

Devoted to the Matter of Science: The Life and Professional Career of Piotr Galperin

For most people, their professional careers go hand-in-hand with their private lives and the development of his or her scientific ideas, is inherently connected with the person's life journey. In this article, I very briefly present Piotr Galperin's biography against the backdrop of the historical context to gain insight into the trajectory of the contributions of this outstanding scholar.

Family, Education, and Early Research (1902–1930)

Piotr Galperin was born to Jewish parents on 2 October 1902, in Tambov, Russia. At that time, Tambov was a provincial and underdeveloped town in czarist Russia, where Jews were allowed to settle. Galperin's father was a doctor in Tambov, and young Piotr often accompanied him on visits to sick people. In 1911, his father became a professor at Kharkov¹ Medicine Institute, and the family moved to Kharkov, then the capital of Ukraine. In Kharkov, Galperin studied at the grammar school, where he met his future wife, Tamara Meerzon (Haenen, 1996). It was her, who Galperin dedicated his first book to, *Introduction to Psychology*, published in 1976. Little Galperin was often ill (at the age of 17, he contracted tuberculosis) and often stayed at home. However, young Galperin compensated for the gaps in his education by reading books on psychology and philosophy from his father's library. From his early days, he wanted to become either a philosopher or a psychologist. However, after a strong recommendation from his father, Galperin chose to pursue medicine. He enrolled at Kharkov Medicine Institute in 1921 and graduated in 1926, as a psychoneurologist.

During his school years, Galperin was fascinated by several schools of psychology that attempted to explain human consciousness—the period that Vygotsky described as a crisis in psychology (Dafermos, 2014). Vygotsky presented a thorough analysis of the crisis in psychology in his famous essay “The Historical

¹Kharkov—Russian; Kharkiv—Ukrainian. During the events described in the article, the spelling Kharkov was mostly used and therefore this spelling is maintained throughout the article.



Fig. 1 Kharkov medicine institute (2019). Photo: Irina Engeness

Meaning of the Psychological Crisis” (Vygotsky, 1997). In the essay, Vygotsky argued that psychology should overcome the Cartesian dualism of body and mind in order to understand human cognition. Vygotsky postulated that the higher psychological functions could be studied by objective and experimental science and that human consciousness is rooted in social life. Consequently, in order to understand human consciousness, one should turn to real life, which is stimulated by the development of relationships among humans involved in practical activities (Vygotsky, 1980). The central idea in Vygotskian theory is that participation in social practical activity, using tools, is the main factor influencing the development of human consciousness. Although Vygotsky’s essay on the crisis in psychology was written in 1926, the fact that Galperin met Vygotsky in the early 1930s, and worked closely with him on a regular basis for several years (Haenen, 1996), makes it quite possible that Galperin had the opportunity to read Vygotsky’s manuscripts even at the beginning of the 1930s. Considering Galperin’s interest in dualism and understanding psychology when he was young, the influence of Vygotsky’s works might have been significant.

A further argument also suggests that Galperin was familiar with and influenced by Vygotsky’s view on the crisis in psychology. In the early 1930s, Vygotsky wrote a study on emotions (Vygotsky, 1984), which was published in full only in 1984. In this study, Vygotsky attempted to connect the crisis in psychology with the issue of mind–body dualism (Van der Veer & Valsiner, 1991). In 1970, a short excerpt of this manuscript was published in the Soviet journal *Voprosy filosofii* (Philosophy Matters), accompanied by a preface written by Galperin. This suggests that Galperin might have been familiar with Vygotsky’s works through the original manuscripts and that Galperin’s quest to overcome mind–body dualism might have originated in Vygotsky’s works (Haenen, 1996). However, first, he had to complete his education.

In 1926, Galperin graduated from Kharkov Medicine Institute as a psychoneurologist—a specialisation in medicine that dealt with both organic and functional nervous and mental disorders. In his third year of studies, in 1924, Galperin completed a study under the supervision of Professor Platonov on the effects of hypnosis on digestive leucocytosis.² Platonov (a well-known physician at that time in the field of hypnosis whose research was concerned with examining the effect of verbal activity on the human brain) was involved in the study of hypnosis and the possibilities of using hypnosis for treating neuroses and as a substitute for anaesthetics in operations and in childbirth. The results of Galperin's study were published in 1926, in the Ukrainian *Journal of Reflexology*, which might be considered his first scientific publication (Stepanova, 2017).

After graduation, Galperin worked as a physician at a hospital for drug addicts led by Prof. Platonov. He successfully used hypnosis to treat drug addicts and became quite a skilled hypnotist. However, after a while, Galperin began to understand that addiction was not merely a human weakness but a real illness, and he suggested that addicts had a sort of weak link in their metabolisms that could be compensated for by one or another type of poison, such as alcohol or other drugs. Having translated the German book *Treating the Drug Addicted*, he wrote a foreword to the Russian edition in which he suggested that the reason for drug addiction might be a dysfunction of metabolism in humans and described in detail how to treat drug addiction (Haenen, 1996). Although Galperin's hypothesis seemed promising, he did not pursue any further research on this matter.

A Path to Psychology: Kharkov School (1930–1936)

The period from 1930 to 1936, in Piotr Galperin's biography is associated with the so-called Kharkov school, headed by Leontiev. In 1928, Galperin was invited to work at the psychoneurological research laboratory, which together with the hospital for the drug addicted was part of the Ukrainian Psychoneurological Institute in Kharkov. In 1932, it merged with another large psychiatric clinic in Kharkov, the Central Clinical Psychoneurological Hospital of the Ministry of Railways, and finally reorganised into the All-Ukrainian Psychoneurological Academy (UPNA) (Yasnitsky, 2009).

The best professionals in the areas of psychology, neurology, neuropathology, and other areas from the whole Soviet Union were invited to Kharkov to work at the newly founded UPNA. Vygotsky, Leontiev, Luria and others from the so-called Vygotsky's circle, the leading psychologists in the Soviet Union at the time, were also invited to join the Academy (Yasnitsky & Ferrari, 2008b). The members of Vygotsky's circle accepted the invitation for two main reasons: First, Kharkov was the capital of Ukraine and a well-recognised scientific centre. The second and perhaps more important reason was that the atmosphere in Moscow, in the 1930s,

²Leucocytosis is concerned with the production of white blood cells (leucocytes) connected with digestion.



Fig. 2 The main building of the All-Ukrainian Psychoneurological Academy (2019) (left). Located on the Academic Pavlov Street (right). Photo: Irina Engeness

had become difficult and even life-threatening (Gindis, 1998; Van der Veer & Valsiner, 1991). There were first attacks on pedology (the science that combined physiology, defectology, psychology and pedagogy). Some of Luria’s works were banned, and the decree of 1936 abolished pedology as a science (Engeness & Lund, 2018). As Haenen (1996) describes, Kharkov was away from the hectic hub of Soviet affairs, and it was a place where the invited scientists could continue their



Fig. 3 The main entrance of All-Ukrainian Psychoneurological Academy (2019) (left), now the Institute of Neurology, Psychiatry and Narcology of the National Academy of Medical Sciences of Ukraine (right). Photo: Irina Engeness

work and remain relatively safe. In addition, at the time, Soviet psychology was divided into several conflicting schools, such as Pavlov's physiology, Bekhterev's reflexology, Kornilov's reactology, and Vygotsky's cultural-historical approach (Haenen, 1996). Kharkov seemed to be a safe harbour where the scientists could pursue their ideas apart from other conflicting schools and the threatening political atmosphere in Moscow.

Galperin and his colleagues took an active part in arranging the move of Vygotsky, Luria, Leontiev, Bozhovich and Zaporoshets to Kharkov (Haenen, 1996). However, Vygotsky, who suffered from occasional bouts with tuberculosis (Vygodskaya & Lifanova, 1996), did not move to Kharkov. Like Luria and Leontiev, he was offered only one room in a communal house and could not bring his family—his wife and two daughters—so he accepted Rubinstein's 1931 offer, to take a position in the Department of Psychology at the Leningrad Institute of Pedagogy. Nevertheless, Vygotsky actively participated in the founding of the Psychological Sector of the UPNA and closely supervised the research of the Kharkov group (Yasnitsky & Ferrari, 2008a).

The account of the internal structure of the psychological sector of the UPNA was presented in Galperin's article "Psychological Sector" in the first collection of the works of the UPNA, published in 1934, in the materials of the First All-Ukrainian Psychoneurological Conference (Galperin, 1934; Yasnitsky & Ferrari, 2008a). In this paper, Galperin presents three main research units: (1) the Department of General Experimental and Genetic (i.e., Developmental) Psychology, headed by Leontiev; (2) the Department of Clinical Psychology, headed by Lebedinskii and (3) the Department of General Psychological Theory, headed by Galperin, which worked on developing theoretical grounds of psychology. Luria was the founder and the first director of the psychological sector of the Academy. Even after his departure to Moscow, in 1934, he was closely associated with the Kharkov group, especially with the Department of Clinical Psychology (Yasnitsky, 2009).

Galperin became acquainted with Vygotsky and his theory in the 1930s, after the Vygotskian group joined the UPNA in Kharkov, and this acquaintance greatly influenced the beginning of his career as a psychologist and his subsequent research (Arievitch, 2008). In the early 1930s, Galperin carried out his well-known experiments on the differences in tool use between human beings and animals and on the appropriation of tool-mediated activity (Galperin, 1936). He also engaged in polemics concerning matters arising from Pavlov's theory. Galperin insisted on keeping physiology and psychology as sharply distinguished sciences, although they have some overlapping areas. Pavlov stated that it was possible to study psychological phenomena using the method applied in physiology, and in general, he was openly sceptical of psychology as a science. Galperin argued that physiology and psychology were essentially different sciences with their own laws that could not be used interchangeably to examine and explain psychological and psychological phenomena. For example, Galperin disagreed with Pavlov's understanding of the development of human consciousness through establishing stimulus-reflex responses, but he suggested the development of human consciousness as

a process of internalisation of external social activity with tools. Such an understanding presents, in a nutshell, the methodological and epistemological approach to studying human consciousness the members of the Kharkov School suggested in the 1930s. Galperin's candidate dissertation presents an accurate summary of this perspective.

In his candidate dissertation, Galperin studied the differences in tool use between humans and animals. He argued that there was a fundamental difference between the tools humans developed and used, and the auxiliary devices animals used that were psychological in nature. Galperin suggested that the tools humans created and used in practical activities enhanced the development of new psychological functions. For example, an ability to engage in learning and human understanding originate in external tool-mediated practices. Such use of tools totally differs from the way animals utilise tools as an extension of their limbs. In addition, as opposed to the animal mind, human consciousness undergoes developmental transformations initiated in tool- and speech-mediated activities.

In the second part of his dissertation, Galperin studied the development of motor skills with children and suggested that such development goes through four distinct phases: (i) trial and error, (ii) alertness, (iii) persistent intervention and (iv) tool-oriented activity (Haenen, 1996). In the first phase of *trial and error*, a child makes random and mostly unsuccessful attempts to use a tool to complete the task. In the phase of *alertness*, the child starts to notice successful attempts of tool use and directs its efforts to repeat the required movements with the target tool. In this phase, the performance of the action slows down as the child uses substantial time to identify the factors that lead to successful tool use. In the third phase of *persistent intervention*, the child repeats the successful tool use. The movements of the child are productive and skilful; however, the pace of the action is slow. In the final phase of *tool-oriented activity*, the child is able to complete the required action with the tool at hand. The movements of the child correspond to the logic of the target tool, and the learner is able to complete the task. In sum, Galperin's research exemplified in detail the unity of external tool-mediated and internal human psychological activities. These findings were influential and gave rise to further research that laid the foundations of Soviet psychology. Galperin successfully defended the dissertation in 1938. Zinchenko (2013) considered Galperin's dissertation of primary significance to the cultural-historical theory, as it demonstrated and scientifically proved the process of the development of human consciousness in practical tool-mediated activities (Zinchenko, 2013).

In 1934, Luria moved back to his family in Moscow (he married Lana Linchina in 1933), and for a brief period, Galperin was the head of the psychology sector of the UPNA. However, as a consequence of the decree of 1936, that banned pedagogy as a science and the fact that the capital of Ukraine was moved to Kiev in 1935, the Academy lost its funds and was considerably reduced in size. Finally, at the end of 1936 and the beginning of 1937, the Ukrainian Psychoneurological Academy was renamed the Kharkov Psychoneurological Institute (Voloshin, 1994), and its psychological sector was significantly reduced (Haenen, 1989). Several sources indicate that 1936 marked the end of the Kharkov School (Haenen, 1996;

Yasnitsky, 2009; Yasnitsky & Ferrari, 2008b). However, in his autobiography, Galperin reported that he worked as a psychologist in the period 1930–1943 (Stepanova, 2017). In addition to his work at the Academy, until 1936, Galperin was a docent in psychology at the Kharkov Institute of Pedagogy. He was teaching, among others, courses in dialectical and historical materialism, the history of psychology and general psychology (Stepanova, 2017).

Development of Motor Functions with Wounded Soldiers (1936–1943)

After the 1936 decree on pedagogy, Galperin worked mainly in the psychiatry sector of the UPNA. During World War II, the Germans occupied Kharkov for over three years, and in 1941, the UPNA was reorganised to be the Kharkov Psychoneurological Institute and evacuated to Tumen in West Siberia, where Galperin worked as a neurosurgeon dealing with rehabilitation of motoric functions in wounded soldiers. On 14–16 February 1943, in Tumen, Galperin participated in the Ninth Conference of the Ukrainian Psychoneurological Institute and the Second Conference of Neurosurgeons, where he presented the results of his study entitled *On the Development of Conscious Movements in Rehabilitation Therapy*. His findings demonstrated that a movement that a wounded soldier could not initially perform could be accomplished when the movement became tool-oriented. For example, a person who was initially unable to lift his hand could lift his hand to comb his hair. In sum, Galperin suggested that tool-orientation was fundamental to understanding the nature of human movements. Therefore, the process of rehabilitation required a systematic approach and had to be completed gradually to target both neurological and psychological aspects of human activity. These findings had significant implications for the development of rehabilitation programmes for wounded soldiers that restored movements through a process of meaningful tool-mediated actions. This research was a sequel to Galperin's research in Kharkov, particularly his findings concerning tool-oriented actions with humans, which are central to the cultural-historical theory. In 1943, Galperin moved to Moscow, following Leontiev, who had moved there at the beginning of 1943, and worked at Moscow State University until his death in 1988.

The Study of the Development of Human Mental Activity (1943–1988)

The Department of Psychology was founded at Moscow State University on 1 October 1942, under Rubinstein's leadership (Stepanova, 2017). Until the autumn of 1943, a part of this department, headed by Leontiev, remained evacuated. Upon

Leontiev's return to Moscow, in 1943 and Galperin's subsequent move to Moscow, the latter was appointed as a docent of the Department of Psychology in the Philosophical Faculty at Moscow State University. He was primarily engaged in research activities until 1947, when he also became actively engaged in teaching.

In June 1944, the Department of Psychology at Moscow State University organised a conference on the psycho-physiological issues of rehabilitation of human functions: motor, sensor, and speech. Galperin, together with Ginevskaya (1947), presented a study that reported on wounded soldiers' increased productivity of movements in tool-oriented actions. However, by the end of the 1940s, Galperin had become extremely interested in studying not only tool—mediated actions and their effects on the development of human consciousness, but also how to develop desired actions in humans. For Galperin, the classical approach of observation used in traditional psychology seemed to be insufficient to reveal the conditions and the properties of the developed actions. Galperin suggested that in order to understand the development of human consciousness, researchers should not only study observed actions, but also direct their efforts toward the development of actions under various conditions and with required properties. Such an approach became fundamental to Galperin's further work and manifested itself in the study of the phases of the development of mental actions.

Galperin suggested the study of the development of human mental activity at the beginning of the 1950s, as an approach to improve students' learning in mathematics and languages, and in particular, to develop their ability to solve mathematical and linguistic problems mentally. However, the ideas for this study can be traced to Galperin's work back in the 1930s, during his Kharkov period. For example, in 1931, at the discussion about the situation in psychology held in Kharkov, Galperin indicated that psychology should study the essence of psychological phenomena, such as tool-mediated activity of humans (Stepanova, 2017). Such an approach was highly innovative considering that Soviet psychology in the 1930s–1950s, was greatly influenced by Pavlov's theory (Haenen, 1996).

Between 28 May and 4 June 1950, the conference to discuss the implications and the significance of Pavlov's theory for physiology and other related sciences was organised in Moscow. The main line of the discussion concerned the use of Pavlov's theory to study psychological phenomena. Another conference to discuss the Pavlovian approach to psychology was held in July 1952; over 400 psychologists attended. Galperin contributed to the discussion at both conferences by offering a new method of studying psychological phenomena by examining human tool-mediated actions. This was a revolutionary view on the subject of psychology and the method of psychological research. In the following conferences in 1953 and 1955, which were to discuss the significance and implications of Pavlov's theory for the subject of psychology and the methodological approach to studying psychological phenomena, Galperin gave a talk on his new approach to studying psychological phenomena, which significantly differed from the approach Pavlov suggested. In 1959, at the Conference of Soviet Psychologists, Galperin presented his study *Research on the Development of Mental Actions*. This study was a summary of Galperin's many years of research and the first consistent

representation of his study on the phases of the development of mental actions. In the following years, Galperin's ideas were further developed in the works of Pantina (development of writing skills), Talyzina (development of concepts in geometry), Davydov (development of concepts in mathematics), and others (Stepanova, 2017).

At the beginning of the 1960s, Galperin conducted several studies on the development of human mental actions. In 1962, he became the head of the programmed learning laboratory at Moscow State University. He developed the theory on the development of human mental activity in detail in his doctoral dissertation, which he defended on 28 May 1965, at the Philosophical Faculty of Moscow State University. In his dissertation, Galperin discussed the psychological nature of human activity, the nature of psychological phenomena, and the method of research in psychology. He successfully defended the dissertation and became a Doctor of Psychology on 22 January 1966.

In February 1967, Galperin achieved the position of professor in the Faculty of Psychology of Moscow State University and became head of the laboratory studying human activities in ontogenesis. In 1966, the International Congress of Psychologists was held in Moscow, where Galperin not only presented the study *Methods, Facts and Theories in the Development of Mental Actions and Concepts* but also co-organised the congress together with Piaget and Bruner. At the congress, Galperin discussed the psychological grounds of the development of mental actions with Piaget. He also participated in the 19th International Congress of Psychologists in London, in 1969, where he presented his *Study on Education and Mental Development of Children Five to Eight Years Old*. In 1971, at the age of 69, Galperin became the Head of the Department of Developmental Psychology at Moscow State University, and following a heart attack, he assumed emeritus status in 1984. Galperin never fully recovered from the heart attack, and after a short stay in the hospital, he died on 25 March 1988, at the age of 85.

Galperin's Legacy of Educating Future Generations

Piotr Galperin summarised his fifteen years of research and his scientific contribution in the book *Introduction to Psychology* (Galperin, 1976). The book was initially written at the beginning of the 1970s; however, in 1972, Leontiev gave critical feedback on Galperin's book, indicating that Galperin did not manage to discuss the target concepts in detail or reflect on the fundamental issues in psychology. As Stepanova (2017) mentions, Leontiev and Galperin had a very unpleasant discussion of Galperin's *Introduction to Psychology*. Leontiev suggested that Galperin's theory on the phases of the development of mental actions was a substantially reduced reflection of Leontiev's activity theory. However, as Nechaev indicated, Galperin's theory was not a reduction but on the contrary, an extension of Leontiev's theory and Galperin's theory showed its practical operationalisation in pedagogy, education and other sciences (Nechaev, 2003). In addition, Galperin's

theory had undiscovered scientific potential to be used as a method of psychological research (Nechaev, 2003). Stetsenko and Arieivitch (2002) point to the central issues of Galperin's theory: the origins of human consciousness and the nature of the development of cognitive processes. They explain that Galperin approached these issues by studying the process of internalisation of cultural tools as a specifically human form of individual cognitive development. In this respect, Galperin's theory clearly continues the Vygotskian line of thinking and extends Leontiev's theory. Galperin considered Vygotsky a genius, a ray of light in the chaos of the crisis in psychology (Galperin, 1981). He was the first to consider Vygotsky a founder of non-classical psychology. However, Galperin went further in that he operationalised Vygotsky's concepts of cultural tools, mediation, and internalisation by scrutinising the ways in which the specifically human mental activity is developed (Arieivitch & Stetsenko, 2000; Arieivitch & Van der Veer, 1995; Haenen, 2001). According to Haenen (2001), Galperin extended Vygotsky's notion of the zone of proximal development by including a teaching–learning model of the development of mental actions that integrates the notions of mediation, activity and internalisation. In so doing, Galperin outlined the steps in the teaching—learning process, formulated a set of conditions for the development of mental actions, and showed the teacher's role (Haenen, 2001). Rambusch emphasises that Galperin's approach provides substantial support for situated learning theories and should thus be considered a valuable complement to the theoretical framework of situated learning (Rambusch, 2006). A spiral model, which, according to Arieivitch and Haenen (2005), most adequately represents Galperin's development of mental actions, has been introduced. The spiral indicates students' increasing internalisation of an action while passing through the sequence of levels in mastering a given task. The learning process moves forward as gradual improvements in the quality of action, which can be observed in the steadily growing ability of the learner to orient him or herself in the task and propel him or herself forward while mastering this task (Arieivitch & Haenen, 2005). Arieivitch points out that Galperin's approach contains a unique core component: a conceptualisation of psychological aspects of human mental activity, distinct from its physiological, logical, or sociological aspects (Arieivitch, 2003). Galperin specified the unique character of human mental development emerging in social activities and cultural tool-mediated practices, conceptualised the nature and functions of human psychological processes as specific forms of activity by outlining their structure and identifying the subject of psychology in studying object-oriented activity in its ontogenesis, and conceptualised the role and the function of tools as imbued with relevant social experiences and mediating learning activity (Engeness & Lund, 2018). In so doing, Galperin attempted to consolidate the contributions of Vygotsky and Leontiev and extend these contributions by showing how they could be implemented in educational practice and research.

Galperin educated a whole generation of brilliant psychologists who contributed to the further development of his ideas: Davydov, Arieivitch, Podolskiy, Nechaev, Talyzina, Zinchenko and Obukhova, just to name a few. According to Arieivitch, Podolskiy, Zinchenko and Obukhova, Piotr Galperin was a modest person who did

not seem to realise the significance of his contributions in his lifetime. However, he was a man wholeheartedly devoted to the matter of science to enhance learning and the development of future generations.

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References

- Arievitch, I. (2003). A potential for an integrated view of development and learning: Galperin's contribution to sociocultural psychology. *Mind, Culture, and Activity*, 10(4), 278–288.
- Arievitch, I. M. (2008). Exploring the links between external and internal activity from a cultural-historical perspective. *The transformation of learning: Advances in cultural-historical activity theory*, 38–57.
- Arievitch, I., & Haenen, J. (2005). Connecting sociocultural theory and educational practice: Galperin's approach. *Educational Psychologist*, 40(3), 155–165.
- Arievitch, I., & Stetsenko, A. (2000). The quality of cultural tools and cognitive development: Gal'perin's perspective and its implications. *Human Development*, 43(2), 69–92.
- Arievitch, I., & Van der Veer, R. (1995). Furthering the internalization debate: Gal'perin's contribution. *Human Development*, 38(2), 113–126.
- Dafermos, M. (2014). Vygotsky's analysis of the crisis in psychology: Diagnosis, treatment, and relevance. *Theory & Psychology*, 24(2), 147–165.
- Engeness, I., & Lund, A. (2018). Learning for the future: Insights arising from the contributions of Piotr Galperin to the cultural-historical theory. *Learning, Culture and Social Interaction*. Epub ahead of print 6 December 2018. doi:[10.1016/j.lcsi.2018.11.004a](https://doi.org/10.1016/j.lcsi.2018.11.004a).
- Galperin, P. Y. (1936). *Psychological differentiation of human beings' tool and the facilitating means of animals and their significance* [Candidate's dissertation]. Kharkov.
- Galperin, P. Y. (1959). Razvitije issledovanij po formirovaniju umstvennyh deistvij [Research on the development of mental actions]. *Psychological Science in the USSR*, 1, 441–469.
- Galperin, P. Y. (1976). *Vvedenie v psikhologiyu* [Introduction to psychology]. Moscow: MGU.
- Galperin, P. Y. (1981). *Idei L. S. Vygotskogo i zadachi psichologii segodnia* [Vygotsky's legacy and the challenges of contemporary psychology]. Presented at *The Scientific Legacy of Vygotsky and the Contemporary Psychology*. Moscow.
- Galperin, P. Y., & Ginevskaya, T. O. (1947). Zavisimost objema dvizenija ot psihologicheskogo charactera zadachi [The relationship between the movement and the psychological nature of the task]. *Scientific Notes of Moscow State University*, 111, 75–79.
- Gindis, B. (1998). *Piotr Galperin: Psychologist in Vygotsky's footsteps*. Sage Publications Ltd.
- Haenen, J. (1989). An interview with P. Ya. Gal'perin. *Soviet Psychology*, 27(3), 7–23.
- Haenen, J. (1996). *Piotr Galperin: Psychologist in Vygotsky's footsteps*. Nova Science Pub Inc.
- Haenen, J. (2001). Outlining the teaching–learning process: Piotr Gal'perin's contribution. *Learning and Instruction*, 11(2), 157–170.
- Nechaev, N. (2003). A. N. Leontiev and P. Ya. Galperin: A dialogue across time. *Voprosy Psichologii* (2), 50–69.
- Stepanova, M. A. (2017). Psychologist, physician and philosopher: The stages of P. Ya. Galperin's scientific biography. *Natsional'nyy psikhologicheskii zhurnal* [National Psychological Journal], 3, 21–32. doi:[10.11621/npj.2017.0304](https://doi.org/10.11621/npj.2017.0304).
- Stetsenko, A., & Arievitch, I. (2002). Teaching, learning, and development: A post-Vygotskian perspective. *Learning for life in the 21st century: Sociocultural perspectives on the future of education*, 84–96.

- Van der Veer, R., & Valsiner, J. (1991). *Understanding Vygotsky: A quest for synthesis*. Blackwell Publishing.
- Voloshin, P. V. (1994). *Istoriya Ukrainskogo nauchno-issledovatel'skogo instituta klinicheskoy ieksperimental'noj nevrologii i psikiatrii* [The history of Ukrainian Scientific Institute of Clinical and Experimental Neurology and Psychiatry] [electronic version]. Retrieved March 6, 2007, from <http://www.psychiatry.org.ua/books/history/paper01.htm>.
- Vygodskaya, G., & Lifanova, T. (1996). *Lev Semyonovich Vygotsky. Life, work, strokes for the portrait*. Moscow: Smysl (in Russian).
- Vygotsky, L. (1980). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Vygotsky, L. S. (1997). *The collected works of LS Vygotsky: Problems of the theory and history of psychology* (Vol. 3): Springer Science & Business Media.
- Yasnitsky, A. (2009). *Vygotsky circle during the decade of 1931–1941: toward an integrative science of mind, brain, and education*. (Doctoral dissertation).
- Yasnitsky, A., & Ferrari, M. (2008a). From Vygotsky to Vygotskian psychology: Introduction to the history of the Kharkov school. *Journal of the History of the Behavioral Sciences*, 44(2), 119–145.
- Yasnitsky, A., & Ferrari, M. (2008b). Rethinking the early history of post-Vygotskian psychology: The case of the Kharkov school. *History of Psychology*, 11(2), 101–121. doi:10.1037/1093-4510.11.2.101.
- Zinchenko, V (2013). Psychology of action. The contribution of the Kharkov school of psychology. *Cultural Historical Psychology*, 2013(1), 92–107.