

## VYGOTSKY'S DEFECTOLOGY

### Presentation

# Vygotsky's approach to disability in the context of contemporary debates and challenges: Charting the next steps<sup>1</sup>

(Presentation for the "Special Issue – Vygotsky's Defectology")

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This Special Issue is a timely contribution to research and theorizing about disability. It takes up Vygotsky's legacy on this topic and charts new ways of understanding and applying its lessons and ideas to a variety of topics. Re-examining Vygotsky's position on disability and on educating children diagnosed with disability is important because it has not been given due attention in Western interpretations of his legacy (cf. SMAGORINSKY, 2012). In fact, however, his position (though not his terminology, which needs serious upgrades) is extremely contemporary and progressive, if not radically progressive, even by today's standards. We stand to learn a lot if we re-engage with Vygotsky's ideas while also, at the same time, striving to interrogate and advance them into their own zones of proximal development. We begin by outlining a vision of Vygotsky's contribution to the study and pedagogy of disability to provide a context in which the articles included in this Special Issue are then presented in way of their brief synopsis.

Vygotsky's approach is, first of all, aimed against what is today called *a deficit view of disability* (in his terminology, the "invalid-oriented view") to focus instead primarily and centrally on *difference*. This theme cuts across his writings as, for example, when he states that "a child whose development is impeded by a defect is not simply a child less developed than his peers but is a child who has developed differently" (1993, p. 30). He further writes that "no theory is possible if it proceeds from exclusively negative premises" (p. 31). He zooms in on educational approach that can assist children to overcome whatever obstacles they encounter and stresses that "it is extremely important to discard the constraints limiting our mental outlook... It is important that education aims to realize social potential fully and consider this to be a real and definite target. Education should not nurture the thought that a blind child [or a child understood to be on an extranormative developmental path in any area] is doomed to social inferiority" (p. 63). This approach was clearly opposed to the traditional one which is, in Vygotsky's words, "poisoned by [the implications of] sickness and weakness" or

<sup>1</sup> Note that many of the quotations from Vygotsky's works have been compared with the original texts (in Russian) and changes made in cases in which it was necessary to better convey the meaning and to correct mistranslations.

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fueled by purely charitable intentions of “helping the needy” which he saw as “a radical untruth” (p. 64). He asks rhetorically “[w]hat horizons will open up to the pedagogues, when they recognize that a defect is not only a disadvantage, a deficit, or a weakness, but also an advantage, a source of strength and capabilities, that it has positive significance!” (p. 56).

This is followed by his quite astonishing, unequivocal and prescient observation that “the task is not so much the education of blind children as it is the *reeducation of the sighted*. The latter must change their attitude toward blindness and toward the blind. The reeducation of the sighted poses a social pedagogical task of enormous importance” (p. 86). How often do we read even today in the mainstream literature on disability that it is society that needs to change its attitudes towards those who are different rather than to unidirectionally aim at changing these people in a zealous drive for unification and flattening of difference?

Second, and as related to the previous point, Vygotsky clearly and unequivocally insists that extranormative development (or what is typically termed “disability”) has to be understood as a sociocultural process and, in particular, a process that is immersed in collaborative sociocultural practices as the major site where, and the core pathway through which, any development takes course. Therefore, in his words, “Cultural development is the main area for compensation of extranormativity [deficiency] when further organic development is impossible; in this respect, the path of cultural development is unlimited” (1993, p. 169). The main point was to open up ways, through radical educational reforms guided by ideals of social justice and equality, for all citizens to have a productive role in society based on their unique strengths, while viewing extranormativity as precisely one type of such strengths. Along this path, education “must cope not *so much with [any] biological factors as with their social consequences*” (VYGOTSKY, 1993, p. 66, emphasis in original). Socializing and fully integrating *all* people to participate in the sociocultural practices of their communities, rather than repairing whatever “defects” attributed to them, was the main goal of the “new social pedagogy” outlined by Vygotsky as replacing “the outdated as-old-as-Adam systems” (ibid., p. 73) that were reinforcing the “psychology of separatism” (p. 85). In other words, the ultimate goal is attaining “social completeness” (ibid., p. 75) in the sense of a full social competency or capableness (*‘sotsialnaya polnotsennost’* – Russ.) related to social participation in society.

Crucially, Vygotsky states that “all problems that appear to be absolutely unsolvable ... turn out to be solvable insofar as *another human being [and society as a whole]* is drawn into a picture” (ibid., p. 85; for more details, see ARIEVITCH & STETSENKO, 2014; STETSENKO, 2012, 2013). The role of cultural mediation which becomes possible within a sociocultural approach to extranormative development, as related to the role of the other, should also be considered as crucial. Cultural mediation, in particular, makes possible the development of roundabout mediational supports that help to produce capabilities for full social participation. For example, metaphorically, with the help of cultural mediation “the blind person acquires his microscope and telescope, which infinitely widens his experience and closely intertwines him into the general fabric of the world” (ibid., p. 85).

Third, and quite significantly, Vygotsky is speaking from a position which, in contemporary parlance, portrays development as a dynamic, open-ended and systemic process which is flexible, situated, distributed, culturally mediated and heavily reliant on contextualized dynamics of everyday activities and practices out in the world. The notion of systemic organization of psychological functions became central to works not only by Vygotsky himself but also his many co-workers and followers (see STETSENKO, 2008). For example, Alexey Leontiev (1978) also pursued the notion of systemic organization of psychological functions and consciousness. Alexander Luria (e.g., 1973) made it a cornerstone of his approach to neuropsychology – what he termed the principle of “the dynamic-systemic localization of brain functions” – an approach that has a strikingly contemporary relevance. Here, their voices essentially join in with the contemporary dialogues and debates of extremely high significance. In particular, their approach, to this day, constitutes the cutting edge in neurosciences in that it posits that the brain serves as an instrument for carrying out meaningful goal-directed activities, situated in context of interaction and collaboration with other people and mediated by the tools of culture. Therefore, brain functions are neither preprogrammed nor inborn but, instead, are formed in development in response to specific life demands in the course

of sociocultural practices and activities. Brain functions are also not rigidly assigned to specific locations but emerge in fluid, contingent and flexible ways. As such, this approach was a precursor to many important developments in neuroscience of recent years.

Indeed, through the past decades and especially in recent years, traditional mainstream neuroscience portrays the brain as a collection of various functionally and anatomically specific local areas or modules, each dedicated to processing information for an encapsulated domain such as language, memory, spatial vision, numerical reasoning, and so on. An especially vocal position, by well-known scholars such as Pinker, has been that this anatomical specificity is innate and shaped by evolutionary processes (cf. THELEN, 2000). However, there is also another picture of brain structure and function that is much less rigid and much more open to the world and the worldly dynamics of activities in which all people participate. This picture is consistent with Vygotsky and his school's insistence on viewing the brain as embedded, situated and culturally mediated dynamic system. As such, Vygotsky's works are in sync with recent research that shows that contrary to the long-standing stereotypes, brain structures are in fact neither rigidly preformed ("wired") nor unidirectionally driven by maturation. Instead, brain structures and patterns of neural activation are constructed within development dynamics and in relation to individual experiences and learning (e.g., GOTTLIEB, 2003, 2006). In a related vein, many researchers recently caution that the brain is not a separate organ but is part and parcel of activities of organisms as a whole (e.g., FOX, LEVITT, & NELSON, 2010). Neural plasticity, in particular, is used to refer to processes that involve major connective changes of the nervous system in response to experience (e.g., KOLB & GIBB, 2011; LI, 2009). Here is how Esther Thelen (2000, p. 8-9) describes a perspective that is in fact highly consistent with Vygotsky's views:

I argue for a distributed, multiply determined cognition, where the lines between perceiving and acting and between remembering and planning are blurred and shifting like drops of oil on a puddle. ...[This] picture of brain structure and function ...is perfectly consistent with a coupled and embedded, time-based dynamic system. The nature of these complex connections [among brain functions], in the terminology used by Edelman (1987, 1993), is that they are *reentrant* and *degenerate*. *Reentry* means that the stream of processing is not one way, or even parallel, but densely interwoven such that the output of one tract is fed back on itself – output is also input. *Degeneracy* means that neural processing is multiply determined: There is no one dedicated pathway to do anything. Any network may participate in multiple tasks at the same time that a single task may be accomplished by many different routes. Most important, it is impossible in such a system to identify serial or hierarchical causality or even "first principles" that motivate behavior.

Finally, Vygotsky's position on disability clearly sounds not only contemporary but apparently well ahead of his time in terms of him taking a systemic and dialectical view on the problem of nature versus nurture. This is where the contribution that Vygotsky and his school made to the study of disability and development on the whole is particularly and deeply significant. In today's works and research on human development and adjacent fields, it is often assumed that the debates on nature and culture belong to the past because science has presumably reached a resolution on this topic – typically described as a broad consensus widely disseminated in professional outlets and popular discourses that it is somehow *both* nature and culture that play a role in human development. However, taking this position of what is sometimes called "an interactionist consensus" is premature and misleading at best. Indeed, the so called "interactionist consensus" in fact hides many important distinctions and conceptual specifications that are far from resolved, in thus providing a false sense of settlement and an illusion of clarity. This is a pseudo-consensus and a pseudo-resolution. Susan Oyama (2000, p. 22) has precisely described the present situation when,

[e]ven though the distinction between the innate and acquired has been under attack for decades [...], and even though it is routinely dismissed and ridiculed in the scientific literature [...], it continues to appear in new guises. *The very people who pronounce it obsolete, manage, in the next breath, to distinguish between a character that is a "genetic property" and one that is only "an environmentally produced analogue"* (emphasis added).

Much more is needed to truly combat the harmful stereotypes and false proclamations that for centuries have served to affirm social inequalities as somehow outcomes of “nature” that follow with the “dictates” of some putatively natural “rules and laws”. Today this task is no less, and most likely more, urgent than at any time in recent history. This is because we are witnessing an aggressive promotion of biological determinism, in increasingly crude forms, resulting in no less than a new rise of eugenics, much in similarity with the 1920s and against the same background of deep economic crisis, bitter antiimmigration sentiment, and social upheaval (cf. ALLEN, 2001). Appealing to innate and unalterable biological (genetic) mechanisms and determinants of human behavior and development is now extremely common in the form of a crude genetic essentialism (DAR-NIMROD & HEINE, 2011). It is highly troublesome that, as many scholars have observed, “there is a growing trend among behavioral scientists [particularly psychologists] to view more and more of human behavior as in large measure attributable to our genes” (CHARNEY, 2008, p. 299). Even more troubling is that a rather common and widespread view is that racial disparities in education (along with those in crime and economic status) are the result of biological differences between races rather than social inequalities (DONOVAN, 2014; cf. GOULD, 1996).

Vygotsky’s position is exemplary in its capacity to confront and debunk all forms of biological reductionism including in disability studies. From his early works on (see especially VYGOTSKY, 1997a, p. 158 ff.), he insists that organisms and the environment cannot be understood as independently existing “things,” outside their intricate bond and relationship. While positing that environment, especially the social one, is a systematic and powerful influence on development that is omnipresent and ubiquitous, Vygotsky qualifies this idea by saying that *the role of the person* cannot be overlooked, adding that the person is part of the environment in so far as she or he acts in the environment so that the biological organismic structures are always determined by preceding environmental influences. He concludes that “all this gives us the right to speak of the organism [person] *only* in interaction with the environment” (1997a, p. 159; note that in the English translation the word *only* is omitted and the meaning is thus distorted). The word *only* plays a critical role here in conveying the core idea that there is no organism or person as such and no environment as such – if these are viewed as somehow independently existing entities – because both need to be viewed in their dynamic interplay. From this it follows, even more dramatically, that there is no way to separate sociocultural influences from the organic or biological ones. In Vygotsky’s words,

The biological and the cultural – both in pathology and norm – have turned out to be heterogenous, distinctive, specific forms of development that do not co-exist next to each other or one above another and are not mechanically linked to each other, but instead are fused together into a *higher synthesis*, complex, though still unified (1997b, p. 26; emphasis added).

Vygotsky further states that this approach eventually resolves the argument between nativism and empiricism (nature and culture) by showing that “*everything* in personalities is built on a species-generic, innate basis and, at the same time, everything in them is supra-organic, contingent [*uslovno* – Russ.], that is, *social*” (VYGOTSKY, 1993, p. 154-155; see also VYGOTSKY, 1994a). In formulating these apparently contradictory (counterintuitive) views, Vygotsky in fact directly, and even quite literally, intuites the most recent advances in the cutting edge approaches such as Dynamic Systems Theory, according to which development is “fully a product of biology *and* culture” (LICKLITER & HONEYCUTT, 2003, p. 469) and what counts as “biological” falls entirely within the domain of what counts as “cultural” and vice versa (cf. INGOLD, 2000; see also GOTTLIEB, 2003; GOULD, 1996; LEWONTIN, 1995).

In this perspective, both individual and environmental characteristics continuously emerge in the life course, while co-defining and co-generating each other in the very process of developmental transactions, rather than them existing independently. The emphasis is on *joint determination* by multiple causes, contextual sensitivity, and contingency, and on development as activity-dependent, emergent co-construction of developmental outcomes by human beings co-acting with others (in relying on available cultural resources). This approach undermines any claims that inborn talents, cognitive modules, or even skeletal innate mechanisms preexist individual development and lie

dormant awaiting activation under certain conditions. One of the stunning conclusions, fully in line with Vygotsky's works, is that developmental potential "resides not in genes or in other developmental resources but rather emerges from their synergistic interaction" (ROBERT, 2004, p.397), so that genes do not preexist developmental processes. As Lickliter and Honeycutt (2013) argue in uncompromising terms, "attempts to identify traits that are innate versus acquired are both meaningless and invalid. A belief in innate traits reflects a commitment to preformationism and ultimately, mysticism" (p. 186).

When these views are combined with Vygotsky's emphasis on the social mediation of development and its situated, interactional-relational and dynamic-systemic nature, the conclusion can be made that how society provides conditions for or, alternatively, deprives individuals of access to participating in social practices and their resources (cultural tools of mediation, social spaces, contacts with other people etc.) necessary for their development is of critical significance. This conclusion is extraordinarily significant. Namely, in the present-day climate, researchers often continue to equivocate between commitment to the idea (and the ideal!) that all humans are equal, indeed equally infinite in their potential, versus the tendency to attribute developmental outcomes to the workings of the brain, differences in "natural" inborn talents and biologically defined endowments. From Vygotsky's position, however, it can be inferred that all human beings have infinite potential that is not predefined and, therefore, incalculable and unidentifiable in terms of any preconceived (somehow hardwired) inborn "endowments." Moreover, this potential is only realized in the course of development, which does not happen in a vacuum but instead, is critically reliant upon sociocultural supports, tools, and mediations (ARIEVITCH & STETSENKO, 2014; STETSENKO, 2016a, 2017, 2018a, b). This conjecture implies that the requisite cultural mediations and supports (broadly understood to include educational opportunities, incentives, cultural tools, spaces, and other resources), tailored to the needs of each learner, must be made accessible and available to all individuals and communities, including teaching-learning tailored to their needs and requirements. This is a radical argument with vast political and social implications for educational research and policy including as relates to disability.

We concur with Smagorinsky's (2012, p.21) assessment that "Vygotsky's (1993) vision of a humane approach to difference serves more as a blueprint for broad societal action than a specific educational program". However, that Vygotsky linked the seemingly academic topic of disability/difference with social action is in fact a remarkable achievement that needs careful attention as it affords a radical shift away from the old approaches and thus, charts the next steps for those working in this area – both practitioners and researchers. Indeed, Vygotsky's contribution needs to be lodged not only within the discussion on the topic of disability per se but also within a broader discussion of the very type of methodology and theorizing that Vygotsky's approach represents (see especially VYGOTSKY, 1994b). As Stetsenko (2018c, p. xx) has formulated, Vygotsky's project needs to be understood

as (a) simultaneously a direct outcome of and contributor to the revolutionary... practices of its time; (b) entwined with practical, political, and value-laden dimensions of these practices; (c) embodying these practices and their socio-political ethos in the very fabric of its knowledge; (d) entailing directionality, that is, specifically a commitment to fostering a social equality-based view on human development and society as an essential and ineluctable ingredient; and (e) moving beyond the confines of science as a purist thought odyssey and instead, representing *a transformative pursuit of radically new forms of social life* (emphasis added).

Thus, Vygotsky and his school allows us to theorize the complex relationships between the social constitution of human psychological processes and the possibility of social change – "a new theory of the relationship between pedagogical politics and political pedagogy" (AMSLER, 2008) including in the field of disability studies. Psychology and education still tend to stay within the ivory towers of academia and away from politics. However, the current realities make the need for a change in perspective quite obvious and pressing. In this change of perspective away from purely descriptive approaches and instead, towards research with a transformative potential agenda as a direct intervention into the world and a form of resistance (for further discussion, see STETSENKO,

2014, 2015, 2016a,b, 2018c; STETSENKO & ARIEVITCH, 2014; VIANNA & STETSENKO, 2014), based on the premises of social justice and equality, Vygotsky is a great and indispensable ally for us today.

The conception of disability established by Vygotsky was, also what was the the basis of Soviet defectology [then]. “Defectology” is a term that today sounds extremely outdated, and it is important to note that it was not created by Vygotsky, but he made use of this term (either theoretical or practical) in an original resignification. Regarding the term defectology, Gindis (2003, p. 200) explains that

*[d]efectology* is the term that reflects the area of Vygotsky’s research and practice that is relevant to contemporary special education and school psychology. The term itself sounds rather degrading. (...) this term would not survive a scientific discussion in the Western world today because it carries too many negative connotations regarding individuals with a disability. Ironically, the negative undertone of the term itself is in no way present in the inspiring and positive attitude of Vygotsky writings. The word *defectologia* (or *defectology* in the English transliteration) literally means the study of defect (author’s emphases).

Most of the authors who work now with the defectology Vygotskian approach still use this same term (see, for example, SELAU, 2015, SELAU & DAMIANI, 2016), to preserve the authenticity of the notions proposed by Vygotsky, and to avoid possible conceptual errors (lack of accuracy in attempts to combine defectology with current terms, see GINDIS, 1994).

In order to continue the discussion of this great conception regarding its fundamental interconnections with Education, Psychology, Neurology, Social Work and other areas, we invited some researchers to contribute to this Special Issue. It starts with the article **Vygotsky’s Defectology: A Misleading Term for a Great Conception**, by *Hartmut Giest*, which discusses the conception of L. S. Vygotsky’s defectology, following through with the possible unfolding of its use, as a theoretical base in the area of education. Essentially, it addresses the concept of defectology, the interlocution of this concept and applicability of defectology at the heart of the Soviet psychology – in the midst of what Vygotsky defined as a crisis on psychology – Vygotsky’s evaluation of psychometric tests, the cooperation for work, and strengthening the historical-cultural theory’s assumption that specifically human psychological functions are of cultural origin, including examples of defectology for inclusion. The author argues that looking at the problems of disabled children, Vygotsky has discovered that deficiencies do not originate primarily from biology or the nervous system. Disabled children who are prevented from integrating into society and culture lose out possibilities that are important, as characteristic for all human beings. Therefore, Vygotskian defectology was not intended to compensate for biological disadvantages, but for the social ones.

**Vygotskian (but only partly Vygotsky’s) understanding of special education**, by *Aaro Toomela* discusses the general principles of special education from the Vygotskian perspective. The author argues that when studies based on Vygotsky’s defectology go beyond what seems ordinary to his thinking (such as the ZPD), these studies are highly valued to considerably contribute to the development of special education. Toomela states that “[I am] relying on Vygotsky’s theory but I am also going beyond it”. The task that the author has embarked upon is organized in order to clarify and amplify Vygotsky’s theory of defectology.

**Interacción tangible para la Compensación Social de procesos mediados en niños con diversidad funcional**, written by *Liliana Passerino*, *Teresa Coma Roselló* and *Sandra Baldassarri* aims to discuss the conception of technology as a sign of mediation in social compensation processes. Methodologically, this is a case study which uses tangible interaction with 6 children diagnosed with and autism spectrum disorder and 7 children with communication problems. Passerino, Coma and Baldassarri analyze the interaction and the processes of mediation that emerged from the study groups. The authors explain the issue of primary and secondary deficiency and social compensation in inclusive processes, and technology as a mediator sign for social compensation. The results show an interactive improvement in most participants, as well as their ability to represent manipulated objects, favoring the transition from concrete to abstract.

**Theories of L. S. Vygotski on Defectology: Contributions to the Special Education of the 21st Century**, written by *Sonia Mari Shima Barroco*, presents theoretical considerations about

Vygotsky's writings regarding his defectology. It analyzes the author's contributions to the education of people with disabilities in the first decades of the twentieth century, when basic education was not universalized, and in the twenty-first century in Brazil, when it is assumed as a right for all, from the perspective of educational inclusion. The author argues that "if we use Vygotsky's work in Brazil today, it is essential to identify everything that hinders development, humanization". Barroco understands Vygotsky's defectology as a "breeding ground" for proving the author's main theses.

In **Counteracting the stigma of homelessness: The Finnish Housing First strategy as educational work**, *Annalisa Sannino* approaches one of the most spurious faces of capitalism affluent societies: the lack of housing. The study "focuses on key examples of the ways in which the Housing First strategy developed and implemented in Finland since 2008 is counteracting the stigma of homelessness by facilitating collective learning and agency formation. The examples are analyzed with the help of a Vygotskian perspective on secondary deficit and mediated learning and agency formation processes". The author argues that the stigma of homelessness can be considered a "deficit" that society imposes on those who live under this condition. For Sannino, the notion of "deficit" imposed by society and its aggravating factors affecting individuals experiencing homelessness can be better understood by what Vygotsky (1993) called "secondary deficit," a socially produced stigma that adds a sense of unworthiness to physical, mental, and socioeconomic characteristics of difference. Fundamentally, the article shows the educational role played by the main actors and institutions in the strategy to foster new modes of actions not only among the clients but also within the broad society. This role is exerted by means of systematically implemented negotiations and agreements which establish effective pathways out of marginalization. What is the disabled, the "deficit", in line with Vygotsky's views, is not only the result of what biology imposes on the subject: society creates, with its prejudgments, several "deficiencies" and as it creates them, it can also create pathways out of stigmatizing and marginalizing tendencies.

**Becoming a person through innovative inclusive education**, written by *M. Serena Veggetti*, discusses the notions of how the conscience of the person is constituted, based on Vygotsky's ideas, giving attention to the constitution of the disabled person's personality. On the processes of consciousness development, she reminds us that, in Vygotsky's perspective, the psyche is not influenced solely by genetic inheritance: the whole life of the subject is based on the use of the experience of previous generations (the historical experience); combined with the social experience, referring to the innumerable connections that are established in the experiences with other people. These relations, which are historically constituted, are made possible essentially by the use of verbal language and the word [see, for example, CASTRO, DAMIANI e SELAU, 2016]. M. Serena Veggetti reminds us that Vygotsky, in his "defectology", considered that social experience – as the inevitable antecedent of human consciousness – to emphasize that the social environment of the disabled as fundamental to the constitution of the personality. These notions, according to Veggetti, makes the school [and the activity of the teacher] the fundamental element for the formation of the handicapped child, on the condition that education is based on cooperation thus surpassing the "traditional" school only concerned with the mere transmission of knowledge.

**On Fundamentos de defectología and the development of Special Education teachers in Brazil**, *Fabiane Adela Tonetto Costas e Bento Selau* aim to confirm that the work *Fundamentos de defectología* (VYGOTSKI, 1997) does not constitute the official documents of SECADI-MEC which include teacher development based on the National Policy on Special Education in the Perspective of Inclusive Education (BRASIL, 2008). The presentation of this report was based on a bibliographical research (GIL, 2008) which includes: a discussion on Vygotsky's collection of defective works – selected to compose the work *Fundamentos de defectología* –; an exposition of the survey results indicating the absence of *Fundamentos de defectología* (VYGOTSKI, 1997) in the normative documents for teacher development related to Special Education in Brazil. The authors also discuss the results regarding the use of Vygotskian defectology in Brazil, in Research and Postgraduate Programs, in Research Groups n. 15 and n. 20 of ANPEd and in articles and chapters of books. Costas and Selau understand that the non-inclusion of *Fundamentos de defectología* in the references used by MEC as a conductor of and for teacher development in Brazil represents an intellectual blank, given the importance of this work for Special Education, Education and Psychology.

Among the articles, the reader will notice the different spellings of L. S. Vygotsky's surname, because of the transliteration of the Russian name to the Roman alphabet – an aspect explained by Blanck (2003), in the “Presentation” of Pedagogical Psychology (VIGOTSKI, 2003). When organizing this Special issue, the decision was to not ask the authors to use this or that spelling, or even to explain it to the reader, in each article. The only guidance was that literal quotations were in accordance with the work edition referenced at the end of the text, considering the suggestions described in the Blog of American Psychological Association (APA):

Do not change the name on a work if an author has published under different names; cite the work using the names how on the publication you read. In most cases, it is not necessary to note for the reader that two different names refer to the same person; just cite each work normally (LEE, 2017).

Finally, we hope that the “**Special Issue – Vygotsky's Defectology**” may be useful to various readers, especially to the undergraduate and graduate programs in education and psychology, so that it becomes a supplement to the study of Vygotsky's *Fundamentals of Defectology* and for an increased understanding of Cultural-Historical Psychology; to teachers who practically work with people with special educational needs, as a source of new understandings and new practices; for researchers who are interested in discussing this work.

## REFERENCES

- ALLEN, G. E. Essays on science and society: Is a new eugenics afoot? *Science*, 294 (5540), 59-61, 2001.
- AMSLER, S. Pedagogy against ‘dis-utopia’: From *conscientization* to the education of desire. *Current Perspectives in Social Theory*, 25, 291-325, 2008.
- ARIEVITCH, I. M.; STETSENKO, A. Developmental trajectories and transformations of cultural mediation: From symbiotic action to psychological process. In: YASNITSKY, A.; VAN DER VEER, R.; M. FERRARI, M. (Eds.). *The Cambridge Handbook of Cultural-Historical Psychology*. New York: Cambridge University Press, 2014. p. 217-244.
- BLANCK, G. Prefácio. In: VIGOTSKI, L. S. *Psicologia Pedagógica*. Porto Alegre: Artmed, 2003. p. 15-32.
- BRASIL. Ministério da Educação. *Política Nacional de Educação Especial na Perspectiva da Educação Inclusiva*. Brasília: MEC: SEESP, 2008.
- CASTRO, R. F.; DAMIANI, M. F.; SELAU, B. Consciousness and control: a cultural-historical intervention on e-learning Pedagogy Course students' writings. *Educação*, Porto Alegre, v. 39, n. esp. (supl.), s66-s75, dez. 2016.
- CHARNEY, E. Genes and ideologies. *Perspectives on Politics*, 6, p. 299-319, 2008.
- DAFERMOS, M. Critical reflection on the reception of Vygotsky's theory in the international academic communities. In: SELAU, B.; CASTRO, R. F. *Cultural-historical approach: educational research indifferent contexts*. Porto Alegre: EDIPUCRS, 2015. p. 19-38.
- DAR-NIMROD, I.; HEINE, S. J. Genetic essentialism: On the deceptive determinism of DNA. *Psychological Bulletin*, 137(5), 800-818, 2008, 2011.
- DONOVAN, B. M. Playing with fire? The impact of the hidden curriculum in school genetics on essentialist conceptions of race. *Journal of Research in Science Teaching*, 51, 462-96, 2014.
- FOX, S.; LEVITT, P.; NELSON, C. A. How the timing and quality of early experiences influence the development of brain architecture. *Child Development*, 81, p. 28-40, 2010.
- GIL, A. C. *Como elaborar projetos de pesquisa*. 4. ed. São Paulo: Atlas, 2008.
- GINDIS, B. Remediation Through Education: Sociocultural Theory and Children with Special Needs. In: KOZULIN, A. et al. *Vygotsky's Educational Theory in Cultural Context*. New York: Cambridge University Press, 2003. p. 200-221.
- GINDIS, B. Vygotsky's defectology. *American Journal on Mental Retardation*, 100, 2, p. 214-216, 1994.
- GOTTLIEB, G. Developmental neurobehavioral genetics: Development as explanation. In: JONES, B. C.; MORME'DE, P. (Eds.). *Neurobehavioral genetics: Methods and applications*. 2. ed. New York: Taylor & Francis, 2006. p. 17-27.
- GOULD, S. J. *The mismeasure of man*. 2. ed. New York: W.W. Norton, 1996.
- INGOLD, T. *Perception of the environment: Essays in livelihood, dwelling and skill*. London: Routledge, 2000.
- KOLB, B.; GIBB, R. Brain plasticity and behaviour in the developing brain. *Journal of the Canadian Academy of Child and Adolescent Psychiatry*, 20(4), 265-276, 2011.
- LEE, C. What's in a Name? Inconsistent Formats and Name Changes. *APA Style Blog*, May 10, 2017. Disponível em: <<http://blog.apastyle.org/apastyle/2017/05/whats-in-a-name-inconsistent-formats-and-name-changes.html%20>>. Acesso em: 16 ago. 2018.
- LEONTIEV [LEONT'EV], A. N. *Activity, consciousness, and personality*. Englewood Cliffs, NJ: Prentice-Hall. (Russian edition published 1975), 1978.
- LEWONTIN, R. Genes, environment, and organisms. In: SILVERS, R. (Ed.). *Hidden histories of science*. New York: New York Review of Books Publishers, 1995.

- LI, S. C. Brain in macro experiential context: Biocultural coconstruction of lifespan neurocognitive development. **Progress in Brain Research**, 178, 17-29, 2009.
- LICKLITER, R.; HONEYCUTT, H. Developmental dynamics: Towards a biologically plausible evolutionary psychology. **Psychological Bulletin**, 129, 819-835, 2003.
- LURIA, A. R. **The working brain**: An introduction to neuropsychology (B. Haigh, trans.). New York: Penguin Books, 1973.
- OYAMA, S. **Evolution's eye**. Durham, NC: Duke University Press, 2000.
- ROBERT, J. S. **Embryology, epigenesis, and evolution**: Taking development seriously. New York: Cambridge University Press, 2004.
- SELAU, B. Vygotski's studies on blindness. In: SELAU, B.; CASTRO, R. F. **Cultural-historical approach**: educational research indifferent contexts. Porto Alegre: EDIPUCRS, 2015. p. 191-210.
- \_\_\_\_\_.; DAMIANI, M. F. The conclusion of higher education by the blind and the psychology of Vygotski: the tip of the iceberg. **Perspectiva**, Florianópolis, v. 34, n. 3, p. 861-879, set./dez. 2016.
- SMAGORINSKY, P. Vygotsky, "Defectology," and the Inclusion of People of Difference in the Broader Cultural Stream. **Journal of Language and Literacy Education** [Online], 8(1), 1-25, 2012.
- STETSENKO, A. Natureculture in a transformative worldview: Moving beyond the "interactionist consensus". In: JOVANOVIĆ, G.; RATNER, C. (Eds.). **The Challenges of Cultural Psychology**. London: Routledge, 2018a. p. 37-57.
- \_\_\_\_\_. Confronting biological reductionism from a social justice agenda: Transformative agency and activist stance. **Literacy Research: Theory, Method, & Practice**. 2018b.
- \_\_\_\_\_. Research and activist projects of resistance: The ethical-political foundations for a transformative ethico-onto-epistemology. **Learning, Culture and Social Interaction**. Available online 25 April 2018 <https://doi.org/10.1016/j.lcsi.2018.04.002>. 2018c.
- \_\_\_\_\_. 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** (special issue on Disrupting Inequalities, ed. by M. Winn and M. Souto-Manning), v. 41, p. 112-135, 2017.
- \_\_\_\_\_. **The transformative mind**: Expanding Vygotsky's approach to development and education. New York: Cambridge University Press, 2016a.
- \_\_\_\_\_. Vygotsky's theory of method and philosophy of practice: Implications for trans/formative methodology. **Revista Psicologia em Estudo**, 39, 32-41, 2016b.
- \_\_\_\_\_. Theory for and as social practice of realizing the future: Implications from a transformative activist stance. In: MARTIN, J.; SUGARMAN, J.; K. SLANEY, K. (Eds.). **The Wiley Handbook of Theoretical and Philosophical Psychology**: Methods, Approaches, and New Directions for Social Sciences. New York: Wiley, 2015. p. 102-116.
- \_\_\_\_\_. Transformative activist stance for education: Inventing the future in moving beyond the status quo. In: CORCORAN, T. (Ed.). **Psychology in Education: Critical Theory~Practice**, Rotterdam, The Netherlands: Sense Publishers, 2014. p. 181-198.
- \_\_\_\_\_. The challenge of individuality in cultural-historical activity theory: "Collective" dialectics from a transformative activist stance. **Outlines – Critical Practice Studies** (special issue on transformative social practices edited by I. Langemeyer and S. Schmachtel), 14(2), 7-28, 2013.
- \_\_\_\_\_. Personhood: An activist project of historical Becoming through collaborative pursuits of social transformation (invited paper for the Special Issue on Personhood, edited by Jack Martin and John Bickhart). **New Ideas in Psychology**, 30, 144-153, 2012.
- \_\_\_\_\_. Teaching-learning and development as activist projects of historical Becoming: Expanding Vygotsky's approach to pedagogy. **Pedagogies: An International Journal** (Special Issue on Vygotskian approaches to pedagogy edited by W.-M. Roth and Y.-J. Lee), v. 5, n. 1, 6-16, 2010.
- \_\_\_\_\_. From relational ontology to transformative activist stance: Expanding Vygotsky's (CHAT) project. **Cultural Studies of Science Education**, 3, 465-485, 2008.
- \_\_\_\_\_.; ARIEVITCH, I. (2014). Vygotsky's collaborative project of social transformation. In: BLUNDEN, A. (ed.). **Collaborative Projects**. Leiden, The Netherlands: Brill Publishers, 2008. p. 217-238.
- THELEN, E. Grounded in the world: Developmental origins of the embodied mind. **Infancy**, 1, 3-28, 2000.
- VIANNA, E.; STETSENKO, A. Research with a transformative activist agenda: Creating the future through education for social change. In: VADEBONCOEUR, J. (Ed.). **Learning in and Across Contexts**: Reimagining Education. National Society for the Studies of Education Yearbook. Volume 113, Issue 2, 2014. p. 575-602.
- VIGOTSKI, L. S. **Psicologia Pedagógica**. Porto Alegre: Artmed, 2003.
- \_\_\_\_\_. **Obras Escogidas**: Fundamentos de defectología. Madrid: Visor, 1997.
- \_\_\_\_\_. (1987/1934). Thinking and speech. In: **Collected works** (Vol. 1, pp. 39-285) (R. Rieber & A. Carton, Eds.; N. Minick, Trans.). New York: Plenum.
- \_\_\_\_\_. **The collected works of L. S. Vygotsky**. Volume 2: The fundamentals of defectology (abnormal psychology and learning disabilities) New York: Plenum, 1993.
- \_\_\_\_\_. The problem of the environment. In: VAN DER VEER, R.; VALSINER, J. (Eds.). **The Vygotsky reader**. Cambridge, MA: Blackwell, 1994a. p. 338-354.
- \_\_\_\_\_. The fascism in psychoneurology. In: VAN DER VEER, R.; VALSINER, J. (Eds.). **The Vygotsky reader**. Oxford: Blackwell, 1994b. p. 327-337.
- \_\_\_\_\_. **The collected works of L. S. Vygotsky**. Volume 3: Problems of the theory and history of psychology (R. W. Rieber and J. Wollock, eds.). New York: Plenum, 1997a.
- \_\_\_\_\_. **The collected works of L. S. Vygotsky**. Volume 4: The history of the development of higher mental functions (R. W. Rieber, ed.). New York: Plenum, 1997b.