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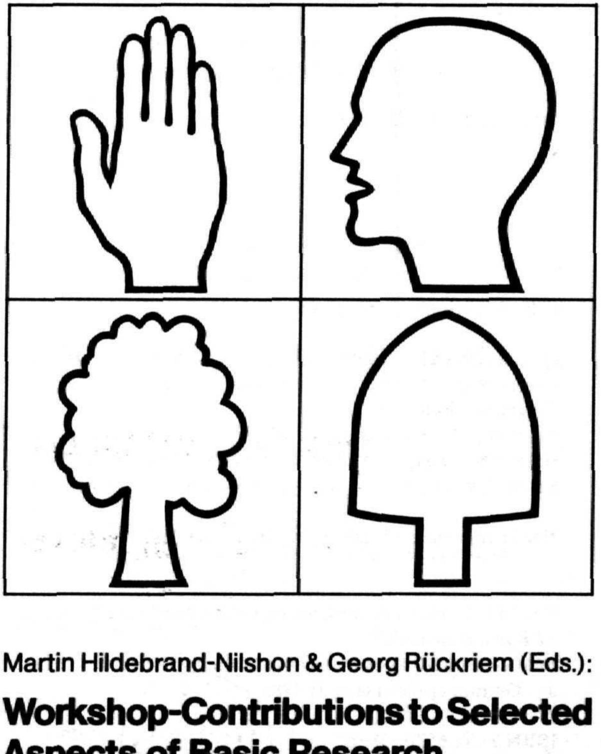
Proceedings of the 1st International Congress on Activity Theory
Kongreßbericht des 1. Internationalen Kongresses zur Tätigkeitstheorie

PROCEEDINGS



Martin Hildebrand-Nilshon & Georg Rückriem (Eds.):

Workshop-Contributions to Selected Aspects of Basic Research

Workshopbeiträge zu ausgewählten Aspekten der Grundlagenforschung

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Workshop 1
Chair: A. Metraux (Heidelberg)
Activity Theory and its Foundations in Philosophy and Philosophy of Sience
Wissenschaftstheoretische und philosophische Grundlagen der Tätigkeitstheorie

Rene van der Veer, Jaan Valsiner

Vygotskij as a philosopher of science

1. Introduction

The Sovietpsychologist Lev Vygotsky (1896–1934) is now generally accepted as a major figure in the history of psychology. Selections from his work have been translated into many languages and his ideas have inspired contemporary thinkers as Jerome Bruner (e.g. Bruner, 1985), Stephan Toulmin (1978), and Roman Jakobson (1985). He published articles and books on such diverse topics as *schizophrenia, thought and language, intelligence testing,* and disabled children (Van der Veer, 1985). It is less generally known, however, that he was also a methodologist in the Russian sense of the word, that is one who analyzes basic assumptions and concepts of various psychological currents and psychology in general. Such a methodologist thus has to be both a knowledgeable historian of psychology and a philosopher of science. Vygotsky combined these qualities and it is our conviction that his importance for psychology lies precisely in his methodological work. It is the way Vygotsky tackled psychology's age-old problems, such as the nature–nature issue and the mind–body problem that makes him one of the major psychologists of this century.

The first more or less complete account of Vygotsky's methodological ideas can be found in the essay "The historical significance of the crisis in psychology" (Vygotsky, 1927/1982). In this paper Vygotsky analyzed the psychological currents of his time, traced to which extent they are compatible or incompatible, and sought to find materials for a future methodology. As Vygotsky deals with problems of practice in psychology, the history of scientific ideas, problems of epistemology, and dualism in the social sciences the outlines of his own stance with regard to philosophical and epistemological problems become progressively clear.

A second study of special significance for an appraisal of Vygotsky the *methodologist* is the unfinished essay entitled "The theory of

emotions. A historical–psychological investigation" (Vygotsky, 1933/1984). This study, which was never published during Vygotsky's lifetime and of which only two small excerpts (Vygotsky, 1968, 1970) were known until now, concentrates on the JamesLange theory of emotion and its roots in the history of Western thought. It is thus of more limited scope than the 1927 essay, but exemplifies Vygotsky's lifelong interest for problems of dualism in psychology. In this paper we will concentrate on the essay on the historical significance of psychology's crisis.

2. Crisis in psychology

The 1927 essay is actually a quite complex work in which Vygotsky deals with many problems of classical and contemporary psychology. In his introduction Vygotsky calls attention to the unfortunate state of affairs in psychology. The many and diverse currents and subcurrents of psychology produce heaps of facts, but what is missing is a general psychology. We lack a subdiscipline of psychology (nowadays we would call it theoretical psychology) which asks the important questions, which generalizes the findings found in different subdisciplines and schools. We do not need new fact–finding, says Vygotsky, what we need are concepts or ways to interpret the gathered facts.

The need for such a general framework of concepts and way of looking at the facts can be demonstrated by studying the history of psychology. In particular the study of scientific discovery and its dissemination is instructive. Vygotsky gave an original sketch of the vicissitudes of scientific discoveries in the history of psychology. With his analysis he wished to show that psychology apparently has an urgent need for clarifying principles and general concepts. Each discovery, if at all possible, is declared an explanatory principle (see Kozulin, 1984).

In the next part of the essay Vygotsky attempted to show that the difference between general (theoretical) psychology and empirical psychology is gradual. Binswanger's idea that general psychology should confine itself to abstract, logical concepts was criticized by Vygotsky. In so doing he formulated several interesting epistemological statements.

3. Epistemology

Vygotsky argued that Binswanger's position was untenable because every concept, however, abstract, ultimately refers to reality. It does not matter whether we deal with mathematical or philosophical concepts, they all refer ultimately to concrete, empirical reality. He was leaning here on Engels (1925/1978, p. 530) who had considered all "freien Schöpfungen und Imaginationen des Menschengeistes" to be an utter impossibility. The so-called free creations and imaginations are in reality inspired by concrete reality. However, although even the most abstract thought contains elements of concrete reality, it is also true that every scientific fact already contains a first abstraction. There are no absolutely abstract ideas without a material foundation as there are no absolutely empirical concrete facts whitout a germ of abstraction. Vygotsky argued that this state of affairs is often overlooked by psychologists who try to follow the model of the natural sciences because there one would find an objective and direct registration of facts. In his opinion these psychologists subscribe to a totally false conception of the natural sciences. The natural sciences are only seemingly of a purely empirical nature. One reason for this ist that we make a selection from the stream of experiences and another is the fact that scientific facts are presented in verbal or symbolic form. With regard to the first point Vygotsky stated that the human eye is, naturally, a selective organ. Much the same goes for our scientific equipment which, too, can only registrate part of reality and in a specific way (Vygotsky, 1927/1982, p. 348). With regard to the second point Vygotsky noted the following. We describe scientific findings with language. Doing so, however, we inevitably introduce abstractions. Every so-called purely empirical observation is a mixture of perception and thought. There is no way to separate our conceptual knowledge couched in language from our perceptions. This line of thought leads Vygotsky to the thesis that in the scientific enterprise "in the beginning was the word" and that the word is theory or science in embryonic form (Vygotsky, 1927/1982, p. 358).

With these observations Vygotsky thus opened a frontal attack on the idea that the natural sciences (and science in general) proceed by gathering direct, a-theoretical facts. Here again he referred to Engels "Dialektik der Natur" (Engels, 1925/1978, p. 346; p. 475; p. 506). His emphasis on the role of the word as such, however, is also clearly related to his linguistic background, and especially to the work of

Potebnja (see Van der Veer, 1985; Potebnja, 1922).

What also played a crucial role in the development of psychology's crisis, according to Vygotsky, is the "dogma of direct experience". Both in objective and subjective psychological currents the direct experience was stressed. In subjective psychology one took the direct experience of introspection as starting point of theories. In behaviorism we saw a limitation to the direct registration of external, observable facts. In both cases one does not exceed the limitations of the moment. Vygotsky argued that in psychology we should break through this direct experience by means of interpretation. This, of course, happens in all sciences (for one reason because we cannot avoid interpretations, see above). As regards this point Vygotsky does not see any principal difference between psychology, the study of history, or the natural sciences. In none of these branches of science one stops at the direct facts, but all interpret and extrapolate to past and future. This emancipation from our sense-organs is not only a necessity for the science of psychology, Vygotsky argued, it is psychology's liberation and *salto vitale* (Vygotsky, 1927/1982, p. 349). We may conclude that the registration-induction procedure is considered by Vygotsky to be a fiction. Neither in the natural sciences, nor in psychology we come across this procedure. In all sciences we meet with interpretation, analysis and reconstruction of findings.

These epistemological ideas make a surprisingly modern impression. In fact Vygotsky seems to anticipate some of the arguments used by post-positivistic philosophers of science such as Popper, Kuhn', Lakatos, Hanson, and Feyerabend. At the very same time that Carnap *cum suis* developed logical-positivism its assumptions were undermined a few thousand miles away. Part of the explanation of this fact should be sought in the general philosophical climate in the Soviet Union of these days. Boeselager (1975), in his study of the Soviet criticism of (neo-)positivism has argued that it was Lenin who emphasized the role of theory in the Soviet conception of science. It is a paradoxal fact that it was Lenin too, who stressed the importance of practice. This unique combination of theory and practice is clearly reflected in Vygotsky's methodological writings (see next paragraph).

We here have a clear example of the social-cultural embeddedness of social scientific thought (Valsiner, 1986). It has been Lenin's

theses, in particular his emphasis on theory and his condemnation of empiricism (Boeselager, 1975, p. 38) which formed the basis for Soviet philosophy of science's different development as compared with (neo-)positivsm.

4. The role of 'praxis'

The main reason for the crisis in psychology, Vygotsky argued, was the development of applied psychology. In former days academic psychology looked with contempt to applied psychology. The application of knowledge was a sort of by-product, a fortuitous gain, which was not worth serious study. Vygotsky saw a radical change of this situation in his time. The growth of branches of applied psychology, such as psychotherapy, intelligence testing and educational counseling, forced the researchers to be explicit in their assumptions and to think over their theoretical concepts. This meant to Vygotsky that 'praxis' (practice) had taken over the leading role in science. In former days, the application of knowledge fell outside the field of science. The success of failure or the application had no influence whatsoever on the scientific theory (Vygotsky, 1927/1982, p. 387). The rise of applied psychology changed this situation. Practice had become the new truth criterion of theory. That is why Vygotsky considered it to be of the utmost importance to develop a methodology for applied science. The combination of applied research and a good methodology was one of the demands that had to be met before a solution of the crisis in psychology would be possible. Vygotsky: "However insignificant the practical and theoretical value of the Binet-scale or other psychotechnical tests, however bad the test in itself may be, as an idea, as a methodological principle, as a perspective it is very much. The most complex contradictions of psychology's methodology are brought to the field of practice and can only be solved there. Here the dispute stops being fruitless, it comes to an end..... That is why practice transforms the whole of scientific methodology" (Vygotsky, 1927/1982, p. 388).

It was Vygotsky's conviction that practice, being an impartial arbiter, would not allow more than one winner but would select the one and only true theory. We cannot use Husserl's philosophy to select tram-drivers, Vygotsky argued. And ultimately, of course, the criterion of practical applicability would lead to the triumph of causal, dialectical-material psychology.

This brings us to one of the main themes of Vygotsky's essay, that is the bifurcation of psychology into objective, causal psychology on the one hand, and subjective, hermeneutic psychology on the other hand.

5. The bifurcation of psychology

In the second paragraph of this paper we referred to the many different currents and schools in psychology. In the nineteentwenties psychology knew, among other things, reflexology, reactology, psychoanalysis, Gestaltpsychology, personalism, and behaviorism. Following other researchers Vygotsky stated that these currents could be divided into two groups, each with their own conception of science and methodological approach. On the one hand there was causal, explanatory psychology and, on the other hand there was descriptive psychology. The first type of psychologists propagated psychology as *Naturwissenschaft* and desired to be scientists in the accepted sense common to the natural sciences. They tried to explain and predict human behavior. The second type of psychologists regarded psychology as *Geisteswissenschaft* and seek to understand or describe human psychological processes. They denied the possibility of the natural science approach for the higher psychological processes, argueing that we can only empathically understand these processes. Some representatives of descriptive psychology, however, admitted the possibility of a causal, natural science explanation of relatively simple, lower, psychological processes. At the same time, many adherents of the natural science approach were reluctant to study the higher psychological processes. These were in their opinion difficult to investigate or even nonexistent (here they fell victim to their empiricist prejudice, according to Vygotsky, see paragraph 3). In this way the following division of labour in psychology evolved: causal, natural science psychology studied lower processes (e.g. reaction time), and descriptive psychology studied higher processes (e.g. problem solving). This was a highly unsatisfactory situation according to Vygotsky, who declared that we should not abandon the higher processes to descriptive psychology, they too had to be explained. Consequently, in his 1927 essay he opted for a psychology inspired by the natural sciences. Psychology had to apply this approach even to the higher processes (Vygotsky 1927/1982, p. 417). Vygotsky's choice was made on methodological grounds: he preferred objective, causal

psychology because of its superior methods, but he thought descriptive psychologists were right in emphasizing higher psychological processes. But at the background of his analysis of the different schools and currents in psychology was also Lenin's notion of "partijnost'" (partisanship). One aspect of this notion was that in philosophy of science ultimately only two positions are possible. One is either materialist or idealist (Boeselager, 1975, p. 30). There can be no middle position. This is one of the reasons why Vygotsky tried to reduce all psychological currents of his time to these two extreme positions explicitly asserting that there was no third possibility. What he advocated was a dialectical materialism that would enlarge its territory to the detriment of idealism. We conclude that Vygotsky accepted the distinction between lower and higher psychological processes, and that he sought to explain both types of processes in a deterministic way.

In his later writings he also attempted to show (Vygotsky 1933/1984) that psychology's bifurcation is a legacy of Descartes' dualism. It is Descartes' distinction between a mechanistic, determined body and a free, undetermined soul which is still haunting the science of psychology (cf. Kendler, 1981). Vygotsky turned to the writings of Descartes' contemporary Spinoza to find a possible solution for this unhappy division of psychology (Van der Veer, 1986 b). Unfortunately, he did not develop this idea into a full-grown program.

In his later works Vygotsky also developed his cultural-historical theory to account for the distinction between lower and higher processes (Van der Veer, 1985; Van der Veer & Van Ijzendoorn, 1985). He then made clear that he regarded the genetic point of view as the key concept in overcoming psychology's bifurcation. The crux of Vygotsky's social-historical determinism is then to show how the child incorporates cultural tools through language and how the child's affective and cognitive psychological processes are, therefore, ultimately determined by his or her social-cultural surroundings (Van der Veer, 1986 a).

6. Conclusions

We have discussed several of the main themes of Vygotsky's study and showed some of its backgrounds. Hopefully it has become

increasingly clear that Vygotsky grappled with some of psychology's most significant problems. His opposition to a fact-finding approach and his plea for a theoretical psychology still deserve to be heard, in particular in a time when departments of theoretical psychology in various countries are threatened by the omnipresent specter of budget cuttings. The actuality of his criticism of empiricism and positivism hardly needs mentioning. In fact, in recent textbooks on the philosophy of science one can encounter all of his arguments (cf. Chalmers, 1982). His emphasis on practice as a criterion of truthfullness of a theory is of course still very much a matter of debate in Marxist oriented philosophy of science (cf. Bayertz, 1980). Finally, his analysis of psychology's bifurcation and his dismissal of any dualism is still a hot topic today. Various studies (Kendler, 1981; Popper & Eccles, 1977) have made abundantly clear, that psychology will be haunted by the problem of dualism for a long time to go.

All this hopefully demonstrates that Vygotsky was a philosopher of science who showed a deep understanding of psychology's problems and who managed to give some penetrating analyses of them. Vygotsky deserves to be known not only as the excellent child psychologist and educationalist he was. He was also, and probably first and foremost, a theoretical psychologist and a philosopher of science.

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