdov points out that the child after the birth possesses such a perfect reflex control (for instance, forced grasping reflex enables the child to do chin-ups after having seized the hand lifting him) which he, maybe, never achieves or not soon, on the voluntary level; and capabilities, speed and volume of the information processed on the conscious level are never equal to the organismic capabilities of a human being [1]. The advantages of higher function lie in something else: in the possibility to come out of the extent of existent stimulation, capability of behaving or non-behaving in accordance with some other, non-natural rules, and sometimes despite them. At that, one should especially underscore that *denial, inhibition, and prohibition,* as the forms of socialized self-regulation have not got less significance than joint fulfillment with the adult. Effort and tension have a principal value for generating higher forms of psyche. Further internalization is to involve the obligatory stage of the externalization of involuntary natural activity, its objectification, and the following post voluntariness expects the preceding de-automation. The well-known parallelogram development reflects very important, but non-fully conceived phenomenon, that is, possible activity deterioration at the initial stage of the acquisition of mediating instruments. The comprehension of "inhibition", "restriction" as the basic essence of the interpersonal stage of higher function formation is analyzed by D.B. Elkonin quite in a detailed way, and earlier by Ribot [25].

In accordance with cultural-historical approach; memory, perception, thinking and speech are traditionally considered as higher mental functions, though there are no principal restrictions for possible analogous interpretation of both other mental functions (for instance, emotions) and corporeal and physiological functions [22]. Emotions with relation to the cultural-historical approach may also be considered as higher mental functions possessing all the corresponding characteristics: hierarchal structure, lifetime social formation, sign-symbolical mediation and voluntariness of regulation. Properly speaking, human emotions form upon the basis of natural (innate) affectivity. The driving motive of their development in ontogeny as in case of other higher mental functions is communication with the adult, in the first place, with the mother. For instance, the mother fills with sense and signifies vital needs (you want to eat, drink, you feel cold and so on) and corporeal functions of the child. Likewise she recognizes and designates (signifies) mimic, locomotive, physiological signs of the child's condition in the terms of emotions: pleasure, displeasure, joy, sorrow (you're angry, pleased, anxious, upset, etc.).

The somatic-vegetative displays of physiological state, that is, reddening, blanching, strain, relaxation, etc. are signified in the category of emotional experiences transforming into their sign and adding to the natural, organismic essence with the symbolic meaning. Such a "doubling" leads not only to the formation of a wide range of differentiated emotions but also to the "structural readjustment" of organismic functions (in particular, the physiological displays of emotions) which turn from natural and involuntary to social and managed. This fact changes the situation in a thoroughgoing way: the child's scream turns from the display of fear into the instrument of overcoming and handling this fear, that is, into the call for help. L. Wittgenstein describes the acquisition through the natural sensation of the sign function by the example of pain: "The words are associated with the primordial, natural expression of sensation, and they substitute it. The child hurts himself, he cries, and at the same time, the adults induce and teach to exclaim, and then to clause. They teach the child a new, painful conduct... Verbal expression of pain substitutes the cry" [24]. In order for the child to acquire such an instrument, it is very important to form and keep a constant "gap" between the display of need and the mother's reaction, in which this display transforms into the action.

The acquirement of forms of emotion displays including both orders and prohibitions in this sphere takes place in touch with and under supervision of the adult. In this sense, emotion does not differ from other higher mental functions, passing through the interpersonal stage to intrapersonal. The peculiarity is determined by the restrictive form of the joint activity, which is also characteristic of corporeality and sexuality, by sharing not only function fulfillment, but its prohibition with the adult, as well. The examples of such prohibitions are as follows: the refusal from direct feeling expression ("A real man never cries") or the imitation of socially significant emotions ("Smile!"). The socialization of affects in the form of cultural instructions and prohibitions is the condition, manner and result of the development of the voluntary management of emotions. By means of transforming primarily outer dialogic process into inner mechanisms of emotional regulation, there appears a mature emotion, the function of mastering and managing one's own behavior. In that way the emotion obtains its

voluntariness attaining it non-directly (as it is impossible for a human being simply "not to feel"), but through sign-symbolical operations.

The mother's word creates the system of coordinates and frame of references "leading" the child through the steps of "affects taming": differentiation, imitation, teaching to express, and manage. "The immediate emotional communication between the mother and child during the first half a year of the life already does not come to double-contact exchange of emotions; the world of objects wedges in it as the third link, and the mother loses no chance to indicate what is interesting, good, terrifying in this world" [20]. Both fixing the "affect-object" connection ("You rejoice at a new toy") and training the attitude to the matter of emotion (the objects connected with a positive experience are valued as "good" or "desired" and vice versa) are lifelong and social. One of the first steps along this path contains the ability to "brake" immediate emotional displays slowing down or concealing the feelings. The example can be politeness as a set of regulations and restrictions for the expression of true senses in definite situations. As sign systems determining emotion formation there are both natural phenomena (gestures, mimicry obtaining sign functions) and the sign system itself — speech.

Object domain is the primary "instrument" of the mediation of emotions. The child learns to manage the experiences through "acquiring" their objects. Citing to A.N. Leontiev, like a need must "gain its sight" in the issue of meeting its object, an affective state transforms into emotion by way of the "affect-object" connection. Making formally external spatial manipulations with an affectively charged object, per se, the child gains the instrument to manipulate the inner state. In the future, the child's approach moves towards the objects that provoke positive emotions and moves away from the objects provoking negative emotions (peculiar to lower forms of affectivity) are substituted by the complex activity of sign-symbolic "holding" of one's own behavior, emotions and outward things. The management of emotions is not carried out directly but in a mediate way, for instance, by means of their objects. It is impossible to provoke a definite feeling voluntarily, that is, with the help of self-ordering and self-convincing but "manipulations" with the emotion's object enable to organize the situation in the way when a desired feeling appears ("When a black thought enters your mind, uncork a bottle of champagne or read "The Marriage of Figaro" once again").

The attainment of sign function by means of organismic displays (the transformation of a "physiological" cry into the message) and fixation of multiple-valued relations between an affective feeling and its object transfers affectivity from the natural field into sign-symbolic, that is, semiotic one. The comprehension of sign system opens broad possibilities for their poly-semantic interpretation: sorrow and joy for the person feeling their gist are the signs of joyous and sad events, while for a psychiatrist or psychologist they may be the sign of mental disorder, and for a psychoanalyst they represent the reflection of some long-ago forgotten incidents. The obligatory object orientation of a mature emotion together with equivalence

relation between an affective feeling and its object generates conditions for the voluntary regulation of emotions. Emotions like higher mental functions also play "a substantially diverse role in comparison with elementary functions (*auth*. affects) accomplishing organized adaptation to situation with a preliminary control over one's own conduct" [22, p. 55]. The connection with their own objects does not imply "the bondage" of emotions. It is rather vice-versa: it enables to get free from the imposed settlement of the immediate influence. The voluntariness of emotions attained by means of sign-symbolic mediation allows a person to take hold of the passions caused by circumstances and/or hormonic changes. Voluntary perception sets a person free from the power of sensory area, and voluntary memory — from the power of immediate anamnesis. However, emotion voluntariness has its restrictions: in emotion there is always a "track" of a primitive, uncontrolled affect in the form of an inexplicable feeling that involuntarily appears and hard gives way to regulation. This shade of "naturalness" and "immediacy" adds the quality of "genuineness" to a mature emotion: an excessive mediation is the loss of emotion ("artificiality" of feelings, absence of sincerity), and an excessive immediacy is a loss of the subject ("one has forgotten himself, has been off his onion, a surge of feelings has overlaid").

Thus, in the phylogenetic sense, affect is a product of a biological development that has led to the differentiation of a primarily indivisible reflection into cognitive and affective processes, and emotion is a result of the further cultural development of affective processes [7]. However, the relation of emotion with the object is not concluded in the modality of its affective shade only: the more developed emotion, the more complicated and mediated relations between them. If affect is characteristic of either the "ignorance" of its object, or a plain connection with it, then in the course of socialization this connection loses its immediate nature and becomes determined by the individual peculiarities of semantic sphere and experience or by cultural standards and rules. This relation may possess mobility and abilities for transformation in the issue of emotional switch. The kind of the connection like this is not the identity when a definite object is unambiguously related to the concrete affective feeling (this is characteristic of involuntary affects) but it is rather a univalency (or, in the category of semiotics, "ascription"). As long as the object orientation of emotion is a basis for the formation of voluntariness (the object is one of the "tools" of mediation), these disturbances are interrelated. The loss of voluntariness represents the outer form of emotional disorders which is phenomenologically reflected in a "capturing" kind of feelings in affective and anxiety disorders, in the inability to slow down, conceal or restrain their displays, while its (voluntariness's) latent psychological mechanism lies in the derangement of the connection with the object.

In contrast to the "normal" experiences which keep their ability for voluntary management or experimental situation undergoing reality test, (where affect existence depends upon duration of effect (chemical or neurophysiological)), in the clinical picture of affective pathology

there is a peculiar field of persistent abnormal affective phenomena whose distinguishing feature is the inability of self-dependent correction. In spite of the diversity of disorders in the affective sphere found in clinical practice, from the phenomenological point of view, besides the particular "depth" and anomalous directedness of pathological affects, their essence comes to two main formal characteristics: the loss of voluntariness and connection derangement with object content. Irrespective of the modality of affect the loss of voluntariness is expressed in the inability of management of both experiences attaining a peculiar "capturing" nature and affect displays becoming uncontrolled by the subject. These capturing experiences are characterized by ambiguity and diffuseness, they are not that much reflexed by the patient, and they seem to him/her to be "obscure" and non-deducible from the life context. Even if they seem to the patient to be the consequence of some real events, their scale of the experience is incommensurable with the event either in its depth, or in its duration.

Upsetting the wholeness of normal phenomenon, pathology presents to us particular "natural experiment" baring concealed-in-norm mechanisms. The distortion of the link of emotion with its object in affective and anxiety disorders is found in two ultimate variants: "non-object-oriented" and "over-object-oriented" emotional phenomena. The former implies the loss of voluntariness, which is determined by the absence of appropriate means of management, that is, by the absence of emotion's object, first. The latter is determined by the lack of means of management since the depth of emotion in relation to this object or the link rigidity invariably exceeds the ability to manage.

In the phenomenological sense, derangements of voluntariness show in an obsessive, "capturing" way of pathological experiences; structurally describing, as the connection disturbance "object-affect". One of the variants of the loss of voluntariness is represented by "non-object-oriented" emotional phenomena found in the clinical picture of endogenous disorders and described in the context of the pathology of vital feelings. Vital ennui in depression and vital anxiety are characterized by the absence of a causative explanation, firm content, psychological non-deducibility from life context, and they have phase course and respond to biological therapy. The diffuse localization of similar sensations at the border of consciousness and body can be considered as a peculiar "pseudo-thingness", the interpretation of non-object-oriented emotion as a corporeal sensation (an "oppressive" boredom, "a weight on one's heart", "the heart jumping out of the breast", "impossibility to find one's own level", the sensations of "muscle tension", "dry mouth", "nervous tremor", "lump in one's throat", "lack of air", "heaviness in the stomach", "weakness in legs", etc.). Since such emotions have "phantom" nature, no actual activity can help along their resolution, and no object can fulfill the function of mediate link, which attach a capturing and obsessive nature to them. Apart from poorly managed emotional states linked to vital needs determined phylogenetically, there may be ontogenetically generated "particular" relations with the object. These experiences about an excessively significant object in clinical practice are referred to the category of "super values" and bound up with neurotic and personality disorders. Those super valuable formations are characterized with a developed (though, not always appropriate) reflection, hypertrophied pithiness, object-centered character, and relatively safe criticism. The reasons for the specific, overvalued relation to the emotion's object are associated with the history of a given particular patient, and seeming absurdity in the presence of a relative criticism is based on the unconscious nature of connection with the object.

Thus, there are two variants of the disruption of emotion link with its object and, accordingly, two variants of voluntary regulation disturbance turning emotion into affect. The first variant corresponds to endogenous affective disorders in which affect has not still become the emotion, and object attribution has a phantom nature. The second one corresponds to personality pathology, psychogenic and neurotic disorders in which the affective component is not an emotion anymore since it is rigidly connected with the object [18].

The experimental proofs of the central place of regulatory component fault in affective disorders in the form of the deficits of sign-symbolic mediation of emotional regulation and actualization of destructive strategies of self-regulation of emotional states (self-accusation, rumination, desasterization, drinking for relieving anxiety, avoidant behavior, etc.) are presented in the works about cognitive regulation of emotions [12; 14].

As far as it was mentioned above, cultural-historical approach in its classical variant applies to quite a limited number of mental functions despite there were not and there are not any fundamental restrictions to understand both mental and non-mental functions from the point of view of this approach. First of all, it concerns the cultural transformation of the human body that extends not only at the expense of instrument acquiring, but of the total transformation of senses, motility abilities and even formation of virtual mental functions (the Internet, computer, imaging systems) (H.M. McLuhan. Understanding Media: The Extensions of Man).

This is a fundamentally new field of the possible application of cultural-historical approach concerning the transformation of culture itself and generation of (in principle) new psychological instruments-tools, which come out of the extent of a simple site or physical corpus. However, the base of such a transformation is laid down already at the stage of the formation of cultural body, cultural corporeal and physiological functions, which do not match with natural functions in the way of realization (actualization) and management being their basis. In the most general form the idea of cultural body formulated by K. Marx in his remark about that, "Hunger is hunger but the hunger gratified with cooked meat eaten by a knife and fork is another hunger than that which bolts raw meat with the help of hand, nail and tooth" [10, p. 28].

In principle, the restrictions imposed on natural functions by society create a new "landscape" of a cultural body, in principle. Prohibition and rules of meal and functions make the new reality of an "alimentary" body, hygiene causes the subjective phenomenon of "cleanness

and mud", and sexual bans cultivate an "erotic body". In this sense, the last group of taboo is particularly demonstrative. Sexual needs colliding with the regulation of its manifestations form totally particular ideas about erotic/non-erotic entity, which are closely connected with the historical, religious and ethnic variants of banned/allowed substance. Despite sexual attraction is traditionally regarded amongst major and the most fundamental human needs, its realization control is traced since the very early stages of human history, particularly in European culture. European culture is characterized by marking out the zones of "tolerable" manifestations of sexuality and distinct "marking" of forbidden ones. The specific character of such an attitude requires mastering one's erotic attractions and turning sexual attraction from natural and involuntary into voluntarily regulated.

Following L.S. Vygotsky, if one accepts that the most important "trait of higher mental function is mastering one's own behavioral process", then it is quite consistent that sexuality loses its involuntary character early. Moreover, this is the only human function whose canons of realization are fixed within the framework of legislation. As a result, there is a new, socially determined regulatory principle of sexual conduct. This is the sexuality, which accounts for the idea of "cultural development" consisting in that "it is not nature but society should be regarded as the determining factor of human behavior".

The hierarchal construction of human sexuality shows itself in that natural need for procreation is instinctive in nature; it has the exact range of unconditioned stimuli; it is realized in the form of chain reflex under the conditions that respond to these unconditioned irritants. It also shows itself in that, from some moment it begins complying with the conventionalities that are not biological, but social in nature and it transforms to "genetically more complex and higher form of behavior". The hierarchy of the human sexuality construction reveals itself in the possibility of its split; for instance, in case of the "withdrawal" of higher regulatory forms, in the situation of alcoholic or drug intoxication, in the pathological state of affect, in frontal lobe syndrome and other lesions of cortical parts of the brain. As in some other variants of higher mental functions, in the new structures of human sexuality (contrary to lower mental functions) the difference lies in, first of all, that "... the immediate unity of stimuli and reactions in one complex turns out to be disturbed".

Exactly like other mental functions, human sexuality is characterized by the lifetime social nature of its formation. However, in this case the peculiarity of socialization is determined by the combination of the severity of prohibition, its inner contradiction and non-apparent wording (not always); and the interpersonal stage of formation is mostly characterized by sharing of not function *fulfilment* but of its *prohibition*. Not only is the model of realization primarily obtained, but also the stereotype of inhibition. M. Foucault demonstrates that the silent management of child's sexuality displays in the form of interpersonal activity may be realized not only in words, but also merely in the architecture of educational buildings [4, p. 448].

Although the notion of socialization for L.S. Vygotsky is not connected with the repressive function of

culture, there is no principal theoretical restriction for its usage when interpreting repression. Such an extension of the comprehension enables to use the advantages of the home cultural-historical approach combining them with the well-developed subject of the repressive function of culture in contemporary western philosophy and psychology. One more demonstrative example of the socialization of non-mental functions, still turning into cultural ones is the transformation of sleep. Sleep like many other physiological functions is not fully natural any more for a person as distinct from animals. Exactly in the same way like a human being partially controls that what, where, how and when he eats, where and how his processes of elimination are realized, he began to partially control his sleep. Sleep as well as food, excretion, erection after their socialization gets not only naturally but also socially determined: the way life and conduct influence upon it; a human being regulates his sleep in accordance with the views adopted by culture.

In the natural environment, sleep adjusts mainly to conditions of nature (illumination, temperature, melatonin level in the blood) and regular flow of physiological processes: as a general rule, an animal falls asleep as night is setting in. It is tired, and it sleeps as much as the organism needs. In the social environment, a person finds the means of the direct and indirect regulation of sleeping, thus, he endeavors to put off sleep time in order to speak to his friends, complete his work, or go to the cinema. He tries not to fall asleep in the daytime when there is work to do, when he moves and flies over several time zones and then tries to adapt himself to time changes, and he fixes the time he gets up in the morning. The set of means of the indirect regulation of sleep enlarges: a person takes soporific to fall asleep, sets an alarm clock, on having awoken he has coffee in order to wake up. Regimen becomes the tool of sleep regulation: a person's job and life assign an individual what time and how regularly he goes to bed, and how many hours he sleeps. An artificial light allows a person to work in the night, perhaps, breaking his circadian rhythms — the rhythms of sleep and wakefulness in concerned with lightning. In other words, at least, a human sleep may be partially controlled with the help of direct (what time to go to bed and wake up) and indirect (sleeping pills, coffee, energizing drinks, listening to the music before one's sleep, making a bed) tools. Thus, sleep can be considered as the analogue of higher mental function [13, p. 24].

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Such a transformation like in every other case creates a specific zone of "the cultural pathology" represented by the whole set of caused-by-culture disorders. From the moment the sleep is not a natural function any more, a person begins taking it as a voluntary function, that is, as that what he is able and obliged to manage. However, a human being can manage even "genuine" higher mental functions (memory, perception, thinking) on a limited scale only. The sleep itself is just an analogue of higher

mental functions. Like any physiological function it depends upon a great number of factors; and the boundaries of its voluntary regulation are pretty narrow. As in case of conversion disorders, functional impotence and other "higher" corporeal function derangements, neurotic insomnia forms according to the mechanism of the vicious circle of excessive efforts, hyper function of control in the absence of necessary means and instruments for such a regulation. The lack of the improvement in consequence of auto regulation does not lead to the change of coping-strategy by patients: either they proceed with picking up some newer inefficient medicines of sleep control, or they cease any whatsoever actions in way of "rejection reaction" and changeover to the chemical modulators — somnifacients. For all that, the size of the market of soporifics — the most widespread psychotropic drugs — enables to evaluate the prevalence of cultural pathology related to sleep in modern society.

Last but not least, let us dwell on one of the most remarkable moments of the socialization and transformation of innate biological functions into higher mental functions, regulated voluntarily and then post-voluntarily and mediated by special tools. Besides the generation of new forms of activity, this process is attended by possibly an incidental to some extent but fundamental feature: the generation of the subject himself, the consciousness. On having encountered with an obstacle on the path of the involuntary unconscious fulfillment of any natural function, the subject is "clarified" for himself becoming the object for himself. This is possible under the conditions of "delayed", "braked" activity only, where the subject displays himself in the form of the subject of deficiency, and then of activities.

From Vygotsky's viewpoint, a corpus is fully farmed out to physiology. As soon as the anaphora of the transformation of the natural entity into the sociocultural one is finished in a gesture, further on is there a beginning of the human life itself of a human being. That is, it is a "one-shot event". The essence is established: one may forget about the body further, as well as about the transformation connective in between the natural and human substances. Anyway, there is an ability to think over the situation in another way. The deficiency, inability of the newborn for a self-dependent existence with no adult's help, the so-called "defect" of the body are not the situation of the initial stage of development but a permanent situation. A person as a human being is not complete: from the moment of conception till the moment of death he is merely a "being in the possibility" to become a human being not only as personality but also still in the sense of nature. Each day we face the incompleteness of ourselves, the peculiar "defect"; and if this deficiency is experienced and/or conscious, the corporeal deficiency obtains a sociocultural dimension; the latter in its turn argues about its corporeal disincarnating [17].

The clarification is under way, seemingly, according to a universal mechanism for consciousness: one realizes (is aware of) everything that meets with an obstacle on the path of an immediate and unfettered realization. We encounter with the substance of thinking when we cannot accomplish a task, with the substance of memory

when it denies. This resembles the probe, which phenomenologically exists in the zone of its "semi-transparency", partial controllability. As soon as it ceases fully to obey, it turns into an outside object; and as soon as it gets fully subordinate and predictable, it is included in body scheme is not conscious anymore. It can be represented as the metaphor of glass: if we see a completely opaque glass, then we can predetermine its depth by no means, it appears in front of us in the form of surface; if it is utterly transparent it is outside our perception. The glass is in existence to us as much as we encounter with it in one way or another; it is semitransparent or dust-laden.

The genesis of subjectness like all the forms of higher activity takes place in ontogeny, when encountering with cultural restrictions and requirements the child has to accommodate himself to them turning in the process of "normal estrangement" from resultant physical and physiological "forces" into the author of his actions. This act lies in the base of the formation of the basic psychological tool — pointing gesture, which underlie any sign from the point of view of L.S. Vygotsky. "In case of gesture, its natural and sociocultural constituents are equally necessary but differently significant in the making, they form the unique variant of growing sociality (and not only it)… The challenge of a human nature deficient in itself and for itself produces future sociality matrix in gesture. At that, strictly speaking, ever since a human being has got his internal psychological plan formed, there is another "coming to help" as well as the person as "the other for himself". In this sense, the room for gesture development like a border zone, in which nature evokes culture's response, is not only outside but in the essence of each person" [17]. Let us pay our attention to that the pointing gesture becomes a sign only provided that it is an "unaccomplished", outstanding action. The need for it will be no longer relevant if it (the action) manages to be fulfilled. This is the gap in fulfilling a grasping action that transforms it into the gesture of managing his mother who ought to complete it first. There is one more accurate ontogenetic instance of generating subjective responsibility: to put the baby in the corner. The situation here stands out for its form from normal action. The baby's actions are not confined with the physical limits of the situation: he is rather able to leave the corner but he does not do it transforming the action absence into his own action and alien will or fear of punishment into his action of "inaction".

This is the type of ontogenesis when the child is under the process of the formation of his own consciousness. J. Piaget's statement about the connection of the advent of egocentric speech with the hardship of the operational aspect of the child's activity can be amplified with the hypothesis about the necessity of normal self-estrangement, primary externalization of I with the following new internalization and formation of a mature personality. In other words, even in this, an adequate identification is the product of the internalization of what has been externalized before; it forms in the process of the step-wise formation of ability for voluntary regulation. This is the very stage of egocentric speech when the child speaks about himself in the third person, which is corroborated with the relatively

late formation of the first person pronoun in language and with the absence of the phenomena of estrangement in younger children and the reps of archaic cultures.

* * *

The problem of socialization within the scope of cultural-historical approach may be considered in a much broader way than as merely the development of higher mental functions. This is about the transformation of biological substance into human entity. Owing to it a person becomes not only the slave of environment, perceptive field or of his instinctive desires, emotions but he gains the whole number of psychological tools for separation from them and obtaining of a definite autonomy.

Some of these technologies are quite obvious. For instance, there are entire technologies of mastering, such as: culinary arts and pornography for tightening up appetite and sexual arousal. But the other mediating instruments are less evident and grounded on management by means of both chemical and non-chemical mediators: drugs, alcohol, pharmaceuticals, as well as poetry, music and philosophy. But anyway, all of those are the tools of human culture helping the human being towards mastering his own behavior. The socialization of natural native features, psychic, physiological, corporeal functions, attractions and needs is remarkable for all the fields of human existence, from delivery of a child till a person's death including the most existential moments in the context of culture: life and death, conception and birth, sickness and health. These are not simple landmarks and properties of biological existence but to a great extent socially and technologically mediated phenomena.

References

1. Allakhverdov V.M. Metodologicheskoe puteshestvie po okeanu bessoznatelnogo k tainstvennomu ostrovu soznaniya [Methodological Travelling in the Ocean of Unconsciousness to the Enigmatic Island of Consciousness]. Saint-Petersburg, 2003. (In Russ.).

2. Bakhtin M.M. Avtor i geroy v esteticheskoy deiatelnosti [The Author and Hero in Aesthetic Activity]. Leningrad, 1928. (In Russ.).

3. Dobrynin N.F. O teorii i vospitanii vnimaniya [On the Theory and Training of Attention]. *Sovetskaya Pedagogika = The Soviet Pedagogy*, 1938, no. 8. (In Russ.).

4. Foucault M. Volya k istine: po tu storonu znaniya, vlasti i seksualnosti. Raboty raznykh let [The Will to the Truth: to the Other Side of Knowledge, Power and Sexuality. Works of Different Years]. Moscow, 1996. (In Russ.).

5. Hegel G.W.F. Nauka logiki [The Science of Logic]. Saint-Petersburg, 1997. (In Russ.).

6. Khomskaya E.D. Neyropsikhologiya [Neuropsychology]. Saint-Petersburg, 2005. (In Russ.).

7. Leontyev A.N. Potrebnosti, motivy, emotsii [Needs, Motives, Emotions]. Moscow, 1971. (In Russ.).

8. Luria A.R. Vysshie korkovye funktsii cheloveka i ikh narusheniya pri lokalnykh porazheniyakh mozga [Higher Cortical Functions in Man and Their Disturbances in the Presence of Local Brain Lesions]. Moscow, 1969. (In Russ.).

9. Luria A.R. Etapy proydennogo puti: Nauchnaya avtobiographia [The Stages of the Traversed Path: Scientific Autobiography]. Moscow, 1982. (In Russ.).

10. Marx K., Engels F. Sochineniya [Works]. Vol. 46. Part I. Moscow, 1968. (In Russ.).

11. McLuhan M. Ponimanie media [Understanding Media]. Moscow, 2011. (In Russ.).

12. Pluzhnikov I.V. Emotsionalnyy intellekt pri affektivnykh rasstroystvakh [Emotional Intelligence in Affective Disorders]. Synopsis of Ph.D. Thesis. Moscow, 2010. (In Russ.).

13. Rasskazova E.I. Narusheniya psikhologicheskoy samoregulyatsii pri nevroticheskoy insomnia [Psychological Autoregulation Disorders in Neurotic Insomnia]. Synopsis of Ph.D. Thesis. Moscow, 2008. (In Russ.).

14. Rasskazova E.I., Leonova A.B., Pluzhnikov I.V. Razrabotka russkoyazychnoy versii oprosnika kognitivnoy regulyatsii emotsiy [The Development of the Russian Version of the Inquirer of Emotion Cognitive Regulation]. *Vestnik Moskovskogo Universiteta = Moscow University Bulletin*, 2011, Series 14. Psychology, no 4, pp. 161—179. (In Russ.).

15. Sacks O. Chelovek, kotoryy prinyal zhenu za shlyapu [The Man Who Mistook His Wife for a Hat. Saint-Petersburg, 2006. (In Russ.).

16. Senyushenkov S.P. Problema interiorizatsii v istorii otechestvennoy psikhologii [The Problem of Internalization in the History of National Psychology]. Synopsis of Ph.D. Thesis. Moscow, 2009. (In Russ.).

17. Tishchenko P.D. Zhest kak tvorchestvo sotsialnosti: *pereosmyslyaya L.S. Vygotskogo* [A Gesture as the Creation of Sociality: Reassessing L.S. Vygotsky]. Preprint. (In Russ.).

18. Tkhostov A.Sh., Kolymba I.G. Phenomemologiya emotsionalnykh yavleniy [Phenomenology of Emotional Phenomena]. *Vestnik Moskovskigo Universiteta = Moscow University Bulletin*, 1999, Series 14. Psychology, no. 2, pp. 3—14. (In Russ.).

19. Venger A.L., Slobodchikov V.I., Elkonin B.D. Problemy detskoy psikhologii i nauchnoe tvorchestvo D.B. Elkonina [The Problems of Child Psychology and the Scientific Creative Work of D.B. Elkonin]. *Voprosy psikhologii=Issues in Psychology*, 1988, no. 3, p. 20. (In Russ.).

20. Vilyunas V.K. Psikhologicheskie mekhanismy motivatsii cheloveka [Psychological Mechanisms of Human Motivation]. Moscow, 1990. (In Russ.).

21. Vygotsky L.S. O psikhologicheskikh sistemakh [About Psychological Systems]. In Vygotsky L.S. *Sobraniye sochineniy v 6 tomakh* [*Collected Works in 6 Volumes*]. Moscow, 1982. (In Russ.).

22. Vygotsky L.S. Uchenie ob emotsiyakh [The Theories of Emotions]. In Vygotsky L.S. *Sobraniye sochineniy v 6 tomakh* [*Collected Works in 6 Volumes*]. Vol. 6. Moscow, 1984. (In Russ.).

23. Vygotsky L.S. Istoriya razvitiya vysshikh psikhicheskikh funktsiy [The History of the Development of Higher Mental Functions]. In Vygotsky L.S. *Istoriya razvitiya cheloveka* [*The History of Human Development*]. Moscow, 2005. (In Russ.).

24. Wittgenstein L. Philosophskie issledovaniya [Philosophical Investigations]. Moscow, 1994. (In Russ.).

25. *Serge Nicolas*, "Théodule Ribot (1839—1916). Le philosophe, la mémoire et l'imagination", Sciences humaines, hors-série spécial, n° 7, septembre-octobre 2008. (In French).

Идеи Л.С. Выготского в контексте клинической психологии

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В статье обсуждаются перспективы развития культурно-исторического подхода в контексте клинической психологии. Выдвигается предположение об онтогенетическом развитии человека как результате его взаимодействия с культурной средой, трансформирующей натуральные психическое функции в высшие и приводящей к формированию целого ряда психопатологических аномалий. Также обсуждается произвольная регуляция высших психических функций, определение непроизвольности и постпроизвольности функций, интернализация действий, дифференциация аффекта и эмоции (в т.ч. как высшей психической функции), «культурная» социализация непсихических функций (сексуальных, функций сна, выделения) и несовпадение натурального и культурного в человеке. В статье доказывается, что в основе развития человека в онтогенезе лежит субъектность, появляющаяся, как и все формы высшей деятельности, в результате соприкосновения с культурными ограничениями и требованиями. Автор предлагает расширить понятие «высших» функций, включив сюда физиологические и телесные функции. Последние приобретают характер высших психических функций (произвольная регуляция, иерархическая структура, контроль) в процессе социализации. Статья рассматривает феномены отчуждения, конверсии и диссоциативные расстройства как результат осложнения и реструктуризации натуральных функций. В завершение намечаются перспективы дальнейших исследований.

Ключевые слова: социализация, культурно-исторический подход, произвольность, «культурное» тело.

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Relationship between Education, Development & Health from Cultural-Historical Perspective

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The article reflects on the authors' professional journey to problematizing the relationship between Education, Development and Health. This journey consisted of 4 stages or steps: 1) from research on cognitions in creative problem solving in healthy and pathological samples to identification of the role of reflection in cognitive self-regulation and coping with challenges; 2) from the practice of helping to overcome learning difficulties and psychological maladjustment to making meaning of these practices using cultural-historical concepts; 3) from using the cultural-historical framework to understand the relations within the Education-Development and Health-Development dyads to considering complex relations within the Education-Development-Health triad; 4) from relations within the triad to "a new parallelogram of development", i.e. creating the basis for helping practitioners' (educators'; psychologists'; psychotherapists') efforts that would account for "a tripartite goal" using a conceptual framework of cultural-historical psychology, including the reflection-activity approach (the zone of proximal development; the multidimensional model of the zone of proximal development; dual resource; collaboration; reflection; problem epicenter, a subjectness position; self-development). When discussing each step, the authors identify gaps in efforts invested by specialists working in every dimension and provide evidence to an essential contribution of cultural-historical psychology theory and practice to bridging these gaps and establishing an evidence-based practice of education aiming at students' development and health enhancement.

Keywords: education; development; health; cultural-historical psychology; reflection-activity approach; creative thinking; psychological counseling; psychotherapy; reflection; zone of proximal development; multi-dimensional model of the zone of proximal development; problem epicenter, double resource; collaboration; subjectness position; self-development.

The authors of the article believe that establishing the relationship between three fundamental subject matters of psychology as a science, and essential areas of psychological practice — and namely, Education[1], Development and Health — is prerequisite to achieve practical goals in any of these three areas. However it took the authors much time and effort to come to conceptualize the relationship between the three disciplines. When we started working on this article, it became clear that in order to create a proper problem statement addressing the relationship between the subjects of science from the perspective of the non-classical, practice-oriented research, it is crucial to make meaning of one's own scientific and practical journey. According to our teacher N.G. Alekseev, what works in practice is "lived-through" scheme rather than "office-room" patterns. Therefore, we chose to approach the article's central problem statement by reconstructing each of the authors' professional journey. It enabled us to single out *four steps needed to articulate the problem statement addressing the relationship between Education, Development and Health in scientific research and practice.*

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[1] The authors use the terms "education", "instruction" and "learning" as synonyms in this article.

1. The first step is discovering the contributions of reflection to normal and pathological functioning. The authors of this article carried out their first term papers under the supervision of scholars who used to work with Vygotsky and whose frame of reference developed under the influence of his ideas and personality. These scholars — *Bluma W. Zeigarnik and Piotr Y. Galperin* — were friends and paid regular visits to each other. Nevertheless, as far as research is concerned, they went their separate ways "rearing" the seeds that L. Vigotsky had sown, i.e. the ideas that fertilized various areas of psychology. Bluma Zeigarnik promoted the cultural-historical approach in clinical psychology, and Piotr Galperin introduced it to developmental psychology. Nonetheless, their approaches had something in common, and namely, they were practice-oriented; both scholars were practitioners right from the start. When developing psychodiagnostic methods in pathopsychology, *B. Zeigarnik emphasized the idea of instrumentality of the human psyche.* In our personal communications, she reiterated that facilitation of mental processes mediatedness opened a way to resolving psychological problems; she pointed out that pathology was, first and foremost, a deficit of self-regulation capacity. *P. Galperin grounded the development of his educational methods in the idea that the origins of the human psyche lay within the social, and that the psyche was "grown" from external, materialized actions through their interiorization.*

Thus, their effort aimed at solving the issue of the mental processes organization, and untangling converted series of internal actions hidden from us.

Volitional regulation; awareness; mediatedness, and goal-orientation were Zeigarnik's favourite and most important words for comparison of mental processes in normal and pathological conditions. When specifying the conditions of efficient education, Galperin introduced the notion of the mental actions quality, and a key feature of this quality referred to awareness of the mode of action. A wealth of skills and knowledge that our teachers, who elaborated on Vygotsky's ideas, endowed us became an important foothold for the step towards *discovering the role of reflection in the norm and in mental disorders.* This step grew from the integration of different lines of cognition research and attempts to shape thinking in the course of creative problem solving by healthy subjects (V.K. Zaretsky) and people with thought disorders in schizophrenia (A.B. Kholmogorova).

Creative thinking resisted to being shaped. This process might have been hindered by a view on mistakes that advocates of the stage-by-stage formation of mental actions stuck to. This framework conceptualized efficient learning as formation of mental actions meeting predetermined high standards, and considered mistakes to be undesirable and intolerable phenomena. *At the same time, an insight occurred only when research participants followed wrong routes through the task. That is, a mistake was essential for creative action, and the insight exhibited itself as experiencing the transition from a wrong mode of action to a mode that met the challenge appropriately.* It was within this transition when the crucial contribution of reflection to cognitions came to the foreground. Therefore, it was no coincidence that research

continued from other perspectives: the system approach to cognition, which believed reflection to be incorporated in the structure of thinking [2; 27] allowed to develop a theoretical rationale for the central role of reflection and to support it with empirical evidence from cognitive research on the material of creative problem-solving.

Zaretsky (1975) identified and described the phenomenon of pre-insight intensification of reflection in his graduation study supervised by Igor N. Semenov, Galperin's and Alekseev's disciple. Now it is difficult to believe that the graduation thesis was marked down to "B" instead of "A" due to the use of "a completely unknown, non-psychological term 'reflection' " [1], which the jury had reproached the author for. In after years, the creative problem-solving task became not only the empirical material for creative process research but also the model of a challenging situation when a person faces inadequacy of his/her modes of action. Given that this situation is a common occurrence in learning, in after years, the identified contribution of reflection to creative problem solving became an important clue to assisting children who experience learning difficulties.

The creative problem-solving task modeled the situation of a challenge and the need to become aware of and to restructure basic modes of action. In one of the first coauthored articles, we called the mechanism of this restructuring *"a constructive function of reflection"* [29] As early as at the end of the 1970s, Nikita Alekseev, our second and mutual teacher, emphasized that reflexivity became a specific trait of cognition in the second half of the 20th century, and within a short time, it would be impossible to imagine either science or culture in general without the concept of reflection [22] Alekseev enjoyed quoting Fichte's words, "Reflection is freedom". He also argued, "When the mode is out of awareness, it harnesses the person; reflection enables the person to become aware of the mode of action and to harness it" (N.G. Alekseev, a workshop presentation).

Inspired by the ideas about the role of reflection in cognitive regulation, which we both believed to be a possible clue to solving the puzzle of schizophrenia at the time, we approached Bluma Zeigarnik in 1979 and suggested studying the process of creative problem solving in schizophrenia patients. Zeigarnik was quite impressed with the potential of reflection studies for uncovering the mysteries of mental disorders, as explicit self-regulation or mediation of mental processes would be impossible without fully-fledged reflection. So, our first mutual study of cognitive dynamics and its reflexive regulation in the normal and pathological conditions [29] occurred. An examination of the healthy sample showed that in a challenging situation, at the stage of moving in blockade [16] cognition either got organized by means of reflection and overcame the impasse, or got disorganized unless the regulatory function of reflection "switched on". An examination of the schizophrenia sample showed that whereas cognitive processes before moving in blockade unfolded in a similar way in both samples, at the stage of moving in blockade cognition disintegrated because reflection never "switched on" [49] These findings allowed us to infer that reflexive regulation of cognition played a

crucial role in challenging situations and that this regulation was disturbed globally in severe mental disorders. Subsequent writings elaborated on this conclusion [35], [36]. Later — during the following step — the views on the role of reflection in genesis and resolution of challenging situations became essential for the translation of academic research onto psychological practice.

2. The second step comprised work within "Education-Development" and "Health-Development" dyads. At the cusp of 1980s—90s, when the Russian academic psychology started to turn its face towards practice, we both, just like other Russian psychologists, dived into practice and became engrossed in it. Then our "reflection-based" expertise transformed into conceptual tools, which were quite instrumental when dealing with practical issues in psychotherapy (A.B. Kholmogorova) and problem-solving counselling (V.K. Zaretsky), which focused on challenges that many individuals as well as organizations and communities were encountering at the time.

Later, due to different reasons, issues of helping children with learning difficulties became the focus of Zaretsky's counseling activity. Kholmogorova who completed multiple training courses in various areas of psychotherapy that were available due to generous support of our foreign colleagues, had her heart set on Aaron Beck's cognitive psychotherapy. At this stage, the work was developing in two directions: 1) the cultural-historical framework became essential for analyzing the Education and Development issues when providing assistance to underachievers and children with learning difficulties and arrested development; 2) the cultural-historical framework helped to establish relationships between the issues of Health and Development in terms of psychotherapy effectiveness research (A.B. Kholmogorova). *At this stage, the "Education-Development" and "Health-Development" dyads were separate.*

Let us consider the "Education-Development" dyad using the example of psychological and educational support with overcoming learning-difficulties provided to school students in 1990—2010. In the beginning, this objective consisted in assistance with bridging the gaps in knowledge by improving teachers' efficiency through incorporating psychological assistance tools helping to become aware of inappropriate modes of action and to restructure them, i.e. through initiating, activating and supporting students' reflection. A small book "When the situation seems insolvable...", which was written right before this stage, aimed at endowing people with psychological expertise that they could use for real-world problem solving, and articulated five rules of creative problem solving [20]. The 17-year-long academic research on cognition in creative problem solving, the material of which was used in several PhD studies, resulted

in five short sentences... Here are these rules that became the first tools of psychological help to organize thinking in a challenging situation [20, p. 47].

1. In order to solve a problem, one needs to set one's mind to it.

2. In order to solve a problem, one needs to believe that it can be solved.

3. In order to solve a problem, one needs to be solving it.

4. In order to solve a problem, one needs to understand what interferes with solving it.

5. In order to solve a problem, one needs to see the obstacle as a way to solving the problem[2].

As you can see, these rules were free from any subject-specificity. The former three rules represented personality-related conditions of solving challenging problems (to set one's mind to; to believe; to invest effort). The latter two rules were related to reflection: to become aware of the obstacle (which lay within one's own mode of action) and to turn it into a resource when searching for a solution, as P. Galperin [14] believed that obstacles acted not only to disconnect but also to connect the problem statement and the solution to be found. Using chimpanzee' problem solving research as an example, Galperin explained that when a chimp saw the distance between its hand and a banana as something that connected them rather than interfered with getting the banana, it would think to get a stick and fill in that interval.

Working with children with learning difficulties, we frequently employed the fifth problem-solving rule that helped children take mistakes and challenges easier. It helped them understand that becoming aware of the causes underlying challenges and obstacles on their way to the correct solution, as well as deficits in their own modes of action was indeed a great success. There was only one step from becoming aware of the cause of a mistake to correcting it, and this step was to see the obstacle as a way to problem-solving, namely, to understand what and how one needed to change about one's mode of action. Students of any age that we worked with mastered the words "mode" and "reflection" very quickly and incorporated them in their activity.

In the 1990s, the number of underachieving students was rising fast. According to our practical experience, introduction of differentiated instruction and the so-called remedial classes made things even worse rather than improved them. This happened because teachers preferred to view underachieving children as "ineducable". This gave a proper explanation to their professional failure, and attempts (unsuccessful though) to teach these children could qualify as an act of humanity.

This perspective prevailed among educators, but it contradicted successful practice of "innovative teachers" who demonstrated that indeed there were no in-

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[2] On April 21, 2019, the 500th TV-game "What? Where When?" took place, in the creation of which V.K. Zaretsky took part as a psychologist-consultant in 1975. Having voiced the first four rules for solving a creative problem, the host of the TV program B. Kryuk suggested asking players a question, about what the fifth rule is. Team of six players could not answer correctly, so we may say that 30 years after these rules were formulated, the idea that there is a resource in the difficulty itself for a solution still remains unclear and even original.

educable children, but there were creative challenges of setting conditions for their education and development. Sometimes these challenges could be very difficult but still manageable. Emilia Leongard's work with deaf and hard-of-hearing children and the experience of the Centre of Remedial Education; "Borozdin's School" Abilitation Centre etc. served good examples of that practice. One could also remember a unique experiment of the Soviet time, and namely, the project initially supervised by A.I. Meshcheryakov and later by E.V. Ilyenkov, who created conditions for education and development of a group of deafblind students. A student from this group A.V. Suvorov became PhD in psychology and developed a unique educational approach [48]. Keeping in mind these examples of fruitful professional educational and psychological work, we decided to reword the problem of educating "the ineducable": when a child failed to learn and to develop, it would mean that educators had failed to find and to create such conditions for learning and development that would have met this child's specific needs. As this child's life would begin to center around the situation of facing learning challenges, the outcome of which would determine his/her future life, the practical goal would focus on how to help the child overcome this learning challenge. It was assumed that if the child overcame his/her learning difficulties with our help, he/she would make progress in development as Vygotsky stated that "learning preceded development" [11]. Besides, Galperin's work taught us that operational cognitive schemata in junior-school children changed when children started learning elementary mathematical concepts [44]. Elkonin articulated a clear statement that it was the child's own intellectual activity that drove development [61], and Elkonin and Davydov's practice of developmental education, which aimed at facilitating development through organization of instruction, was unfolding successfully in psychology and education [15; 46; 60; 62], etc.

The first project whose aim was to rebut the assumption that there were ineducable children, encompassed summer schools for children with special needs and learning difficulties in the Nytvensky District of Perm Krai, Russia. The summer schools took place in 1996—2002, and it was the school of 1997 and working with children with learning difficulties at the Russian language lessons that gave rise to a new approach, which was named "the Reflection and Activity Approach" to helping children overcome learning difficulties [17].

The approach received this name to reflect the idea of a Russian language teacher (N.Y. Abasheva) and a psychologist who assisted her (V.K. Zaretsky) that students were to become agents of their activity by means of overcoming their own difficulties and reflecting upon this process. The core assumption was that orientation on overcoming challenges and active attempts at coping from the agent's position would facilitate gaining awareness on inefficient modes of action and promote their restructuring.

For example, when asked how they wrote dictations, most children answered, "I hear — I write". It was their natural way of writing dictations. Some children strongly believed that most words were spelled just as they sounded, and one could simply spell them by ear.

After a short piece of work on reflection focusing on analyzing and classifying mistakes, the mode of action went through initial transformation, "I hear — I think — I write". However the main issue was that the children lacked instruments to make thinking possible. While going deeper into the mode of action, the students became aware that one needed to see "bottlenecks" so that one could reflect on anything. They understood that one needs to know grammar rules for various cases, various morphemes, and word classes... Depending on the extent of the gaps, the middle part of the mode of action ("I think") could turn into a complex system of actions that occupied two or three pages when put down on paper. Nevertheless, when the mode of action was well-developed, tried, and its robustness was proved by practice, the child had nothing else to do to become literate but train 100 spelling rules and 50 punctuation rules getting to know some specific terms on the way. After one's own reflection and creative work on the mode of action, this goal seemed quite attainable.

The children left the summer school having acquired the experience of successful coping with several challenges (i.e. the learning effect might have been not so big), and willingness to continue working on their own difficulties. What was especially important, they were clearly aware of what they could do themselves and what they needed another person's help with (a teacher, a psychologist, or someone else). We believed this result to signify cognitive and personal development that was visible without special psychological testing [24].

This experience taught us that the assumption that "learning precedes development" was more than a theoretical statement, but a practical tool, some kind of a "methodological clue" to the problem of the relationship between Education and Development. Starting work with a student experiencing learning difficulties, one needed to identify what the child was able to do him/herself; what the child was unable to do; what help the child needed; and how things that the child would learn having overcome his/her difficulties could help him/her to develop and what specific development they would facilitate, which was especially important in terms of the problem statement. For example, arranging for the action of control (according to Galperin and Kabylnitskaya) [40] when working on mistakes due to lack of concentration facilitated development of attention. Efforts invested in overcoming the inability to remember more than a couple of words when writing a dictation and to understand connections between them resulted in development of a meaningful text perception, imagination, the ability to act mentally. Overcoming a stereotype of thoughtless "mechanical model-based action" led to development of thinking, understanding and establishing of causal and other relationships etc.

Positive personality changes that could be considered as new personality formations occurred in parallel. For example, lack of motivation for learning gave place to insatiable curiosity (sometimes a flock of children was following the teacher after the lesson asking her questions, some of which she even found difficult to answer). Lack of belief in one's own abilities and possible success changed for con-

fidence that there were no insolvable issues. Former lower scorers started wondering which Moscow universities they could enter. Resistance to making any assignments gave way to appetite for learning; willingness to face any challenge; enthusiasm when solving difficult problems. *The capacity for reflection enabled the children to be precisely aware of what they already knew, and of what they did not know yet but what they were going to learn tomorrow (the day or two days after etc.).* They became aware that to learn something that they were still unable to do, was a matter of time and effort alone. When anyone believed him/herself "ineducable" (disordered, "defective"), these myths dissolved quickly as soon as real learning progress was made. A student might even overcome learned helplessness when the educators managed to engage the child in relevant activity.

Witnessing personality evolution of the children whom we succeeded to provide efficient psychological and pedagogical help to (we should say it openly that of course, there were children who we failed to help), every time we got amazed at its speed. There was a former "lazybones" who told us that she got scared when she "had forgotten all the twelve word classes" on her way to the toilet at 2 a.m., but had succeeded to remember them while she was walking back. And there was an overage child who had spent three extra years at elementary school and who was telling a young teacher from a different school about his last-year training. He told her that he used to be unable to add figures but succeeded in learning all mathematical operations; that his reading speed increased month by month, and that he learnt to prevent mistakes in words with a soft sign...

All the changes resulted from an altered attitude to learning. Therefore, we started to lay a special emphasis on a student's position within the learning process, and we found out that students who exercised learning from the full subjectnes position not only became agents of learning and reflection but also became agents of self-development. We were able "to catch" empirical acts of self-development by means of analyzing children's reflexive statements. For example, a child who was working on avoiding mistakes in words with unstressed vowels in the root could say in the course of reflection, "I have learnt to cope with my anxiety". It was reconstructing the process that the child initiated alone that made the link between anxiety and working on mistakes be comprehensible. When the child started working on the rule, she became quickly aware that she knew the rule and how to use it, but her anxiety due to the fear of making a mistake destroyed the whole process and precluded rational action. Anxiety was a challenge; therefore she needed to learn to cope with it. She set the goal — she achieved it, "I have learnt to cope with my anxiety!" It is worth mentioning that no one said a word about "anxiety" during the lesson; the child asked neither the teacher nor the psychologist for help; that is to say, in the course of reflecting, she discovered a target for her fully autonomous effort. If the girl did learn to cope with anxiety that interfered with her performance, the step in development, which the child made by herself, could indeed be an instance of self-development.

The conceptual framework of the Reflective-activity approach (RAA) started to develop in the course of reflecting on the experience of summer schools; working with children with special needs and disabilities; orphaned children; adolescents with behavioral conduct issues, and other difficult categories of children and adolescents [21]. The key RAA concepts included students' subjectness position in learning [32]; student-teacher cooperation; positive, meaningful and emotional contact; reflection; elaborating modes of action; and self-development [21]. The value of Development became the basic value shared by the RAA-community members (as RAA advocates started to call themselves); the "Intention-Implementation-Reflection" scheme [1] became the basic scheme for arrangement of joint activity; and the main conceptual instruments encompassed cultural-historical psychology assumptions on the relationship between learning and development. The concept of the zone of proximal development (ZPD) [11], [12] was central and served the basis for the next step in conceptualizing the relationship between Education, Development and Health.

Nevertheless, it is worth looking at the progress with the "Development and Health" dyad at first. Let us begin to problematize the "Development-Health" dyad with citing a small quote from personal correspondence, *"You are saying that you have written an article on how Vygotsky's cultural-historical theory could be useful for psychotherapy. But psychotherapy has been rapidly developing... Was Vygotsky such a visionary indeed?"* (From Alfred Längle's letter to Alla Kholmogorova following the XXth IFP Congress).

We wrote and published the article with a detailed account of the importance of cultural-historical psychology for psychotherapy in 2010 [56], [57]. In the present article, we would like to give a brief description of the cultural-historical psychology heuristic potential for psychotherapy. Vygotsky authored a developmental theory with a very strong conceptual framework that may become an essential vehicle for psychotherapists if they want not only to eliminate the disease symptoms but also to enhance health resources facilitating their patients' development. From the cultural historical perspective, mental development implies internalization of cultural tools for organization of one's mental activity whereas psychopathology is a lack of tools for mental regulation and organization of the psyche. In this case, psychotherapy can be described as the process of compensating for this deficit through development of new mental formations that change the organization; expand the psyche's "apparatus", and improve the capacity for mental self-regulation.

Let us refer to the authority of James Wertsch, one of the main Western experts in cultural-historical psychology, who wrote, "... the emergence of selfregulative capacities in ontogenesis — a central theme in the work of Vygotsky and his followers... their ideas about self-regulation can be properly understood only if we conduct a genetic analysis that goes back to the origins of self-regulation... researchers have paid very little attention to his ideas about the transition from interpsychological into intrapsychological functioning" [78]. Although contemporary

Western experts in Social Cognition do not mention Vygotsky's name, they have been disseminating the central idea of cultural-historical psychology putting an emphasis on the need for the transition from the intrapsychological (which conceptualizes social cognitions as resulting from maturation of some specific, genetically-programmed brain substrate) to the interpsychological (focusing on the role of the child-adult interaction) paradigm [76].

Undoubtedly, highlighting the importance of a genetic analysis, Wertsch meant that researchers paid little attention to the mechanisms of the transition from "the inter-" to "the intra", in order to study which one needs to address such concepts of Vygotsky's theory of development as collaboration; the zone of proximal development; bypass pathways of mental development. Another famous British researcher of social cognition, Charles Fernyhough points to a key contribution of Vygotskian ideas about the function of egocentric speech to understanding of the nature of mentalization and empathy-social cognitions that lay the ground for understanding oneself and other people [52; 69]. Fernyhough singles out two types of the adult-child or the therapist-client interaction as a clue for development of social cognitions: 1) *partnership interaction* implying two positions of a child and an adult; a client and a therapist (Vygotskian collaboration); 2) *instructional interaction* — when an adult or a therapist domineers the interaction (ideology of influence). Whereas the first type facilitates development of social cognitions and reflexive capacities, the second mode suppresses them. Relational analysis [73] — one of the modern psychodynamic psychotherapy approaches — directly relies on Vygotsky's concepts of internalization; dialogue with an adult, and ZPD.

Within the practice of the Reflection and Activity Approach to assisting children with learning difficulties [21] development of dialogical and reflexive thinking is embedded in the principles of collaborating within ZPD and facilitating of the subjectness position and reflecting on modes of action. A step in learning based on these principles may facilitate remediation of social cognition deficits. *The capacity for reflection can be viewed as an essential criterion of psychological maturity, and the process of "rearing" this capacity in the course of psychotherapy and assistance with overcoming learning difficulties facilitates development and the transition to a higher level of psychological functioning.*

From the positions of the Russian tradition of the study of creative thinking and cultural-historical psychology, the mechanisms of the effectiveness of cognitive therapy of A. Beck were analyzed not only for mental health, but also for general development [50], [72], [30] Due to his major contribution to theory and practice of psychotherapy, Aaron Beck deserves to be called a Freud of the second half of the 20th century. Moreover, his ideas about the human ability to manage their mental processes and life were far more optimistic — he enriched psychotherapy with a metaphor of a human as a pilot. It was Beck, who translated the Cognitive Revolution, which overtook Western psychology, onto psychotherapy in the 1970s—80s [63]. Furthermore, a review of mechanisms underlying cognitive psychotherapy effectiveness from the conceptual perspective of the Russian cognitive research on reflection [50; 72] showed that Beck's writings contained the seeds of another revolution — the Revolution of Reflection that broke out in the 21st century when all psychotherapy has become reflexive or metacognitive in the Western psychology terms [53], *Describing these Revolutions in psychotherapy, we used to metaphorically describe them as "from sex and reflex — to reflection" in our publications* [56], [57], [72].

Figure 1 below embraces terms that various approaches to psychotherapy utilize as central concepts when addressing mental health issues, and all of them represent various functions of reflection.

As early as in 1988, Donald Meichenbaum, one of the cognitive psychotherapy founder, wrote, "Metacognition refers to the executive self-regulatory processes one engages in and how one reflects upon them. The CB therapist helps clients develop the ability to "notice," "catch," "interrupt," "monitor," and "evaluate," their thoughts,
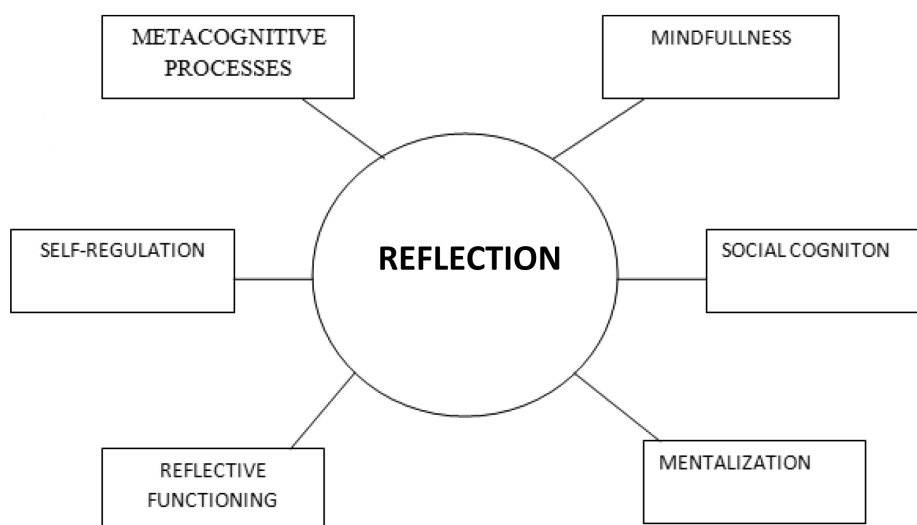

Fig. 1. Reflection and Its Foreign Alternatives

feelings, and behaviors. Moreover, CB therapists ensure that clients take credit or make self-attributions about the behavioral changes they implement" [67]. *This short quote hides several essential cultural-historical concepts: help; co-operation; mode of action; reflection;* subjectness position[3] *(it was shown above how these concepts were used and developed in RAA).* And here is another quote of the same author, "Another somewhat related influence, especially in the development of CBT with children, was the work Of the Soviet psychologists Lev Vygotsky (1978) and his student A.R. Luria (1976). They proposed that children become socialized by internalizing interpersonal communication into private (intrapersonal) speech. Their socialization and internalization models provided a theoretical framework for the development of cognitive behavior modification with children" [67].

Holmes, a contemporary social cognition researcher, defined mentalization as the capacity to *see oneself from the outside* (i.e. in the terms of the reflection action scheme, performing the internal actions of alienation and objectification), and *to see other people from the inside* — somehow permeating, transferring oneself onto their mental state (i.e. performing an internal action of decentration) [71].

The described cultural-historical approach to the Development-Health dyad implies that development of mature mental structures, capacity for reflection and self-regulation is prerequisite for health. This raises the question: how to provide conditions for this development? Until now, most research on these conditions dealt with the role of upbringing and the role of key — first and foremost, parental — figures in development, e.g. in Bowlby's theory of attachment. As far as health issues were concerned, education was viewed mostly from the perspective of its negative effects, i.e. damage to students' mental health. Now we have reached the third step and its key question — is it possible to create such conditions for development in the course of education that would facilitate students' mental health in the best possible way?

3. The third step on the way to the "Education-Development-Health Triad". Reflecting on the practice of psychotherapy and counseling for children with learning difficulties and conceptualizing the problem of the relationship between Education, Development and Health from the cultural-historical perspective.

Let us consider **the Education-Health dyad.** The epidemic of affective disorders characterizes a current state of affairs in healthcare of many countries, including Russia. Depressive and anxiety disorders; eating disorders become younger, and cause crisis states; suicidal behaviors and social maladjustment in children, adolescents and youth increasingly more frequently. A US study of over 13,000 adolescents at the age of 12 to 17 years old in 2009—2014 elucidated threatening figures of childhood depression — 13.6% in boys and 36.1% in girls [64]. An examination of 10,000 school students at the age of 7 to 17 years old in China using Covac's Children Depres-

7sion Inventory (CDI) also identified a significant number of students at risk of depression (23.9%) [74]. The biological approach to mental disorders fails to explain these tendencies, however the Vygotskian cultural-historical idea about the defining role of the social situation in children's development allows for identifying the sources of the young generation ill-being [52].

In Russia, depressions are also a frequently seen mental condition in adults and adolescents [42]. For example, in the 1990s, about 19% of Moscow school students had depression of some degree of severity [38; 39]. In the 2000s, Kholmogorova supervised a series of studies carried out by researchers of the Clinical Psychology and Psychotherapy Department of Moscow State University of Psychology and Education, and the Clinical Psychology and Psychotherapy Lab of Moscow Research Institute of Psychiatry (now it is a branch of Federal Medical Research Centre of Psychiatry and Narcology named after V.P. Serbsky). The studies unfolded in the samples of children from various social strata, which differed in their social situation of development. At the same time, a Lab's psychological counselling centre opened its doors for children and their parents, and the integrative model of psychotherapy incorporating family systems and cognitive-behavioral approaches was taking its shape there [51]. There was a surge in utilization of the centre's services due to school-related issues even by socially advantaged parents whose children learnt in advanced privileged schools that sprouted like mushrooms at the time.

In order to identify and describe different risk groups, a large-scale population-based study in various Moscow educational institutes using Covac's Children Depression Inventory (CDI), which was widely used all over the world for identification of risk groups among children and adolescents (CDI). The department's specialists translated and validated this inventory[7] so that it could be used in healthcare and educational systems of our country meeting the principles of evidence-based research and practice. The study sample included 1,011 students aged 11 to 16 years old from Moscow and Moscow Region advanced learning schools; general-purpose schools; orphanages and charity schools [8]. The largest number of children from a high-risk group with high levels of depression symptoms studied at advanced learning schools (about 25%); children from orphanages (about 20%) followed. About 10% of children studying at general-purpose schools were also at risk for depression at that point. At the time, we inferred that a pressure of success and perfectionist standards in advanced learning educational institutions were as dangerous for children's emotional wellbeing as poverty; alcoholism and poor care that were typical of the families that the orphaned children were withdrawn from [6].

Subsequent studies elicited threatening tendencies in college students as well. Curran & Hill [65], the authors of a large-scale study of cross-temporal changes in students' mental health during the last 30 years, emphasize the role

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[3] The concept of the subjectness position corresponds to the concept of the sense of agency in the Western psychology. This concept was worked out in the special study and included two important components — activity and awareness [32], [33], [34].

of social factors in the epidemic of depression among the youth, "In this… society, young people are evaluated in a host of new ways. *Social media, school and university testing and job performance assessments mean young people can be sifted, sorted and ranked by peers, teachers and employers. There is, then, enormous pressure on young people to demonstrate their value and outperform their peers. And there is evidence that they are struggling to cope*" [65]. In their article for The Conversation (a British website), Etherson and Smith from York St John University address the subject of perfectionism and depression in students, "The pressures of young adulthood coupled with the demands of university leave undergraduates at risk for depressive symptoms. In fact, nearly 30% of undergraduates suffer from depressive symptoms, which is threefold higher than the general population. As such, researchers are increasingly interested in identifying factors that contribute to depressive symptoms to help curb the ever-increasing depression epidemic …", write the authors [66]. Our research in a Russian student sample was quite consistent with the above findings regarding a significant increase in the number of students with depressive symptoms within the last 10 years: this rate grew from 30 % in 2006—2008 to 44% in 2017—2018 [55]. An increase in depression paralleled an increase in the socially-encouraged perfectionism [30], just like in Curran & Hill's English-speaking sample [65].

The Western research showed that about 75% of adults with mental disorders had expressed symptoms when they were still underage, and as little as 25% of these people had eventually received diagnosis and proper help even in developed countries [68]. Individuals who contacted mental healthcare services during their school years had lower incidence of mental disorders in their adulthood as compared to those people who never received this help [75].

These findings made researches conclude that there is a need for intensifying the connection between mental health services and schools and universities. Such mental health services would be able to identify risk groups taking into account the social situation of children's and youth's social situation of development and to provide qualified psychological help [54; 59]. *Ironically, despite multiple evidence of harmfulness of the educational system for the students' health, the discussion is never about the need to restructure the system but about the development of mental healthcare services so as to eradicate the consequences of this harm as soon as possible.* The medical healthcare system tries to mitigate the effects of the educational system. And the educational system mirrors demands of the modern competitive society and parents who are frequently more concerned about their children's social success than about their mental disorder. The educational system based on competition and ratings is traumatic for socially disadvantaged children who are often devoid of needed support and are unable to meet the imposed requirements.

Thus, when addressing the general educational practice, we see harmful effects of education on students' health, and consequently, on their development. People who deal with the issues of education do not think about consequences for mental health; those who provide psychological and psychotherapeutic help notice the harm

but fail to eliminate its consequences fast enough. Those who work in the area of development and invest efforts in bridging the gaps between education and health find themselves in a confusing position. It is impossible to integrate three vast objects of academic research, i.e. Education — Development — Health — into a single metaobject. This idea collapsed as early as in Vygotsky's time when G. Stanley Holl's concept of a new science of paedology became increasingly popular. Does the situation look irresolvable? Not at all — it can be solved at the level of addressing specific issues within real-life practice. Moreover, organizing education within the framework of cultural-historical psychology can provide resources both for accomplishing developmental goals and mental illness prevention tasks.

Relying on the cultural-historical theory and achievements of certain psychological and educational practices, we view the idea that "learning precedes development" as a positive resource, meaning that education can create conditions for the child's balanced development. *In order to make the transition from the "E-D", "D-H", and "E-H" dyads to the "Education — Development — Health" Triad, let us consider the example of a large-scale study in a sample of Nizhny Novgorod school students, and non-attenders specifically.* It is important to emphasize that its author became a PhD in Psychiatry eventually. The sample included more than 600 adolescents, 13% of who skipped school regularly. 76% of the non-attenders had various developmental issues (hyperkinetic disorders; organic asthenic disorders; somatoform disorders of autonomous nervous system; socialized and unsocialized conduct disorders; adjustment disorders). The non-attenders had significantly poorer academic performance: 90% of them had C and D marks and had poor relationship with teachers. The School Situation Inventory designed by Kholmogorova and Zaretsky [4] measured 8 dimensions of the school-situation perceived quality: attitude to studies; perceived learning challenges; relationship with teachers; parents' attitude to studies; non-attendance; school leisure activities; friends among classmates, and the general measure of the school situation quality. The "non-attenders" had significantly poorer results in all dimensions as compared to regular attenders. An essentially important finding was "the genuine non-attenders'" answers to questions whether they experienced insuperable difficulties with school subjects ("Yes"), and whether teachers helped them to overcome learning difficulties ("No").

These findings were consistent with the ZPD concept implying that the normal course of children's development and maintaining mental health would be impossible if the demands imposed on children fell outside its scope or fell into the Zone of Unattainable Challenge. In this case, according to Vygotsky, "… the child can compensate for difficulties responding with aggressive behaviors targeting the social environment that he finds himself in (his peers; social environment; school)" [13].

A student who persists in a situation when he/she has to do things that are unattainable to him, and is exposed to taunts and ridicule hinting at his/her low intellectual capacity instead of getting help, would be unable to maintain equilibrium for long. Anyone could be trau-

matized by this situation. After 6 months that specialists of the Nizhny Novgorod Mental Health Centre for Children and Adolescents spent running an integrative program to help the adolescent non-attenders and to alter teachers' and parents' attitudes to them using cognitive-behavioral therapy methods, the situation changed dramatically. Most non-attenders resumed visiting school; their academic performance improved; relationships with their teachers, parents and classmates improved too; the social situation of development became more balanced in general [3]. What makes this example interesting is that the tripartite relationship between Education, Development and Health came to the foreground twice: at first, it showed up as an object of research, and then as an object of practical psychological and pedagogical assistance to all agents of the educational process. The study allowed to make hypotheses addressing the relationship between Education, Development and Health, and to identify targets of practical efforts, which resulted in effects in all the three dimensions. The essential condition for the situation to get normalized was a change in the teachers' attitude: when they got to know more about specific features of underachievers' mental processes and emotional sphere, they leveled down standards for the non-attenders; stopped chasing them into the zone of unattainable challenge, and started helping them to cope with learning difficulties.

This raises a question: why the initial structure of the learning process made students do things that they were unable to do? Who is responsible for facilitating students to move within ZPD without trying to do impossible things that adults make them do?

Now we have approached the core concept that we believe to be instrumental for establishing a tripartite framework encompassing "Education, Development and Health". On our complicated journey, we encountered the notion of ZPD three times, each time uncovering something new about it. In this way, RAA developed as continuation and elaboration of cultural-historical psychology. This happened for the first time when a collective of innovators who succeeded in working with children with special needs was designing the project of the Social Contract "On Conditions of Normal development of A Child with Special Needs"[18]. At that point, "working within the zone of attainable challenge" was positioned as an essential condition. And it was only after many Russian colleagues agreed with this wording when a hypothesis that Vygotsky embedded the same idea in the concept of ZPD appeared. Addressing Vygotsky's works in the context of rich experience of supporting children with special needs helped to understand the author's unfinished idea and "build" it up to the representation that shined through fragmented notes scattered around different writings.

Integrating different Vygotskian assumptions on ZPD with the idea of various developmental dimensions where this concept could be instrumental, enabled us to design a multidimensional model of ZPD [19; 79], and it was the second time when we addressed one of the main Vygotskian concepts (see Fig. 2).

Coping with Challenges Dimension

Dimension of Cognitive Change Due to Mastering New Modes of Action

Reflection Development Dimension

Subjectness Position Dimension

Personality Change Dimension

Zone of Actual Development

Zone of Proximal Development

Zone of Unattainable Challenge

Working on Learning Difficulties Dimension
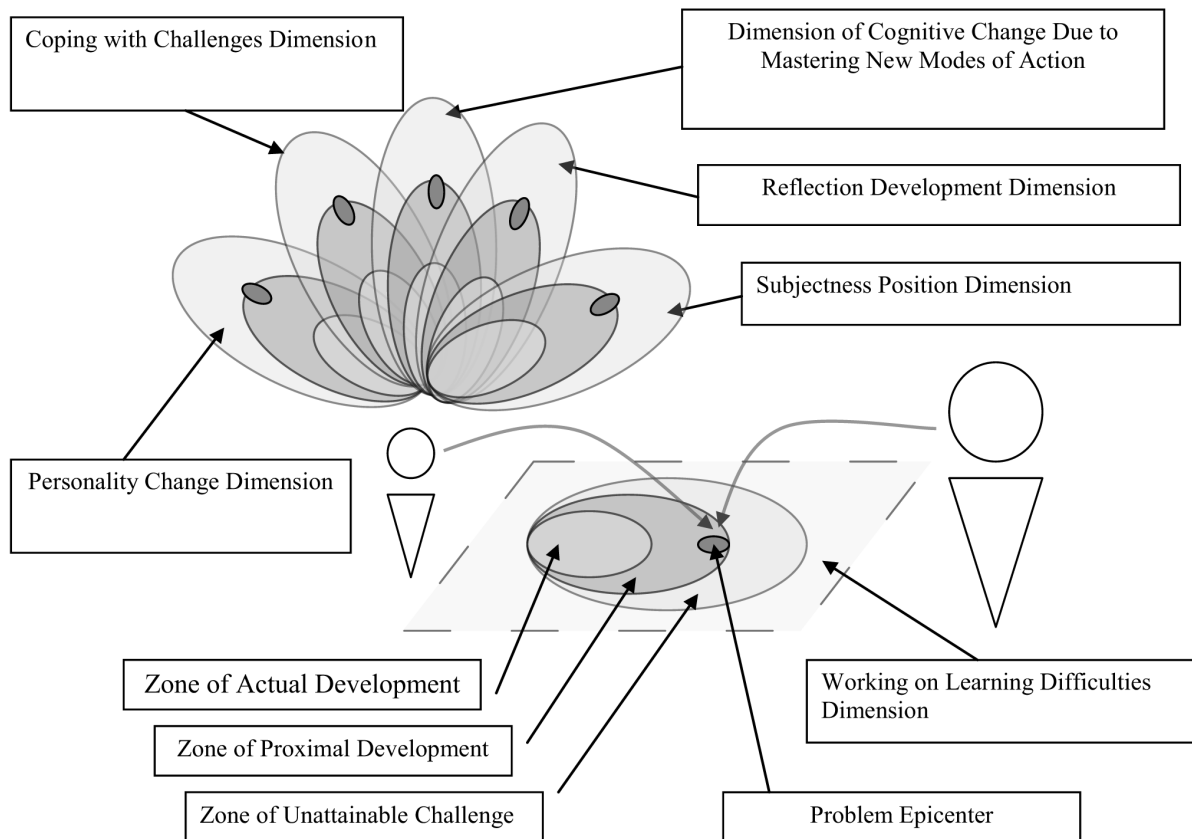
Problem Epicenter

Fig. 2. ZPD as the generality of the measurement of potential developmental steps in the course of learning [19], [79]

The third encounter with this concept was driven by an attempt to understand what other deep thoughts one could find reflecting and reconstructing "the implicitly said" of Vygotsky's writings. This encounter took place when we faced a most difficult challenge that we had ever come across in our practice, i.e. the challenge of creating conditions for education of orphaned children with disability and severe somatic conditions who underwent long-term treatment in the Russian Children's Clinical Hospital and were under the care of the "Deti.msk.ru", one of the oldest charity funds in Russia.

This challenge represented a natural connection between "Education, Development and Health": these children's health precluded them from fully-fledged learning; failure to get education had an adverse impact on the children's development, made them lag behind their peers as far as development and education were concerned, and this affected their health. It was assumed that this vicious circle could be dissolved by concentrating effort on education, i.e. by initiating systematic education of these children and creating conditions for their development in the course of learning. However the initial educational level of these children was so low that it was unclear what could be achieved. We resisted to think about the outcome. The prospects were absolutely vague, and we could hope for nothing but for some miracle...

The hope for the miracle arose when an author of this article encountered one phrase in "Thinking and Speech" [11] on page 230... At first, this phrase seemed to be a metaphor that was to enhance the meaning that Vygotsky embedded in the idea that "learning preceded development". On this page, Vygotsky wrote, "And a single step in learning can represent a hundred steps in development"!

Now these words are popular and are subject to a wide professional discussion, and in 2012 (at launch of our collaboration with the "Deti.msk.ru" Fund), there was hardly anyone who quoted this Vygotskian idea anywhere — neither in journal articles, nor at conferences; it was left unmentioned by books and textbooks (save as Obukhova's textbook [44]. There were no evidence-based explanations for this mechanism. From the practical perspective, it was of pivotal importance to understand how this mechanism would work. If learning could be arranged so as to produce a hundred (or at least several if not hundred) steps in development, it would mean that every child, every person might have chances not only for normal development but also might possess the prospect of unlimited development, which V. Zinchenko [37] mentioned in his essay about Vygotsky.

Let us consider the ZPD multidimensional model [19; 23; 79; 80] etc. in terms of establishing the "Education, Development and Health" Triad.

Just like other RAA concepts, the ZPD multidimensional model originated from reflecting on the practice of assisting different children (general purpose school students; children with special needs; children with behaviour misconduct; orphaned children; orphaned children with disabilities and severe medical conditions) to cope with learning difficulties. The ZPD multidimensional model design relied on the search for "other ZPD dimensions" save as the dimension of the learning material, which various Russian authors undertook [5; 41; 45; 60]. *When developing the ZPD concept, Vygotsky emphasized that "... a salient feature of learning is that learning creates the zone of proximal development, i.e. evokes, awakens and sets a whole set of internal developmental processes to movement"* [13]. What did he mean under "a whole set of developmental processes"? It is known that discussing the notion of ZPD and its pivotal importance for a new understanding of the relationship between learning and development, Vygotsky emphasized that, firstly, the concept of ZPD could refer not only to cognitive functions but also to development of a child's personality in general, i.e. he understood it quite broadly [11]. Secondly, as it has already been said, Vygotsky articulated an important principle that "a single step in learning can represent a hundred steps in development" [11, p. 230]. This enables us to assume that a step that a child makes in learning can somehow evoke the developmental processes that lie within various "dimensions", including those that relate to health.

Every practitioner working with children knows that development is not even but unfolds by leaps and bounds. At some point, the efforts invested turn into a quantum leap in development. This leap can be due to a shift in mastering some learning material (a child eventually understood the meaning of mathematical operations or bridged some old gap in knowledge) or to a breakthrough in development of mental functions (a child learnt to perform actions mentally and this changed the whole structure of mental activity); coping with personality-related barriers (having succeeded in overcoming difficulties, a child became confident in his/her own abilities and willing to invest efforts in coping with new challenges).

As follows from this thread of thought, the steps along the vector of with learning lesson material (the dimension of working with learning difficulties in Fig. 2) can evoke "the whole set of developmental processes" as Vygotsky argued. These developmental processes can refer to various developmental dimensions as shown in the proposed diagram, including:

1) a child's attitude to learning (the subjectness position);

2) making meaning of one's activity (reflection),

3) various mental functions that help to implement this activity (cognitions),

4) personality traits and specific features that exhibit themselves and take shape within this activity (personality) (Fig. 2).

The proposed multidimensional model [19; 23; 79; 80] opens the way to applying the notion of ZPD both to situations of learning difficulties in childhood and to a wide range of challenges that an individual (either a child or an adult) is unable to overcome by him/herself and seeks help for this (as it happens in education, counselling and psychotherapy).

We see that various aspects of education, development and mental health (and, consequently, educational, psychological and psychotherapeutic efforts) intertwine very closely in these examples. **The problem**

epicentre is a point where various aspects intersect; it is a central challenge, the ability to overcome which determines whether developmental processes will be evoked or not. A similar concept proposed by Vygotsky is a central new formation of school age. He called it "the core nerve", "the axis", around which all the other processes center. At the same time, he emphasized that "most complicated dynamic regularities that can't be described by an a priori present theoretical formula arise between the process of development and the process of learning" [13].

Indeed, when working with a concrete child one may find out that his/her epicenter refers to neither of age-related new formations but to his/her learning history; specific features of the family environment; the experience of interpersonal relationship, or emotional coping with challenges. And then the target of efforts can shift from the dimension of learning difficulties or the central new formation of the age to any of other developmental dimensions where a blockade that is hindering overall development has arisen. The dimensions of the subjectness position and reflection become crucial in this model.

The subjectness position dimension represents the person's capacity to be the agent of his/her own activity and its reflection [32], [33]. The child who owns a subjectness position towards his/her activity starts to engage actively in overcoming challenges accepting the adult's support, making use of it but also initiating things him/herself. If a child fails *to do* something by himself, but is able to understand how to do it in collaboration with the adult, then this activity is manageable for the child and falls within his/her ZPD. If the child is invited to act outside "the upper limit" of ZPD, i.e. within the zone of unattainable challenge (i.e. the area where the child lacks resources for a thoughtful collaborative action, for understanding this), then the child will fail to utilize this help and the problems may grow worse to a degree of the learned helplessness syndrome, depressive or anxiety disorders. Alternatively, if the adult's support is adequate, the child will gradually add to his/her resource while reflecting on his/her joint activity with the adult, becoming aware of its tools and interiorizing them. Accordingly, the challenges that seemed unattainable in the beginning gradually become the subject of joint activity and can be resolved successfully.

In this section we attempted to demonstrate close relationships between Development, Education and Health and their underlying mechanisms identified using the framework of cultural-historical psychology as amended and expanded by concepts that RAA develops. *It is worth emphasizing that from the perspective of classical conceptualizations of a research object, it is impossible to create "a theory" of such a global object.* However this neither undermines the need to consider this relationship from a consistent theoretical perspective, for example, in terms of the developmental theory, nor the need of setting practical goals, in order to manage which one needs to hold a holistic view on Education, Development and Health. *We believe that cultural-historical psychology could be considered a front runner for the theory that could be shared by Education, Development and Mental Health and could serve as a methodological clue to setting and searching for practical objectives where these "dimensions" can be viewed as interrelated.* Let us provide a rationale for these assumptions in Step 4.

Step 4 — Approaching "New Developmental Parallelogram". The rationale for integrating tools of pedagogical and psychotherapeutic help and educational and psychological counselling to meet practical challenges of education; to create conditions for development and mental health maintenance.

If we give up attempts to state the problem in its classical academic sense and attempts to answer the question, "what the relationship between Education, Development and Health is" as an object of research, then we still can follow a non-classical route, i.e. asking practice-related questions: how one can account for and provide for this relationship creating conditions for students' high-quality education; constant development and mental health maintenance?[4] This problem statement shifts the focus from the knowledge about the subject of "a tripartite relationship" to the knowledge about how to manage it, for example, how one can create conditions facilitating children's personality development and health. An alternative question might be, "How one could create conditions for education and development of severely ill people when organizing their treatment?" Another question might be, "Is educational resource useful in somatic and mental disorders treatment? Which conditions would turn activity (educational, occupational, play activities etc.) into a resource for education, development and prevention of illness or enhancing one's health?".
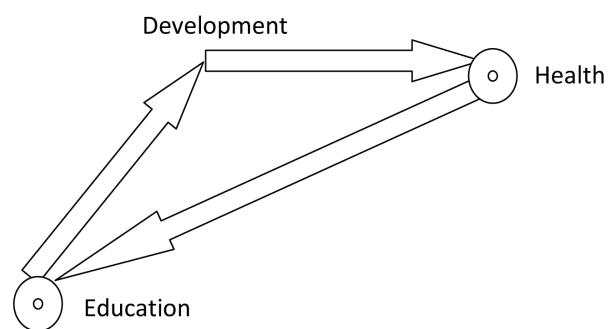

Fig. 3. Development-Education-Health Triad

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[4] This problem statement is very close to a tripartite goal of a complex science of ergonology (ergonomics) that Bekhterev stated in the 1920s: increasing the efficiency of work performance; maintaining working peoples' health and developing their personality. If we change "working people" for "students" and "work performance" for "academic performance", this tripartite goal becomes quite compatible with our problem. Besides, at the time when Bekhterev was dreaming about ergonology, Vygotsky was discussing paedology as an integrative science of human development and in "Historical meaning of the Crisis in Psychology" (1927/1982), his policy writing, he provided a rationale for emergence of new — practical — psychology [10].

The aforementioned examples have demonstrated relevance and importance of these questions and the need to build the connection between Education, Development and Health so as to avoid adverse effects of education on students' development and health. We have already mentioned the experience of using RAA when helping children overcome learning difficulties. This experience shows that facing a learning challenge can become a resource for development if:

— coping with it takes place within ZPD;

— if an assisting adult interacts with students as a co-worker rather than tries to exert any influence on them pursuing educational, health-related or any other goals;

— if an assisting adult supports students' subjectness position helping them become agents of their own (and their joint) activity and reflection;

— if an assisting adult encourages and supports students' reflection targeting making meaning of and restructuring one's modes of action; becoming aware of and eliminating internal obstacles; internalization of joint activity experience;

— if joint activity facilitates motivational and meaning-making aspects of learning etc.
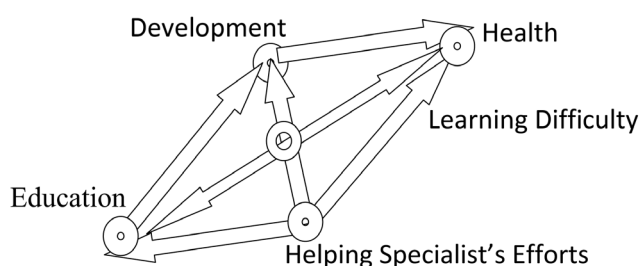

Fig. 4. "A new parallelogram of development" embraces efforts to meet a complex practical challenge and to establish relations between Education, Development and Health — relations that can change their foci and epicentres in every particular case

This list can be continued. The missing link in the Education, Development and Health triad is efforts of practitioners (psychologists, psychotherapists, teachers, tutors etc.) who engage in meeting specific practical challenges: from helping a concrete child with learning difficulties to adjusting the learning process in a concrete class, school or college taking into account all three spheres. Building "the Triad" up to "the Quadrilateral", we get "a new parallelogram of development"[5] that can be depicted the way it looks like in Fig. 4.

The field where building this relationship is reasonable and relevant may be providing help with overcoming learning difficulties. As we were able to see, the deeper the issue is, the more complex this relationship can be, but, alternatively, the richer developmental resource it has. The experience of the "Deti.msk.ru" Fund's team may be

a shining example of providing integrative help to children with learning difficulties. Throughout 7 years since the time when the practical goal of creating conditions for appropriate education and development of orphaned children with disabilities and severe somatic conditions, there have been multiple attempts (both successful and unsuccessful) to get this process up and running.

Nevertheless, the idea itself and belief that it could be realized has never been doubted: eventually the team reduced to those people who believed in the possibility of these children's normal development. Today, the children are consistently developing despite their special health needs; the learning process has been aligned; and thanks to Natalia Shumilkina's initiative (she is a stage director of the Russian Academic Youth Theatre), the Centre, where children stay, has created a theatre, and little actors have already staged 4 professional performances in Moscow and Saint-Petersburg. Interestingly, only 7 years ago, in January 2013, the Centre's employees and counselors were having hot discussions whether these children were at all educable; whether they were able to develop. Today spectators who leave after a performance is over do not even feel reminded that the cast included children with special needs[6]. Another case-study with a group of children at risk of school exclusion in Great Britain was presented by Olga Rubtsova and Harry Daniels as an example of applying a "dramatic event" as a cultural tool for reorganising the social situation of development [47].

We have outlined only one potential area where Education, Development and Health should go together, i.e. psychological and educational assistance with overcoming learning difficulties. However other areas like this could be identified too. Firstly, these are all kinds of assistance to various categories of children with special needs, including inclusive education. Secondly, they include helping teachers in their work with children with learning difficulties. Thirdly, they include helping parents to interact with their children, to overcome prejudice that complicates relationship and has an adverse effect on the family's development and health. Fourthly, psychotherapy can also make use of (and in fact it does) such concepts as ZPD, a subjectness position, reflection etc.

Helping adults' consistent effort aiming at establishing collaborative relationship with children and supporting their initiative in shaping, implementing and reflecting upon their own intentions not only facilitates enhancement of children's resources but also contributes to development of their subjectness position in learning, which becomes the key resource for education and development and becomes a prerequisite for one's mental health balance.

A crucial contribution of students' subjectness position to their mental development was confirmed by the findings of a study that took place in a sample of school students of different age, living in different Russian cities and studying in schools of different types: students

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[5] A.N. Leontyev introduced the notion of "a parallelogram of development" to research on memory as a higher mental function (Vygotsky "Thinking and Speech"). In this case, the term "a parallelogram of development" is used to highlight RAA's belongingness to the cultural-historical tradition.

[6] In 2019, the Find won the President's grant supporting theatrical activities and studying its effects on children's development. The study was called "Opening unlimited capacities".

with higher levels of subjectness had a better school situation (good relationship with a teacher; availability of help etc.) and better emotional well-being [33]. The elementary school students' subjectness position was more prominent than that of the high school students' that might provide indirect evidence for a negative effect of education (studying at school) on the students' subjectness position as far as learning was concerned. In other words, in the course of growing, students started to lose learning-related motivation and awareness. Thus, it might be inferred that their subjectness position was unsupported and perhaps was suppressed at school. Students of the few schools where the educational process relied on facilitating students' subjectness position perceived their school situation as more satisfactory.

Practical cases of providing psychological and pedagogical help illustrate the role of a child's subjectness position in overcoming learning difficulties quite vividly. *These cases also show that it is the* subjectness position *that is prerequisite for activating the mechanism that Vygotsky encoded in his formula "a single step in learning can represent a hundred steps in development".* For example, in Sasha O.'s case [34] it took a remedial school student only a few sessions to become an agent of his educational process and, having set the objective to start studying English (that was not taught at the remedial school), to learn English letters and sounds and to read short texts after three lessons with a counsellor. At the same time, the boy exhibited dramatic improvements in cognition; reflection; self-efficacy; subjectness position; and interpersonal relationship. In Denis' case [25], a 7th-grade student of a remedial class who was able to develop and master his subjectness position after six counselling sessions, set the goal to become literate and became convinced that he could achieve this. In a month, the boy mastered Russian having learnt all the rules practically by himself; received an A for an end-of-year dictation (he was the only student from the 7th grade who received this mark), and at the beginning of the following school year, the boy took part in a Russian language city competition and won the third place among students of advanced learning schools.

This list could be continued with shining examples of personality growth suddenly emerging in the course of overcoming learning challenges; and every time the game changed when children started to act as agents of their effort [24; 26; 28; 33; 43; 80].

The multidimensional model of ZPD may explain the famous psychotherapy effectiveness researcher Grawe's findings regarding the relationship between the psychotherapy effectiveness and a therapist's sensitivity to spontaneous activation of the clients resources in the process of interaction [70]. *"Spontaneous resource activation" means potential development within the* subjectness position *dimension, i.e. a client's (child's) ability to exercise agency in relation to his/her own issues; to identify, invest and regulate efforts aiming at solving them.* When a child interacts with an adult (a client interacts with a therapist), each of them invests as much in their joint activity as they can manage. An increase in the child's (client's) contribution would mean strengthening of

his/her subjectness position. The child's subjectness position thus becomes a prerequisite for collaboration and, consequently, its effectiveness.

Consistent encouragement of a child's subjectness position in the course of overcoming learning difficulties can be designated as a basic value that embodies Vygotsky's idea of collaboration as a specific type of the child-adult interaction within which development occurs. This value should be shared by all specialists who aim at facilitating the developmental process.

In this context, the aforementioned findings by Grawe who showed that sessions when therapists responded to the moments of their clients' spontaneous resource activation in an attuned way were most efficient, can give rise to an important assumption that may be helpful for helping children and adults in multiple ways. The most powerful effect may be achieved when a practitioner facilitates a child's (a client's) subjectness position. It is worth reiterating: a practitioner's sensitivity to a child's (a client's) subjectness position and his/her ability to target both solving an urgent issue (meeting a specific challenge) and expanding the client's resource, i.e. investing in the client's development, are of pivotal importance. If the practitioner works in this way, mastering certain skills (modes of actions) by the child is accompanied by the growth of his/her energy; self-confidence; awareness of one's own resource, and areas where he/she still needs help, and the ability to receive and use this help. The child becomes less dependent on the helping adult, more capable of coping with challenges by him/herself, and requesting the adult's help if needed; differentiating between what he/she is able and unable to do him/herself, and understanding what help he/she needs and where.

That is to say, in the course of learning or psychotherapy, the child starts to account for "the dual resource": what he/she can do by himself and what he/she can do with the adult's/teacher's/counselor's/assistant's help. Differentiation between "I can do it myself" and "I can do it with another person's help" is a prerequisite for successful educational and psychotherapeutic work [31; 81]. If the child-adult (client-therapist) joint activity is efficient, the child (the client) enjoys improved capacity for independent action as well as an expanded repertoire of joint actions [31; 81]. When the child (the client) clearly behaves as an agent of his/her activity, the third resource activates. This is a resource of a subjectness position as capacity to increase one's own resource autonomously. As a rule, this manifests itself in emergence and active implementation of one's own intentions; reflection on obstacles to their implementation, and monitoring and elimination of various internal obstacles to intention implementation. *This is a mechanism of self-development that the multidimensional model of ZPD outlines [21]. Efforts of an agent of self-development may aim at education; development; health enhancement or looking for bypasses (remediation of health limitations), depending on what lies at the epicenter of interrelationship of these aspects of his/her life.*

It is important that a helping practitioner is also an agent of his/her professional activity. Therefore, subject-

ness position can be viewed as an essential professional quality, which was confirmed within an empirical study of relations between the levels of subjectness position in learning in students of helping professions and their capacity for understanding other people and providing them with reflexive and empathic support [58].

Alternative Conclusion

In our opinion, development has a special position in the triad under discussion (see Fig.3): it is not only a basic need, but also an outcome of education and a prerequisite for mental health. The knowledge of major developmental mechanisms is the basis for efficient performance of any specialist (be it an educator, a psychologist or a therapist) and a helping adult in a broader sense, whereas the shared concept of development as the basis for mutual understanding and activity is an essential condition of a helping team's success. Lev S. Vygotsky left us a heritage of methodological clues to the cultural-historical concept of development focusing on psychological and educational practice in normal and abnormal conditions [30].

References

1. Alekseev N.G. Proektirovanie usloviy razvitiya refleksivnogo myshleniya: diss... dokt. psihol. n. v vide nauchnogo doklada [Designing the Conditions for the Development of Reflexive Thinking: Diss ... DSc in the form of the scientific report]. Moscow, 2002. 41 p. (In Russ.).

2. Alekseev N.G., Semenov I.N. Urovni poznavatel'noy deyatel'nosti pri reshenii tvorcheskih zadach [Levels of cognitive activity in solving creative problems]. *Novye issledovaniya v psikhologii = New Studies in Psychology*, 1979, no. 2, pp. 3—8. (In Russ.).

3. Andreyuk V.Yu., Dmitrieva T.N., Kholmogorova A.B. Psihosocial'naya reabilitaciya podrostkov s problemoj shkol'noj dezadaptacii v forme sistematicheskih propuskov zanyatij [Psychosocial remediation of adolescents with the problem of school maladaptation in the form of the regular absence]. *Nevrologicheskij vestnik=Neurological Bulleti,*. 2009, no. 1, pp. 102—105. (In Russ.).

4. Andreiuk V.Yu., Zaretsky V.K., Kholmogorova A.B. SHkol'naya dezadaptaciya v forme sistematicheskih propuskov zanyatiy: faktory riska i psihosocial'naya reabilitaciya [School maladjustment in the form of the regular absence: risk factors and psychosocial remediation]. *Defektologiya=Defectology,* 2009, no. 5, pp. 39—47. (In Russ.).

5. Belopolskaya N.L. Otsenka kognitivnykh i emotsional'nykh komponentov zony blizhayshego razvitiya u detej s zaderzhkoy psikhicheskogo razvitiya [The assessment of cognitive and emotional components of the zone of proximal development in children with mental development delay]. *Voprosy psihologii = Psychology Issues,* 1997, no. 1, pp. 19—25. (In Russ.).

6. Volikova S.V., Galkina,A.M., Kholmogorova A.B. Roditel'skiy perfektsionizm — faktor razvitiya emotsional'nyh narusheniy u detej, obuchayushchikhsya po uslozhnennym programmam [Parental perfectionism is a factor in the development of emotional disorders in children studying in complicated programs]. *Voprosy psihologii = Psychology Issues*, 2006, no. 5, pp. 23—32. (In Russ.).

7. Volikova S.V., Kalina OG, Kholmogorova A.B. Validizactsiya oprosnika detskoy depressii M. Kovak [The Validization of the Child Depression Questionnaire by M. Kovak]. *Voprosy psihologii = Psychology Issues*, 2011, no. 5, pp. 121—132. (In Russ.).

8. Volikova, S.V., Kholmogorova, A.B. Proyavleniya emotsional'noy dezadaptatsii u shkol'nikov iz razlichnykh social'nykh grupp [Manifestations of emotional maladaptation in schoolchildren from various social groups]. In Obukhova L.F. (eds.), *Drugoe detstvo = Other childhood*. Sbornik nauchnykh statei. Moscow: Moscow State Pedagogical University], 2009, pp. 108—118. (In Russ.).

9. Vygotsky L.S. Problema obucheniya i umstvennogo razvitiya v shkol'nom vozraste // Izbrannye psikhologicheskie issledovaniya. [The problem of learning and mental development at the school age. *Selected psychological studies*. Moscow: Publishing House of the APN of the RSFSR], 1956, pp. 438—452. (In Russ.).

10. Vygotsky L.S. Istoricheskiy smysl psikhologicheskogo krizisa [The historical meaning of the psychological crisis. *Coll. works: 6 vol. Volume 1*. Moscow: Pedagogy, 1982, pp. 291—436. (In Russ.).

11. Vygotsky L.S. Myshlenie i rech'. Sobr. soch.: v 6 t. Tom 2 [Thinking and Speech. Coll. works: 6 vol. Volume 2]. Moscow: Pedagogika, 1982, pp. 5—361. (In Russ.).

12. Vygotsky L.S. Problemy detskoy (vozrastnoy) psikhologii. Sobr. soch.: v 6 t. Tom T. 4. [Problems of children's (developmental) psychology. Coll. works: in 6 vols. T. Vol. 4. Moscow: Pedagogy], 1984, pp. 243—432. (In Russ.).

13. Vygotsky L.S. Pedagogicheskaya psikhologiya [Pedagogical psychology]. Moscow: Pedagogy-Press, 1999, 536 p. (In Russ.).

14. Galperin P.Ya. Psikhologiya myshleniya i uchenie o poetapnom formirovanii umstvennykh deystviy [The psychology of thinking and the doctrine of the gradual formation of mental actions. *Issledovaniya myshleniya v sovetskoy psikhologii* [*Studies of thinking in the Soviet psychology*]. Moscow: Nauka, 1966, pp. 236—277. (In Russ.).

15. Davydov V.V. Teoriya razvivayushchego obucheniya [The Theory of Developmental Learning. Moscow: INTOR, 1996, 554 p. (In Russ.).

16. Zaretsky V.K. Put' k samovospitaniyu tvorcheskikh sposobnostey [The path to the self-education of creative abilities]. *Nauka i tekhnika = Science and technology*, 1980, no. 12, pp. 8—10. (In Russ.).

17. Zaretsky V.K. Ob opyte refleksivno-deyatel'nostnogo podhoda k organizatsii korrektsionnykh zanyatiy po russkomu yazyku [About the experience of the reflection-activity approach to correctional lessons of the Russian language]. *Metody i sredstva reabilitatsii detey s osobennostyami razvitiya i invalidnost'yu* [*Methods and means of the remediation of children with developmental disabilities*]. Moscow: IPI RAO, 1998, pp. 86—90. (In Russ.).

18. Zaretsky V.K. Desyat' konferenciy po problemam razvitiya osobennykh detey — desyat' shagov ot innovatsii k norme [Ten conferences on the problems of the development of special children — ten steps from innovation to the norm]. *Psikhologicheskaya nauka i obrazovanie = Psychological Science and Education*, 2005. Vol. 10. no. 1, pp. 83—94. (In Russ.).

19. Zaretsky V.K. O chem ne uspel napisat' L.S. Vygotskij [What did not have time to write L.S. Vygotsky]. *Kul'turno-istoricheskaya psihologiya = Cultural-historical psychology*, 2007, no. 3, pp. 96—104. (In Russ.).

20. Zaretsky V.K. Esli situatsiya kazhetsya nerazreshimoy… [If the situation seems to be unsolvable… Moscow: Forum], 2011, 67 p. (In Russ.).

21. Zaretsky V.K. Stanovlenie i sushchnost' refleksivno-deyatel'nostnogo podhoda v okazanii konsul'tativnoj psikhologo-pedagogicheskoy pomoshchi [The formation and essence of the reflection-activity approach in the provision of Counseling psychological and pedagogical assistance]. *Konsul'tativnaya psihologiya i psihoterapiya = Consultative Psychology and Psychotherapy*, 2013, no 2, pp. 8—37. (In Russ.).

22. Zaretsky V.K. Traektorii razvitiya predstavleniy o refleksii i ikh ispol'zovanie v praktike organizatsii resheniya problem [The trajectories of the development of ideas about reflection and their use in the practice of problem solution]. *Psihologiya v vuze = Psychology at a university*, 2013, no. 4, pp. 55—97. (In Russ.).

23. Zaretsky V.K. Teorema L.S. Vygotskogo «Odin shag v obuchenii — sto shagov v razvitii»: v poiskakh dokazatel'stva [L.S. Vygotsky's theorem "One step in learning — one hundred steps in the development": in search of evidence]. *Kul'turno-istoricheskaya psikhologiya = Cultural-historical psychology*, 2015. Vol. 11, no. 3, pp. 44—63. DOI:10.17759/chp.2015110305 (In Russ.).

24. Zaretsky V.K., Gordon M.M. O vozmozhnosti individualizatsii obrazovatel'nogo processa na osnove refleksivno-deyatel'nostnogo podkhoda v inklyuzivnoy praktike [About the possibility of the individualization of the educational process based on the reflection-activity approach in the inclusive practice]. *Psihologicheskaya nauka i obrazovanie = Psychological Science and Education*, 2011, no. 3, pp.1 9—26. (In Russ.).

25. Zaretsky V.K., Zaretsky Yu.V. Sluchaj Denisa G. [The case of Denis G.]. *Zhurnal konsul'tativnoj psihologii i psihoterapii = Journal of Counseling psychology and psychotherapy*, 2015, no. 2, pp. 166—180. (In Russ.).

26. Zaretsky V.K., Nikolaevskaya I.A. Metod situatsionno-vektornogo analiza kognitivno-lichnostnogo razvitiya uchashchikhsya v processe preodoleniya uchebnykh trudnostey [The method of the case-vector analysis of the cognitive-personal development of students in the process of overcoming educational difficulties]. *Kul'turno-istoricheskaya psikhologiya = Cultural-historical psychology*, 2020. Vol. 16, no. 1, pp. 35—48. DOI:10.17759/chp.2020160104 (In Russ.).

27. Zaretsky V.K., Semenov I.N. Logiko-psihologicheskij analiz produktivnogo myshleniya pri diskursivnom reshenii zadach [Logical and psychological analysis of productive thinking in the discursive solution of problems]. *Novye issledovaniya v psihologii = New research in psychology*, 1979, no. 1, pp. 3—8. (In Russ.).

28. Zaretsky V.K., Sudakova L.V. Pomoshch' v preodolenii uchebnyh trudnostey sredstvami refleksivno-deyatel'nostnogo podkhoda v usloviyah distancionnogo obucheniya: sluchay Miti [Assistance in overcoming educational difficulties by means of the reflection-activity approach in the conditions of distance learning: the case of Mitya]. *Konsul'tativnaya psihologiya i psihoterapiya = Counseling Psychology and Psychotherapy*, 2020. Vol. 29, no. 2. (in the press). (In Russ.).

29. Zaretsky V.K., Kholmogorova A.B. Smyslovaya regulyatsiya resheniya tvorcheskikh zadach [The Personal Meaning Regulation of the Solution of Creative Tasks]. *Issledovaniya problem psihologii tvorchestva = Studies of problems of the psychology of creativity. Moscow: Nauka*, 1983, pp. 62—100. (In Russ.).

30. Zaretsky V.K., Kholmogorova A.B. Mirovaya psykhologiya i pedagogika v poiskah teorii razvitiya, adekvatoy vyzovam nashego vremeni: vperyod k Vygotskomu [The world psychology and pedagogy in search of a development theory adequate to the challenges of our time: forward to Vygotsky]. *Konsul'tativnaya psihologiya i psihoterapiya = Counseling psychology and psychotherapy,* 2017. Vol. 25, no. 3, pp. 170—175. DOI:10.17759/cpp.2017250312 (In Russ.).

31. Zaretsky V.K., Kholmogorova A.B. Pedagogicheskaya, psikhologicheskaya i psikhoterapevticheskaya pomoshch' v processe preodoleniya uchebnykh trudnostey kak sodeystvie razvitiyu rebenka [Pedagogical, psychological and psychotherapeutic assistance in the process of overcoming educational difficulties as a contribution to the development of the child]. *Konsul'tativnaya psihologiya i psihoterapiya = Counseling Psychology and Psychotherapy*, 2017, Vol. 25, no. 3, pp. 33—59. DOI:10.17759/cpp.2017250303 (In Russ.).

32. Zaretsky Yu.V. Subyektnaya pozitsiya po otnosheniyu k uchebnoy deyatel'nosti kak resurs razvitiya i predmet issledovaniya [The subjective position in relation to the educational activity as a development resource and object of research]. *Konsul'tativnaya psihologiya i psihoterapiya = Counseling Psychology and Psychotherapy*, 2013, no. 2, pp. 110—128. (In Russ.).

33. Zaretsky Yu.V. Subyektnaya pozitsiya shkol'nikov po otnosheniyu k uchebnoy deyatel'nosti v raznykh vozrastnykh periodakh: Avtoref. diss… kand. psihol. n. [The subjective position of students in relation to the educational activity in different age periods: Author. diss … PhD]. Moscow, 2014. 24 p. (In Russ.).

34. Zaretsky Yu.V., Zaretsky V.K. Subyektnaya poziciya rebenka v preodolenii uchebnykh trudnostey [The subjective position of the child in overcoming educational difficulties]. *Konsul'tativnaya psihologiya i psihoterapiya = Counseling psychology and psychotherapy*, 2012, no. 2, pp. 110—134. (In Russ.).

35. Zeigarnik B.V., Kholmogorova A.B. Narushenie samoregulyatsii poznavatel'noy deyatel'nosti u bol'nyh shizofreniey. [The Impairment of the Self-regulation of Cognitive Activity in Patients with Schizophrenia]. *Zhurnal nevropatologii i psikhiatrii im. S.S. Korsakova = Journal of Neuropathology and Psychiatry named after S.S. Korsakov,* 1985, no. 12.

36. Zeigarnik B.V., Kholmogorova A.B., Mazur E.S. Samoregulyatsiya v norme i patologii [Self-regulation in norm and pathology]. *Psihologicheskiy zhurnal = Psychological journal*, 1989, no. 2. (In Russ.).

37. Zinchenko V.P. Lev Semenovich Vygotskii: zhizn' i deyatel'nost'. V kn.: Stil' myshleniya: problema istoricheskogo edinstva nauchnogo znaniya. K 80-letiyu Vladimira Petrovicha Zinchenko. Kollektivnaya monografiya [Lev Semenovich Vygotsky: life and activity. In: Style of Thinking: the Problem of the Historical Unity of Scientific Knowledge. To the 80th Anniversary of Vladimir Petrovich Zinchenko. Collective Monograph]. Shchedrina T.G. (ed.). Moscow: The Russian Political Encyclopaedia (ROSSPEN)], 2011, pp. 294—299. (In Russ.).

38. Iovchuk N.M., Batygina G.Z. Depressii v shkol'noy podrostkovoy populyatsii [Depression in the school teenage population]. *Rossijskij psihiatricheskij zhurnal = Russian Psychiatric Journal*, 1999, no. 3, pp. 37—40. (In Russ.).

39. Iovchuk N.M., Severny A.A., Morozova N.B. Detskaya sotsial'naya psikhiatriya dlya nepsikhiatrov [Child Social Psychiatry for Non-psychiatrists]. Saint Petersburg: Peter, 2006. 416 p. (In Russ.).

40. Kabylnitskaya S.L. Eksperimental'noe formirovanie vnimaniya. V kn.: Upravlenie poznavatel'noy deyatel'nost'yu uchashchikhsya [The experimental development of attention]. In Galperin P.Ya. (eds.), *The Management of the Cognitive Activity of Students*. Moscow: Publishing House of Moscow University, 1972, pp. 83—108. (In Russ.).

41. Kravtsova E.E. Kul'turno-istoricheskie osnovy zony blizhayshego razvitiya [The cultural and historical basis of the zone of proximal development]. *Psihologicheskij zhurnal = Psychological journal,* 2001. Vol. 22, no. 4, pp. 42—50. (In Russ.).

42. Kravchenko, N.E. Sovremennye predstavleniya o depressivnykh rasstroystvakh nastroeniya v podrostkovom vozraste i nekotorykh problemakh ikh terapii (analiticheskiy obzor) [Modern views on depressive mood disorders in adolescence and some problems of their therapy (analytical review)]. *Terapiya psikhicheskikh rasstroystv = Therapy of mental disorders*, 2007, no. 3. (In Russ.).

43. Nikolaevskaya I.A. The case-vector analysis of the transcripts of classes to overcome educational difficulties: case analysis. *Klinicheskaya i spetsial'naya psikhologiya = Clinical and special psychology*, 2020. Vol. 9, no. 1, pp. 186—203. DOI:10.17759 /cpse.2020090110 (In Russ.).

44. Obukhova L.F. Detskaya psikhologiya: teoriya, fakty, problem [Child Psychology: Theory, Facts, Issues. Moscow: Trivola], 1995, 360 p. (In Russ.).

45. Obukhova L.F., Korepanova I.A. Prostranstvenno-vremennaya skhema zony blizhayshego razvitiya [The spatial-temporal diagram of the zone of proximal development]. *Voprosy psihologii = Psychology Issues,* 2005, no. 5, pp. 13—26. (In Russ.).

46. Rubtsov V.V. Social'no-geneticheskaya psikhologiya razvivayushchego obrazovaniya: deyatel'nostnyj podhod [The Socio-genetic Psychology of Developing Education: the Activity-based Approach]. Moscow: MGPPU], 2008. 416 p. (In Russ.).

47. Rubtsova O.V., Daniels G. Ponyatie «dramy» v konceptsii L.S. Vygotskogo: kul'turno-istoricheskiy i issledovatel'skiy kontekst [The concept of "drama" in L.S. Vygotsky's concept: the cultural-historical and research context]. *Kul'turno-istoricheskaya psihologiya = Cultural-historical psychology*, 2016. Vol. 12, no. 3, pp. 189—207. DOI:10.17759/chp.2016120310 (In Russ.).

48. Suvorov A.V. Eksperiment dlinoyu v zhizn' [A life-long experiment]. *Kul'turno-istoricheskaya psihologiya = Cultural-historical psychology,* 2012. Vol. 8, no. 3, pp. 118—120. (In Russ.).

49. Kholmogorova A.B. Narusheniya refleksivnoy regulyatsii myshleniya pri shizofrenii: Avtoref. diss... kand. psihol. n. [Disturbances of the reflective regulation of thinking in schizophrenia: Author's abstract. diss ... PhD in Psychology]. Moscow, 1983. 24 p. (In Russ.).

50. Kholmogorova A.B. Otechestvennaya psikhologiya myshleniya i kognitivnaya terapiya [Domestic psychology of thinking and cognitive therapy]. *Konsul'tativnaya psihologiya i psihoterapiya = Counseling psychology and psychotherapy,* 2001. Vol. 9, no. 4, pp. 154—164. (In Russ.).

51. Kholmogorova A.B. Integrativnaya psikhoterapiya rasstroystv affektivnogo spektra [Integrative psychotherapy of affective disorders]. Moscow: Medpraktika], 2011, 480 p. (In Russ.).

52. Kholmogorova A.B. Znachenie kul'turno-istoricheskoy teorii razvitiya psikhiki L.S. Vygotskogo dlya razrabotki sovremennykh modeley sotsial'nogo poznaniya i metodov psikhoterapii [The relevance of the cultural-historical theory of the development of the psyche of L.S. Vygotsky for the development of modern models of social cognition and methods of psychotherapy]. *Kul'turno-istoricheskaya psihologiya = Cultural-historical psychology,* 2016. Vol. 12, no. 3, pp. 58—92. DOI:10.17759/chp.2016120305. (In Russ.).

53. Kholmogorova A.B. Kognitivno-bikhevioral'naya terapiya «na grebne tret'ej volny»: revolyutsionnyj povorot ili novye aktsenty? [The cognitive-behavioural therapy "On the crest of the third wave": a revolutionary turn or new accents?]. *Sovremennaya terapiya psikhicheskikh rasstroystv = Modern therapy of mental disorders,* 2016, no. 2, pp. 16—21. (In Russ.).

54. Kholmogorova A.B., Garanyan N.G., Gorshkova D.A., Melnik A.M. Suitsidal'noe povedenie v studencheskoy populyatsii [Suicidal behaviour in the student population]. *Kul'turno-istoricheskaya psihologiya = Cultural-historical psychology,* 2009, no. 3, pp. 101—110. (In Russ.).

55. Kholmogorova A.B., Garanyan N.G., Tsatsulin T.O. Dinamika pokazateley perfektsionizma i simptomov emotsional'nogo neblagopoluchiya v rossiyskoy studencheskoy populyatsii za poslednie desyat' let: kogortnoe issledovanie [The dynamics of perfectionism indicators and symptoms of emotional ill-being in the Russian student population over the past ten years: a cohort study]. *Kul'turno-istoricheskaya psihologiya = Cultural-historical psychology*, 2019. Vol. 15, no. 3, pp. 41—50. DOI:10.17759/chp.2019150305 (In Russ.).

56. Kholmogorova A.B., Zaretsky V.K. Could Russian psychology be useful in solving the issues of modern psychotherapy: reflections after the XX Congress of the International Federation for Psychotherapy (IFP). *Medicinskaya psihologiya v Rossii: elektron. nauch. Zhurn. = Medical Psychology in Russia: electron. scientific journal*, 2010, no. 4. Available at: http: //medpsy.ru (Accessed: 12.22.2010). (In Russ.).

57. Kholmogorova A.B., Zaretsky V.K. Mozhet li kul'turno-istoricheskaya konceptsiya L.S. Vygotskogo pomoch' nam luchshe ponyat', chto my delaem kak psikhoterapevty [Can the cultural-historical concept of L.S. Vygotsky help us understand better what we do as psychotherapists]. *Kul'turno-istoricheskaya psihologiya = Cultural-historical psychology*, 2011, no. 1, pp. 108—118. (In Russ.).

58. Kholmogorova A.B., Klimenkova E.N. Sposobnost' k empatii v kontekste problemy subyektnosti [The ability for empathy in the context of the problem of subjectness]. *Konsul'tativnaya psikhologiya i psikhoterapiya = Counseling Psychology and Psychotherapy*, 2017, no. 2, pp. 75—93. (In Russ.).

59. Kholmogorova A.B., Yakubova L.N., Gorshkova D.A., Evdokimova Ya.G., Moskova M.V., Matytsina V.A. Sluzhba psikhologicheskogo soprovozhdeniya studentov vuzov: problemy stanovleniya, osnovnye napravleniya, metody i principy raboty [Psychological support service for university students: problems of establisment, main directions, methods and principles of work]. *Voprosy psihologii = Psychology Issues*, 2010, no. 4, pp. 55—63. (In Russ.).

60. Zuckerman G.A. Vzaimodeystvie rebenka i vzroslogo, tvoryashchee zonu blizhayshego razvitiya [The interaction of a child and an adult, creating the zone of proximal development]. *Kul'turno-istoricheskaya psihologiya = Cultural-historical psychology*, 2006, no. 4, pp. 61—73. (In Russ.).

61. Elkonin D.B. Detskaya psikhologiya. 5-e izdanie. M.: Moskovskiy centr «Akademiya» [Child psychology. 5th edition. M.: Moscow Centre "Academy"], 2008, 384 p. (In Russ.).

62. Elkonin B.D. Pedagogicheskaya ideya razvivayushchego obucheniya [The pedagogical idea of developing learning. In Elkonin B.D. et al. *Sovremennost' i vozrast* [*Modernity and Age*]. Moscow: Non-profit partnership "Author's Club"], 2015, pp. 26—28. (In Russ.).

63. Beck A.T. Cognitive therapy and emotional disorders. *New York: American book*, 1976.

64. Breslau J. et al. Sex differences in recent first-onset depression in an epidemiological sample of adolescents. *Translational psychiatry*, 2017. Vol. 7, no. 5, p.1139. DOI:10.1038/tp.2017.105

65. Curran T., Hill A.P. Perfectionism is increasing over time: a meta-analysis of birth cohort differences from 1989 to

2016. *Psychological Bulletin*, 2017, 71 p. Available at: https://www.researchgate.net/publication/321012074 (Accessed 19.03.2017).

66. Etherson M., Smith M. How perfectionism can lead to depression in students, 2011, Available at: theconversation.com

67. Facilitating Treatment Adherence. A Practitioner's Handbook. By Donald Meichenbaum and Dennis Turk. *New York and London: Plenum Publishing*. 1987. 310 p.

68. Fazel, M., Hoagwood, K., Stephan, Sh., Ford, T. Mental health interventions in schools in high-income countries. *The Lancet Psychiatry*, 2014. Vol. 1, Iss.5, pp. 319. Available at: https://www.sciencedirect.com/science/article/pii/S2215036614703128 (Accessed 19.03.2017).

69. Fernyhough C. Getting Vygotskian about theory of mind: Mediation, dialogue, and the development of social understanding. *Developmental Review*, 2009. Vol. 28, pp. 225—262.

70. Grawe K., Agents of Change in the Processes of Psychotherapy, Part I. *IFP Newsletter. Zurich*, 2006, pp. 7—17.

71. Holmes J. Can attachment theory help us understand better what we are doing as psychotherapists? Plenary lecture 4. Abstract. FMPP Annual Congress of Psychiatry and Psychotherapy. 20th IFP World Congress of Psychotherapy. June 16th—19th, 2010, KKl, Luzerne, Switzerland, pp. 208—227.

72. Kholmogorova A.B. A. Beck's Cognitive Psychotherapy and L.S. Vygotsky's Cultural-Historical Psychology. In Barma S., Zaretsky Z.K. Contemporary Russian Contributions to Vygotsky's Heritage. Special Issue. CRI_SAS *International Journal*/Revue internationale du CRIRES: innover dans la tradition de Vygotsky, 2017. Vol. 4, no. 1, pp. 209—218.

73. Leiman M. The concept of sign in the work of Wygotsky, Winnikott, and Bakhtin. *British Journal of Psychotherapy*, 1992. Vol. 65, pp. 209—221.

74. Lifei Wang, Zhengzhi Feng, Guoyu Yang, Yaling Yang, Kaifa Wang, Qin Dai, Mengxue Zhao, Chaobing Hu, Rui Zhang, Keyu Liu, Yu Guang, Fan Xia Depressive symptoms among children and adolescents in western china: An epidemiological survey of prevalence and correlates. *Psychiatric Research*, 2016. Vol. 246, pp. 267—274. Available at: https://www.sciencedirect.com/science/article/pii/S0165178115301736 (Accessed 19.03.2017)

75. Neufeld Sh.A.S., Dunn V.J., Jones P.B., Croudace T.J., Goodyer I.M. Reduction in adolescent depression after contact with mental health services: a longitudinal cohort study in the UK. *The Lancet Psychiatry*, 2017. Vol. 4, Iss.2, pp. 120—127. Available at: https://www.sciencedirect.com/science/article/pii/S2215036617300020 (Accessed: 19.03.2017).

76. Sharp C., Fonagy P., Goodyer I. (eds.). Social cognition and developmental psychopathology. Oxford University Press. 2008. DOI: 10.1093/med/9780198569183.001.0001

77. Stiles W.B. Coming to terms. *Psychotherapy Research*, 2011. Vol. 21 no. 4, pp. 367—384. DOI:10.1080/10503307.2011.582186

78. Wertsch J.V. From Social Interaction to Higher Psychological Processes. A Clarification and Application of Vygotsky's Theory. *Human Development*, 2008. Vol. 51, pp. 66—79.

79. Zaretsky V.K. The zone of proximal development: what Vygotsky did not have time to write. *Journal of Russian and East European Psychology*, 2009. Vol. 47 (6), pp. 70—93.

80. Zaretsky V.K. Vygotsky's principle "One step in learning — one hundred steps in the Development": From idea to practice. *Cultural-Historical Psychology*, 2016. Vol. 12, no. 3, pp. 149—188. DOI:10.17759/chp.2016120309 (In Russ.).

81. Zaretsky V.K., Kholmogorova A.B. Pedagogical, Psychological and Psychotherapeutic Assistance in Overcoming Learning Di-culties to Facilitate Development. Barma S. & Zaretsky Z.K., Contemporary Russian Contributions to Vygotsky's Heritage. Special Issue. CRI_SAS *International Journal*/Revue internationale du CRIRES: innover dans la tradition de Vygotsky, 2017. Vol. 4, no. 1, pp. 134—153.

Связь образования, развития и здоровья с позиций культурно-исторической психологии

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Статья представляет собой рефлексию профессионального пути авторов к постановке проблемы связи Образования, Развития и Здоровья, включающего четыре этапа или шага: 1) от исследований мышления при решении творческих задачи в норме и патологии к выделению роли рефлексии в саморегуляции мышления и преодолении проблемных ситуаций; 2) от практик помощи при трудностях в учебной деятельности и при психической дезадаптации к осмыслению этих практик при помощи концептуального аппарата культурно-исторической психологии; 3) от опоры на культурно-исторической психологии в понимании связей в диадах Образование-Развитие и Здоровье-Развитие к рассмотрению комплексных связей в триаде Образование-Развитие-Здоровье; 4) от связей в триаде к «новому параллелограмму развития» — построению основ практической деятельности помогающих специалистов (педагогов, психологов, психотерапевтов), учитывающей «триединую задачу» в опоре на концептуальный аппарат традиции культурно-исторической психологии, включая реф-

лексивно-деятельностный подход (зону ближайшего развития, многовекторную модель зоны ближайшего развития, двойной ресурс, сотрудничество, рефлексию, проблемный эпицентр, субъектную позицию, саморазвитие). При анализе каждого из шагов констатируются и анализируются разрывы между деятельностью специалистов, занятых в каждой из трех рассматриваемых сфер деятельности и обосновывается важная роль теоретических и практических разработок КИП в преодолении этих разрывов и создании научно обоснованной практики образования, ориентированной на развитие учащихся и укрепление их здоровья.

Ключевые слова: образование, развитие, здоровье, культурно-историческая психология, рефлексивно-деятельностный подход, творческое мышление, психологическое консультирование, психотерапия, рефлексия, зона ближайшего развития, многовекторная модель зоны ближайшего развития, проблемный эпицентр, двойной ресурс, сотрудничество, субъектная позиция, саморазвитие.

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DISCUSSIONS AND DISCOURSES
ДИСКУССИИ И ДИСКУРСЫ

Discovering the Great Royal Seal: New Reality of Vygotsky's Legacy

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The paper explores contemporary state of arts in the perception of cultural-historical theory (CHT) by the international scholarly community. On one hand, we do have a great number of publications exploring and advancing Vygotsky's legacy in many ways and directions. On the other hand, paradoxically, there is still no agreement about what CHT is as a theory, and what are its subject-matter, laws, principles and research method. The current state of arts could be expressed by the metaphorical words "Christianity without Christ". The problem is that the existing exposition of CHT appeared over 30 years back, when only a limited number of Vygotsky's original texts were available. But the new reality, with Vygotsky's legacy connected by the publication of a significant number of his unknown previously writings and recent archival findings, allows us to improve the existing exposition of CHT. This article provides an example of how this new reality brings solutions to several problems, such as 1) the title of the theory; 2) its subject-matter and 3) the system of laws of psychological development. The last part of the paper indicates several problems and issues to resolve in discovering CHT as a wholistic theoretical system.

Keywords: Vygotsky, cultural-historical theory, the development of higher psychological functions.

The State of the Arts

Does cultural-historical theory (CHT) still exist? — the question might look naïve and even provocative. It provokes an immediate positive answer: yes, cultural-historical theory (CHT) does exist! Created in the1920s—1930s, CHT does not belong to the history of psychology only, but rather it is living and powerful theory which informs contemporary research in early childhood development [14; 16; 17; 29; 31; 36], school learning and instruction [2; 4; 9; 25; 56; 57; 92], professional development [12; 15; 28; 30], social studies [12; 15; 28; 30], human-computer interactions [34; 49], second language acquisition of adults [11; 37; 38; 39] and many other fields.

Hundreds of researchers declare they are inspired or driven by Vygotsky's ideas and concepts [1; 2; 3; 8; 9; 22; 23; 24; 26; 29; 31; 40; 56; 59; 92; 94] in developing their own original theoretical approaches. Indeed, a great deal of work has been undertaken by international scholars [18; 22; 23; 24; 37; 38; 40] to discover and advance the cultural-historical theory.

Contemporary textbooks consider cultural-historical theory as one of the classical theories in the psychology of the 20th century along with Y. Bronfenbrenner and J. Piaget [55]. Encyclopedia Britannica has an article on Vygotsky, and Encyclopedia of the Sciences of Learning includes the chapter "Cultural-historical theory of development" [52]. The Internet is full of hundreds of sites presenting and representing the cultural-historical theory with different levels of accuracy. What other evidence do we need?

However, there is no coherent approach and acceptance of CHT within academia. In other words, the ma-

jor issue is: does CHT represent a coherent theoretical system and if so what kind of system is CHT? If CHT does exist as an integrated theoretical system, is it possible to expose it in an integral wholistic way and form? The situation looks so that we have a huge number of different, sometimes conflicting, interpretations, and interpretations of interpretations. Some researchers (we can conditionally call them post-Vygotskian or neo-Vygotskian scholars) consider Vygotsky's theory as an unfinished project, i.e. as a more or less developed combination of several powerful insights, a fusion of general ideas, deliberations and conceptions. According to this vision, cultural-historical conception is rather an approach, not the theory as the system of theoretical tools. Therefore, it creates a powerful, but very general theoretical "umbrella-like" framework for the concrete research programs and projects. It gives freedom to the researchers to interpret or re-interpret Vygotsky's ideas according to their wishes and purposes. Marsico [43] describes this in the following way:

"After all, … Vygotsky represents one among the giants on whose shoulders anybody jumps picking up pieces of his complex theoretical framework and using them as a self-explaining theoretical umbrella for making any sort of scientific claims. Very often one can read in academic papers sentences like "According to Vygotsky's theory…" or "Following Vygotsky's perspective …" as a façade of a scientific kind in the polyphony of the research's supermarket" (p.v).

For others, the cultural-historical theory is a complex system of interrelated concepts and principles, the theoretical framework the research could be built on, and therefore, it can be used as analytical tools for conducting concrete research, i.e. for data collection and data analysis. Accordingly, this kind of research requires not only a general theoretical framework, but also careful selection of proper analytical tools for doing the empirical or experimental study according to the research question/s and methodology requirements. In some sense, it does not give a researcher a freedom of interpretations of concepts and principles, because every theoretical concept has strict theoretical content that should be properly understood before being used as an analytical tool. The first (neo-Vygotskian) vision allows great freedom in interpretations of the theoretical contents of concepts, whereas second one requires deep study to comprehend Vygotsky's theory as a system, i.e. the system of interrelated theoretical concepts, laws, principles, and research methods.

The state of arts exposes an interesting picture. On one hand, we do have a great number of publications exploring and advancing Vygotsky's legacy in many ways and directions. On the other hand, paradoxically, there is no agreement about what CHT is as a theory, what is its subject-matter, laws, principles and the research method. There is nothing bad in this:

"The best thing that can happen to a scholar is that someone else takes her idea and elaborates it further. Replication, reification, and even taking care lead to no further theoretical advancement, since they tend to maintain the orthodoxy of the original formulation. The most faithful student makes the worst service to the teacher since she may merely reproduce or echo the teacher's voice. New ideas will emerge only in the process or cannibalization, dissection, and remaking. Thus, just "taking care" is not enough for the process of science making. What we need is "cultivating" new possibilities to understand the phenomenon under investigation" [44, p.v].

I would agree with this and I am against orthodoxy. However, the situation described in this quotation requires an important clarification: all this is correct *only when the original ideas of the teacher are properly understood*, at least in the first approximation. You can never be successful in improving any complex system if you do not understand what it is and what it is for. Improving without understanding always leads to nothing and looks miserable and pathetic. And I am not the only one who cares about this:

"Nevertheless, if the misconceptions lead to developments that capture the imagination, spur research, and influence educational practice, is this not a positive outcome? The problem is that, in lieu of discussions and applications of key principles, the rich understandings provided by the theory do not receive a hearing in the forum of professional ideas" [25, p.114].

F. Mikhailov, one of the leading experts in Vygotsky's studies, expressed this in a very strong way saying that most Western scholars have fundamentally misunderstood Vygotsky (Mikhailov, 2001) as his ideas "have been substantially distorted by commentators, disciples, and users to meet their own needs" [47, p. 11]. This is in line with Cazden [19] who argued that most references to Vygotsky's work are selective, employed to fortify an author's pre-existing beliefs rather than to reconceptualize prior understandings through a careful and extensive reading of his work.

The situation though is more complex and contains a risk of discreditation of the entire theory. Saying this I share Gredler's point that:

"Accurately assessing the potential of… theory …. is in serious jeopardy when only fragments of a few concepts attract attention and the limited information becomes popular. Researchers and practitioners begin to make inferences and extrapolations from the limited information, but such views cannot reflect the theorist's orienting framework. The connections between ideas, "the holistic structure (Gestalt) of a scientist's thinking necessary to understand the meanings of the elements" is missing" [25, p. 114].

This leads to a more serious outcome:

"… ultimately, the theory itself is often discredited when the popular view is found wanting. This problem has not yet occurred with Vygotsky's theoretical system. However, his theory is the most recent perspective to be discussed largely in terms of popular misconceptions" [25, p. 114].

Summarizing this point, Gredler describes this by comparing Piaget's phrase that "fragments of an idea were assimilated into existing schemas" [25, p. 128]. What I can add to this is that such assimilation sometimes happens without any signs of accommodation. I agree, Vygotsky's theory is not yet discredited, but I also agree that it is a victim of popular misconceptions.

This means that the overall situation has not changed much since the 1980s when Luria declared: "Vygotsky managed to create a psychological system that has not yet been fully studied" [41, p. 44]. The current state of arts could be expressed by the metaphorical words of Ronald Miller: "Christianity without Christ" [48, p. 53]. This inevitably leads to fragmentation and simplification of Vygotsky's ideas as well as to a series of misinterpretations and misconceptions which dominates in contemporary studies, as several researchers express their concerns about [65; 13; 6; 7; 48].

The problem

It might seem that the main problem which has generated such a controversial and contradictory situation with Vygotsky's legacy is that he did not leave a separate book that presents the theory in a systematic way; instead, the ideas are scattered across different works and their connections are not always obvious and clearly highlighted. Yet, this is only a part of the problem, and not even a major one. Contemporary neo-Vygotskians could easily do the same as they do, even if such a book by Vygotsky were written. Quite often they do not care that their interpretations directly contradict the original meaning given in Vygotsky's original texts. Just an example: Holzman argues:

"Vygotsky seems to be saying that learning-leading-development is created collectively. This suggests that the ZPD is more usefully understood as a process, as a spatio-temporal entity, an activity rather than an actual zone, space, or distance" [32, p. 29].

I could understand why the authors of a Wikipedia article refuse to define ZPD as a *distance* between two levels of development as Vygotsky formulated in his famous definition [72, c. 42], but what remains a mystery is that high-class experts in this field deny the idea of distance and space as though Vygotsky's original definition does not exist at all. From the fact that learning-leading-development is being created collectively, it does not at all follow that the zone itself must be understood as an activity. On the contrary, Vygotsky says that teaching-learning (obuchenie) *creates ZPD* or occurs within ZPD [79, c. 264] being focused to support "the buds of development" [72, c. 16]; so, ZPD **is not an activity** if we follow Vygotsky's logic expressed in the original definition.

Where is the problem then? In my opinion, the problem is that the contemporary understanding of Vygotsky's theory, the existing picture of the theory so to say, is not a contemporary picture in its origins. This picture arose a long time ago — namely, in the 70—80s of the last century on the basis of a very limited number of Vygotsky's works published and available to researchers. Starting from *Mind in Society* [74] — the cocktail-like compilation of separate fragments of various works by Vygotsky mixed with editorial inserts and paraphrases — this picture was doomed to be very fragmented, superficial, and contradictory. In the Preface [74] the Editors honestly warned readers of "significant liberties" they had taken with Vygotsky's texts, saying that:

"The reader will encounter here not a literal translation of Vygotsky but rather our edited translation of Vygotsky, from which we have omitted material that seemed redundant and to which we have added material that seemed to make his points clearer ... We realize that in tampering with the original we may have distorted history" [74, p. 10].

At that time, however, there was no other way to introduce Vygotsky to the Western audience, having a very limited number of Vygotsky's original manuscripts. Michael Cole's Prologue to *The Essential Vygotsky* [53, p. xi] makes clearer why these drastic editorial changes were considered necessary at the time. The publication of the *Collected Works* in Russian and in English, paradoxically, did not change the situation significantly. Unfortunately, neo-Vygotskians follow the tradition and in many cases continue taking "significant liberties" of interpretations and paraphrasing, even though these interpretations directly contradict Vygotsky's ideas.

In the 80s—90s, due to limited sources of Vygotsky's original texts available, there could be no other, completer and more accurate picture — a synthesized picture of a holistic theory. But this does not mean that there can be no other picture now. Why? Because over the past 20 years, what I call "the new reality" of the legacy of Vygotsky has emerged. In the next parts of the article, I will show what this new reality is and how, on its basis, we can begin work on creating and reconstructing a holistic, systemic presentation of Vygotsky's theory; that is, to present a new vision of the theory precisely as a system with a precisely defined subject-matter, research methods, a complete set of laws, and a system of basic interconnected concepts and principles. In my opinion, the new reality puts this task on the agenda and provides an opportunity for its solution. I am fully aware that to restore the theory as an integral system requires collective efforts, and I am ready to contribute to this project. In this article I would like to outline possible paths to go. The challenge of time is very clear: either we remain inside the already existing picture of Vygotsky's theory and continue to assimilate new sources without accommodation, by adapting them to existing schemes, or we will try to take the next step and begin work on synthesizing a new reality — reconstructing CHT as the holistic theory trying to avoid superficial interpretations and giving the voice to Vygotsky himself.

Mission impossible?

I begin this part of the article from the words of Meshcheryakov, who claims:

"Vygotsky's conceptual approach is very complex and multifaceted, and it certainly cannot be scraped from the surface of the author's texts. He had too little time to follow through on all the implications of his theory, to systematize and present them in an extended academic fashion. Therefore, we must not expect to find finished and complete conception in all of his texts, although these texts may be used as an implicit, internal form for reconstructing a more comprehensive conception" [45, c. 156].

But even the task of reconstructing a more comprehensive conception is nearly impossible to solve. Even a

very brief analysis of the literature shows that there are a number of insurmountable obstacles and barriers that can be classified as follows:

1) Quick and rapid evolution of Vygotsky's theoretical views [10; 45; 46];

2) Several key Vygotsky's works remained inaccessible and not translated [104];

3) Poor translation of Vygotsky's texts [27; 26; 58; 66].

Each of them is seriously reasoned and justified. Thus, speaking about the first obstacle, the editors of *Cambridge Companion to Vygotsky* made a strong claim:

"A close reading of Vygotsky's work shows how his ideas developed and were transformed over a very brief period of time. It is difficult to reconcile some of the writing from the early 1920s with that which was produced during the last 2 years of his life. These rapid changes, coupled with the fact that his work was not published in chronological order, make synthetic summaries of his work difficult" [10, p. 2].

What complicates the whole issue (Obstacle 2) is that not all Vygotsky's key texts, even the published ones, were included into the *Collected Works* being unavailable even for Russian researchers and remaining untranslated. Poor translation (Obstacle 3) began to be sporadically discussed already in the beginning of 1980s (see, for example, [27]). The more texts became available the more issues with poor translation came to the attention of researchers [25; 58; 65; 66]. The difficulties are exacerbated by the fact that translations of Vygotsky's original works often are heavily abridged and edited, which has led to the statement that "existing translations are marred by mistakes and outright falsifications" [62, p. 475].

Taken together, these obstacles and barriers produce a cumulative effect, which gives the impression that Vygotsky either did not have a holistic theory at all, or if it was, then it is impossible to make its systemic synthesis. Vygotsky himself did not leave such a book, but almost a century after his death, none of Vygotsky's numerous followers neither tried to do this nor did they even put such a task on the agenda. On the contrary, leading Vygotsky's scholars consider this task impossible and the goal unreachable in principle. The common opinion sounds like a famous movie title — *Mission Impossible*. Yet, is it?

New reality with Vygotsky's legacy

In the 1980s, when the Russian edition of the *Collected Works* (1982—1984) was published, a significant number of Vygotsky's works remained unknown and were not included into that edition. Some of them remained practically unavailable as they were originally published in the 1920s and 1930s in a very limited number of copies; others existed only in a form of manuscripts, diaries, and notes in archives. The situation started to change gradually, as previously unavailable texts began to appear creating a new reality in Vygotsky's legacy. I give only several examples to clarify the point.

Among seminal and foundational works, *Concrete Psychology of Man* was published in 1986 [80], *The Problem of Cultural Development of the Child* [69] was

republished in 1991 [82], *Imagination and Creativity in Childhood* (1930) in 1991 [83]. On the other hand, archival materials started to be published, *for example* [76]. Many of these materials, such as *Concrete Human Psychology* [81] were translated, and included to separate volumes, such as *The Vygotsky Reader* [61], *The Essential Vygotsky* [52].

On the other hand, some foundational works are now available only in Russian and still unavailable in English; we do have in Russian the whole text of *the Problem of Age* [79, 88] which was only partly presented in both Russian and English *Collected Works*. We do have the complete text of the *Pedology of Adolescent* [70; 71] whereas only 4 Chapters are available in the *Collected Works*. We do have the complete text of *The Intellectual Development of Children in a Process of Instruction* [72] from which only pieces of two chapters are available in English [74]. *The Problem of Development and Disintegration of Higher Psychological Functions* [73; 90] is not yet translated. And since 2001 we do have *Lectures on Pedology* in Russian [88], but only one out of these seven lectures was available in English [61] and the whole book is only recently translated [91].

In addition to this, a series of publications of previously unknown scientific diaries of Vygotsky, published and commented by Zavershneva [97; 98; 99; 100; 101; 102; 103] does not only allow access to new sources, but shows Vygotsky's thinking and opens an "internal laboratory of thought". This "archival revolution" is culminated with a book [104].

I should limit myself here with a few examples and there are many more to take into account. Yet, now, with a huge number of sources recently available, we have a new situation, a new reality with Vygotsky's original texts. This new reality allows us to make a new step in discovering the cultural-historical theory as a system or at least to significantly improve the traditional picture. Because of these new sources, there are some aspects in the theory which now can be clarified on the basis of Vygotsky's original texts. There are some theoretical links which were hidden and now became clear; there are some examples of concrete research conducted by Vygotsky and his collaborators which were unknown, but now can help to clarify the research method and its links to the theoretical concepts. There are some general laws of development of human higher psychological functions which Vygotsky presented and explained in these new sources, which for many years were unavailable for Western audience. All these might contribute to the on-going process of discovering the cultural-historical theory. In the following part of the paper I show how this new reality contributes and might contribute much more in solving the problem of presenting CHT as a holistic theoretical system. I also will show how this new reality might help us rethink obstacles as challenges which might be met and resolved.

Obstacles or challenges?

Quick and rapid evolution of Vygotsky's theoretical views, which was considered as an obstacle preventing

or making difficult the synthetic summary of Vygotsky's system in 1980s, is not an obstacle anymore.

In many cases it is not even difficult to restore the chronological order of Vygotsky's writings. For example, *The Consciousness as a Problem for the Psychology of Behavior* [85, pp. 63—68], and *The Methods of Reflexological and Psychological Investigation* [85, pp. 35—50] are considered to be related to the same stage of Vygotsky's work. Thus, the first was published in 1925 [67], the second in 1926 [68]. However, they were written in an opposite order and reflect different stages of Vygotsky's theoretical evolution. *The Methods of Reflexological and Psychological Investigation* coincides with the title of the presentation Vygotsky did on the Second All-Russian Congress on Psycho-neurology on January 6, 1924. The main idea of that paper was to show that reflexological methods might be used in psychological research. Yet, *The Consciousness as a Problem for the Psychology of Behavior* which is critical to any attempt to apply reflexological methods to psychology definitely belongs to another period of Vygotsky's creative theoretical evolution (more on this in [64]).

Due to the contemporary publication of Vygotsky's archival materials and notebooks [104] and deep investigation of key periods of Vygotsky's theoretical evolution [7] *there are no more blank spaces left*. These publications allow us to not only to reconstruct completely all key periods of Vygotsky's theoretical pathway, but to identify absolutely clearly when, at what year, and sometimes the exact dates all his published and unpublished works (including preparatory materials and notes) were written. This might help to avoid the situation when ideas from different periods are heaped together and the evolution of Vygotsky's position is undervalued or simply ignored.

This new reality provides the opportunity to overcome the second obstacle, that is limited access to original texts of Vygotsky mentioned above. The task to study Vygotsky's theory as a system should not be limited by the *Collected Works*; other sources unavailable in 1980s and 1990s and available now, significantly enrich our understanding of the conceptual content of Vygotsky's theory. Due to the collective efforts, now, in the beginning of the 21st century, there are no fundamental texts of Vygotsky which are unknown and/or unavailable despite not all of them being available in English.

What existed and what was absolutely correctly considered as obstacles that make a synthetic summary of Vygotsky's theory difficult or even impossible does not exist anymore. Great amounts of materials, which are now available in Russian and English, should be considered as valuable (and sometimes exclusive) sources for discovering the cultural-historical theory and building a synthetic summary. This does not mean that the discovery of the cultural-historical theory in all its complexity is not difficult; yes, it is difficult, but not impossible. Yes, it requires deep reading and comparative analysis showing directions of Vygotsky's theoretical pathway, its turning points and dramatical contradictions; it requires deep analysis of conceptual contents and contexts, but this job must be done, and it has to be done now. In the next section I will show some examples of which con-

troversial issues have been resolved and which problems can be resolved if we consider the new reality.

Making mission possible

There are several generally accepted, or widespread, provisions that, due to the fact that they are widely multiplied, have not become the subject of a critical attitude. The new reality, which opened Vygotsky's previously inaccessible texts, allows a critical review of these issues. The scope of this article does not allow a detailed discussion of all these issues and this requires further collective work, so I focus only on a few that seem to me indisputable.

The title of the theory

This question seems unimportant and inconsequential. A tradition has been established when Russian researchers use the term "cultural-historical theory", whereas Western scholars prefer the term "sociocultural theory". However, the label matters. The point of view is very widespread that Vygotsky himself never called his theory "cultural-historical"; even more there is a claim that this term was introduced in mid-30s by critics with defamatory aims and have been later accepted by Vygotsky's followers in consequence of the mechanism of "identification with the aggressor" [35].

The new reality with Vygotsky's legacy solves this issue completely and irrevocably. In recently re-published Preface to Leontiev's book "The development of memory" [89] we see the following definition:

"In its essence the... theory of the historical (or cultural-historical) development in psychology means the theory of the *higher psychological functions* (logical memory, voluntary attention, verbal thinking, volitional processes, etc.) — nothing more, and nothing less" [89, p. 200].

Thus, Vygotsky does not only give the title of his theory, but clearly identifies its subject matter — the cultural-historical theory of development of higher psychological functions. The original source, thus, clearly shows that the title of the theory was introduced by Vygotsky himself before 1931, but not by the critics in the mid 1930s.

The problem, however, is deeper: both "cultural" and "historical" mean something important. "Cultural" addresses human culture and separates it from organic development. "Cultural" relates to the cultural development of behavior as a theoretical concept [86, p. 7]. "Cultural" relates to "social"; "... everything cultural is social. Culture is both a product of social life and of the social activity of man" [86, p. 106].

The word "historical" in the title highlights the nature of human higher psychological functions both in the history of mankind (phylogenesis) and individual history of development of the child (ontogenesis). Individual development of the child and adolescent, and historical development of cultural forms of behavior are the same type of development [79, p. 221].

The subject-matter of CHT

It looks strange, but there is still no unity among researchers on what is the subject matter of cultural-his-

torical theory. Literature either circumvents this issue and does not give an exact answer, or captures any one aspect, fitting the theory into the framework of classical psychological academic traditions. This uncertainty and diffusion leads to the state of arts where Vygotsky's theory is often classified as sort of social constructivism [33], or as a theory of social development [5], a theory of learning and development [3], or simply as a theory of the development of thinking [25; 26]. Indeed, in Vygotsky's writings one can find deep ideas about the interconnectedness of education and development, the development of thinking, social development, etc., but all these provisions do not exhaust and do not answer the question "What is the subject of cultural-historical theory?" And vice versa, to understand the full deepness of these ideas and correctly interpret them is only possible if you see that these ideas were formulated through the prism of the main problem, for the solution of which the theory was created.

Vygotsky's theory was the answer to the problem formulated by W. Wundt — is it possible to objectively study higher psychological processes (functions) in human beings? Wundt's answer was negative; Vygotsky's answer was positive. Already established higher psychological functions, functions per se, are not available for objective study. But if we make the *entire process* of their development and becoming the subject matter of research, the opportunity for their objective scientific study appears.

"The origin and development of the higher psychological functions, their construction and composition, their way of functioning and their mutual connections and interdependencies, the laws that govern their course and fate — all this is constituting the exact content and the true subject matter of these investigations" [89, c. 200].

Thus, the subject matter of CHT is the process of development of the higher mental functions of man in all its basic aspects: 1) their origins 2) their construction 3) their composition 4) their mutual connections and interdependencies and 4) the way of functioning. The fundamental issue is the idea of development: to explain the development of higher psychological functions not from its properties, but to deduce its properties from its development [85, p. 126].

An exact definition of the subject matter of theory is not a simple formality. This relates to the problem, namely the problem of lower (elementary, biologically driven) psychological functions and higher (cultural) psychological functions. This is a complex problem that has been brilliantly solved in cultural-historical theory: but I will dwell briefly on only one aspect. Secondary literature, referring to the cultural-historical theory, ascribes to higher psychological functions not only voluntary attention, intentional memory, and logical thought (which is correct), but also "problem solving, learning, and evaluation of the effectiveness of these processes" [38, p. 1—2] which looks confusing and very embarrassing. Slightly changing the clear and intelligible "higher psychological function" to "higher mental capacities" [38, p. 1—2] or even "higher functioning" completely

eliminates the opportunity to understand Vygotsky's original message and leads to the fact that they are mixed in vague terminological constructions, like "lower and higher elementary functioning" [8, p. 25] which strictly and directly contradicts Vygotsky's theoretical model. As a result, Vygotsky is credited with the idea that "The general logic of development, Vygotsky maintains, is associated with the transformation of natural mental functions into higher ones" [63, p. 151]. This take is so widely disseminated that no one doubts that it accurately reflects the concept of theory.

The new reality with Vygotsky's legacy allows us to say that this view needs substantial refinement. *In The Problem of Development and Disintegration of Higher Psychological Functions* [73; 90] Vygotsky with great details explains the dialectics of relations of higher and lower psychological functions and gives the clear answer: higher psychological functions are special functional systems "that are not a direct continuation or development of an elementary function, but represent a whole in which elementary mental functions exist as one of the instances that make up the whole" [90, p. 13].

The lower functions, of course, are involved as integral components of the higher ones, while they unconditionally transform. However, lower functions in no case determine the composition of the higher function due to the fact that *the higher functions have a different nature and origin.* Moreover, having become an instance in the composition of a new whole, lower functions begin to work according to the laws of this new whole — this is the essence of the matter.

The very fact of the publication of this Vygotsky's report calls into question the widespread belief that in the last years of his life Vygotsky abandoned (or even simply rejected) the ideas of the cultural-historical theory developed in 1927—1930. However, it was precisely established that this report was made at a conference of the All-Union Institute of Experimental Medicine in April 1934 [73, p. 364]. In other words, three months before his death, Vygotsky continued to assert that "the problem of higher psychological functions is the central problem of the whole psychology of man" [73, p. 364].

The transition from studying the genetic processes of the emergence of higher functions to studying their development from the point of view of changing interfunctional relationships was the essence of the last stage of the development of CHT. The first results of this new research program were presented by Vygotsky in that report. We could conclude that at all stages of the development of CHT, the process of development of higher psychological functions remained the main subject-matter of the theory.

It is a pity, this late-stage work of Vygotsky, which significantly contributes to the CHT and allows us to clarify the relations between lower and higher psychological functions, is not yet available in English. This is one more of many other examples of how the new reality challenges the limitations, fragmentation, and even fallacy of the existing picture of the cultural-historical theory presented in contemporary literature.

Laws of psychological development

No scientific theory, in the classical sense of the word, can be called such if it is not built on discovered and experimentally justified objective laws: Newton's theory, for example, is impossible without the three basic laws of mechanics. Yet, are there objective laws for explaining complex mental phenomena that are subjective in nature? Contemporary psychology is actively discussing this issue and these discussions are either calming down or going back on the agenda. Cultural-historical theory answers this question unambiguously — if the subject matter of the theory is the process of development of higher psychological functions, then the task is to identify the universal and general laws of their development. If psychological development is an objective process, then it is necessary to identify the laws of development of higher functions, the laws "which govern their course and fate" [89, c. 200].

Vygotsky's invaluable contribution to developmental psychology is that he identified and experimentally justified the general objective laws of development of higher psychological functions. However, the literature, built on outdated reality and based on a very fragmented view of the theory as a whole, gives the same fragmentary and contradictory picture when it comes to the laws of development. Thus, Mahn claims that "Vygotsky discovered two fundamental laws" [42, p. 63]. Gredler and Shields [26] speak about 3 general laws of cultural-historical theory, Meshcheryakov [45; 46] and Obukhova [51] present different lists of four laws each. The bulk of researchers, however, is limited to references to only one, the most famous law — the general genetic law [86, p. 106] in best case scenario, or simply to its abridged and incorrect translation in the *Mind in Society* [74, p. 57]. These different lists are full of inconsistencies, incorrect references to Vygotsky's original texts, inaccuracies, or subjective interpretations. For example, the law which Vygotsky defined as "the law of the transition [of the child] from direct, innate, natural forms and methods of behavior to mediated, artificial psychological functions" [79, p. 221], is called "the law of mediation" [46, p. 162] or the "law of the transmission" [26, p. 50].

It might sound unbelievable, but now, after nearly a hundred years from the time the theory appeared, there is no research presenting the complete and systematic list of laws of psychological development which could be found in Vygotsky's original writings. Secondary literature gives some general understanding of Vygotsky's laws, but: 1) the numbers of laws in different lists do not match; 2) the formulations of laws are not always given accurately but in accordance with the authors' interpretation and approach, rather than in agreement with Vygotsky's; 3) some of them are based on wrong translations; 4) some important original sources where Vygotsky had formulated the general laws of development are not considered. Even the question of how many laws of psychological development is presented in Vygotsky's texts causes confusion and bewilderment among neo-Vygotskians.

Again, the new reality with Vygotsky's legacy provides an accurate answer to this question. The first law of psychological development that cultural-historical theory based on is the law of four stages of development as the "extremely important genetic law that character-izes the development of all higher mental functions — of logical memory, voluntary attention, and thinking in concepts" [87, p. 103]. Three more laws are presented and explained with great details in the *Pedology of an Adolescent* [87, pp. 167—171]. Together with the general genetic law [86, p. 106] this makes up 5 laws. It is amazing that all of these Vygotsky's works are accessible; all that is needed is to work carefully with the *Collected Works*. Yes, the voice of Vygotsky himself is almost inaudible in the chorus of modern interpreters.

The new reality with the legacy of Vygotsky presents surprises even to those who think that this list of 5 laws is the final one. In the recently translated *Lectures on Pedology* [88; 91], four more laws of psychological development (laws of differentiation and subordination of psychological functions) are systematically presented and discussed in Lecture 5. In this lecture, Vygotsky does not only formulate and explain these laws, he shows how they are interrelated and interconnected and gives a huge number of examples showing how these laws work at different stages (psychological ages) of child development.

New reality and new opportunities

Cultural-historical theory **does exist as a theoretical system** and the new reality makes it possible to discover the cultural-historical theory as a system, i.e. the system of laws, theoretical concepts, and principles. The time is coming to discover the theory as deeply connected to the research method, where theoretical analytical tools and research analytical tools constitute the cultural-historical genetic research methodology. Doing this we will find what kinds of new opportunities the cultural-historical theory might provide for educational research in the 21st Century.

The task to present Vygotsky's theory in synthetic summary is still challenging, but not impossible. What we need is to include texts which recently became available (including these not translated to English yet) into already available sources which we can use to solve the task of fully discovering the psychological system Vygotsky had created. There is no single book where Vygotsky presents his system as a whole; however, there are new sources where he introduces concepts, laws, and principles being clearly formulated and theoretically interrelated; there are texts where we can find concrete examples of how those theoretical analytical tools work to study experimentally the process of psychological development. The obstacle is that we still deal with the tradition when ideas from different periods are heaped together and the evolution of Vygotsky's position is undervalued or simply ignored. In contrast to this, the cultural-historical theory might be presented in the way it was developed during two key stages: 1) 1927—1931 and 2) 1932—1934 [104; 18]. We need to explain the theoretical continuity of these two stages as well as differences between them; we need and we can present and explain the concepts and principles developed during these stages and theoretical links between them.

We should as much as we can reduce the tradition of interpretations of interpretations, and focus on collective generative understanding of what Vygotsky said himself, what were the original psychological meanings of his theoretical "messages" since the only way to understanding is to reconstruct the theoretical content of the theory in all its key components based on Vygotsky's original texts. Otherwise, without giving the voice to Vygotsky, we will be doomed to remain in the situation which Miller describes as "Christianity without Christ" in contemporary sociocultural studies [48, p. 54].

Final remarks

The new reality with Vygotsky's legacy, with a huge amount of sources become recently available allows to start a business that even 20 years ago seemed impossible. This new reality allows us to make a new step in discovering the cultural-historical theory as a system. Because of these new sources, there are some aspects in the theory which now can be clarified on the basis of Vygotsky's original texts. My article is focused on several examples, and there is much more to do. There are some theoretical links which were hidden and now became clear; there are some examples of concrete research conducted by Vygotsky and his collaborators which were unknown, but now can help to clarify the research method and its links to the theoretical concepts. And finally, there are some general laws of development of human higher psychological functions which Vygotsky presented and explained in these new sources, which for many years were unavailable for Western audience. All these might contribute to the on-going process of discovering the cultural-historical theory. Cultural and historical theory was a fundamental discovery, but for historical and cultural reasons, it itself remains undiscovered for the global psychological community and even for those who identify themselves as Vygotskian, neo- or post-Vygotskian.

Some people who are happy with the state of arts might consider this task as a sort of Utopia. Probably it is. However, cultural-historical theory is a treasure which we should learn how to use. Otherwise, we are at risk to be a pauper, described by Mark Twain:

The King turned to Tom, and said kindly "My poor boy, how was it that you could remember where I hid the Seal when I could not remember it myself?". "Ah, my King, that was easy, since I used it divers days." "Used it- yet could not explain where it was?" "I did not know it was that they wanted. They did not describe it, your Majesty." "Then how used you it?" The red blood began to steal up into Tom's cheeks, and he dropped his eyes and was silent. "Speak up, good lad, and fear nothing," said the King. "How used you the Great Seal of England?" Tom stammered a moment, in a pathetic confusion, then got it out— "To crack nuts with!".

We do not have reasons to say that we did not know it was that they wanted, and nobody described it. Vygotsky did tell and his voice is worth being heard.

References

1. Bodrova E. Key Concepts of Vygotsky's Theory of Learning and Development. *Journal of Early Childhood Teacher Education,* 1997. Vol. 18, no. 2, pp. 16—22.

2. Bodrova E., Leong D.J. (1998). Scaffolding emergent writing in the zone of proximal development. *Literacy Teaching and Learning,* 1988. Vol. 3, no. 2, pp. 1—18.

3. Bodrova E. Key Concepts of Vygotsky's Theory of Learning and Development. *Journal of Early Childhood Teacher Education,* 1997, Vol. 8, no. 2, pp. 16—22.

4. Chaiklin S. The zone of proximal development in Vygotsky's analysis of learning and instruction. In Kozulin A., Gindis B., Ageyev V. Miller S. (eds.), *Vygotsky's educational theory in cultural context.* Cambridge: Cambridge University Press, 2003, pp. 39—64.

5. Crawford K. Vygotskian approaches in human development in the information era. *Educational Studies in Mathematics,* 1996. Vol. 31, no. 1—2, pp. 43—62.

6. Dafermos M. Critical reflection on the reception of Vygotsky's theory in the international academic communities. In Selau B., Fonseca de Castro R. (eds.). *Cultural-historical theory: Educational research in different contexts.* Porto Alegre: Edipucrs, 2015, pp. 19—38.

7. Dafermos M. Rethinking cultural-historical theory: a dialectical perspective to Vygotsky. Singapore: Springer, 2018. 309 p.

8. Daniels H. Vygotsky and research. Routledge, 2008. 218 p.

9. Daniels H. Vygotsky and pedagogy, New York, NY: Routledge. 2016. 205 p.

10. Daniels H., Cole M., Wertsch J. (eds.) The Cambridge companion to Vygotsky. Cambridge: Cambridge University Press, 2007. 477 p.

11. DiCamilla F., Lantolf J.P. Sociocultural theory and the acquisition of Spanish as a second language. In Salaberry M.R. & Lafford B. (eds.). *The acquisition of Spanish as a second language.* Washington, DC: Georgetown University Press, 2003, pp. 262—284.

12. Donato R. Collective scaffolding in second language learning. In: Lantolf J., Appel G. (eds.). *Vygotskian Approaches to Second Language Research.* Norwood, NJ: Ablex Publishing Corporation, (1994, pp. 33—56.

13. Elhammoumi M. Lost-or merely domesticated? The boom in sociohistoricocultural theory emphasizes some concepts, overlooks others. In Chaiklin S. (ed.). *The theory and practice of cultural-historical psychology.* Aarhus, Denmark: Aarhus University Press, 2001, pp. 200—217.

14. Elkonin B.D. The psychology of play. *Journal of Russian and East European psychology,* Vol. 43, no. 1 and 2. Originally published as Elkonin D.B. (1978). Psihologiya igry [The psychology of play]. Moscow: Pedagogika, 2005/1978.

15. Eun B. Making connections: Grounding professional development in the developmental theories of Vygotsky. *The Teacher Educator,* 2008. Vol. 43, pp. 134—155.

16. Fleer M., Veresov N. Cultural-historical and activity theories informing early childhood education. In M. Fleer, B. van Oers (Eds.), *International handbook of early childhood education,* NY: Springer, 2018, pp. 47—76. DOI 10.1007/978-94-024-0927-7_3

17. Fleer M., Veresov N. A cultural-historical methodology for researching early childhood education. In M. Fleer,

B. van Oers (Eds.), *International handbook of early childhood education,* NY: Springer, 2018, pp. 225—250. DOI 10.1007/978-94-024-0927-7_9

18. Fleer M., Gonzalez Rey F., Veresov N. (eds.). Advancing Vygotsky legacy. New York: Springer, 2017. 276 p.

19. Cazden C.B. Selective traditions: Readings of Vygotsky in writing pedagogy. In Hicks D. (ed.). *Discourse, learning, and schooling.* New York, NY: Cambridge University Press, 1996, pp. 165—185.

20. Goncu A., Tuermer U., Jain J., Johnson D. Children's play as cultural activity. In Goncu A. (ed.). *Children's engagement in the world. Sociocultural perspectives.* Cambridge, MA: Cambridge University Press, 1999, pp. 148—170.

21. Goncu A., Jain J., Tuermer U. Children's play as cultural interpretation. In Goncu A., Gaskins S. (Eds.), *Play and development. Evolutionary, sociocultural, and functional perspectives.* Great Britain: Lawrence Erlbaum Assoc, 2007, (pp. 155—178).

22. González Rey F. A re-examination of defining moments in Vygotsky's work and their implications for his continuing legacy. *Mind, Culture, and Activity,* 2011. Vol. 18, pp. 257—275.

23. González Rey F. A new path for the discussion of Social Representations: Advancing the topic of subjectivity from a cultural-historical standpoint. *Theory & Psychology,* 2015. Vol. 10, pp. 1—19.

24. González Rey F. Advances in subjectivity from a cultural-historical perspective: unfoldings and consequences for cultural studies today. In: Fleer et al. (eds), *Perezhivanie, emotions and subjectivity: advancing Vygotsky legacy.* New York: Springer, 2017, pp 173—194.

25. Gredler M. Understanding Vygotsky for the Classroom: Is It Too Late? *Educational psychology Review,* 2012. Vol. 24, pp. 113—131.

26. Gredler M., Shields C. Vygotsky's Legacy: A Foundation for Research and Practice. New York: The Guilford Press, 2008. 242 p.

27. Griffin P. Cole M. Current activity for the future: The Zo-ped. In Rogoff B., Wertsch J. (eds.). *Children's learning in the «Zone of proximal development».* San Francisco: Jossey-Bass, 1984, pp. 45—64.

28. Guskey T., Huberman M. Introduction. In: Guskey T.R., Huberman M. (eds.). *Professional Development in Education: New Paradigms and Practices.* New York, NY: Teachers College Press, 1995, pp. 1—6.

29. Hakkarainen P. Learning and development in play. In Einarsdottir J., Wagner J.T. (eds.), *Nordic childhoods and early education. Philosophy, research, policy, and practice in Denmark, Finland, Iceland, Norway and Sweden.* Charlotte: Information Age Publishing, 2006, pp. 183—222.

30. Hattie J. Visible learning for teachers: maximizing impact on learning. NY: Routledge, 2012. 296 p.

31. Hedegaard M. The development of children's conceptual relation to the world, with focus on concept formation in preschool children's activity. In Daniels H., Cole M., Wertsch J. (eds.). *The Cambridge companion to Vygotsky.* New York: Cambridge University Press, 2007, pp. 246—275.

32. Holzman L. Vygotsky at work and play. New York: Routledge, 2009. 168 p.

33. Hua Liu S., Matthews R. Vygotsky's philosophy: Constructivism and its criticisms examined. *International Education Journal,* 2005. Vol. 6, no. 3, pp. 86—399.

34. Karasavvidis I. Activity Theory as a Conceptual Framework for Understanding Teacher Approaches to Information and Communication Technologies. *Computer and Education,* 2009. Vol. 53, pp. 436—444.

35. Keiler P. "Cultural-historical theory" and "Cultural historical school": From myth (back) to reality. *Dubna Psychological Journal,* 2012. Vol. 5, no. 1, pp. 1—33.

36. Kravtsova E.E. Cultural-historical/nonclassical basis of the "Golden Key" school program. *Journal of Russian and East European Psychology,* 2010. Vol. 48, no. 4, pp. 61—75.

37. Lantolf J.P. Sociocultural theory and the teaching of second languages. London: Equinox Publishing, 2008. 436 p.

38. Lantolf J.P. (ed.) Sociocultural theory and second language learning. Oxford: Oxford University Press, 2013. 306 p.

39. Lantolf J.P., Appel G. (eds.) Vygotskian approaches to second language research. Norwood, NJ: Ablex Publishing Corporation, 1994. 232 p.

40. Lee C., Smagorinsky P. (eds.). Vygotskian perspectives on literacy research: constructing meaning through collaborative inquiry. Cambridge University Press, 2000. 296 p.

41. Luria A.R. Etapy proidennogo puti; nauchnaya avtobiografia [Stages of the road travelled: scientific autobiography]. Moscow: MGU, 1982. 192 p.

42. Mahn H. Essential aspects of Vygotsky's theoretical framework and methodological approach revealed in his analysis of unit(ie)s. In Lantolf J.P. et al., (eds.), *The Routledge Handbook of Sociocultural Theory and Second Language Development*, Routledge, 2018, pp. 56—74.

43. Marsico G. From Vygotsky: The question of psychological synthesis: preface from the series editor. In Roth W-M., Jornet A. (eds.). *Understanding Educational Psychology: A Late Vygotskian, Spinozist Approach.* New York, Springer, 2017, pp. v—vii.

44. Marsico G. Cultivating new ideas in cultural psychology of education. In Marsico G., Tateo L. (eds.). *The Emergence of Self in Educational Contexts: Theoretical and Empirical Explorations.* Switzerland: Springer, 2018, pp. v—vii.

45. Meshcheryakov B. Logiko-semanticheskii analis kontseptsii L. . Vygotskogo [Logical-semantical analysis of Vygotsky's conception]. Samara: SGU, 1998. 60 p.

46. Meshcheryakov B. Terminology in L.S. Vygotsky's writings. In Daniels H., Cole M., Wertsch J. (eds.), *The Cambridge companion to Vygotsky.* Cambridge: Cambridge University Press, (2007, pp. 155—177.

47. Mikhailov F.T. The "Other Within" for the psychologist. *Journal of Russian and East European Psychology,* 2001. Vol. 39, no. 1, pp. 6—31.

48. Miller R. Vygotsky in perspective. New York: Cambridge University Press, 2011. 467 p.

49. Nardi B.A. (ed.). Context and consciousness: activity theory and human-computer interaction. Cambridge: MIT Press, 1995. 414 p.

50. Newman F., Holzman L. Lev Vygotsky: Revolutionary scientist. London: Routledge, 1993. 248 p.

51. Obuknova L. Detskaya psihologia: teoria, fakty, probmemy [Child psychology: theoreies, facts, problems]. Moscow: Trivola, 1998. 352 p.

52. Podolskiy A. Cultural-Historical Theory of Development. In: Seel N. (Ed.) *Encyclopedia of the Sciences of Learning.* Springer, Boston, MA. 2012. Doi: https://doi.org/10.1007/978-1-4419-1428-6

53. Rieber R., Robinson D. (eds.) The essential Vygotsky. New York: Kluwer Academic/Plenum Publishers, 2004. 614 p.

54. Rogoff B. Apprenticeship in thinking: cognitive development in social context. New York: Oxford University Press. 1990. 258 p.

55. later A., Bremner G. (eds.) An introduction to developmental psychology. Wiley. 2017. 848 p.

56. Stetsenko A. The transformative mind: Expanding Vygotsky's perspective on development and education. New York: Cambridge University Press, 2016. 429 p.

57. Smagorinsky P. Vygotsky and literacy research: a methodological framework. Rotterdam/Boston/Taipei: Sense Publishers. 2011. 346 p.

58. Tuchina O.D. Translating Cultural-Historical Psychology: Comments from Lay Professional. *Revue internationale du CRIRES: innover dans la tradition de Vygotsky [Contemporary Russian Contributions to Vygotsky's heritage: special issue]*, 2017, Vol. 4, no. 1, pp. 2—13.

59. Valsiner J. Culture in minds and societies: Foundations of cultural psychology. Sage Publishers, 2007. 434 p.

60. Van der Veer R., Valsiner J. Understanding Vygotsky: A quest for synthesis. Oxford: Blackwell, 1991. 250 p.

61. Van der Veer R., Valsiner J. (eds.) The Vygotsky reader. Blackwell, 1994. 388 p.

62. Van der Veer R., Yasnitsky A. (2011). Vygotsky in English: What still needs to be done. *Integrative Psychological and Behavioral Science*, 2011. Vol. 45, no. 4, pp. 475—493.

63. Veraksa N., Veraksa A. (2018). Lev Vygotsky's cultural-historical theory of development and the problem of mental tools. *Papeles del Psicólogo/Psychologist Papers*, 32018. Vol. 9, no. 2, pp. 150—154.

64. Veresov N. Undiscovered Vygotsky. Frankfurt am Main and New York: Peter Lang, 1999. 302 p.

65. Veresov N. Forgotten methodology: Vygotsky's case. In Toomela A., Valsiner J. (eds.), *Methodological thinking in psychology: 60 years gone astray?* Charlotte: IAP, 2010, pp.267—295.

66. Veresov N. (2017). ZBR and ZPD: is there a difference? *Cultural-historical psychology,* 2017. Vol. 13, no. 1, pp. 23—36.

67. Vygotsky L.S. Soznanie kak problema psikhologija povedenija. In Kornilov K. (ed.), *Psikhologija i marksizm*. Leningrad: Gosudarstvennoe Izdatel'stvo, 1925, pp. 175—198.

68. Vygotsky L.S. Metodika refleksologicheskogo i psikhologicheskogo issledovanija. In Kornilov K. (ed.), *Problemy sovremennoj psikhologii* Leningrad: Gosudarstvennoe Izdatel'stvo, 1926, pp. 26—46.

69. Vygotsky L.S. Problema kulturnogo razvitia rebenka [The problem of the cultural development of the child]. *Jurnal psihologii, pedologii I psihotehniki*, 1928, Vol. 1, pp. 58—77.

70. Vygotsky L.S. Pedologija podrostka [Pedology of the adolescent.] (Part I). Moscow/Leningrad: Gos. Uschebno-Pedagogisheskoe Izdatelstvo, 1929. 465 p.

71. Vygotsky L.S. Pedologija podrostka [Pedology of the adolescent] (Part II). Moscow/Leningrad: Gos. Uschebno-Pedagogisheskoe Izdatelstvo, 1931, 465 p.

72. Vygotsky L.S. Umstvennoe razvitie detei v protsesse obuchenia [Intellectual development of children in a process of learning]. Moscow-Leningrad: Gos. Uschebno-Pedagogisheskoe Izdatelstvo, 1935. 139 p.

73. Vygotsky L.S. Razvitie vischih psihicheskih funktsii [The development of higher psychological functions]. Moscow: Academy of Pedagogical Sciences RSFSR, 1960. 488 p.

74. Vygotsky L.S. Mind in society: the development of higher psychological processes. Cambridge: Harvard University Press, 1978.175 p.

75. Vygotsky L.S. Sobranie sochinenii [Collected works] (Vol. 1). Moscow: Pedagogika, 1982. 487 p.

76. Vygotsky L. Iz zapisnyh knizhek Vygotskogo [From Vygotsky's notebooks]. *Vestnik MGU, Seria 14, Psihologia,* 1982a, Vol. 1, pp. 60—67.

77. Vygotsky L.S. Sobranie sochinenii [Collected works] (Vol. 2). Moscow: Pedagogika, 1982b. 502 p.

78. Vygotsky L.S. Sobranie sochinenii [Collected works] (Vol. 3). Moscow: Pedagogika, 1983. 367 p.

79. Vygotsky L.S. Sobranie sochinenii [Collected works] (Vol. 4). Moscow: Pedagogika. 1984, 426 p.

80. Vygotsky L. Konkretnaya psihologia cheloveka [The concrete psychology of a human being]. *Vestnik MGU, Seria 14, Psihologia,* 1986. Vol. 1, pp. 52—63.

81. Vygotsky L.S. Concrete human psychology. An unpublished manuscript by Vygotsky. *Journal of Russian and East European psychology*, 1989. Vol. 27, no. 2, pp. 53—77.

82. Vygotsky L. Problema kulturnogo razvitia rebenka [The problem of the cultural development of a child]. *Vestnik MGU, Seria 14, Psihologia,* 1991a. Vol. 4, pp. 52—63.

83. Vygotsky L.S. Voobrazhenie I tvorchestvo v detskom vozraste [Imagination and creativity in childhood]. Moscow: Prosveschenie. 1991b. 93 p.

84. Vygotsky L.S. The problem of environment. In van der Veer R., Valsiner J. (eds.). *The Vygotsky reader*. Blackwell, 1994, pp. 338—354.

85. Vygotsky L. . The collected works of L.S. Vygotsky (Vol. 3). New York: Plenum Press. 1997. 426 p.

86. Vygotsky L.S. The collected works of L.S. Vygotsky (Vol. 4). New York: Plenum Press, 1997a. 294 p.

87. Vygotsky L. S. The collected works of L.S. Vygotsky (Vol. 5). New York: Plenum Press. 1998. 362 p.

88. Vygotsky L.S. Lektsii po pedologii. Izevsk: Izdatelstvo Udmurdskogo Universiteta, 2001. 303 p.

89. Vygotsky L.S. Predislovie k knige A.N. Leontieva "Razitie pamiati" [Preface to the book of A.N. Leontiev "The development of memory". In Leontiev A.N. *Stanovlenie teorii deyatelnosti [The rise of the theory of activity]*. Moscow: Smysl Publishers. 2003, pp 199—206.

90. Vygotsky L.S. Psihologia razvitia cheloveka [Psychology of the development of man]. Smysl Publishers, 2005. 1136 p.

91. Vygotsky L.S. L.S. Vygotsky's Pedological Works. Volume 1. Foundations of Pedology. Singapore: Springer Nature, 2019. 159 p.

92. Wells G. The zone of proximal development and its implications for learning and teaching. In *Dialogic inquiry: Towards a sociocultural practice and theory of education*. Cambridge: Cambridge University Press, 1999, pp. 313—334.

93. Wertsch J.V. Vygotsky and the social formation of mind. Cambridge, MA: Harvard University Press, 1985. 280 p.

94. Wertsch J. Mind as action. Oxford University Press, 1998. 224 p.

95. Zavershneva E. K probleme periodisatsii nauchnoi biographii L.S. Vygotskogo [To the problem of periodisarion of a scientific biography of L.S. Vygotsky]. *Vestnik RGGU,* 2006. Vol. 1, pp. 284—293.

96. Zavershneva E. K publikatsii zametok L.S. Vygotskogo [To the publication of Vygotsky's notes]. *Metodologia i istoria psihologii,* 2007a. Vol. 2, no. 4, pp. 15—24.

97. Zavershneva E. Put k svobode (k publikatsii materialov iz semeinogo arhiva L.S. Vygotskogo [The way to freedom [To the publication of the materials from Vygotsky's family archive]. *Novoe literaturnoye obozrenie,* 2007b. Vol. 5, no. 85, pp. 67—90.

98. Zavershneva E. Zapisnye knizki, zametki, nauchnie dnevniki Vygotskogo: resultaty issledovania semeinogo arhiva [Notebooks, notes, scientific diaries of L.S. Vygotsky: results of the investigation of the family archives]. *Voprosy psihologii,* 2008.Vol. 1, pp. 132—145.

99. Zavershneva E. "Kliutch k psihologii cheloveka": kommentarii k bloknotu L.S. Vygotskogo iz bolnitsy Zahairino (1926) ["The key to human psychology": comments to the notebook of Vygotsky from Zakhairino hospital (1026)]. *Voprosy psihologii,* 2009a. Vol. 3, pp. 123—141.

100. Zavershneva E. Issledovanie rukopisi Vygotskogo "Istoricheskii smysl psihologicheskogo krizisa [The investigation

of Vygotsky's manuscript "Historical sense of psychological crisis"]. *Voprosy psihologii, 2009b.* Vol. 6, pp. 119—138.

101. Zavershneva E. The problem of consciousness in Vygotsky's cultural-historical psychology. In Yasnitsky A., Van der Veer R., Ferrari M. (eds.) *The Cambridge handbook of cultural-historical psychology.* Cambridge: Cambridge University Press, 2014, pp. 64—100.

102. Zavershneva E., Osipov M. Osnovnie popravki k tekstu "Istoricheskyy smysl psihologicheskogo krizisa

[Main corrections to the text of "Historical sense of psychological crisis"]. *Voprosy psihologii,* 2010. Vol. 1, pp. 92—103.

103. Zavershneva E., Surmava A. (Eds.). Dva fragmenta iz zapisnyh knizek Vygotskogo [Two fragments from Vygotsky's notebooks]. *Vestnik RGGU,* 2006a. Vol. 1, pp. 294—298.

104. Zavershneva E., Van der Veer R. Vygotsky's notebooks: A selection. Singapore: Springer. 2018. 523 p.

Что нам делать с «Большой Королевской Печатью»: новая реальность в наследии Выготского

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В статье исследуется современное состояние дел в восприятии культурно-исторической теории (КИТ) международным научным сообществом. С одной стороны, у нас есть множество публикаций, в которых исследуется и развивается наследие Выготского во многих отношениях и направлениях. С другой стороны, как это ни парадоксально, нет единого мнения о том, что такое КИТ как теория, каковы ее предмет, законы, принципы и метод исследования. Современное состояние дел можно выразить метафорическими словами «христианство без Христа». Проблема в том, что существующее представление о КИТ возникло более 40 лет назад, когда исследователям было доступно лишь ограниченное количество оригинальных текстов Выготского. Новая реальность с наследием Л.С. Выготского, связанная с публикацией значительного числа его работ, неизвестных ранее, и недавние архивные находки позволяют улучшить существующее представление о КИТ. В статье приводятся примеры того, как эта новая реальность позволяет решить несколько проблем, таких как: 1) название теории; 2) предмет КИТ и 3) система законов психологического развития. В последней части статьи обозначается несколько проблем, которые необходимо и можно решить, если представить КИТ как единую и целостную теоретическую систему.

Ключевые слова: Выготский, культурно-историческая теория, развитие психических функций.

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ARCHIVE
АРХИВ

Mental Development in the Early Childhood

A.N. Leontiev

This is the first English translation of the paper of the prominent Soviet scholar Alexey Nikolaevich Leontiev (1903—1979) published in 1948. The paper introduces the author's ideas on mental and personality development in preschool children based on the research results of his close colleagues under his leadership during the 1930-s and 1940-s. It embraces the conditions and features of the development of the hierarchy of motives in preschoolers which underlies the emergence of volitional behaviour at this age. Evidence is provided for the role of the motivational structure in the volitional regulation of such cognitive processes as perception, memory and in the emergence of children's control of their motor processes. It demonstrates that the motives of the child of the preschool age get subordinated when the child is engaged in the social interaction with the participation of an adult. In a brief preface to this publication, E.E. Sokolova highlights the context of the author's work, the continuity of his ideas of the activity theory with Vygotsky's approach, and emphasizes a nontrivial approach in Leontiev's school to mental development as rooted in the total activity of the subject rather than in the brain processes.

Keywords: activity theory approach, personality development, the hierarchy of motives, volition, mental development, preschool age.

Preface

This paper does not belong to the most cited works of A.N. Leontiev, and has never been translated into English. Nonetheless, it contains important highlights of the activity theory approach in psychology. It was developed by A.N. Leontiev and the fellow members of his school who innovatively interpreted many ideas of Lev Vygotsky.

The paper was first published in 1948 as an introductory chapter in the book "The Issues of the Psychology of the Child of the Preschool Age" edited by A. Leontiev and Alexander Zaporozhets. The book included also chapters written by Alexander R. Luria, Daniil B. Elkonin, Alexander V. Zaporozhets, Lidia I. Bozhovich and other Leontiev's associates. At that time, Leontiev was the Head of the Department of Child Psychology at the Institute of Psychology of the Academy of Pedagogical Sciences of the Russian Socialist Federative Soviet Republic. The studies mentioned in the text were performed under his supervision during the 1940s. In this paper, Leontiev referred also to some earlier studies.

The paper discussed the mechanisms of personality formation in the early childhood, during its "first birth", as Leontiev would call it later. Leontiev observed the mechanisms of the gradual emergence of a socially determined hierarchy of motives at this age. For example, A.N. Leontiev referred to the "bitter candy" phenomenon: an adverse reaction to the reward obtained through cheating indicated that the hierarchy of motives was taking shape in the childhood. However, this process is fully developed only by the age of 6—7 years old.

Leontiev further analysed the experimental research on volitional actions by Konstantin M. Gurevich who explored the subordination of a "negative" motive to a "positive" one. This referred to a child who had to do first something unpleasant or boring (activity with a "negative motive"), e.g. distributing multiple pieces of a mosaic into different boxes, for the sake of receiving a funny toy thereafter (a "positive motive"). A.N. Leontiev concluded that the subordination (hierarchy) of motives proceeded most effectively when the "positive" motive had been presented to the child rather only in the imagination than in the real perceptual field. This is why the subordination of motives appeared only at the preschool age when the imagination was developing in the course of narrative and role-playing games. It was also shown that the hierarchization of motives in preschool children emerged rather in communicating with an adult than in performing the task on their own.

Leontiev also raised the issue of the child's readiness for school. First of all, this referred to the child's capacity for self-control, that is, for the voluntary behaviour. The volitional regulation of behaviour and mental processes was associated with L.S. Vygotsky's concept of their mediation by psychological tools (signs). In A.N. Leontiev's school, it was shown that voluntary regulation would occur only if a required action was incorporated into the significant activity of the child with the corresponding motive. The experiments of Zinaida V. Manuilenko showed that younger preschoolers were able to voluntarily maintain their posture (stand still) for a while when this action was included in the sentry post game, i.e., the game which was significant to them. They failed to perform such a task beyond the context of that activity,

Based on similar studies of memorization (Zinaida M. Istomina), A.N. Leontiev asserted that the development of voluntary memory at the preschool age was conditioned by the development of the child's activity. A child set and achieved a mnemonic goal more effectively when its meaning directly grew from the motive of activity that was significant for him or her (e.g. play). The same pattern was detected in the research of perception in preschool children that was conducted with the same methodology.

Thus, in the preschooler, voluntary control of his or her mental and motor processes does not occur as a result of the maturation of specific nervous processes (as Leontiev calls it). It is rather a result of the development of various forms of a socially determined activity. According to Leontiev, that activity, develops initially "on the old neurological basis", and then, this basis gets rebuilt in the course of the child's activity. Hence there is an important theoretical conclusion common to the entire school of A.N. Leontiev, though quite uncommon to the Soviet science of that time: mind is not a function of the brain as it is but rather a function of the integral activity of the subject. This statement may seem nontrivial also to many neuroscience scholars today and makes this publication still up to date.

Elena E. Sokolova

Usually, there are two age periods specified in the context of child development containing the psychological changes that are crucial for personality development. The first is preschool childhood[1] and the second is adolescence and youth. The importance of these periods for personality development has been stressed by such significant scholars of the domestic pedagogy and psychology as Ushinsky[2], Lesgaft[3] and others.

Each of the two periods is of paramount importance in the development of a child's personality, and has its peculiarities. Adolescence is characterized by the work on oneself; it is the period of the formation of moral consciousness, ideals, the period of emerging self-consciousness.

Preschool childhood is different. This is the period of an initial essential formation of the personality, the period of the development of personal "mechanisms" of behaviour. During the child's development in preschool years, the first motivational "nodes" are fixed and the first connections and relationships are established, which constitute a new, higher activity and, at the same time, a new higher structure of the subject, that it, the unity of the person. The period of preschool childhood is much important even because it is the time of an actual formation of the psychological mechanisms of personality.

What is the essence of the formation of the psychological mechanisms of personality at the preschool age? What are those new established connections and relationships which form the bases of personality? These emerging relations are set between separate processes of the child's activity, and they have a special nature. They differ from those that characterize the biological essence of any individual, as they are social. They can only emerge as a result of life in the social environment, that is, only in humans and only at a particular stage of development. They arise and develop under the influence of education.

It is mentioned above that the life of every individual is a coherent system of processes. Some processes of activity regularly change to others; some of them become prevailing (dominant); others seem to fade into the background. This is a manifestation of the natural fluctuation of the organism's needs determined by its biological organisation and typical *cyclic nature* of life. That change of needs and the cyclicality of life processes is clearly observed in infants, for example.

Strictly speaking, it occurs very early, within the first year of life, when the infant's behaviour begins transforming. More and more behavioural processes occur in the child's life due to social circumstances and the educational influence of surrounding people. A child masters the human ways of acting with objects, the forms of human communication and language. New, specifically human needs develop in him or her which have been created by the entire mode of living from the very first days of his/her existence in multiple ways. He gradually learns to respond to the adult's demands: following instructions, obeying prohibitions, and understanding praise and encouragement.

By the age of 2—2.5 the child has made quite a progress in this direction. He not only moves freely and treats familiar and accessible objects correctly, but he speaks and mindfully follows what he sees and hears from adults. He also shows considerable initiative and autonomy. In short, his or her behaviour is already characterized by almost all psychological features that characterize the child also at later stages of development.

There is, however, one important feature that distinguishes the behaviour of a child under three years from the behaviour of older children. This well-known feature has been described many times in the scientific literature on child psychology. It is manifested in the fact that the child of pre-preschool age is in the grip of surface impressions. It is thus easy to attract him

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[1] In the Soviet Union in the 1940s school education started at 7 years. Preschool age often refers to the age 3—7 years. (This and other notes are authored by the translators).

[2] Ushinsky Konstantin (1823—1871) —Russian scholar in pedagogy.

[3] Lesgaft Peter (1837—1909) — Russian doctor, pedagogue, and civic leader.

to something, but equally easy to distract. He/she is very emotionally responsive to what happens, but the emotions are unstable. If, for example, a child cries of grief, it is very easy to console him: it is enough, for example, in exchange for a lost toy to give him another one or propose a different activity. It is said not without reason that children at this age are "easily comforted". Indeed, one can see that in no longer than 2—3 minutes after any failure suffered by a toddler he is already smiling, ready to engage in what is shown or told to him. Only occasionally he might look sobbing. This is a remarkable phenomenon: the external expression of the emotional response, its, so to say, external aftereffect, is still there, while internally, on the psychological plane, the emotion has already disappeared.

What is hidden behind this feature of pre-preschool children? What can explain this specific internal instability of their behaviour in general?

Psychological analysis of this type of evidence like the above one allows us to discover a possible general explanation. One can see that the very *structure* of activity at this age has one crucial feature. Specifically, though the child's activity is urged by motives relevant to relatively advanced needs and includes already complex and diverse conscious goal-directed processes (conscious actions), these motives are not yet internally subordinated to each other. In other words, the motives driving the child are not yet in the relations of subordination, in which some are central and more important for the child, while others are less essential and secondary. This means that there are no corresponding relations between more important and less important meanings of various events and various types of his or her activities. Rather, these relations may be established, but only from outside, in the course of the actual development of the child's behaviour and as a result of the adult's direct educational influence.

Of course, at this stage of development, there are still internal connections that determine the subordination of motives, but these are still primitive and of an organismic nature. These are the connections of natural needs. For example, a hungry child would not react equally to everything, to be sure. A child who needs to sleep does not care about anything, being just capricious. This amendment, which we must add to our understanding of the general structure of activity of pre-preschool children, in no way cancels its above-mentioned characteristics. Their behaviour does not yet make a remotely developed system, defined by the subordination of motives of the highest type, though the motives which drive their activity are very complex by nature, highly developed. Therefore, a child of 2—3 years of age can not consciously bargain away an attractive thing for another, still more valuable one. At the same time, even a strong disappointment can be dispelled in him by some trifle.

Only at the preschool age can we discover for the first time these higher types of subordination of motives. These types are established by more important motives standing out and subjugating other ones. A few years ago we had a chance to observe it in one experimental

study. A child who had failed in the task offered to him and was very sad about it was told that he was still good. Like other children, he received a small gift — a candy. However, he took the candy without pleasure and resolutely refused to eat it, and his grief was not diminished; due to the failure, the candy he received became a "bitter candy" for him. In our laboratory, we have been long calling such phenomena in children, and not only in them, "bitter candy phenomena".

Later, K.M. Gurevich (1938) specifically investigated, when and in which succession the subordination of children's motives emerged. He used the following method. In an everyday communication with a child he created a situation like this: when a child had got tired of unfolding a mosaic, with which he was busy for some time, he was offered an attractive mechanical toy. However, he was immediately told he would be allowed to play with it only after the pieces of mosaic (many of them) were carefully sorted by colour in boxes as they had been before. Thus, the child had to execute a long action that he did not want to do in order to be allowed to play with a new amusing toy. In other experiments a child was involved in a game which involved a very exciting moment but required painstaking preparation for it. This game was built on a principle similar to, for example, sliding down from the board which is very exciting, but first you are to climb effortfully to the sliding board with your sleds.

These and other similar experiments not only demonstrated that conscious and autonomous subordination of one action to another one is shaped only in the preschool age, but also allowed us to outline the development of the process. First, an opportunity to independently execute an unattractive (*negatively* motivated) action emerged earlier in the course of development if the objective (what constitutes its *positive* motive) was mentally represented rather than immediately perceived by the child. When the promised toy was left in the child's view, it was much harder for the child to complete disassembling the mosaic than when the toy was not in his visual field. In the first case, a child was not yet capable of forcing himself to engage in uninteresting mosaic folding — even for a chance to play with a toy that attracted him. It got easier if the toy was removed from the external "field" of the child's activity. In this case, the child is not only distracted from the attractive toy but acts for it: having finished disassembling the mosaic, the child immediately reminds the adult of the promised toy.

First, this observation revealed that the possibility of conscious subordination of one's action to a more distant motive is in fact a product of a higher stage of development. This subordination initially suggests the possibility of an "ideal" (mental) motivation of the child's behaviour, and only later embraces also the relationships between the urges immediately present in the field of activity. Then the child's behaviour turns from the "field-driven", as it is in the pre-preschool age, into the "will-driven" one.

Secondly, these experiments demonstrated that doing something for the sake of another action emerges in a child primarily in the process of *communication*, under

the influence of education, when the subordination of motives is established by the requirement of an adult. Only later this comes from the requirements of the objective circumstances of the child's activity *themselves*. Thus, it happens earlier that a child copes with a puzzle in order to get a toy when it is requested by an adult. It is however very hard for the same child to set up tabletop targets in order to have an exciting game of capturing them with a top, though the necessity of the former action is absolutely evident for him. Hence, the subordination of motives develops first in a communication with the tutor in an obviously social situation, and only later it occurs, when the child acts independently in the conditions which require it.

So, from about three years of age, children begin to develop a more complex internal organization of behaviour and general structure of their activity at large. The child's activity becomes driven not by separate motives that succeed each other, reinforce each other, or conflict with one another, but rather by the subordination of motives of single actions as described above. The child is now capable of pursuing a goal that is not in itself attractive for him for the sake of something else or, conversely, abandoning something immediately pleasing in order to obtain something more important or to avoid something undesired. As a result, his individual actions may acquire a more complex kind of reflected meaning for him, depending on the motive to which these actions are subordinated. For example, placing mosaic pieces into boxes consciously commenced by the child in order to play with steam trains obtains a new conscious meaning, depending on that to which it is now subjugated to. In this example the meaning of placing mosaic tiles is for the child his anticipation of getting to play with the trains.

All of these are however just signs or symptoms of the emergence of the first nodes that tie together the separate processes of the child's behaviour on a new basis, the basis of the more complicated human relationships into which he is entering. The effective involvement of the preschool child into these relationships takes place in various forms. One form is the practical mastery of the rules of behaviour in the process of upbringing, as described by V.A. Gorbacheva (1945). Another remarkable form is the process of the creative gameplay when a child takes this or that role. Doing this, he or she also takes on those internal structures of behaviour, which are comprised by this role as well as by other forms of the child's activity.

We consider the emergence of these first nodes in the child's activity of paramount importance from the viewpoint of personality development. It is from these nodes, which connect separate intentional processes into a subordinate relationship, that the general pattern begins to weave that serves as a background for the gradual appearance of the main lines of meaning of the person's activity, characterizing his *personality*.

Speaking about one's personality, we always imply primarily a specific directionality of a human being, created by the leading life motives. They subjugate other motives that start, so to say, to shine with the reflected light of these main leading motives. If otherwise there is no such subordination of motives and individual urges simply interact with each other, we see a personality disintegration, a return to a purely "field-driven", purely reactive behaviour. That is why the period of the child's development is so important when these first subordinations in his activity are formed, when the "mechanisms" of these subordinations are being construed. This period falls at the beginning of preschool childhood. While at the age of about three years only its first signs appear, by six or seven years of age the subordinations already reach their full development.

The development of mind in the preschool age is a complex and multiform process. It would be therefore erroneous to think that the content of this process is exhausted by the change in the general structure of activity described above, which occurs as a result of the emerging connections of motives of an advanced type. On the contrary, this change characterizes the development only one-sidedly and, moreover, only in the most general form.

Nevertheless, it is crucial to highlight this change in the overall structure of the child's activity. It opens the way to understand and to establish connections between specific psychological changes observed through the preschool age and to approach these changes as the whole process of the psychological development of the child's personality. This is the only way to approach the issue, because the *true* subject of the development is the child, rather than his or her separate mental processes by themselves.

It is impossible in a short article to cover all the multiform psychological changes, manifesting the mental development of a preschool child. Therefore, we will focus only on some issues related to particular changes associated with the above general transformation of the structure of the child's activity, in particular, on the issues of the development of *voluntariness* of separate processes.

The pedagogical urgency of these issues is due to the fact that the development of the ability to manage one's behaviour is crucial for a *child's psychological readiness for school*.

Studying at school does not only require that the child possesses a certain range of ideas and knowledge and a certain level of physical fitness. It also imposes requirements on his mental development, e.g. on his memory, perception and other processes. From the very first days at school, a child should control his or her behaviour, for example, correctly lining up and sitting at the desk, obeying rules during breaks. All this suggests the ability to restrain their impulsive motor reactions, control their behaviour, and rule their movements.

Obviously, these requirements are not always easy to meet for a seven-year-old child. It is also known that these skills are taught rather than emerging by themselves. It is necessary, therefore, to properly educate a child at the preschool age to prepare him or her for school in this aspect.

At first glance, it may seem that this task does not deserve the attention of a psychologist, does not raise any significant psychological issues. However, it is not so. The purely mechanical skill training or drilling

is not in question here. This was emphasized already by K.D. Ushinsky. We view the capacity to control one's motor behaviour as a relatively complex process. "Controlled" behaviour is not just a fixed skill, but rather a consciously managed behaviour, with this control requiring no special attention. The student should behave properly in the class: sitting properly at the desk, not spinning, not manipulating manually the objects lying in front of him, not waiving his legs — in one word, "not switching off" for a single minute, no matter how absorbed his attention is in the teacher's words.

An experimental study specifically devoted to the study of the voluntariness of the child's motor behaviour was conducted in our laboratory by Z.V. Manuilenko (1948). She showed that the formation of voluntary control, starting in early preschool years, comprises a number of qualitatively peculiar stages. The development of the voluntariness of motor behaviour illustrates the change of the general structure of activity of the child discussed above.

In this study, children were given a task to keep a certain posture (a "sentry" posture). Children aged 3 to 7 years approached the same task in very different conditions, which made it possible to reveal not only the actual course of development of the capacity to control their behaviour, but also some important psychological prerequisites of this process.

It turned out that if the task of voluntary maintenance of the posture was set to the child in the form of a direct instruction, the youngest preschoolers were essentially unable to manage it, even when they accepted the task eagerly. This task had a particular motive for them related to their relationships with the adult which made the requirements quite meaningful for them. So, the reason that they involuntarily break the posture in a few seconds was not their internal lack of acceptance of the task. As a more detailed analysis shows, they were not able to control their movements for a long time. Their lack of control referred not to the externally proposed result to be achieved, but rather to the motor process itself, to its performance.

Things were different for older children. Children as old as middle preschool-age[4] subordinated their activity to this task easily. For them, however, maintaining a posture was indeed a *special* task that required internal activity, so they totally concentrated on it. That is why any distraction interrupted the task: maintaining the immobility could not be fulfilled, and the required posture was broken.

The process of managing the posture in older preschool-age children was different. They were capable of controlling their posture even when they were distracted by something: their motor behaviour could become truly *controlled*, they were truly free to "master themselves".

What are the central psychological moments that determine the development of the process of voluntary control over their behaviour? We find the answer to this question in another series of studies. They were constructed in such a way that the task of voluntarily keeping the same "sentry" posture arose from the play role accepted by a child. Under these conditions, even children of 4 years old, who could not execute the task of voluntary retention of the posture in the first series, performed perfectly. This was explained by the fact that while playing, it was easier for a child to establish a relation between the goal of retaining the posture and the motive to which it was subordinated. For a child, the task to act "like a sentry" already contained the task to stand "well", excluding sudden posture-breaking movements, etc. The one directly followed from the other. At the same time, the task of retaining the posture and the motivation to perform the adult's instructions as well as possible stood psychologically in more intricate relationships with each other. This explanation has been carefully tested through comparing experimental data from other studies specifically designed for this purpose.

It should, however, be specially emphasized that it is only at the stage of *initial* shaping of the voluntary motor behaviour that the immediacy of the relation between the motive underlying task fulfilment and the new goal of self-monitoring that stands out for him plays a crucial role. This is not decisive for older children for whom the mechanism of voluntary behaviour has already taken shape. Managing their own behaviour becomes a free act for them not only because this does not occupy all their attention, but also because it is not restricted by the frames of specific relations between objects and meanings.

Investigation of the development of the voluntariness of motor behaviour in the preschool age reveals two-way inner associations of this process with the general development of the child.

First of all, it is related to the development of higher mechanisms of *movement* proper. Studies of the motor sphere by A.V. Zaporozhets and his associates allow to conclude that its general transformation observed during the preschool age is not the result of independently autonomously proceeding maturation of relevant nervous mechanisms. It rather comes about because a child begins to consciously specify and set special "motor goals" in his behaviour. In other words, higher motor mechanisms develop specifically in connection with the progress in managing one's motor behaviour.

This connection came forward clearly in Z.V. Manui-lenko's study discussed above. For example, in younger children who consciously directed their activity to the goal of maintaining the required posture, the very mechanism of self-control was still organized analogously to the management of external actions with objects, under almost permanent visual control. This, by the way, explains why the child is so strongly "tied up" and immediately loses control as soon as something distracts him from outside. Thus, initially conscious and voluntary control of his posture relies also on the mechanism of conscious control of movements directed

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[4] About five years.

at external objectives, which has developed much earlier. At the next stage of development, self-control is being transferred to other nervous mechanisms. It is performed under the control of motor (proprioceptive) sensations. Of course, these sensations have already previously played a decisive role in movements, in their coordination, but now they begin to serve the voluntary, conscious control, although in a particular way. So we see that first the actual development of new internal connections and relations occurs in the activity on the former neurological basis, and only thereafter this very basis is reconstructed. And this, in turn, opens up new possibilities for further development of managing one's behaviour. While still under the control of consciousness and completely voluntarily regulated, this behaviour begins to display features of an automatically occurring process. Now it does not require continuous effort and, figuratively speaking, "does not occupy consciousness". This is exactly how senior preschoolers manage themselves, and this is what is required of the child at school.

There are also linkages of another kind, the ones between the ongoing restructuring of motor behaviour and the changes that occur in the child's mental processes through the preschool period — changes in his memory, perception and other processes.

Consider the study by Z.M. Istomina of memory development in preschool children. It showed that *the main* change in memory processes in this period is that the processes of memorizing and remembering turn from involuntary to intentional and voluntary ones. And it means that the child now sets a conscious goal to remember, and he learns to actively attain this goal. N.L. Agenosova's research shows a similar transformation in the processes of perception, which also become manageable at this age and acquire features of true volition.

The mere fact of the formation of voluntary memorization in preschool age was to be expected, but what is important is how this process proceeds and what determines it.

Z.M. Istomina studied memory in preschool children from the youngest to the oldest groups by manipulating their motivation. She showed that the transformation of children's memory is due to the development of the general structure of the child's activity discussed above. The turning point usually falls at the age of about four years. She showed further that children could consciously specify and set the goal to memorize or remember something earlier if the meaning of this goal directly followed from the motive of their entire activity. In her study, the advantageous condition was a game which required memorization of the assignment and its recollection, which directly followed from the playing role adopted by the child. Other conditions referred to other meaningful activities. It was more difficult for children when the goal stood in more abstract relations to the motive, as in the case when memorization was done in a typical laboratory experiment.

Thus, we conclude that the changes in diverse processes occurring through the preschool age are internally connected with each other and have a common nature. Obviously, this commonality of changes is due to the fact that they are related to the same circumstances. All the studies included in this book highlight the connection of these changes to one central fact.

The fact is that the child in the course of his or her development actively intrudes into the surrounding world of human relationships, learning the social functions of people (initially in a very specific and practical form), socially developed norms and rules of behaviour. This initially *mandatory* specificity and efficacy of the form, in which a child is mastering higher processes of human behaviour, certainly requires that the tasks that the educator sets for the child were meaningful to him or her. It means that the connection between *what* the child must do, *what* he or she acts *for*, and the conditions of his or her activities were not formal, not conditional and not too complicated, but rather as direct and proximal as possible. Only under this condition new higher internal connections and relations in the child's activity can initially emerge as a response to the complex tasks that the social and historical conditions of the child's life set for him.

We want to emphasize this thesis because there is one simple but important pedagogical issue related to it. During the initial stages of a child's mastery of a new task (for example, the task of managing his or her behaviour), should the education go, so to speak, along the lines of strengthening the motive itself? Our data show that this path does not lead to success at the initial stages of development. It is not the *strength* of the motive and the desire produced by it in the child that is decisive at these stages. What really matters here is the conscious, meaningful connection between the motive of a child and the action that he or she needs to subdue to the given motive. This becomes evident from all the material in the cited experimental studies.

This thesis, however, applies only to the initial stages of the process. Further development goes in the direction of overcoming such limitations, and this also must be taken into account in education. At the first stages of development of the voluntary motor sphere of a preschool child the object and role tasks ("to walk like a bear", "to gallop like a horse", etc.) are used with good reason. Nevertheless, at the next stage motor tasks should be given also in a much more abstract form, i.e. tasks of free gymnastic type. The same is true for other domains of education. After all, a child will face much higher requirements at school in the future. The school will set such tasks and will require the child strive to attain such goals which will not always directly follow from the child's natural desire to learn, and are not always directly connected for him with specific motives of learning.

References

1. Gurevich K.M. K teorii volevogo dejstviya [On the theory of voluntary action. Dr. Sci. (Psychology) thesis.] 1938. (In Russ.).
2. Gorbacheva V.A. K osvoeniyu pravil povedeniya det`mi doshkol`nogo vozrasta [On the learning rules in preschool age]. *Izvestiya Akademii pedagogicheskix nauk RSFSR = Proceedings of the Academy of Educational Research of the Russian Soviet Republic*, 1945, no. 1, pp. 125—164. (In Russ.).
3. Manujlenko Z.V. Razvitie proizvol`nogo povedeniya u detej doshkol`nogo vozrasta [Development of the voluntary behavior in preschool age]. *Izvestiya Akademii pedagogicheskix nauk RSFSR = Proceedings of the Academy of Educational Research of the Russian Soviet Republic*, 1948. Vol. 14, 89—123. (In Russ.).

Психическое развитие ребенка в дошкольном возрасте

А.Н. Леонтьев (1903—1979)
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Впервые на английском языке публикуется статья Алексея Николаевича Леонтьева (1948), в которой представлены некоторые результаты проведенных под его руководством в 1930—1940-е гг. исследований психического и личностного развития детей дошкольного возраста. Раскрыты условия и особенности формирования у дошкольников иерархии мотивов, которая лежит в основе первых волевых действий в этом возрасте. Приводятся экспериментальные доказательства роли определенных мотивов в произвольной регуляции таких психических процессов, как память и восприятие, а также в возникновении управления детьми своей двигательной сферой. Текст статьи А.Н. Леонтьева предваряет краткое предисловие Е.Е. Соколовой, в котором освещается контекст написания работы, прослеживается преемственная связь развиваемых в статье положений теории деятельности с идеями Л.С. Выготского, подчеркивается нетривиальность понимания в школе А.Н. Леонтьева психики как функции всей деятельности субъекта, а не мозга как такового.

Ключевые слова: школа А.Н. Леонтьева, структура деятельности, развитие личности, иерархия мотивов, воля, развитие психики, дошкольный возраст.

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OBITUARIES
НЕКРОЛОГИ

Elena Olegovna Smirnova
November 1, 1947 — February 3, 2020

On February 3, 2020, Elena Olegovna Smirnova an outstanding Russian scientist, specialist in child psychology, PhD in Psychology, Professor, Head of the Center of Psychological and Pedagogical Expertise of Games and Toys, winner of the Russian government award in the field of education for the cycle of works "The system of upbringing and development of children from birth to seven years", passed away. E.O. Smirnova's scientific activity was evaluated by high government awards: the K.D. Ushinsky medal and the G.I. Chelpanov medal "For contribution to the development of psychological science" of the II degree.

Elena Olegovna Smirnova was born on November 1, 1947 in Moscow in a family of employees (mother — a doctor, father — a chemist, PhD). In 1966, she entered the newly created faculty of psychology at Moscow State University. Her teachers were A.N. Leontiev, A.R. Luria, A.V. Zaporozhets, D.B. Elkonin, V.V. Davydov and other remarkable scientists.

In 1969, E.O. Smirnova, while still a third-year student, came to the laboratory of early childhood and preschool psychology of the Psychological Institute Russian Academy of Education, which was headed by M.I. Lisina. For almost forty years professional life of Elena Olegovna was associated with this laboratory, where she went from assistant to head of the laboratory.

In 1977, under the supervision of M. I. Lisina E. O. Smirnova defended her PhD thesis on "The Impact of communication with adults on the effectiveness of preschool children's learning". In 1992 she defended her doctoral dissertation on "The conditions and prerequisites for the formation of behavior self-regulation of children". Both themes interested her all her life, as a scientist and as a person. Elena Olegovna liked to gather people around her and could to create a friendly, warm atmosphere. She understood will as an intention — own internal motivation to activity through which child develops.

Elena Olegovna worked at the Moscow State University of Psychology and Education since its Foundation as a scientist and a lecturer. She considered it her mission to create a toy museum to based on Z.M. Boguslavskaya's toys collection. As a result the Center of psychological and pedagogical expertise of games and toys was created. She was the Head of The Center for more than 15 years. Under her leadership the concept and methodology of psychological and pedagogical evaluation of games, toys and children spaces were developed, childhood and play were researched. Under the scientific supervision of E.O. Smirnova has prepared and defended more than 20 PhD theses.

In 2017 on the basis of Center of Psychological and Pedagogical Expertise of Games and Toys under the leadership of Elena Olegovna a unique master's program "Play and childhood" was developed and realised to train specialists in the field of children's play and the subject-spatial environment.

E.O. Smirnova is the author and co-author of numerous publications: articles, textbooks, manuals, scientific monographs and popular books. The most famous textbooks that have endured many reprints: "Child psychology", "Psychology of a child", "Psychology and pedagogy of play". Pedagogical manuals and educational programs for teachers and specialists working with children: "Didactical games for preschoolers", "Interpersonal relationships of preschoolers", "Diagnostics of mental development of a child from birth to 3 years: diagnostics, problems, correction", "Organization of subject play space in kindergarten", " First steps. The program of Early childhood education and development", "Organization of play activities". Publications for parents: "Art of communication with a child", "Preschooler in the modern world", "Conflict children", " Your child from 0 to 3. A book for young parents." This far from complete list of works reflects the breadth of Elena Olegovna's interests.

E.O. Smirnova had a talent for popularizing scientific knowledge. She presented scientific data simply and fascinatingly. Her language is recognizable — light and airy, and numerous articles and books are very popular with parents and educators.

Elena Olegovna devoted her life to the humanization of preschool education. She defended the value of children's initiative, the needs and will of a child, defended the children's play, its indispensability and importance for development. Elena Olegovna participated in the development of the Federal State Educational Standard for Preschool Education and made a key contribution in the Standard to the adoption of the value and developing significance of children's play.

In loving memory.

*Specialists of the Centre for Psychological
and Pedagogical Expertise of Games and Toys*