OILY TYPES OF NERVOUS ACTIVITY AND TEMPERAMENTS

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Abstract: This article provides information on higher nervous activity types and temperaments
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Higher nervous activity - the activity of higher divisions of animal and human central nervous system (brain and subbrain centers of cerebral hemispheres); ensures normal interaction of the whole organism with the external environment. Type of higher nervous activity, the term "Temperament" was introduced to science by I. P. Pavlov. He considered higher nervous activity to be synonymous with "psychic activity". As Pavlov said, all forms of mental activity, including human thinking and consciousness, are elements of higher nervous activity. I. M. Sechenov, Pavlov's predecessor, was one of the creators of the theory of higher nervous activity. He developed the idea of the reflexive nature of mental activity in his work "Cerebral Reflexes" (1863).

In highly organized animals, conditioned reflexes and complex unconditioned reflexes (instincts, emotions) formed in the upper parts of the central nervous system (in highly organized vertebrates and in humans - the cortex of the large cerebral hemispheres) and complex unconditioned reflexes (instincts, emotions), i.e., mainly in the bark forms of brain activity carried out by neural derivatives. The role of unconditioned reflexes in higher nervous activity is that not only all conditioned reflexes are formed on the basis of these reflexes, but the significance of conditioned and unconditioned reflexes in higher nervous activity changes during the historical development of the animal world. According to Pavlov, the higher nervous activity of even highly developed animals (dog, monkey) mainly consists of a set of diverse and various conditioned reflexes of the first signal system common to animals and humans.

Despite the gradual development of speech, conditioned reflexes of the first signal system form the main fund of higher nervous activity in the first years of children's life. In the subsequent periods of growth, the higher nervous activity of a person occupies a certain place. But in connection with the development of social forms of labor activity in man, second signals appeared and developed. Pavlov developed the following basic rules of higher nervous activity:

1) formation of conditioned reflexes or nerve connections;
2) dependence of conditioned reflex strength on excitation strength;

3) the sum of conditioned triggers;
4) because the conditioned reflexes are not strong, the increase in inhibition due to the sudden increase of the conditioned stimulus or the effect of a new stimulus;
5) as a result of the spread and concentration of nerve processes in the cortex of the brain, the formation of communication between some of its parts, as well as the generalization and specialization of conditioned reflexes;
6) interrelated induction of neural processes that provide opposite interaction between cortical sources of excitation and inhibition.

Conditioned reflexes are a central phenomenon in the activity of the higher nervous system, and they are an important object of research in world neurophysiology and experimental psychology. The correctness of the main facts and consistency of the Higher Nervous Activity defined by Pavlov and his staff has been proven in many works of scientists. In particular, the physiologist P. K. Anokhin developed the theory of functional systems and applied this theory to the evolution of functions, as a result of which he created the concept of systemogenesis, which is the general law of the evolutionary process.[1]

The concept of temperament was developed much earlier. Abu Ali ibn Sini explained the concept of a client based on the response and adaptation of a person to the factors of the external environment. He divides people into hot, dry, wet, and cold clients and explains their unique and different characteristics. Representatives of such customers admitted that it is appropriate to consume foods according to the nature of the food they are prone to, and in what order they should eat.

Western thinkers also explained their understanding about it.

The ancient Greek philosopher Aristotle, who lived a little later than Hippocrates, saw the reason for the differences between people not in the superiority of one or another juice, but in the differences in the most important of these juices - blood. He noticed that the ability to pump blood was not the same in different animals. A high level of coagulation, according to him, is associated with a predominance of solid or earthy particles, less - with a predominance of water or liquid particles. Liquid blood tends to be cold and fearful, while solid blood tends to be warm and angry. Galen, who lived in the 2nd century AD, gave the first detailed classification of temperaments based on Hippocrates' universally humorous ideas about "beauty". It includes 13 types of temperament, including those mentioned above. According to his point of view, the predominance of yellow bile (Latin chole - chole) indicates choleric temperament, the predominance of blood (sanguis - sanguis) - sanguine temperament, the predominance of black bile (melanos chole - melanos chole). - about the melancholic temperament, and superior mucus (phlegm - sputum) - about the phlegmatic temperament.

The ancient doctors had almost no psychological characteristics of temperament; Basically, these properties were related to the body and even some organs. For example, Galen spoke about the temperament of individual parts of the body: heart, liver; the brain.

During the Renaissance, the development of anatomy and physiology gave a new direction to the explanation of temperament types. They are increasingly related to the structure of the body. For example, a number of scientists, in addition to the physical properties of blood, based the division of temperaments on the difference of tissues and the width of the lumen of blood vessels. Light blood, loose tissue and moderately dilated veins, according to these scientists, facilitate life processes and create a sanguine temperament.

With a significant density in the tissues, blood remains in the vessels, the pulse increases and accelerates, the general temperature of the body increases, which leads to the appearance of a choleric temperament. With dense blood and narrow veins, only the liquid, watery part of the blood appears in the tissues, so a phlegmatic temperament, characterized by low temperature and pale skin color, appears. Finally, dense, dark blood with narrow tissue pores and a wide vascular lumen leads to the formation of a melancholic temperament. This theory was preserved in a slightly modified form until the end of the 19th century and the beginning of the 20th century. Thus, P. F. Lesgaft believed that the width of the lumen and the thickness of the walls of blood vessels play a very important role in the emergence of temperaments: choleric people have a small lumen and thick walls, which means a fast and strong blood flow; sanguine people have a small lumen and thin walls, which contributes to rapid and weak blood flow, etc.

Another anatomical direction linked temperament types to the structure of the central nervous system, since it is this brain that is closely related to the mental characteristics that characterize different temperaments. Some saw the main basis of temperament in the size of the brain and the thickness of the nerves, and others in the specific features of their work.

Thus, the founder of experimental physiology, Albrecht Haller, who introduced the concepts of excitability and sensitivity, which are important for physiology and psychology, said that the main factors of differences in temperament are the excitability of blood vessels themselves, through which blood flows.

The idea of connecting the characteristics of temperament with some anatomical and physiological characteristics of the nervous system in various forms appears in the teachings of many philosophers, anatomists and doctors of the 19th century. Some scientists in our country followed the humoral-endocrine theory of the origin of temperament types. P.P. Blonsky (1927) believes that the characteristics of human behavior depend on how balanced and coordinated the sympathetic and parasympathetic divisions of the autonomic nervous system are. Vagotons are slow and calm, not prone to daydreaming, they think soberly and realistically. And sympathicotonics are impulsive, decisive, often carried out and separated from reality. Attempts to classify the types of human behavior based on the fact that certain endocrine glands are activated or decreased N.A. Belov (1924), B.M. Zavadovsky (1928) and others. Thus, B.M. Zavadovsky, differences in temperament determine the interaction of the thyroid and adrenal glands: a sanguine person is characterized by high activity of both glands, a phlegmatic person is weak in both, a choleric person has a weak thyroid gland, but a strong activity of the adrenal glands, and a melancholic person has a thyroid have a strong activity of the gland, but weak - adrenal glands.

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