



Leo Semyonovitch Vygotsky

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Leo Semyonovitch Vygotsky (1896–1934) was born on November 5, 1896, in the small town of Orsha in Byelorussia. He began his professional career as a literary critic and public school teacher at several schools in the provincial city of Gomel near Chernobyl in the Ukraine. Later, his interests gradually changed from art to the psychology of art and eventually to psychology proper. In the early 1920s, Vygotsky established his first small labora-

tory in Gomel. A series of lectures at the Second Neuropsychological Congress in Leningrad in January of 1924 led to an invitation to become a research assistant at the Institute of Experimental Psychology of Moscow State University. Thus began his brilliant but brief academic career, during which he held several professorships, wrote numerous articles and books, and advanced original theories in various subdisciplines of psychology. His writings covered many areas of psychology and related fields of science. For reasons of clarity, Vygotsky's contributions to each major subject area are described separately in the following sections; it should be realized, however, that Vygotsky himself did not make such distinctions between his different interests.



Figure 1 Portrait of Vygotsky as a young man.

Philosophy of Science and Methodology

From the beginning of his academic career, Vygotsky was fascinated by the philosophical and methodological problems of scientific psychology. His search for answers to these persistent questions was to continue throughout his life. In 1926, he prepared a long article on "The Historical Meaning of the Crisis in Psychology," which was only published posthumously (Vygotsky, 1982). Like other important psychologists and philosophers (e.g., Binswanger, Münsterberg, Koffka, and Spranger), he devoted a great deal of attention to the respective advantages and disadvantages of introspective psychology and behaviorism. Following the German philosopher Eduard Spranger (1882–1963), Vygotsky emphasized psychology as a dichotomy which included natural, and social or "human" science branches. He was convinced that Spranger's division of psychology could be traced back to the dualistic philosophy of René Descartes (1596–1650) and that the unity of psychology could be re-established

through the ideas of Baruch Spinoza (1632–1677). Vygotsky tried to apply his Spinozistic analysis of the nature of psychology in his essay, “The Theory of Emotions: A Historical-Psychological Investigation.” This important work also remained unpublished until 1984 (Vygotsky, 1984).

Educational Psychology

As the result of his teaching experience, Vygotsky developed a strong interest in educational questions. Initially his ideas were influenced by the theories of Ivan Pavlov (1849–1936) and Konstantin Nikolaevich Kornilov (1879–1957) (Vygotsky, 1926). Gradually, however, Vygotsky developed his own views, in particular, about the relationship between education and child development (Vygotsky, 1935a). In this context, he originated the concept of the “zone of proximal development,” which is still popular today. According to this concept, mental development results from a close, social interaction between the child and an intellectually more advanced individual. All mental functions are first shared by the child and another person, and only later become the private property of the child. This view, which can be traced back to the ideas of Josiah Royce (1855–1916), James Mark Baldwin (1861–1934), George Herbert Mead (1863–1931), and Pierre Janet (1859–1947), suggests that intellectual diagnosis should always include a determination of the degree to which children can benefit from interactions with experienced, adult members of their culture. Consequently, Vygotsky proposed that each child should routinely be given tests of intelligence on at least two occasions. During the first test session, the child would be expected to solve problems independently, and the results would yield a cross-sectional estimate of the child’s abilities. During a later evaluation, the child would be given opportunities for asking help from an adult associate. The second evaluation would yield a measure of the child’s developmental potential. Recent American studies have shown that such dynamic assessments provide more predictive information than standard IQ scores (Campione, Brown, Ferrara, & Bryant, 1984).

Defectology

Vygotsky’s first scientific publications dealt with the field of *defectology* or child psychopathology, which focused on the diagnosis and treatment of mentally

and physically handicapped children. According to his contemporaries, Vygotsky was an experienced clinician who possessed exceptional tact and a great deal of sensitivity in his interactions with his young patients. He was particularly interested in the problems of blind and deaf children and wrote about them at length. His central argument was that many of the problems that handicapped children face are the result of their social isolation, and that these could be overcome by successful social integration. He strongly supported the mainstreaming of handicapped children and adolescents into regular classrooms and into a normal work environment. According to Vygotsky, the loss of hearing or sight is not the most serious handicap for children. Eyes and ears are “instruments of the mind” and can be replaced by artificial instruments or other sensory systems. For example, fingers can replace the eyes when blind children learn to read Braille.



Figure 2 Title page of Vygotsky’s *Principles of Pedology* (1935).

Pedology

Although Vygotsky nowadays is known as a "developmental psychologist," in his own time he was seen as a pedologist and the professorships he held were mainly in pedology. He published several books and many articles in this field and served as coeditor of the *Soviet Journal of Pedology*. For Vygotsky pedology was the science that integrates disciplines, like medicine, psychology, education, and defectology, and applies knowledge from these fields to specific age ranges or developmental periods. He tried to analyze the unique nature of each developmental period and its specific problems (Vygotsky, 1929).

Unfortunately, the majority of Russian pedologists relied so much and so uncritically on the massive use of IQ tests that one can sympathize to some

degree with the growing dissatisfaction of the Soviet government. Be that as it may, pedology was officially outlawed in 1936 as a science, and two years after his death, Vygotsky's writings suffered the same fate. It was decades before his articles and books were republished, and even today much of Vygotsky's work is virtually unknown (Van der Veer & Valsiner, 1991).

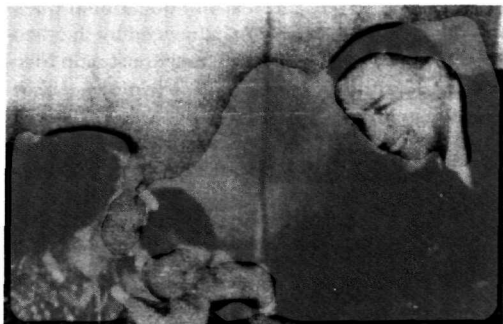


Figure 4 Vygotsky, his wife Rosa, and his daughter Gita, during a filmed psychological experiment.



Figure 3 Portrait of Vygotsky shortly before his death (1934).

Psychology

Vygotsky is best known through a posthumous collection of his articles, which were published under the title *Thought and Language* (1934). The central topic of this book is the relationship between thinking and speaking during child development. According to Vygotsky, speech and verbal concepts are tools or instruments which the developing personality needs in order to direct and control his or her own thinking.

Although these writings were significantly stimulated by the original work of Jean Piaget (1896–1980), Vygotsky reached very different conclusions. For him existing mental functions, like early memory and attention, are transformed as soon as a child begins to speak and acquires so-called scientific concepts (e.g., the concept of a mammal). Scientific concepts form a system and permit the child to draw various conclusions (e.g., "some animals have lungs or do not lay eggs"). According to Vygotsky, these scientific concepts are only fully acquired in early adolescence and result in a fundamental reorganization of the child's mind. For example, a child can now utilize concepts when

recalling events, and these concepts reorganize the material to be memorized and allow the child to reproduce it in a logical sequence. During the final years of his life, Vygotsky concentrated on the acquisition of scientific concepts during child development. Specifically, he explained certain mental disorders as the result of an impairment or deficiency of the conceptual system. For example, Vygotsky believed schizophrenia involved a total collapse of conceptual thought.

Vygotsky was a multitalented scientist whose ideas influenced important subspecialties of psychology and related scientific disciplines. His extensive familiarity with European psychology and philosophy shaped his thinking about important psychological problems. Only history will show which of Vygotsky's discoveries will be remembered. However, it is likely that, if nothing else, Vygotsky's profound analysis of major themes in psychology, such as the merits and shortcomings of introspection and his theory of instrumental thinking, will be mentioned in future histories of psychology.

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