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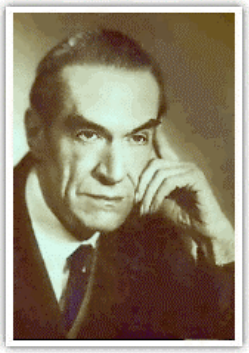
Aleksei Nikolaevich Leontyev
Russian Developmental Psychologist
1904-1979



Aleksei Leontyev was one of the founders of the natural~cultural psychology, along with Lev Vygotsky and Alexander Luria. He began his study of psychology in 1921 at the historical-philological school of Moscow State, graduated in 1924 and was hired by the University upon graduation to work with Luria and other young psychologists in the newly formed Institute of Psychology. Leontyev and Luria joined forces with Vygotsky later that same year, and together they set out to establish an objective, scientific approach to understanding human psychology. According to Luria's Autobiography (p. 79), the three young psychologists would:

> "…meet in Vygotsky's apartment once or twice a week to plan the research that would be required to develop ideas. (They) reviewed each of the major concepts in cognitive psychology – perception, memory, attention, speech, problem solving and motor activity. Within each of these areas (they) would come up with new experimental arrangements which would incorporate the notion that, as higher processes take shape, the entire structure of behavior would change." (Luria, Autobiography, 1979, p. 49)

Within the context of this work, Leontyev focused on the area of cultural mediation. More specifically, mediated memory in children and adults. To better understand the principles important to improving memory he established a unique method to assess its advancement. According to Luria, Leontyev arrived at this finding by working with children of various ages where he "devised a task in which auxiliary stimuli could be used by the subject to help him remember a series of stimuli presented by the experimenter." (Luria Autobiography, p.46) Through this work, Leontyev demonstrated that early memory ability advances predictably, moving from a non-mediated natural process to an external-mediated process and, finally, to an internal-mediated process of remembering. Leontyev characterized these three memory stages as follows:

Natural remembering – In this stage, the utility of using auxiliary memory tools to remember is not recognized or understood, such that even when an auxiliary tool is made available, a child ignores it, relying instead on a his own natural processes of direct un-mediated impressions to remember.

External-mediated memory – During this stage, the utility of an auxiliary tool begins to be understood. When first entering this stage, the child will use visual auxiliary tools when provided with the opportunity to them. Initially, however, his use is not consistent. He often forgets about the tools and their utility unless reminded. When a child becomes older, he more quickly understands the value of auxiliary tools when provided, and uses the tools without visual or verbal reminders. General recall in this stage improves relative to natural remembering and within this stage itself when visual and verbal reminders are no longer required.

Internal-mediated memory – At this stage, the child demonstrates an automatic understanding of the benefit of auxiliary tools, often creating makeshift tools to aid memory before auxiliary tools are even offered. The child's recall at this stage improves versus the previous memory stages.

On the surface, Leontyev's approach demonstrated that the process of mastering a memory task could be improved by using auxiliary tools to mediate and enhance performance. At a deeper level, however, it demonstrated the important role auxiliary tools play in advancing cognition, first enhancing natural performance through external, concrete means and then through internal automatic means. Leontyev's unique approach created a research tool that allowed the Vygotsky school to objectively assess internal psychological processes. As a result, Leontyev's basic construct became the central methodological tool for the school's future research

and the basis for many concepts that Vygotsky later put forth, including the *genesis of higher function* and the *Zone of Proximal Development*.

The genesis of higher mental functions requires:

> "Any function in the child's cultural development to appear twice, or on two planes. First it appears on the social plane, and then on the psychological plane. First it appears between people as an inter-psychological category, and then with the child as an intra-psychological category." (Collected works of Vygotsky, Volume 2, p. 11)

In other words, a concept must first be introduced and guided on the social plane for a child to first develop and then gain a concrete understanding. Only when a concrete external understanding has been gained can a concept move to the psychological plane and advance beyond a concrete understanding for unaided application and generalization to more advanced concepts. Instructor guided demonstration, application, and practice are all auxiliary tools used to aid the concrete development of a new concept. Once internalized and mastered, the concept in and of itself can become an internal tool, first for the child to use automatically to complete tasks directly related to the concept, and, as the tools deeper value is understood, generalized for use in other situations. Leontyev's research design and study of basic memory was instrumental to Vygotsky as he outlined the Zone of Proximal Development. Leontyev's contribution here and in other collaborative efforts helped shape the natural~cultural psychology put forward by Vygotsky and his school.

In 1931, Leontyev was appointed to the Kharkov school in the Ukraine. Despite the move, Leontyev continued to work with Vigotsky and Luria until Vygotsky's death in 1934. While still working within the general construct of natural~cultural psychology, Leontyev's ensuing work introduced a new dimension – human *activity*. Leontyev believed that human *activity* held the key to gaining a better understanding of human psychology. He was "very much concerned with providing a mental evolutionary account of the continuity and discontinuity between human and animal psychological existence. In the sense that his comparative psychological efforts were aimed at elaborating both 'what we share' and what is the 'distinctive province of human intellect.' (P. Galantine) This theory was predicated on the notion that all humans at birth are initially biological, and it is only through their *activities* that they become a social individual. In other words, one is not born with a distinct personality (human mind), but is instead born as a biological individual who develops a personality by actively internalizing culture through the influence of the society that surrounds him.

Leontyev's early work on activity theory departed from Vygotsky by adding the need to separate individual action from collective activity. He did this by distinguishing between activities, actions, and operations. In simplistic terms, Leontyev's activity theory describes how an object, either conceptual or concrete, creates a motivation; that is, the desire to attain or do something. A motivation, in turn, results in an activity, which is composed of a chain of actions, each with its own sub-action/goal. Each action is completed using a method of operation, which may be influenced by outside conditions. Once satisfied, these sub-action/goals collectively complete the activity and satisfy the motivation that was originated by the objective thought or external object. In other words, an activity reflects its motive, an action reflects its goal, and an operation reflects the conditions of action. The basic structure of activity theory and how the role of the individual is set apart from a collective group are perhaps best demonstrated by Leontyev himself with the following example:

> "A beater, for example, taking part in a primeval collective hunt, was stimulated by a need for food or, perhaps, a need for clothing, which the skin of the dead animal would meet for him. At what, however, was his activity directly aimed? It may have been directed, for example, at frightening a herd of animals and sending them toward other hunters, hiding in an ambush. That, properly speaking, is what should be the result of the activity of this man. And the activity of this individual member of the hunt ends with that. The rest is completed by the other members. This result, i.e. the frightening of game, etc., understandably does not in itself, and may not, lead to satisfaction of the beater's need for food, or the skin of the animal. What the processes of his activity were directed to did not, consequently, coincide with what stimulated them, i.e., did not coincide with a motive of his activity; the two are divided from one another in this instance. Processes, the object and motive of which do not coincide with one another, we shall call "actions". We can say, for example, that the beater's activity is the hunt, and the frightening of the game his action." (Leontyev, *Problems of the Development of the Mind,* 1981, p. 210)

In the above example, the man is participating in a hunt because he needs to feed and clothe his family. This is the *activity*, which is governed by his *motives*. The man takes on the role as beater, an *action* that is governed by his *goals*. How he carries out his role depends on the conditions, i.e., terrain, weather, type of game. The *operations* are governed by the *conditions* of the hunt. Although a simplification, this is the basic idea of Leontyev's Activity Theory.

With the publication of Leontyev's writings in the West in the 1960s and 1970s, activity theory has become an interdisciplinary approach to human sciences and has been elaborated upon by a large number of contemporary scholars. At a high level, activity theory bridges the gulf between the individual subject and the societal structure. From the Masgutova perspective, what is most important about Leontyev's activity theory is that he identified measurable response variables (activities, actions, operations) and stimulus variables (concrete and abstract objects, motivation, goals, and conditions) that can be isolated and studied to reflect, measure, and understand the development of conscious and unconscious activity. This perspective is important to the Masgutova Method because it highlights how actions are not simply unrelated by-products of a particular diagnosis, but are clues that can lead to the identification (in the context of conscious or unconscious motivation) of fundamental aspects of troubling behavior, which when understood can lead to remediation and improvement. Leontyev's perspective regarding automatic reflexive motor responses, consciously controlled motor abilities, and learned, automatized motor skills prompted Dr. Masgutova to identify basic and variant phases that are typically present in the maturation of each primary motor reflex pattern. It is through these maturation phases that unconditioned, automatic primary motor reflex patterns integrate. Finally it is through Leontyev's activity theory that Dr. Masgutova came to understand that those she those she treats, play an active role in directing their own functional change through the clues provided in their actions.

Credits and Further Reading:

Ballantyne, P. F., *Leontyev's Activity Theory Approach to Psychology: Activity as the "molar unit of life" and his "levels of psyche"*, Scandinavian Journal of Information Systems Volume 12, August 2000. Article also available at the following link: http://www.comnet.ca/~pballan/AT.htm

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Leontyev, A. N., Problems of the Development of the Mind, Moscow: Progress Publishers, 1981

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Luria, A., Cole, M., Levitin, "The Autobiography of Alexander Luria: A Dialogue with The Making of Mind," 1979, Lawrence Erlbaum Associated, 2006

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