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Critical review of sociocultural theory: Redefining L. S. Vygotsky's non-classical psychology

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Abstract

For many years various labels have been used when referring to the theories of L. S. Vygotsky, all of which have resulted in a most interesting, yet confusing, phenomenon. Why isn't there one label for Vygotsky's psychology? Although this type of diversity reflects a flexible and robust nature of current Vygotskian thinking internationally, it has led to confusion, with people not understanding the difference between sociocultural theory, activity theory,¹ cultural-historical theory, and many other variations. For this reason, a new focus is slowly emerging in Russia, with an attempt to return to the roots of L. S. Vygotsky as a Russian thinker, within an expanded context of interpretation. In celebrating the 110th centennial since Vygotsky's birth (November 2006), it is suggested that we begin to use one term related to Vygotskian thought, and that term—which was created by a Russian—is called non-classical psychology. Daniel Elkonin (1989) stated that Vygotsky was the founder of non-classical psychology, with the following definition: non-classical psychology is “the science of the way the subjective world of a single person emerges from the objective world of art, the world of production tools, the world of the entire industry” (p. 478). Non-classical psychology does not stand in opposition to classical psychology, but transforms it. As well, there is no such term called “non-classical philosophy,” with much of Vygotsky's theories being derived from classical philosophy. At this point in time, there is no attempt to set up new oppositions that carry empty contradictions; however, there is a call to return to the overall intentions of Vygotsky, and to clarify many general hypotheses, such as the claim that Vygotsky's psychology was simply one of “communication.” When rereading Vygotsky's texts, we want to focus on a new paradigm of synthesis/unity that reflects extremely new, often non-spatial thinking. We are ultimately viewing the concept of personality development with the actualization of “self-determination,” “self-regulation,” related to the individual, social, and cultural world, connected with Spinozian monism

Intercultural Pragmatics 4-1 (2007), 85–97
DOI 10.1515/IP.2007.005

1612-295X/07/0004-0085
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1 (which is not static in nature). Sometimes, this understanding is called free
 2 action of will. The focus on personality does not refer to the sum total of
 3 relationships of a single individual, but is actually a construct transcending
 4 the biological and the social. There is a feeling of shared development be-
 5 tween the cultural/social, outside world, relations to other individuals and
 6 artifacts, and intra-mental/developmental growth, all of which is connected
 7 through synthesis. One basic goal of non-classical psychology is to “bridge
 8 the gap between the objective and subjective, between the realm of mind and
 9 the realm of culture, between the person and the world” (D. Leontiev 2005:
 10 26). We need to return to a view of the world both within the framework of
 11 content and process, as well as an understanding of the relationship between
 12 the external and internal. When developing new theories of Vygotskian
 13 non-classical psychology, we will need to understand that nothing is totally
 14 completed, but that everything is in a state of process and change. We have
 15 not yet grasped the notion that concepts such as “motive” and “goal” are
 16 not viewed as internal structures only; and other core concepts such as
 17 “units of analysis” simply cannot be extracted from the world of process
 18 and change to be dissected, analyzed, and put together again. “Units of
 19 analysis” must be understood within a holistic flow model of change. As
 20 well, there are many hierarchies of motives, units of analysis, activity,
 21 sense, meaning, etc. N. Bernshtein and A. A. Leontiev spoke of “levels,”
 22 and this understanding of hierarchy must be reevaluated in light of current
 23 theories today, such as sociocultural theory, cognitivism, and postmodern-
 24 ism. Traditionally, we tend to think of a single construct when we speak of
 25 “motive,” “goal,” “ZPD,” “units of analysis,” etc., instead of understand-
 26 ing asymmetrical layers that intersect. We will offer introductory thoughts
 27 to the problems resulting from the multifarious labeling of Vygotskian
 28 theory, to return to the suggestion of establishing one term of reference to
 29 Vygotskian thought, which is non-classical psychology.

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 31

32 **1. Rethinking Vygotskian Labels: Sociocultural Theory, Cognitivism,** 33 **Postmodernism**

34

35 J. Wertsch (1991, p. 6) states that “perhaps the first point to make about
 36 the Vygotskian foundations of a sociocultural approach is that Vygotsky
 37 himself seldom, if ever, used the term ‘sociocultural.’” No matter what
 38 stance one takes, it should be clear that Vygotsky did not write from a
 39 contemporary sociocultural perspective. Various authors have simply
 40 placed Vygotsky’s thoughts within the word *sociocultural*, sometimes
 41 without accepting Wertsch’s basic understanding of sociocultural. There
 42 is also confusion regarding other writers in Europe, Latin America, etc.

1 who also use the term sociocultural, but in a different context than
2 Wertsch. However, we do not have two distinct terms to refer to sociocul-
3 tural theory in the United States, and sociocultural theory in parts of
4 Canada, Latin America, Europe, etc. Also, when Europeans and others
5 refer to the *Westernization* of Vygotsky many problems arise. Sometimes
6 this label is called the *Americanization* of Vygotsky; however, there are
7 many sociocultural theorists in Europe (such as in Denmark, Sweden, and
8 Holland) who do not subscribe to American sociocultural theory, but are
9 still Westerners. At the same time there is another problem, because the
10 word *Americanization* refers to North America, and not Latin America,
11 where deep and rich traditions of Vygotskian psychology-philosophy
12 stand much closer to the European roots of Russian/German thought
13 than in North America. J. Wertsch (1991: 16) states the following:

14
15 I use the term *sociocultural* because I want to understand how mental action is situ-
16 ated in cultural, historical, and institutional settings. I have chosen this term
17 rather than others . . . in order to recognize the important contributions of several
18 disciplines and schools of thought to the study of mediated action. On the one
19 hand, I wish to recognize the contributions made by Vygotsky and his colleagues
20 . . . On the other, I wish to recognize the contributions made by many contempo-
21 rary scholars of culture . . . A term such as *socio-historical-cultural* would be more
22 accurate, but it is obviously too cumbersome.

23 In many respects, sociocultural theory often incorporates the ideas of
24 Vygotsky to the same degree as it does writers such as Dewey, Whorf,
25 Burke, Bakhtin, etc. Therefore, sociocultural theory sometimes turns
26 into a model of postmodern bricolage. Sociocultural theory normally
27 does not deal with history as change, Marxian dialectics, deeper and intri-
28 cate principles of internalization, nor does it normally deal with a focus
29 on the integrated personality, Marxism, Spinozian monism, etc.

30 However, it does bring other aspects of Vygotskian thought into a
31 more simplified understanding that can be translated into practical guide-
32 lines within education. One reason for the popularity of sociocultural
33 theory is that people in the field of education in North America have be-
34 come enamored with Vygotsky's *Zone of Proximal Development*. The
35 ZPD was created during the last two years of Vygotsky's life, and was
36 based on the thoughts of the American, Dorothea McCarthy, inter alia.
37 The ZPD represents a metatheory of more freedom for student-centered
38 interaction within education [including adult/peer guidance, modeling,
39 and mentoring], and it has become a real antipode to the lockstep ideas
40 gained from Piagetian epistemological educational philosophy. At the
41 same time many articles on the ZPD in the West are not situated within
42 the Russian cultural-historical tradition, and are often compared with

1 theories of educational constructivism (a term that is associated with Piaget,
2 although Vygotsky used the same term in a different context).² As a
3 result, Vygotskian thoughts are often paralleled with theories of interaction
4 and group collaboration, and it is at this point that the simplification
5 of Vygotsky's ZPD within sociocultural theory should be viewed with extreme
6 caution.

7 Another phenomenon is the Western acronym CHAT (Cultural Historical
8 Activity Theory), which has become very popular in the West. In
9 reality, there is one overall school of Vygotskian thought serving as the
10 basis for many directions, branches, trends within that school. Theoretically,
11 it is dangerous to join two theories together, such as CHAT, without an exact
12 and theoretical understanding of the differences between them, all of which has
13 led to much confusion internationally. According to L. I. Bozhovich (2004), a
14 close collaborator of Vygotsky who also worked with A. N. Leontiev:

15
16 It seems to us that Leontiev's theoretical structure cannot be considered a
17 resolution of the crisis in psychology because, in it, psychological reality per se
18 disappears and is replaced by the reality of action. One might ask the following.
19 If the appropriate subject of psychological study was already identified in
20 Vygotsky's works and an approach to it outlined, why has the crisis not been
21 resolved, and why is there again discussion of the appropriate subject of study
22 and methodology appropriate to the science of psychology? (p. 26)

23
24 With the introduction of the International Vygotsky Society in Moscow
25 in November, 2006, a new forum has been established calling for a return
26 to reading and better understanding Vygotsky from a Russian perspective.³
27 There is a call to abandon theory for theory's sake only! The goal of this
28 undertaking will hopefully result in a more expanded, cross-cultural practice
29 of Vygotskian theory in areas such as psychology, education, clinical
30 psychology, etc., to develop a direction of applying theory to practice.

31
32 Another criticism that should be faced is the claim that Vygotsky was a
33 cognitivist, meaning a Western cognitivist, which has an entirely different
34 meaning than it did in Russia during the 1920s and 1930s.

35 36 37 **2. Cognitivism**

38
39 Vygotsky has been called a "cognitivist" or "cognitive" psychologist by
40 some in the West and in Russia. This is a very dangerous position to
41 take, and it is a wrong position for many reasons. Cognitivism began during
42 the 1950s, offering an alternative to behaviorism. During that period,

1 the word “innate” was an attempt to reclaim the inherent qualities each
2 individual possesses. Politically in the United States during the 1960s,
3 there was a focus on social equality. However, it left a sense of dualism
4 or a split within real life, just like the Cartesian mind/body division.
5 Chomsky, for example, is known for his extremely conservative linguistics
6 and extremely liberal politics. The initial idea of cognitivism was to
7 place “meaning” back into theory. Jerome Bruner (1990), one of the
8 founders of Western cognitivism, explains it this way:

9 I want to begin with Cognitive Revolution as my point of departure ... For, at
10 least in my view, that revolution has now been diverted into issues that are marginal
11 to the impulse that brought it into being ... Now let me tell you first what I
12 and my friends thought the revolution was about back there in the late 1950s. It
13 was, we thought, an all-out effort to establish meaning as the central concept of
14 psychology—not stimuli and responses, but meaning ... Very early on ... emphasis
15 began shifting from “meaning” to “information,” from the *construction* of
16 meaning to the *processing* of meaning ... Very soon, computing became the
17 model of the mind, and in place of the concept of meaning there emerged the concept
18 of computability. (pp. 1–6)

19 Interestingly, brains are *not* designed like computers⁴ (see Deacon,
20 1997), and symbolic real world realities cannot be reproduced in a computer
21 today; and it is precisely the symbolic process that we want to better
22 understand, and perhaps even transcend.

23 Cognitivism led to the fact that the “human agent” does not even need
24 to be present, and when a person is referred to, everything is calculated
25 within the individual’s mind/brain/consciousness. This has led to a dead-
26 end often resulting in solipsism and fragmentation. Within cognitivism,
27 human existence seems to be understood as the *sum of our parts*, which
28 can only lead to fragmentation. David Bohm (1980: pp. 15–16) has stated
29 this problem succinctly: “. . . in the first instance, fragmentation is an attempt
30 to extend the analysis of the world into separate parts beyond the
31 domain in which to do this appropriately ... it is in effect an attempt to
32 divide what is really indivisible. In the next step, such an attempt will lead
33 us also to try to unite what is not really unitable.”

34 Another important point is that cognitivism is often not scientific, but
35 deductive. Within Chomsky’s model, there is an attempt to state that
36 there are universal grammar rules, located somewhere in the “deep”
37 structure, but there is no explanation of how the rules reach the “surface”
38 structure, and no explanation of the “deep” structure. There is a top-
39 down, deductive approach, functioning outside a real-life continuum. In
40 the 1960s, Chomsky tried to warn second language researchers not to
41 use his method for understanding the teaching of foreign languages, but
42 to no avail.

1 To state the cognitivist problem simply, F. Varela (1997) maintains
2 that:

3
4 (1) cognitivism postulates mental or cognitive processes of which we are not only
5 unaware but of which we cannot be aware; and (2) cognitivism is thereby led to
6 embrace the idea that the self or cognizing subject is fundamentally fragmented
7 or ununified . . . Cognitivism . . . postulates processes that are mental but that can-
8 not be brought to consciousness at all. Thus, we are simply unaware of the rules
9 that govern the generation of mental images or of the rules that govern visual
10 processing. (pp. 48–49)

11 Cognitivism has gone so far as to presume that cognition can proceed
12 without consciousness (see Varela, 1997: 51); as reflected through Chom-
13 sky, cognitivism operates outside of everyday life, standing on the princi-
14 ples of the Cartesian division, although it appears to offer unity and
15 wholeness.

16 Some of the background ideas and paradoxes of cognitivism are: (1).
17 Cognitivism was a reaction to behaviorism and the political climate of
18 the 1950s. Innatism also represented the equality of all people, reflected
19 in the North American politics of President Johnson during the 1960s.
20 (2). Cognitivism deems itself scientific, without any explanation of how
21 the “rules” are generated, emerging from the linguistic “deep structure.”
22 There is no real time processing in most cognitivist thinking. Some areas
23 of cognitivism include innatism, some branches don’t. (3). The process of
24 fragmentation within cognitivism which unfolded was also reflected in the
25 emergence of postmodernist thought (cf. F. Varela 1997: pp. 48–49).
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28 **3. Postmodernism**

29
30 Vygotsky has also been labeled a postmodernist by Westerners and Rus-
31 sians, and a caveat should be given at this point. In much of postmodern
32 society, psychological, and philosophical theories tend to focus on “parts”
33 of a whole structure, often without understanding the all-encompassing
34 nature of what “holism” refers to. Postmodernism reflects a horizontal
35 level of communication, of equal voices, often replacing a vertical level
36 of hierarchy, which in the past had only a few experts determining
37 research debates. The older, vertical structure demanded a holistic
38 approach to knowledge building; however, this type of structure was usu-
39 ally tied to a traditional philosophical-foundationalist understanding, all
40 of which is rejected in postmodern thought. In other words, there are no
41 longer a few experts at the top who dictate a limited number of values
42 determining much research, as in Chomsky’s linguistics. The negative

1 side of the vertical structure can be understood as a reflection of a unitary
2 approach, which could then be distorted into monolithic, even totalitar-
3 ian theories. The negative side of the horizontal structure within post-
4 modernism is the famous statement: “anything goes,” normally in the
5 name of diversity.

6 It is suggested that Vygotsky, Luria, Pribram, Eisenstein, Vološionv,
7 and many others have contributed to a totally new focus that transcends
8 postmodern fragmentation, as well as transcending the vertical, more tra-
9 ditional, philosophically-foundationalist (i.e. top-down), unified approach
10 to knowledge. For example, Vygotsky’s theories are a combination of
11 Spinozist monistic philosophy, combined with the relative movement of
12 an asymmetrical dialectic (see Karcevskij 1982) that allows for change
13 and development (while including elements of regression). It is the combi-
14 nation of the absolute (here, monism) together with the relative (here, dia-
15 lectic) that allows Vygotsky to transcend both vertical and horizontal
16 thinking, entering the philosophical understanding of *holography* (a newer
17 branch of physics). To better understand this approach, V. N. Vološionv
18 (1973[1929]) stated: “Only on the grounds of a materialistic monism can a
19 dialectical resolution of all such contradictions be achieved. Any other
20 grounds would necessarily entail either closing one’s eyes to these contra-
21 dictions and ignoring them or transforming them into a hopeless antin-
22 omy, a tragic dead end” (p. 40). The major reason that Vygotskian non-
23 classical psychology is not postmodern is because it reflects a sense of
24 hierarchy, but often in a non-spatial reality, something almost impossible
25 to grasp without reading the newer theories of physics from quantum me-
26 chanics to holography. Vygotskian non-classical psychology has never
27 fallen prey to postmodern “flatbed holism.” (K. Wilber 1982). In today’s
28 language, a new understanding of “whole” and “parts” has been coined,
29 called *holon*, within a *holoarchy*, which represents wholeness, unity, and
30 functional integration.

31 Hierarchy is a word coined by Arthur Koestler. It is a combination between the
32 Greek word ‘*holos*’ meaning whole and the word ‘hierarchy.’ It is a hierarchically
33 organized structure of units or entities that are called ‘Holons.’ Each Holon can
34 be regarded as either a whole or as a part depending on how one looks at it. A
35 Holon will look as a whole to those parts beneath it in the hierarchy, but it will
36 look as a part to the wholes above it. So, a Hierarchy is then a whole that is also
37 a structure of parts that are in themselves wholes. (F. Funch 1995)⁵

38
39 Within Vygotskian non-classical psychology the focus is on the interrela-
40 tionships of developmental growth (and regression) within holarchies. Vy-
41 gotsky’s overall metatheories transcend classical psychology, cognitivism,
42 postmodernism, etc., leaving us with theories, which to date have simply

1 not been understood in their unity, and will perhaps never be understood
2 completely.

3

4

5 4. Vygotskian Non-Classical Psychology

6

7 Within a new understanding of Vygotskian non-classical psychology it is
8 important to restructure one's thinking regarding classical psychology,
9 where mental processes are viewed as being exclusively internal. "Vygotsky
10 stated that mental contents and processes do exist in extracerebral
11 and extracorporeal forms, outside the human mind, in the world of
12 human artifacts, cultural sign structures, human-made environment and
13 interpersonal communication, prior to their intra-individual functioning"
14 (D. Leontiev 2005: 20). A primary focus of non-classical psychology is
15 on the development of a "self-determined," "self-regulated" personality,
16 which is individual, cultural, and social. In classical psychology there is
17 often a focus on stimulus and response, and in non-classical psychology
18 the focus is on the "gap" and the "firing potential" [normally understood
19 regarding neurons in the brain] engendered between the stimulus and re-
20 sponse, and the resulting *functional relationships* which are transformed.
21 For Vygotsky, this type of thinking can be understood with the concept
22 of *meaning*, which lies *between* thought and the word. It is the "still
23 point" where transformation is created. An example of this new thinking
24 within neuroscience is called "synaptogenesis," or the creation of new
25 synapses between the existing neurons, a process that probably continues
26 until the moment of death. It is the "firing potential" within the space or
27 Taoist *hole*, between the synapses where creativity is born; and, because
28 of the dance of the projection neurons, inter-neurons, etc., a circuit/
29 system creating human functions is formed. D. Leontiev (2005: 21) asked
30 the following question:

31

32 What is there between stimulus and response? Usually scholars speak about inter-
33 mediate variables, O for organism. Gordon Allport noted that when he started to
34 study these processes, he found a very small S, a very small R and a very, very big
35 O (quoting Evans 1970: 14). Rollo May (1981) wrote that human freedom,
36 human self-determination starts when we make a pause between the stimulus and
37 response. The gap between S and R is a very important point where natural,
38 mechanistic chains are broken.

38

39 There is a "still point" of creation, which can be understood in Vygotsky's
40 thoughts on *displacement*⁶ (which can lead to *catharsis*), Viktor
41 Frankl's *dereflection*, V. Sklovskij's *deautomatization*, A. N. Leontiev's
42 *disobjectivation*, Mamardashvilli's *converted form*, all of which can lead

1 to a transformation and the development of new *functional organs* (Uk-
2 tomsky, Zinchenko). Within non-classical psychology, the answer to the
3 problem of innatism is the development of functional organs (which cor-
4 respond to Vygotsky's *psychological functional system*), meaning the de-
5 velopment of various new skills, such as collective memory, intentions,
6 integral worldview, etc. These functional organs can only arise through
7 interaction with the environment, with an *image of the anticipated future*.
8 "Transformation is the process in which novel functional organs are con-
9 structed. This process is performed by means of mediators that Vygotsky
10 called psychological tools" (Zinchenko 2002: 7). In order for this process
11 of transformation to take place, there must be a structure and system in
12 place to allow for concept formation. "Only with a system can the con-
13 cept acquire conscious awareness and a voluntary nature. Conscious
14 awareness and the presence of a system are synonyms when we are speak-
15 ing of concepts" (Vygotsky 1987: pp. 191–92). And within the system of
16 development, asymmetrical *relationships* are of the utmost importance
17 within a non-spatial understanding of consciousness. "Consciousness de-
18 termines the fate of the system, just like the organism determines the fate
19 of the functions. Each interfunctional change must be explained by a
20 change of consciousness as a whole" (Vygotsky 1997: 130). It is at this
21 juncture that the importance of *language* becomes understood. Returning
22 to the law of conscious awareness (Claparede) and the law of displace-
23 ment (Vygotsky), the following definition is offered:

24
25 To become consciously aware of an operation it must be transferred from the
26 plane of action to the plane of language; it must be recreated in imagination such
27 that it can be expressed in words. This displacement of the operation, from the
28 plane of action to the plane of thought, is accompanied by the same difficulties
29 and complications that were encountered when the operation was first learned on
30 the plane of action. (Vygotsky 1987: 183)

31 Within the various, often static debates regarding externalization and in-
32 ternalization, a big problem has revolved around the concept of "rooting"
33 or "ingrowth." Where does the external actually take root as the internal-
34 ized form, which becomes a sign/symbol/word agent of mediation? In
35 many areas of traditional discourse, externalization/internalization are
36 positioned against each other, as opposites. One aspect we hope to concen-
37 trate on in non-classical psychology is the role of *transformation* that al-
38 lows us to create voluntary action (remembering that thinking transforms
39 action and action transforms thinking). This type of new understanding of
40 "self-determination" is *action directed towards the future*. In much of tra-
41 ditional thinking, "the largest problem is that the logic of internalization-
42 externalization eliminates the creative nature of the developmental

1 process, without which new formations cannot arise. This logic leaves no
 2 place for intuition, insight, and ultimately, for revelation” (Zinchenko
 3 2002: 21). In viewing the *ideal*, *real*, and *mediational* forms of human ex-
 4 istence, we simply must go beyond the implications of stimulus/response
 5 and externalization/internalization to a very different, non-spatial level.
 6 It is the *space between* that needs to be nurtured and allowed to develop.

7
 8 Affective-meaningful formations, which are objectivized in ideal forms that also
 9 have a material existence (i.e., that are objectivized in culture), never lose their
 10 subjectivity. The real, individual aspect of affective-meaningful formations is not
 11 something internal. It is quite objective and exists in the dimensions that Buber
 12 termed as the space *in-between* (between you and me). Therefore, a real form has
 13 a subjective-objective existence . . . Relations between ideal and real forms can be
 14 described as that of mutual generation between each other: Real forms generate
 15 ideal ones and ideal forms generate real ones . . . Ideal, real, and mediational
 16 forms constitute human existence, or, in Mamardashvili’s words, form ‘a single
 17 existence-consciousness continuum.’ It is here that I see the *non-classicism* of Vy-
 18 gotsky’s approach and the *organic nature* of his cultural-historical psychology.
 (Zinchenko 2002: 23)

21 5. Conclusions

22
 23 The purpose of this paper has been to look at a few Vygotskian non-
 24 classical theories, which have not yet been written about in depth theoret-
 25 ically, or used practically. Looking at the fusion of the objective and sub-
 26 jective worlds through the lens of consciousness (viewed as non-spatial as
 27 related to mental functions, cf. Vygotsky 1997: 129), the internal mecha-
 28 nisms that lead to a personal transformation via principles of mediation,
 29 displacement, catharsis, transformation, and the formation of functional
 30 organs lead to the possibility of self-mastery, self-determination, and *free*
 31 *action of will* (in a Spinozian context). *Action directed toward the future*
 32 will always include thinking + interrelating with one’s environment.
 33 However, the focus is not on the environment acting upon the individual.
 34 D. Leontiev (2005: 21) states an important point in non-classical psychol-
 35 ogy: “In [A. N.] Leontiev’s formulation we find . . . [in] the inner reality,
 36 the subject is the true agent of development, its starting point is inside
 37 rather than outside. It is not the external reality that acts upon the indi-
 38 vidual, but rather the subject acting upon him/herself through some ex-
 39 ternal reality.”

40 This focus is holistic, yet differentiated, as described within the param-
 41 eters of holography; and the basic goal is to reach the ultimate level of
 42 development of one’s personality. “The key to the mastery of behavior is

1 the mastery of stimuli. Thus, “*Mastery of behavior is a mediated process*
2 *that is always accomplished through certain auxiliary stimuli*” (Vygotsky
3 1997: 87).

4 Another basic key to this understanding is that of language develop-
5 ment via the system of concept formation, all translated into personality
6 development. One of the core elements within the “gap” or the “still
7 point” between stimulus/response and external/internal is *mediation*. We
8 need to remember that theory and practice form a basic unit within non-
9 classical psychology, which is viewed as a “holistic unit.” When rereading
10 Vygotsky we can begin to analyze phenomena as “wholes,” viewing
11 components/structures historically (within a genetic-developmental per-
12 spective), which must be studied in motion, with an analysis of process
13 (cf. Vygotsky 1997: 43). In other words:

14
15 If we replace analysis of things with analysis of process, then the basic problem
16 for consideration naturally becomes the genetic restoration of all the instances of
17 development of the given process. Here the principal task of analysis is restoring
18 the process to its initial stage or, in other words, converting a thing into a process.
19 This kind of experiment attempts to dissolve every congealed and petrified psy-
20 chological form and to convert it into a moving, flowing flood of separate in-
21 stances that replace one another. In short, the problem of such an analysis can be
22 reduced to taking each higher form of behavior not as a thing, but as a process
23 and putting it in motion so as to proceed not from a thing and its parts, but
24 from a process to its separate instances. (Vygotsky 1997: 68)

25 Vygotsky’s non-classical psychology is *height* psychology within a process
26 model of movement and change. And, paradoxically, the core of this psy-
27 chology is a focus on *holism* and *synthesis*.

28
29

30 Notes

31

- 32 1. For the purposes of this paper an analysis of sociocultural theory and activity theory
33 will not be offered. For a deeper discussion, please refer to D. Robbins and A. Stetsenko
34 (2002), *Voices within Vygotsky’s Non-Classical Psychology*, New York: Nova Science
35 Publishes, Inc. All branches, trends, directions mentioned in this paper are viewed as
36 being heirs of Vygotsky’s thinking, and it is in the interest of all of us to understand the
37 various definitions of these schools of thought, and to work together to form a strong
38 international body of theory, research, and practice. Although the term *non-classical*
39 *psychology* has basically been used by Russians to date, it is indeed used within both
40 Russian cultural-historical theory and activity theory.
- 41 2. For a detailed discussion of comparisons between Vygotsky’s ZPD and Western educa-
42 tional constructivism, see D. Robbins (2003), *Vygotsky’s and A. A. Leontiev’s semiotics*
and psycholinguistics: Applications for Education, Second Language Acquisition, and
Theories of Llanguage. Westport, CT: Praeger.

- 1 3. For information on the International Vygotsky Society, write to Vygotsky1@ru.ru or
2 drobbins@mail.ru.
- 3 4. “We have argued that the brain is not organized like a computer, that its functioning
4 rests instead on such properties as variability, differential amplification, degeneracy, and
5 value” (Edelman, 2000, p. 93).
- 6 5. Parts of this section were published in D. Robbins (2005) “General Holographic Visions
7 of Vygotsky, Luria, Pribram, Leontiev, Eisenstein, and Vološionv,” in *Intercultural
8 Pragmatics* 2/1, pp. 25–39.
- 9 6. Displacement as described by T. Deacon (1997 : “. . . a genetic variation that increases
10 or decreases the relative sizes of competing source populations of growing axons will
11 tend to displace or divert connections from the smaller to favor persistence of connec-
12 tions from the larger . . .” (p. 207) “. . . the displacement process provides the crucial
13 link between global changes in brain growth patterns and changes in functional organi-
14 zation. Our relatively larger brain and its comparatively prolonged and out-of-sync
15 growth suggest that displacement may have played a crucial role in restructuring the re-
16 lationships within it, ultimately resulting in some very different functional relationships
17 from those in other primates and other mammals generally” (p. 212).

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