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THEORETICAL STUDY OF THE CHARACTERISTICS OF CONCEPT PERCEPTION IN LEFT-HANDED INDIVIDUALS

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Abstract. *This thesis focuses on exploring how left-handedness impacts cognitive processes and the understanding of concepts. It analyzes theoretical perspectives from cognitive psychology highlighting the link between left-handedness and the dominance of the brain's right hemisphere. The study particularly emphasizes the literature discussing how right-hemisphere processing, characterized by synthetic and imaginative perception, influences the absorption and transformation of concepts into emotionally enriched images. The author concludes that left-handed individuals possess a distinct ability to intuitively and creatively interpret discursive information, which may enhance their potential for success in artistic and scientific fields.*

Key words: *left-handedness, functional asymmetry, right-hemispheric thinking, perception of concepts.*

Introduction.

Understanding the unique ways individuals perceive the world fuels social dynamics and elicits a spectrum of emotions, from curiosity to rejection. Left-handed individuals, differing from the majority in brain function and spatial orientation, have long been a subject of scientific and social interest, sometimes facing discrimination. Modern psychology and neuropsychology actively study how left-handers process information, revealing links between left-handedness, brain hemisphere asymmetry, and cognitive processes such as concept perception and problem-solving.

Of particular interest is how left-handers perceive concepts as abstract, mental entities rather than mere objects, offering insights into their unique approach to processing information. A.V. Semenovich [11, p.3] highlights the need for interdisciplinary research on this distinct group. N.N. Bragina, T.A. Dobrokhotova, O. Nikolaychuk, R.W. Sperry studied the psychophysiological characteristics of left-handers, the functional asymmetry of the brain and its impact on the work of thinking. L.I. Beglova, A.A. Vasilyeva, Ya.S. Kokurkina, T.A. Molinar, M.A. Pavlova, E.E. Chernova studied the psychological characteristics of the perception of discursive information in children with a dominant left hand. This topic's relevance stems from the growing focus on individual cognitive differences and the demand for inclusive education and diagnostics tailored to left-handers.

This work aims to analyze the perception of concepts in left-handed individuals and the factors influencing it, drawing on research in cognitive psychology and neuropsychology. It examines the specific strategies left-handers use to process complex, abstract information, contributing to a deeper understanding of brain function and cognitive diversity.

Main text

Left-handedness is a psychological phenomenon with organic origins tied to the body's organization. Left-hand person is defined as "a person who predominantly uses their left hand instead of their right" [3, p. 32], with the Medical Encyclopedia describing this as "the use of the left hand when performing various actions" [8, p. 145]. Visible signs include a larger left hand, more pronounced veins, and better-developed hand muscles.

The origins of left-handedness remain debated. Historically, it was viewed as an exception or even pathology, often associated with negative connotations. N.Sh. Korashvili identified three approaches to explaining left-handedness: socio-evolutionary direction, theory of visceral distribution, and theory of heredity [6, p.27]. Modern psychology primarily supports the theory of functional asymmetry of the cerebral hemispheres, where the right hemisphere dominates in specific mental and motor functions (A.N. Bragina, E.P. Ilyin, I.P. Pavlov, V. Rotenberg, V.F. Fokin) [2, p.8; 9, p.115].

Functional asymmetry reflects different strategies of information processing depending on the brain hemisphere. The left hemisphere specializes in analysis, systematization, language, math, and positive emotion regulation, while the right focuses on holistic perception, spatial awareness, negative emotion regulation, and stress adaptation. Both hemispheres interact closely. Left-handedness often signifies right hemisphere dominance, leading to a figurative and intuitive worldview, slower mental processing, and stronger expression of negative emotions [10, p.114]. Left-handers excel in spatial memory, intuitive thinking, and artistic professions, demonstrating a unique perception strategy tied to emotional and conceptual processing. Their perception of such discursive constructs as concepts may be a clear example of this strategy.

A concept is defined as "an idea expressed in words about the general and essential features of objects and phenomena" [5, p.29], based on our knowledge of them [7, p.304]. While concepts are typically resistant to intuitive-figurative perception, the achievements of left-handed thinkers like A. Einstein, I. Newton, and L. da Vinci suggest the possibility of "artistic" comprehension of concepts. Psychological literature highlights how individuals with figurative-sensory perception interpret concepts uniquely.

Firstly, their perception varies depending on personal characteristics, such as synthetic or analytical thinking styles.

Secondly, concepts are classified by emotional valence—positive (e.g., "perfect") or negative (e.g., "immorality") [4, p.46]—and by type, as concrete or abstract. Concrete concepts relate to physical attributes, while abstract concepts, detached from sensory qualities, are linked to emotions and mental states, giving them a subjective nuance in comprehension [1].

Thirdly, concepts, once realized and assessed, become part of memory, where they transform into secondary images—ideas. This transformation begins during perception, as concepts shift into perceptual images. In memory, they lose clarity, emotional brightness, and detail, becoming generalized representations [7, p. 235-236]. Representations evolve either through systematization (losing individual traits) or by

developing image-types (gaining visual detail), with the latter often leading to artistic creation [7, p. 244].

For left-handers with right-hemisphere dominance, concepts are processed through a figurative-holistic lens, shaped by sensory and emotional experiences. These concepts often carry strong emotional and semantic elements, becoming tools for creative mental activity and contributing to innovative scientific or artistic work.

Summary and conclusions.

Individuals with a dominant left hand, associated with right-hemisphere dominance, use a synthetic, figurative-sensory strategy of perception. This influences their understanding of discursive information, such as concepts. Although concepts, as logical and abstract forms of thinking, might seem incompatible with figurative perception, many left-handers have excelled in scientific fields, indicating their unique and effective approach to concept assimilation.

Key factors in left-handers' perception of concepts include individual cognitive styles (synthetic or analytical), emotional valence of concepts (positive or negative), and the transformation of concepts in memory into vivid, individualized image-types, which can evolve into artistic representations. This figurative and holistic processing adds emotional and semantic depth, fostering creative and innovative thinking.

The validity of these conclusions requires experimental verification.

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