Psychology

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Chapter I. SUBJECT OF PSYCHOLOGY

§1. General Concept Of The Psyche

Psychology is a science that studies the human psyche. Under the psyche we mean our feelings, ideas, thoughts, aspirations, desires, well known to each person from his own experience. The psyche also includes the interests and abilities of a person, his temperament and character. How are the processes of perception, feelings, volitional processes? What are the laws of memory, imagination, thinking? How do abilities develop and character of a person is formed? These are the questions that psychology deals with.

A person is a member of society, and therefore his mental properties are formed under the decisive influence of social conditions of life. It is depending on the living conditions and activities of man in society that his psyche, consciousness develops. “... Consciousness from the very beginning is a social product and remains so for as long as people exist at all” (Marx).

The classics of Marxism-Leninism - Marx and Engels, Lenin and Stalin - indicate that the source of sensations, ideas, thoughts is the external, material world, and the psyche, human consciousness, is a reflection of the world.

The psyche is one of the properties of matter that has arisen in the process of its development. Inorganic matter does not possess this property, it does not feel and does not think; and within the limits of the organic world, not all matter possesses a psyche. It took a long path of development of wildlife in order to come to the matter of sensing and thinking. The human psyche is a special property of highly organized matter - a property of the brain. This property is a reflection of the surrounding reality.

Reflection of objects of the real world by the human brain should not be understood as a passive reflection, similar to reflection in a mirror. A person does not passively perceive the world, he cognizes it in practical activity, actively influencing nature and other people. It is in this vigorous activity that our sensations and perceptions arise - the images of those material objects and phenomena that act through our senses on our brain and are reflected in it.

Modern science of the brain gives us knowledge of the physiological processes that occur in the working brain. Research by I.P. Pavlov in the field of higher nervous activity discovered those physiological processes that form the basis of the reflection of the real world by the human brain. These studies removed the veils of secrecy from the so-called mental activity: on the vast material of experimental facts it was proved that the psyche is determined by external influences, the conditions of existence.

The teaching of I.P. Pavlov on higher nervous activity, as the greatest achievement of modern brain science, is the natural-scientific foundation of psychology.

The word “psychology” is formed from two Greek words: “psyche” (soul) and “logos” (word, teaching), and means “science of the soul”.

According to the ideas that arose in ancient times and still exist in religious beliefs and in the views of some bourgeois philosophers, the soul is an intangible, ethereal creature living in the human body and leaving it at the time of death. According to these ideas, the soul is the carrier and the cause of the whole mental life of a person: his feelings, thoughts, desires. This understanding of the psyche is idealistic.

The opposite and the only scientific understanding of the psyche is materialistic. The brain, and not the disembodied soul, is the organ of our mental life, the carrier of all our mental processes: thinking, feelings, will. The reflective activity of the brain makes up our mental life.

For millennia in psychology, a struggle has been waged between materialism and idealism. Even in ancient Greece and Rome, many thinkers and scientists struggled with an idealistic understanding of the soul and made
attempts to give a materialistic explanation of mental life. This struggle was continued by advanced scientists and materialist philosophers of the new era. The great Russian materialist philosophers — Herzen, Belinsky, Chernyshevsky, and Dobrolyubov — made a valuable contribution to the development of a materialistic understanding of mental life. Of great importance for the struggle for materialistic psychology were the works of the great Russian scientist, physiologist and psychologist I.M. Sechenov.

However, only recently, on the basis of dialectical materialism created by the works of Marx, Engels, Lenin, Stalin, it became possible to build a consistent materialistic psychology.

Psychology studies:
1. Mental processes. Perception, remembering, thinking, feeling, volitional decision - these are all different types of mental processes. To understand the complex stream of mental life of a person, it is necessary first of all to distribute all mental processes into certain groups, to select separate areas, or sides, of the psyche, in other words, to classify mental processes. The most general and simple classification is based on the distinction between the three closely related aspects of mental life: knowledge, feelings and will.

In order to correctly understand the human psychic life, one must bear in mind that cognition, feeling and will do not exist apart from each other. Feeling, we experience our attitude to what we know or do; making a volitional decision, we proceed from certain thoughts and feelings.

Mental life, in spite of all its complexity, variability, sometimes seeming capricious and unstable, is subordinated, like all other phenomena of reality, to certain laws.

Psychology has the task to establish the laws of mental processes and thereby give a scientific explanation of these processes.

2. The mental properties of the personality, that is, the most significant and stable features that characterize each person in contrast to others. The mental properties of a person include: the interests and inclinations of a person, his abilities, his temperament and character.

Psychology sets itself the task of studying the formation and development of human mental properties. How are human interests created? How do his abilities develop? How is his character formed? The study of such questions is one of the most important tasks of psychology.

§2. Mind And Activity

While a person lives, he acts in one way or another, in one form or another manifests his activity. All human life is filled with one activity or another.

Acting on a thing, a person is guided by the image of this thing that he has - his perception, understanding, concept of it. If the image is correct, action with the thing can lead to the desired result; if the image of a thing is false, it will lead to failure. Thus, verification of the correctness, truthfulness of those images of reality that deliver our sensations and our thinking is given by practical activity, practice. A person does not always carry out this kind of verification by personal experience.

The main importance is the socio-historical practice of people. It is known that social experience is transmitted from generation to generation in the form of tools of production, in the form of scientific knowledge, etc.

Cognition is a reflection of the real world arising in the process of activity, practice; its correctness is checked by the results of this activity.

All mental processes always proceed in any activity. This applies not only to volitional and cognitive, but also to emotional processes. Man always acts in one way or another, and in the course of his activity he cognizes and feels.

Of course, one does not need to think that all activity is manifested in external movements. Solving a difficult task, a person can outwardly maintain complete immobility, and yet we will say that in this case he is active, that he performs certain activities that have their own goals and require considerable volitional efforts from him.

Mental processes cannot be understood, regardless of the activity of a person as a person, that is, a member of a society living and actively acting among other people in a certain historical era, in certain social conditions.

Not only mental processes arise in human activities, but also mental properties of the personality are formed in activities.

Human abilities are revealed in the occupations of a particular activity; abilities not only manifest themselves in activity, but they are formed, developed at the same time. And character traits are also formed only in activity, in actions. To develop perseverance and perseverance, you need not to be afraid of difficulties, systematically
deal with them, overcome them. A person’s life, his practical activity forms his mental appearance. Not knowing how a person lives and what he does, we will never understand why one or other interests arose in him, these or other abilities developed, or this or that character developed.

§3. Basic Laws Of Higher Nervous Activity

The teaching of I.P. Pavlov on higher nervous activity reveals the physiological foundations of the psyche and the conditioning of the psyche by the conditions of existence. As you know, IP Pavlov, studying the physiology of higher nervous activity, discovered laws that are common to man and higher animals. In addition, he specifically investigated the human mechanisms of higher nervous activity. A scientific explanation of the human psyche is impossible without knowledge of the laws of higher nervous activity.

The basic, most universal principle of the cerebral cortex is the principle of the formation of temporary (conditional) nerve connections. It is as follows. If two stimuli act on an animal at the same time: one - causing an unconditioned reflex (for example, food), and the other - neutral, which in itself does not cause an unconditioned reflex in an animal (for example, a bell), then two centers of excitement appear in the cortex. A connection is established between these foci of excitement, which strengthens with the repeated coincidence of these two stimuli in time. As a result of the formation of such a bond, the neutral stimulus causes the same reaction as under normal conditions causes food. The most important condition for the formation of this connection is the repeated coincidence in time of two stimuli.

Temporary connection is the most universal phenomenon in the work of the cerebral cortex. The activity of the cerebral cortex, consisting in the fact that numerous external stimuli signal other important phenomena for preserving the life of the organism, is called signaling activity. In the above example, a bell is a food signal.

In the cerebral cortex, along with the processes of excitation, there are processes of the opposite nature - processes, inhibitions. The activity of the cortex at any moment is a complex mosaic of processes of excitation and inhibition, interconnected by the law of mutual induction of nervous processes. This law is as follows. If excitation occurs in any part of the cortex, then a process of inhibition (negative induction) develops in related parts of the cortex, and vice versa, if there is a process of inhibition in any part of the cortex, then an excitation process (positive induction) develops in neighboring areas.

It was experimentally shown that the excitation that arose in any area does not remain in one place, but spreads, radiates along the cortex. At the same time, the opposite process arises - inhibition - which limits and directs the process of excitation in a certain direction, leading to concentration, concentration of excitation. At the same time, the process of inhibition is also able to spread along the cortex, irradiate, and gather at one point, concentrate.

Thus, along with the law of mutual induction, the law of irradiation and concentration of nervous processes also operates, which determines the movement of the processes of excitation and inhibition in the cerebral cortex.

A special case of the law of induction is external inhibition, which consists in the following. Suppose that an animal has developed a conditioned food reflex to a bell — then the saliva flows from the dog’s bell. If during the action of the call some sufficiently strong new stimulus begins to act (for example, an outsider enters the room), then the conditioned reflex will slow down, the saliva will stop flowing. This is because the appearance of a new focus of excitation causes inhibition of other parts of the cortex, as a result of which the developed conditioned reflex is inhibited.

Another nature is the internal, or conditional, inhibition that occurs under certain conditions of functioning of this temporary connection. It is not the result of extraneous irritations. An example of internal inhibition is the extinction of the conditioned reflex. If a conditioned stimulus (bell) is given several times in a row without reinforcing it with an unconditioned stimulus (food), then it ceases to cause a conditioned reflex. The resulting connection is temporarily inhibited. If, however, after a while you give the call again, the conditioned reflex will resume. This proves that the conditional relationship is not destroyed, but only temporarily inhibited. Such inhibition is of great importance, causing a temporary fading of the reflex, which in these conditions is useless.

Each reaction of an animal organism occurs according to the principle of reflex, i.e., it is a response to external influences. But it is determined not only by what stimulus is falling on the body at a given moment, but also by what kind of communication systems are already formed in the cortex.

In particular, with a long repetition in the same sequence of a number of conditioned reflexes, the distribution
of the centers of excitation and inhibition in the cortex is fixed in a certain way, as a result of which reproduction of this system of reflexes occurs easily, without effort. It has been shown by numerous experiments that if a dog develops several reflexes to different stimuli that are repeated in a certain order a sufficient number of times, it turns out that after a certain number of repetitions the animal will reproduce the entire system of responses even if the stimuli are significantly changed (for example, if a conditioned brake is in place of a positive stimulus, and vice versa). Such a stable distribution of foci of excitation and inhibition in the cortex, providing a certain system of reactions,

A dynamic stereotype is an adaptation of an organism to the same, repeated external influences. In some cases, in order to cause all the effects of a given system of reflexes, not even an appropriate amount of stimuli is required. It is enough to give a signal, which serves as the beginning of a system of stimuli, so that all reactions follow automatically. It is clear that such an opportunity will take place only with sufficient strength, fixed stereotype. If the developed dynamic stereotype ceases to correspond to the changed order of external stimuli, then it is rearranged, changed in accordance with new conditions.

§4. Methods Of Studying The Human Mental Life

The main methods of psychology are observation and experiment.
The most important feature of a truly scientific psychology is the objective study of the psyche. “A man will receive innumerable benefits and extraordinary power over himself,” said I. P. Pavlov, “when the natural scientist of another person undergoes the same external analysis as he should do with any object of nature, when the human mind looks at itself not from the inside, but from the outside ".

We already know that the psyche is inextricably linked with activity, that it manifests itself in the actions and actions of a person. Therefore, observation of the actions of people and analysis of their statements, speech reactions make it possible to judge their mental life.

The work of a psychologist cannot, of course, be limited to direct observation of those people with whom he can personally communicate. Direct observation materials are supplemented by the study of activity products and documents such as diaries, letters, and memoirs.

The importance of experiment in psychology is very great.
During experiments, the researcher does not wait for the accidental onset of the mental processes of interest to him, but creates the conditions himself to cause these processes in the subjects. (Subjects are persons who are undergoing a psychological experiment.) Using special instruments and methods, it is possible to measure certain aspects of mental processes, for example, perception speed, accuracy and strength of memory, etc. By repeating the same experiment under different conditions with different people, You can establish the individual characteristics of this process in each of these people.

In an experiment, the researcher voluntarily changes some of the conditions under which the process proceeds and observes what consequences this leads to. For example, changing in turn the conditions for memorizing some material (say, foreign words), you can find out under which of these conditions it occurs faster, under which it is more durable. This opens up the possibility of establishing the cause of the phenomenon and learning how to manage it.

All mental processes and personality traits are studied in the process of their formation, development. In this case, the psychological analysis proceeds from the social conditionality of the individual. You can not study the psyche of a person, especially his personality, not taking into account the era in which a person lives, the conditions of his life, his class, his place in public life.

Scientific psychology seeks to uncover the physiological basis of psychic phenomena. Along with the study of the social conditioning of the psyche, the most important task of psychology is to elucidate the brain mechanisms of the psyche based on the teachings of I. P. Pavlov on higher nervous activity.

§5. The Importance Of Psychology

The study of man is one of the most important tasks of science, and psychology occupies one of the first places among the sciences of man. The study of psychology, along with other sciences, is necessary for the development of the scientific; materialistic worldview. It is known that the idealistic doctrine of the soul is a support for all kinds of superstitions and prejudices. Knowledge of psychology, a truly scientific understanding
of the physiological foundations of the psyche, is a powerful weapon in the fight against these superstitions and prejudices.

The significance of psychology is especially great here, in the USSR, in the era of the transition from socialism to communism. Soviet psychology is called upon to equip people with knowledge to help combat the remnants of capitalism in the minds of people and to solve the tasks of the communist education of our youth.

Psychology makes it possible to understand the mental life of people. Therefore, the significance of psychology is very great for any work related to influencing people and requiring the ability to take into account their mental state and understand their individual characteristics. And one can hardly name at least one specialty in which a person does not face the need to understand other people, understand them and act on them.

Comrade Stalin called the writers "engineers of human souls." It is hardly necessary to prove how useful it is for a writer to know the laws of the human soul. To a certain extent, “engineers of human souls” are representatives of other specialties, primarily teachers. For them, knowledge of psychology is absolutely necessary.

It is also necessary to point out the importance of psychology for the study of literature and history. The ability to understand the human mental life contributes to a more complete understanding of many historical and literary facts.

The study of psychology helps to understand your mental life. Each person knows for himself how difficult it is sometimes to put in a word, to describe your own experience. At the same time, the ability to name, describe your experience is very valuable: it makes it possible to realize this experience, understand it and, thanks to this, to a certain extent master it. Psychology makes it possible to understand yourself, to know your strengths and weaknesses. And to know oneself is necessary for self-education, for working on oneself, for correcting one’s shortcomings, for developing one’s abilities. It is also necessary to know oneself in order to consciously choose a profession, a job in which you can bring the most benefit to your homeland and get the most satisfaction.

Knowledge of psychology helps to properly organize mental work, in particular academic work. What techniques of memorization are the most economical and lead to a better assimilation of knowledge? How to organize exercises to develop certain skills? What determines the development of observation, attention, thinking? All these questions belong to the field of psychological knowledge.

Modern psychology is divided into a number of industries. Along with general psychology, which studies the laws of the mental life of an adult normal person, the most important branches of psychology are: child psychology, which studies the child’s psyche, and pathopsychology (from the Greek word “pathos” - suffering), which has as its subject painful deviations in the psyche of people. In psychological science there is a number of special industries that study mental life in conditions of certain types of activity: labor psychology, pedagogical psychology, military psychology, art psychology, etc.

Questions To Repeat

1. What issues does psychology deal with?
2. What is the materialistic understanding of the psyche?
3. What is the difference between mental processes and mental properties of a person?
4. What is the relationship between the psyche and human activities?
5. What is the principle of the formation of a temporary (conditional) nervous connection?
6. What is the difference between external and internal braking?
7. What is a dynamic stereotype?
8. What are the requirements for observation as a method of studying the mental life of people?
9. What is the meaning of experiment in psychology?
10. What is the significance of the study of psychology?

Chapter II MENTAL DEVELOPMENT
§6. General Concept Of The Origin And Development Of The Psyche

At the core of the materialistic worldview is the doctrine of the development of matter. A definite stage in the development of matter is the emergence of life, i.e., the appearance of living, or organic, matter. Having arisen from inorganic matter, living matter, in contrast to inanimate, has its own special properties. The most important of these properties is irritability, i.e., the ability to respond to external stimuli, to come under the influence of the environment into a state of activity. Living matter is irritable matter.

A further stage in the development of matter is associated with the appearance of a new property in higher forms of living matter - sensitivity, that is, the ability to have sensations that reflect the properties of objects that affect the body.

Sensations constitute the initial form of the psyche. The psyche, therefore, is not a property of all living matter. It is a property of higher forms of organic matter. It took a very long way of development in order to come from sensible matter only to sensory matter, from the first appearance of life on earth to the emergence of animals with a psyche.

The psyche arose at a certain stage in the development of animals. It is possible that sensations arose in animals that did not have a nervous system. “The sensation is not necessarily connected with the nerves, but with some protein bodies that have not yet been established more precisely” (Engels). There is no doubt, however, that starting from the coelenterates, the psyche becomes a function of the nervous system and the further development of the psyche is associated with the development of the nervous system. In vertebrates, the brain becomes the direct carrier of the psyche. Thus, in higher animals and humans, the psyche is a product of the brain, or, in other words, the brain is an organ of the psyche.

Man appeared on earth as the highest product of the development of the animal world. It is clear that the human psyche was prepared by the entire previous course of the development of animals. The process of the emergence and development of the psyche in the animal world constitutes, as it were, the prehistory of the human psyche. The study of this process allows us to understand how the appearance of the human psyche was prepared and what is new and special that characterizes it, in contrast to the psyche of animals.

Human consciousness is the highest stage of development of the psyche. Crucial in the transition from the forms of the psyche characteristic of higher animals to human consciousness was labor. “... Labor created man himself” (Engels). Labor has created human consciousness.

The brilliant work of I.V. Stalin on linguistics has shown tremendous importance for the development of consciousness of sound language. “Sound language,” JV Stalin points out, “in the history of mankind is one of those forces that helped people to stand out from the animal world, unite in society, develop their thinking, organize social production, wage a successful struggle with the forces of nature and reach to the progress that we have at the present time."

Of course, the consciousness of primitive people was still very different from the consciousness of modern man. Those features that we observe in the psyche of modern people are not something inherent in human nature. Human consciousness developed in the course of historical development, on the basis of the development of social living conditions.

The long path of development of the psyche from its emergence to the consciousness of modern man has qualitatively different periods: 1) the development of the psyche in animals, controlled by the biological laws of variability, heredity and natural selection and preparing the emergence of human consciousness, and 2) the historical development of human consciousness, for which the main significance have socio-historical laws.

§7. Living Conditions And The psyche Of Animals

The development of the psyche is an integral part of the general evolution of animals. Animals adapt to environmental changes not only corresponding changes in the structure of the body, but also changes in behaviors.

For successful adaptation to the environment, flexibility, variability of the animal’s behavior, and the ability to quickly change its behavior in response to changes in external conditions are of paramount importance. Variability of behavior is associated with the level of mental development: the higher the latter, the more flexible
and perfectly animal adapts to environmental changes.

It should be distinguished, on the one hand, the forms of animal behavior with a predominance of hereditary mechanisms, the so-called instincts, on the other hand, the forms of behavior developed in the individual experience of the animal.

The physiological basis of instinct is unconditioned reflexes. Instinctive behavior is nothing more than a chain reflex, i.e. a series of successive reflex movements, of which each previous is the initial impetus for each subsequent. Unexplained at first glance instinctive actions performed by animals without special training, are a system of unconditioned reflexes, fixed in the process of development of the species. The construction of hundreds of bees or nests by birds, the flight of birds - examples of instinctive actions.

Complex chain reflexes (instincts) are produced as a result of the accumulation in a number of previous generations of those properties that were acquired by animals of this species under the influence of environmental influences. This explains that instincts are well adapted to the usual living conditions for a given species: a bee builds its honeycombs so that the smallest possible space is reached with the least material.

However, one should not think that such actions to some extent speak of the mind of the animal; the bee, of course, does not make a mathematical calculation of its structure. The assumption of “rationality” of instinctive actions is refuted by the following observations: these actions continue to be carried out even with such a change in conditions that turns them into meaningless ones. If you shift the egg several times to the side of the little hut that is hatching the chick during its flight, she sits exactly in the same place upon her return and continues to “hatch” it, not caring at all for the egg that lies nearby in her field of vision. Thus, any unusual change in living conditions can turn an instinctive action from a very perfect and expedient into a biologically meaningless, and sometimes even harmful.

Unconditioned reflexes (instincts) are not, however, completely unchanged. Advanced Michurin biology exposed the falsity of the claims of idealist biologists about the immutability of the hereditary properties of the organism. Getting into new living conditions, the body acquires new properties; These new properties, inherited, are strengthened and fixed in a number of generations. Thus, a change in heredity occurs.

The conditioned reflexes formed in the process of individual development, on the one hand, and congenital, unconditioned reflexes, which are the result of the development of many generations, are on the other hand closely interconnected. The conditioned reflexes corresponding to the constant factors encountered in the life of a given species can become more fixed, made hereditary and transmitted to posterity. “It can be accepted that some of the conditioned newly formed reflexes later become inherited by heredity into unconditioned” (Pavlov). On the contrary, those unconditioned reflexes that cease to respond to changing external conditions cease to be inherited by posterity. Thus there is a change in instincts. But this change is relatively slow, over the course of a series of generations.

In animals, the nervous system of which reaches a sufficiently high level of development, behavior is built largely on the basis of temporary connections that develop in the individual experience of the body. The animal inherits unconditioned reflexes, and conditioned reflexes are developed in it throughout life.

What is called the "training" of the animal is the production of conditioned reflexes. Worms already have known possibilities for this. As a result of repeated experiments, one can teach an earthworm to turn right and not left at a certain place on his way to his home if, after he turns left, an electric current is passed through it.

The study of conditioned reflex activity in animals at different stages of development shows that the more complex and perfect the organism, the more developed it is the ability to produce conditioned reflexes. In mammals, as is well known, the possibilities of developing a variety of conditioned reflexes are extremely great.

The biological significance of conditioned reflexes lies in the fact that new temporary connections make it possible to accurately and timely adapt to changing living conditions. Moreover, it is very important not only that all kinds of neutral stimuli can become signals of unconditioned stimuli, but also that, under the changed conditions, new nerve connections easily disappear and are inhibited. Conditioned reflexes explain the most complex forms of appropriate animal behavior.

The development of the psyche is carried out in inextricable unity with the development of its material carrier - the nervous system, in particular the brain.

Starting with mammals, the cortex of the cerebral hemispheres of the brain becomes the organ for the production of conditioned reflexes, and the evolution of the cortex is of paramount importance.

The complication of the nervous system and the development of various forms of animal behavior are ultimately determined by lifestyle. Take birds as an example. A central fact that determines both their structure and psyche is their fitness for flying life in the air. Flight life requires a good development of vision and hearing;
in this direction the development of sensory organs in birds proceeded. In birds of prey, the ability to see their prey from a distance is crucial, so their visual acuity reaches a level that is not available to any animal. On the other hand, life in the air makes few demands on the sense of touch and smell, as a result of which these sensations are very poorly developed in birds. The movements of birds are highly specialized (flight movements), but they are very stereotyped and provide few opportunities for the development of diverse and variable forms of behavior. Air is a much more uniform environment than the surface of the earth, on which most mammals live. Therefore, evolution in birds went in the direction of improving and complicating unconditioned reflexes (instincts), the least flexible form of behavior, and mammals began to develop behaviors more variable, i.e., conditioned reflexes.

Another example is monkeys. The fact from which to proceed when explaining the height of their mental development is an arboreal lifestyle. Life on trees broadens the field of view; the sense of smell decreases, the role of vision increases. Balancing on branches, jumping from branch to branch require a good eye, the development of touch and, most importantly, the ability to various and dexterous movements. Monkeys feed on the core of nuts, fruits, stems; they have to extract food using fairly fine and subtle movements. Significantly high development of the hand, to a certain extent freed from the function of movement (thanks to the arboreal lifestyle) and began to fulfill the function of grabbing. As a result, numerous and very mobile systems of conditioned reflex connections are formed in monkeys. Separate temporary connections in monkeys, according to I.P. Pavlov, they are closed in a chain of bonds, these chains of bonds can grow and enrich, increasing the adaptive capabilities of the animal. In this connection, reflecting the actual properties, reinforced, and random connections are inhibited, resulting in a reflection of some of the essential properties of objects, and then the relations between objects.

The monkey-research reflex is highly developed in monkeys, about which IP Pavlov writes: “The reflex, which could be called the research reflex, or, as I call it, the“ what is it? ”Reflex, is hardly appreciated of fundamental reflexes. Both we and the animal, at the slightest fluctuation in the environment, establish the corresponding receptor apparatus towards the agent of this vibration. The biological meaning of this reflex is enormous.” On the basis of the development of an orientation-research reflex, the “curiosity” characteristic of monkeys arises - the desire to peer into every new subject, grab it and manipulate it.

All of the above helps to understand why the monkeys had those rudiments of mental activity that make up the highest stage of mental development in the animal world.

§8. Human Consciousness

1) The role of labor and language in the development of consciousness. Human consciousness arose as a result of the transition from animal existence to work. The animal adapts to nature, but man changes nature to satisfy his needs.

The originality of this production, labor activity, which constitutes the main, decisive difference between a person and his animal ancestors, determines the characteristics of the conscious psyche of a person.

For labor, it is primarily characterized by two traits connected with each other: 1) the use and manufacture of tools and 2) the social, collective nature of labor activity.

“The labor process,” says Engels, “begins only in the manufacture of implements.” The prerequisites for this were created, as we saw, already in monkeys. Such prerequisites were the partial release of the hand from the function of movement and its adaptation to the function of grasping, the development of the ability to manipulate things under the control of vision, the development of the rudiments of mental activity. However, another decisive step was required - the transition to a straight gait and the complete liberation of the hand from the function of movement in order to move from the accidental use of tools by higher monkeys to the work of the first people, based on the manufacture and use of tools.

It has been proven by numerous experiments that a monkey can sometimes use a stick, a branch or another long object in order to get a bait (banana, orange), which it cannot reach with its hand. However, there is a significant difference between the real tool and the stick, which the monkey uses as a "tool" to get a banana. This difference is due to the collective nature of labor. Labor arose as a collective activity, and from the very beginning the instruments of labor were characterized by certain methods of use worked out by this collective and known to this collective. Therefore, the guns could be made “for future use” and stored by the team. We find nothing of the kind in monkeys. The "way of eating" a banana stick is not fixed to this stick and does not
The use of sticks as “tools” has a random, episodic character. Therefore, animals never store their "tools." The use of tools is associated with the realization of some stable permanent properties of an object and equally stable relations of this object to others. It is impossible to manufacture and use a tool without being aware that it is a means of obtaining food or clothing, without being aware, therefore, of the relationship that it has to those things that are obtained with it. And in order to manufacture for the future and keep the gun, you need to be aware that this relationship has a constant, stable character. Awareness of the permanent properties of an object and its relationship to other objects is one of the most important signs of a transition from the rudiments of mental activity observed in animals to conscious human thinking.

The collective nature of labor presupposes a certain collaboration of individuals, that is, some, at least the most elementary, division of labor operations. Such a separation is possible only if each individual is aware of the connection of their actions with the actions of other members of the collective and, thereby, with the achievement of the ultimate goal.

Take, for example, the activity of a beater in a primitive collective hunt. What motivates him to work? - The need for meat or animal skin. The ultimate goal pursued by all participants in the hunt is to take possession of meat and animal skin. However, the immediate goal of the beater’s actions is completely different - to scare the beast and drive him away from you. What sense would these actions have if the beater had not realized the connection of his actions with the actions of other participants in the hunt and, thereby, with the achievement of the ultimate goal - obtaining meat and animal skin? Obviously, the actions of the beater are possible only because he is aware of his actions as means leading to the achievement of the ultimate goal of the hunt.

Thus, in the conditions of collective labor, human activity becomes purposeful, that is, it involves awareness of the goal and the means that lead to the achievement of this goal. This is one of the fundamental differences between human activity and consciousness from the behavior and psyche of animals.

Consciousness appeared simultaneously with speech, i.e., the communication of people with each other through language. “Language,” wrote Marx, “is as ancient as consciousness.” JV Stalin points out: “History does not know a single human society, be it the most backward, which would not have its own sound language.”

Animals have no language. True, animals often influence each other with the help of voice sounds. An example is at least the signals given by guard birds in a flock. As soon as a person or a predatory animal approaches a flock of cranes descending into the meadow, the guard bird emits a piercing scream and rises into the air with a noisy flapping of wings, and the entire crane flock is removed after it. However, these cases are only outwardly similar to the speech communication of people. The bird does not cry for the purpose of informing the birds of the impending danger; a cry is part of an instinctive reaction to danger, a reaction that includes, in addition to a cry, flapping wings, take off, etc. Other birds take off not because they “understood the meaning” of this cry, but because of an instinctive connection between them screaming and taking off.

The conditional signals for an animal can be a variety of objects or their individual properties, coinciding in time with the appearance of food or the approach of danger. Such a signaling, providing orientation in the environment according to the properties and signs of surrounding objects and phenomena, having common patterns for higher animals and humans, was called IP Pavlov’s first signaling system.

In humans, unlike animals, a sound language developed in the process of work and social life. Words and combinations of words that we hear, see or feel during pronunciation also signal certain objects or the relationships of things around us. This constitutes the second signaling system, which is a product of social life and forms a specially human “increase” that is not available in animals.

“In the developing animal world at the human phase,” writes IP Pavlov, “an extraordinary increase in the mechanisms of nervous activity occurred. For an animal, reality is signaled almost exclusively only by irritations and traces of them in the cerebral hemispheres that directly enter the special cells of the visual, auditory and other receptors of the body ... This is the first signaling system of reality that we have in common with animals. But the word constituted the second, especially ours, signal system of reality, being a signal of the first signals.”

On the significance of verbal influences, IP Pavlov writes: “a word for a person is the same real conditioned stimulus as all the others in common with animals, but at the same time as comprehensive as no others that go either way in what quantitative and qualitative comparison with conditioned stimuli of animals. The word, thanks to the entire previous life of an adult, is associated with all external and internal irritations that come to the cerebral hemispheres, it signals them all, replaces them all, and therefore it can cause all those actions, body reactions that cause those irritations.”
The second signaling system is inextricably linked with the first; a person always has an interaction of both signaling systems. The second signaling system allows in a generalized form to preserve the accumulated knowledge, serves as a communication between people and underlies the mechanism of human thinking. Through the second signaling system, in its interaction with the first, the decisive influence of social conditions on the development of human consciousness is carried out; through the second signaling system, human consciousness manifests itself in his social activities.

Speech arose in the process of collective labor, when the emerging people inevitably had to have a “need to say something to each other” (Engels).

At the same time, an organ of human consciousness was formed - the cortex of the human brain. “At first, labor,” as Engels points out, “and then next to it articulate speech were the most important stimuli, under the influence of which the monkey’s brain could gradually turn into a human brain, which, with all the similarities in the basic structure, surpasses the first in size and perfection”.

The human brain differs from the brain of all animals, including higher monkeys, primarily in size: the average weight of the human brain is 1,400 g, while the average weight of the brain of anthropoid monkeys is from 400 to 500 g.

The human cerebral cortex has an exceptionally high development. It is a plate with a thickness of 3-4 mm, surrounding the large hemispheres from the outside. Microscopic examination reveals that the cortex consists of a number of layers that differ from each other in the type and functions of nerve cells in them. The nerve fibers that depart from these cells bind them to the sensory organs, to the organs of movement, and also form bonds between the cells. There are about 16 billion nerve cells in the cortex.

The cortex of the human brain is an integral organ, the individual parts of which, performing various functions, are intimately connected with each other.

In parallel with the development of the brain, the development of its closest implements — the sense organs and the organs of movement — proceeded. Of primary importance in the early stages was the development of the hand, which was the organ of labor movements among the formed people and the organ of cognizing things through touch. Equally important was the development of the human vocal apparatus, capable of producing articulate sounds, the human ear, the ability to perceive articulate speech, and the human eye, able to notice in things that is not accessible to any animal.

The basic principles of the cerebral cortex, common to humans and higher animals, are described above in §3.

The teachings of I.P. Pavlov about the second signaling system and its interaction with the first indicate specifically human mechanisms of higher nervous activity. The basic laws of higher nervous activity, established by I.P. Pavlov, are common to all people. But the content of a person’s mental life is determined primarily by the influence of social conditions in which a person lives and acts. With a change in social life, the psychology of people changes significantly, as a combination of historically determined characteristics, habits, knowledge, thoughts and feelings. These changes in the spiritual appearance of people are what distinguishes a person from one historical era from another, one class from another.

2) Socio-historical conditioning of consciousness

Human consciousness arose as a result of the transition of our ancestors to labor, production activities. But “production,” says Comrade Stalin, “is always and under all conditions social production.” And we saw that all the basic features of human consciousness are explained primarily by the collective, social nature of labor. Therefore, the development of consciousness, the development of the human psyche is determined by the course of the socio-historical process.

This development was expressed primarily in the emergence of new needs. The animal is always prompted to activity by the same biological, instinctive needs. The development of new forms of behavior, new modes of action in an animal is not associated with the emergence of new needs. When a dog develops a conditioned reflex to a new stimulus, for example, to a light signal, this does not mean that a new need arises for it, in this case the need for light. The development of new forms of behavior is driven by the same need for food, and the dog reacts to light only because it has become a signal of food.

This is not the case with man. Satisfaction of the labor of the first needs led to the development, refinement of these needs, and then to the emergence of new ones.

The development of needs created new impulses for human activity and led to its constant complication. It also informed the human psyche of wealth and breadth that so sharply distinguish it from the meager mental life of animals.
In activities aimed at satisfying needs, human abilities were created and developed. Perceptual abilities were created as human activities required an ever more subtle and perfect distinction between objects of reality. Thinking abilities developed due to the fact that human activity required him to more deeply comprehend the connections and dependencies between things and phenomena. Will and the ability to voluntarily focus attention developed because the labor process required tension, effort, required a long focus on the subject of work.

The wider and more diverse human activities became, the wider and more diverse their abilities became. During the development of nyauk, the abilities of scientific thinking were formed, the development of music led to the development of musical hearing.

By mastering nature, man has learned to control himself. Unlike animals, he is able to be aware of his attitude to things, to be aware of his feelings, needs, and drives. Based on the awareness of one’s feelings and drives, under the influence of the requirements of social life and activity, a person developed the ability to possess these feelings and drives, the ability to consciously regulate his behavior. On this path, the foundations of the will and character of man were formed.

The mental development of animals is governed by biological laws, including the laws of heredity. In the development of the human psyche, these factors recede into the background in front of other, more significant.

Already in the first instruments of labor, as we have seen, collective, social experience was consolidated. Mastering a tool, a primitive man mastered social experience. This was already a completely new factor in mental development, not known to the animal world. Another means of transmitting public experience was speech, first oral, and then written. Thanks to speech, the experience and knowledge of all people can become the property of everyone and be passed on from generation to generation.

The child in the process of education and training takes possession of the legacy created by all previous generations.

Human consciousness is determined by social being. Consciousness changes following a change in the economic or production relations of people, that is, those relations that people enter into among themselves in the process of struggle with nature to satisfy their needs, in the process of production activity. “History shows,” says Comrade Stalin, “that if at different times people were imbued with different thoughts and desires, the reason for this is that at different times people fought differently with nature to satisfy their needs, and, in accordance with this, their economic relations developed in different ways.” Human consciousness was distinguished by some features in the era of the primitive communal system, when people fought nature together, when they did not know private property. It acquires other features with the advent of private property relations, when a division of society into classes occurs and the class struggle between the exploiters and the exploited is the main feature of the social system; this is the case under the slave, feudal and capitalist system.

In class: society, the psychic traits characterizing typical representatives of certain classes are a consequence of the place this class occupies in production. It is impossible, for example, to understand and scientifically explain the most important psychic features of such heroes of “Dead Souls” as Sobakevich, Korobochka, Plyushkin, if you do not proceed from their class nature, if you look at them only as people “in general”, without taking into account that it is the Russian landowners of the 30-40s of the XIX century. One cannot understand the psychology of Gorky’s heroes if one does not see in them representatives of certain classes of the bourgeoisie (for example, members of the Artamonov family, Yegor Bulychev), the working class (Pavel Vlasov, Nilovna and other characters in the novel Mother).

The greatest historical revolution - the Great October Socialist Revolution - ushered in the deepest changes in human consciousness. With the transition to the Soviet system, a new stage begins in the historical development of man, now freed from the enslaving private property relations. The spiritual image of Soviet man is qualitatively different from the image of representatives of various classes of capitalist society. In our country, in which the construction of socialism is being completed and the transition to communism is being carried out, the greatest restructuring of people's consciousness is taking place.

“Today we are not what we were yesterday,” comrade Zhdanov said, “and tomorrow we will not be what we were today.” We are not the same Russians as we were before 1917, and Russia is not the same with us, and our character is not the same. We have changed and grown along with the greatest transformations that fundamentally changed the face of our country.”

The historical development of consciousness never proceeds as a smooth, even, calm process. In the process of development, there is always a struggle between the old and the new, obsolete and developing, remnants of the past and embryos of the future. It should be borne in mind that the primary, initial is the change in the social relations of people, and the secondary, derivative is the change in their consciousness. “... First, external...
conditions change, first the position of people changes, and then their consciousness changes accordingly” (Stalin). This change of consciousness does not occur immediately. Even after the new features of consciousness have been clearly defined, when they have become characteristic, leading features, the relics of the past in consciousness continue to make themselves felt for some time, and the struggle with these relics can take very sharp forms.

Unfolded in 1929-1930 the mass entry of peasants into collective farms and a sharp turn of the Soviet regime from a policy of restricting the kulaks to a policy of liquidation, its destruction as a class marked a profound revolutionary revolution, the transition of society to a new qualitative state. The consequence of this was the deepest changes in the psychology of the peasants. These shifts are clearly shown by M. A. Sholokhov in the novel “Virgin Soil Upturned”. From the point of view of the struggle of the old and the new in the minds of the peasant in the transition from a sole to collective farm economy, the image of Kondrat Maydannikov is especially instructive.

Kondrat Maydannikov is a middle peasant. He was one of the first to apply to the collective farm and at a meeting where the issue of organizing a collective farm on the Gremyachy Log farm was discussed, and he fervently called for others to do so. But the transition to a new life was also associated with a great internal struggle.

“The collective farm was not easy for Kondrat! With a tear and with blood, Kondrat tore the umbilical cord, connecting it with property, with bulls, with his native land share …” Kondrat no longer believes in God, but believes in the Communist Party, which leads the working people of the whole world to liberation, to a blue future. He brought all the cattle to the collective farm bases … He is for only the one who works to trample the bread and trample the grass. He firmly, inseparably rooted in the Soviet regime. But Kondrat doesn’t sleep at night … And he doesn’t sleep because he remained in his pity, the viper for his good …"

He is a fan of public, collective farm property, he shows an example of a new attitude to work: he was the first on the collective farm to receive the honorary title of drummer. But he still cannot completely abandon the remnants of private property psychology. “I’m walking past the horse looms,” he thinks in heavy, sleepless nights, “the horses of others are standing, “I’m at least something, but as soon as I get there, I will look at his back with a black belt to the turnip, on the labeled left ear, and here will suck in the breasts … And you strive to throw him after the Sentz, popreist, smaller.”

The most remarkable thing about Kondrat Maydannikov is his deeply conscious attitude to the surviving vestiges of private property psychology, his passionate desire to fight them and overcome them. When the secretary of the Gremyachenka cell of the CPSU (b) invites him, the best drummer on the collective farm, to join the party, he refuses, considering himself still unworthy of the high rank of party member: “Since I have not renounced property, it means that the conscience does not allow me in the party to be. As I understand it”. Such an attitude to relics of the past in their psychology is the best guarantee of victory over these relics.

In the 35 years that separate us from the Great October Socialist Revolution, the consciousness of Soviet people has radically changed. “It should be recognized that the most important achievement of our revolution is the new spiritual image and ideological growth of people as Soviet patriots.” “Now the Soviet people are not what they were 30 years ago” (Molotov).

We know that people who combine mental and physical labor are forming in the USSR, and that the psychology of the inhabitants of the city and the village is getting closer and closer. This new spiritual appearance is conquered in a constant struggle with the remnants of the past. Mental traits of a new person do not come by themselves. They are actively brought up in the practice of building a socialist society under the leadership of the great Communist Party.

In this educational work, on the one hand, the struggle against those psychic traits that reflect the influence of capitalism and its ideology and contradict the new, socialist system of society, and, on the other hand, a clear awareness of those new traits that contain embryos, are especially important. future, in which the psychology of the person of the era of communism is already shining through.

Addressing Soviet writers, A. A. Zhdanov said: “To show these new high qualities of Soviet people, to show our people not only on its today, but also to look at its tomorrow, to help illuminate the way forward, this is the task of every conscientious Soviet the writer."

The same task is facing Soviet psychology.

Questions To Repeat
1. What is the difference between irritability and sensitivity?
2. What is called instinct?
3. What do you know about the variability of instincts?
4. What are the individual forms of animal behavior?
5. What determines the process of mental development of animals?
6. What are the most important differences between human consciousness and the psyche of animals?
7. What is the role of labor in the process of turning a monkey into a person?
8. What is the role of sound language in the development of mankind?
9. Indicate the structural features of the cortex of the human brain.
10. What is the teaching of I. P. Pavlov about two signal systems?
11. Indicate the main features of the historical process of development of consciousness.
12. Tell us about the development of consciousness of Soviet people.

Chapter III. FEELINGS §9

. General Concept Of Sensations

Sensation refers to the simplest mental process that occurs as a result of exposure to the senses of objects or phenomena of the material world and consists in reflecting the individual properties of these objects or phenomena.

With the help of sensations, we learn the properties of things around us: their hardness or softness, roughness or smoothness, their severity, temperature, smell and taste, the colors of these things, the sounds that they make. In addition, sensations give us information about changes in our own body: we sense the movement and position of individual parts of our body, disturbances in the functioning of internal organs, etc.

Sensations, being a reflection of the properties of the external world, provide material for other, more complex cognitive processes: perceptions, ideas, memories, processes of thinking. “Otherwise, through sensations,” wrote Lenin, “we cannot learn anything about any forms of matter and about any forms of motion.”

Material things and processes that affect the senses are called irritants, and the very process of this effect is called irritation. The process that occurs as a result of irritation in the nervous tissue is called arousal.

The entire anatomical and physiological apparatus necessary to obtain sensation was proposed by IP Pavlov to be called an analyzer. Each analyzer consists of three parts: the sensory organ (receptor), centripetal nerves and corresponding parts of the brain. If any part of the analyzer is destroyed, the emergence of the corresponding sensations becomes impossible. So, for example, visual sensations cease when the eyes are damaged, and when the optic nerves are cut, and when the corresponding sections of the cortex are destroyed.

It is necessary to pay attention to the fact that the term "sense organs" has a conditional meaning. It gained distribution in those days when a clear distinction between sensations and feelings was not yet made in science. Now, as we know, the word “feeling” denotes a special mental process that is significantly different from sensations. Therefore, it would be more correct to call receptors not sensory organs, but sensory organs.

In the same conditional sense, the word “feeling” is used in the expressions: “sense of vision”, “sense of taste”, “vibrational feeling”, etc., denoting the ability to have sensations of visual, taste, vibration, etc. When meeting with such designations, it must be remembered that they do not refer to “feelings” in the real sense of the word, but to feelings.

In the cerebral hemispheres, the central ends of the analyzers are presented, which distinguish between external influences and internal conditions of the body. “On the highest floor of the central nervous system,” says IP Pavlov, “we have the ends of the finest and infinitely diverse analyzers.” The brain end of the visual analyzer is located mainly in the occipital lobe of the cortex, and the auditory analyzer is located mainly in the temporal lobe.

§10. Types Of Sensations
All sensations can be divided into two groups:

1) Sensations that reflect the properties of things or phenomena that are outside of us. The organs of these sensations are located on the surface of the body or close to it.

2) Sensations reflecting the movements of individual parts of our body and the condition of our internal organs. The organs of these sensations are located deep in the tissues (for example, muscles) or on the surface of internal organs (for example, in the walls of the stomach, respiratory tract).

The first group includes visual, sensory, olfactory, taste and skin sensations.

   The irritant for the organ of vision is light, that is, electromagnetic waves having a length of 390 to 800 nanometers (a nanometer is a millionth of a millimeter).
   Everything that we see has any color. Only an object that is completely transparent and, therefore, invisible, can be colorless. Therefore, we can say that visual sensations are sensations of colors.
   All colors are divided into two large groups: achromatic colors and chromatic colors. Achromatic colors include white, black and all gray; chromatic colors include all others, i.e., red, yellow, green, blue with all kinds of shades.

2. Auditory sensations.
   The stimulus for the organ of hearing is sound waves, i.e., longitudinal vibrations of air particles, propagating in all directions from the sound source.
   In sound waves, they distinguish: the frequency of the oscillations, the amplitude, or range, the oscillations and the form of the oscillations. Accordingly, the auditory sensations have the following three sides: the pitch of the sound, which is a reflection of the oscillation frequency, the volume is the reflection of the amplitude of the vibrations, and the timbre is the reflection of the shape of the vibrations. Our hearing organ is sensitive to vibrations ranging from 16 vibrations per second to 20,000 vibrations per second. Oscillations with a frequency of more than 20,000 vibrations per second, inaccessible to our hearing, are called ultrasound.
   Sounds by the nature of the sensations they cause are divided into musical sounds (the sounds of singing, musical instruments, tuning forks) and noises (all kinds of squeaks, rustling, knocking, crackling, rumble, etc.). Speech consists of both musical sounds (mainly in vowels) and noises (mainly in consonants).

3. Olfactory sensations.
   The olfactory organs are the olfactory cells located in the upper part of the nasal cavity. Irritating to the olfactory organ are particles of odorous substances that penetrate the nose along with air.

4. Taste sensations.
   Irritants for the organ of taste - taste buds - are taste substances dissolved in water or saliva.
   Taste sensations have four different qualities: sweet, sour, salty and bitter. The variety of tastes of various dishes depends to a large extent on the addition of olfactory to the taste sensations. If the sense of smell is completely excluded, the taste of tea, coffee and quinine in the corresponding solutions becomes the same.

5. Skin sensations.
   The skin, as well as the mucous membrane of the mouth and nose can give sensations of four types: a) sensations of touch, or tactile sensations, b) sensations of cold, c) sensations of heat and d) sensations of pain. Some points of the skin give only tactile sensations (touch points), others only sensations of cold (points of cold), still others only sensations of heat (points of heat), fourth only sensations of pain (points of pain). It is easy to verify the existence of cold points by a simple experiment. To do this, use the tip of a pencil, gently touching the skin, slowly hold it over the closed eyelids; from time to time you will get an instant feeling of cold.
   The sensitivity of different skin areas to each of these four types of sensations is different. Sensitivity to touch is most at the tip of the tongue and at the tips of the fingers, that is, at the most mobile organs; the back, for example, is very sensitive to touch. Pain sensitivity is distributed quite differently: the skin of the back and cheeks is the most sensitive to pain, and the skin on the fingertips and on the palm is the least sensitive. Thus, those areas of the skin that we use most for palpation are the least painful; they are most “hardened” against pain. As for the sensations of warmth and cold, those parts of the skin that are usually covered with clothing are most sensitive to them: the skin of the lower back, abdomen, chest.
   The second group includes motor sensations, a sense of balance and organic sensations.

1. Movement sensations.
   Their receptors are located in the muscles, tendons and on the articular surfaces. Motor sensations provide signals about the degree of muscle contraction and about the position of our members, for example, how much
the arm is bent in the shoulder, elbow or wrist joint.

The combination of skin and motor sensations resulting from the palpation of objects, i.e., when a moving hand is touched by them, is called touch. The organ of touch is the hand with all its skin, muscle and articular receptors. The hand as the organ of touch first appears in monkeys, but it only reaches a person’s full development, becoming his tool.

Skin sensations per se signal only about the fact that the object touches the body and the place of this touch. When a fly sits on our forehead, we easily notice this, but just as easily can be misled and take the touch of a straw, brush, blade of grass or piece of paper as a fly. In order to more accurately determine the properties of an object touching the skin, its hardness, softness, roughness, smoothness, shape, shape, etc., you need to feel it. For example, the sensations of hardness and softness depend mainly on what resistance the body exerts when pressure is applied to it; therefore, it is impossible to determine the degree of hardness or softness of objects without the participation of motor sensations.

2. Feelings of balance.

Their receptors are in the inner ear and give signals about the movement and position of the head. These sensations play an extremely large role in the flight business; therefore, when determining the suitability for the pilot's work, the activity of these bodies is always tested.

3. Organic sensations.

Their receptors are located in the walls of most internal organs: the esophagus, stomach, intestines, blood vessels, lungs, etc. Organic sensations include the sensations that we have with hunger, thirst, satiety, nausea, internal pain, etc. So far we are completely healthy, well fed, in general, when the work of internal organs is normal, we do not notice almost no organic sensations; they mainly give signals about violations in the work of internal organs. Studies of the Pavlovian school, primarily the work of K. M. Bykov, showed that impulses directed to the cortex from the internal organs, not clearly recognized, underlie the general “well-being” of a person. Internal analyzers monitor, check the chemical composition and blood pressure, the condition of organs and their work; however, they may temporarily communicate with analyzers,

§Eleven. Sensitivity And Thresholds

Sensitivity, as we know, is the ability to have sensations. It should be distinguished: absolute sensitivity and sensitivity to discrimination. Absolute sensitivity means the ability to feel weak irritations, and sensitivity to discrimination means the ability to sense weak differences between irritations.

Not every irritation causes a sensation. We don’t feel the touch of dust falling on our skin, we don’t hear the ticking of a pocket or wristwatch from the other end of the room. In order for a sensation to arise, it is necessary that the force of irritation reaches a certain certain value. This minimum amount of irritation, giving a subtle sensation, is called the absolute threshold of sensation. Irritations, the value of which lies below the threshold, do not give a sensation.

The smaller the threshold value of sensation, the greater the absolute sensitivity to these stimuli. If one person for the first time feels a touch at a pressure of 3 g per 1 mm2 of the skin surface, and another needs 6 g per 1 mm2 for this, then this means that the threshold of tactile sensations in the second is twice as much, and the absolute sensitivity is half as much as in the first.

The absolute sensitivity of our senses is extremely high. With respect to vision, for example, S. I. Vavilov experimentally showed that under the most favorable conditions the eye is able to sense radiant energy equal to only a few quanta. Assuming complete transparency of the atmosphere, we could see from a distance of 1 kilometer a light source equal to thousandths of a candle. No physical device has such a sensitivity to light. The sensitivity of our sense of smell, which detects the presence in the air of such quantities of matter that cannot be discovered by any chemical analysis methods, is unusually high. It’s enough, for example, to have one hundred millionth of a milligram of artificial musk in a liter of air so that we can smell.

With regard to sensitivity to discrimination, then to characterize it use the value of the threshold of discrimination.

If we put on our hand a load of 100 g and then add another 1 g to it, then no one can feel this increase. To notice an increase in sensation, you need to add at least 3-4 g to a load of 100 g. That minimal difference between irritations, which gives a barely noticeable difference in sensations, is called the threshold of discrimination.
The threshold for distinguishing luminous intensity is approximately 1/100. This means that with a light intensity of 100 candles, an increase in illumination can be noticed by adding 1 candle.

The threshold for distinguishing sound strength is on average 1/10. So, at least 10 singers must be added to a choir of 100 people in order to get a barely noticeable amplification of sound.

The thresholds for discrimination are well explained by the data established by I.P. Pavlov, regarding the nervous processes occurring in the cortical part of the analyzer. Due to the irradiation of excitation along the cortex, the action of a certain stimulus at first does not differ from the action of other stimuli similar to it. The gradually increasing ability to distinguish sensations (differentiation, according to Pavlov) is explained by the concentration of the excitation process in the cortical part of the analyzer; differentiation is based on the inhibitory process - "drowning out the first of the widely excited brain end of the analyzer, excluding its smallest part corresponding to this conditioned stimulus." Such inhibition, which helps to distinguish between similar stimuli, was called IP Pavlov differential inhibition. In this way,

Both absolute sensitivity and sensitivity to discrimination are not constant. They vary depending on different conditions. Most important are the following three reasons for the change in sensitivity. Firstly, sensitivity changes under the influence of stimuli acting on the senses. Secondly, it can change under the influence of other simultaneous sensations. Thirdly, finally, it changes depending on the living conditions and, first of all, on the requirements of the activity in which the person is engaged. Now we will examine in more detail the effect of each of these causes.

§12. Adaptation

If sufficiently strong stimuli act on the sensory organs for some time, then sensitivity to these stimuli gradually decreases. If the stimuli are very weak or absent altogether, the sensitivity increases. Such a change in sensitivity under the influence of stimuli acting on the senses is called adaptation.

In some types of sensations, adaptation is very strong, in others it is very insignificant. Strong adaptation is observed in tactile, temperature, olfactory and visual sensations, weak in auditory and pain sensations.

Tactile sensitivity with a touch of skin that lasts for some time decreases very quickly. The experiments showed that after 3 seconds the sensation of pressure is only 1/5 of the force that it had immediately after touching. Adaptation in tactile sensations is reflected, for example, in the fact that while we are sitting motionless, we almost do not feel the pressure of the clothes. Sometimes you can observe how a person searches in vain for glasses shifted to his forehead. This happens because the skin of the forehead very quickly adapts to the pressure of the glasses and ceases to feel it.

Adaptation in temperature sensations is very strong. When, bathing, you enter the river, the water in the first instant seems cold, but after only two or three minutes it turns out that the water is not so cold at all.

Temperature adaptation is clearly revealed in the following experiment. If for 1-2 minutes you hold one hand in hot water (40 degrees) and the other in cold (no more than 20 degrees) and then lower both hands immediately into medium-temperature water (30 degrees), then this water will simultaneously appear to one hand is cold, for the other is hot. Extremely fast adaptation occurs in olfactory sensations. Entering a poorly ventilated room from the street, in the first instant you smell very unpleasantly, but after a few minutes it ceases to be felt. The experiments showed that, for example, complete adaptation to the smell of iodine occurs after 50-60 seconds (no smell is already felt), to the smell of camphor - after 1.5 minutes, to the smell of a strongly smelling cheese - after 8 minutes. For a complete restoration of olfactory sensitivity, a break of 1 to 3 minutes is needed.

Of particular importance is adaptation in vision. Coming out of a dark room into bright sunlight, in the first moments we see very poorly; strong light blinds us, and our eyes involuntarily close our eyes. But four to five minutes is enough for the vision to adapt to bright lighting and function normally. This is called adaptation to light. The reverse process - adaptation to the dark - occurs when we move from bright light to a more or less dark room. At first it seems to us that we are in total darkness; we do not see anything and can only move by touch. However, after a while it turns out that the room is not so dark at all that we can even distinguish the outlines of objects. During a stay in the dark, the sensitivity of vision increases. Accurate measurements showed what explains such a huge increase in sensitivity?

What fact that the width of the pupil varies depending on the amount of light incident on the eye is of known importance. When moving from bright light to darkness, the pupil area increases by 17 times, and therefore it
transmits 17 times more light. But this is not enough to explain the adaptation to the dark, in which the sensitivity increases not by 17 times, but by 200 thousand times.

The most important fact is that there are two kinds of photosensitive devices in the retina: cones and rods. Cones fill the central fossa of the retina, where the image of the object we are looking at falls. They have little sensitivity: to cause their reaction, you need a sufficiently strong light. We see cones in bright light; they can be called a daylight device. The rods, located mainly along the edges of the retina, are highly sensitive: they can even respond to very weak light. We see with chopsticks at night, at dusk, in general in low light; they are a night vision device. Thus, adaptation to darkness is associated with the transition from cones to vision with chopsticks.

One should not think, however, that cones are a less perfect apparatus than sticks. True, they are less sensitive to light, and therefore cone-shaped vision is possible only in sufficiently bright light. But only with the help of cones we can see the colors and accurately distinguish the shape of objects. In deep twilight, when the wand vision works, we do not distinguish colors - everything seems gray. Under these conditions, we also cannot precisely distinguish the shape of objects.

In purely diurnal animals, there are only cones in the retina; at night these animals do not see at all. Such, for example, hens, pigeons. In the retina of nocturnal animals, such as owls or bats, on the contrary, there are only sticks; these animals do not see well during the day. Rare cases are observed when a person does not have a cone apparatus at all. Such people do not distinguish colors and see everything in gray, as in a photograph; in addition, they suffer from photophobia, that is, they see poorly in bright light. This flaw is called total color blindness. Partial color blindness is much more common, in which a person does not distinguish between certain colors; such partial color blindness is sometimes called "color blindness." There are such cases when the wand apparatus does not function:

Sensations with little adaptation are, as we already know, auditory and pain sensations. A sound that lasts several minutes invariably does not cease to be felt, just as the smell ceases to be felt. Pain does not cease to be felt, lasting several times without change. A slight decrease in sensitivity occurs, but very slowly, so it is difficult to notice it. It does not happen in auditory sensations and anything similar to adaptation to the dark. Falling into silence, we do not experience such an increase in sensitivity, which would allow us to begin to hear after a while sounds that are a thousand times weaker than those that we hear under ordinary conditions.

True, in relation to sounds and pain, sometimes something happens, at first glance similar to adaptation. We get so used to the continuous ticking of the clock in the room that in the end we don’t notice it at all. In the same sense, you can get used to the pain and stop paying attention to it. But these cases have only an outward resemblance to adaptation. My auditory sensitivity does not weaken at all from the fact that the clock is ticking in the room. It is enough for me to recall them, for example, having become interested in whether I forgot to start them in order to hear the tick with full clarity. As a result of adaptation, the sensations themselves weaken or intensify, while getting used to the ticking of the clock does not mean weakening of sensations, but only a different direction of attention. I stop noticing a monotonous noise or pain just because I stop paying attention to them, but at any moment, as soon as I want it, I can notice them again. With true adaptation, the situation is different: no matter how much I want it, I cannot see the faint light in the first moments after coming into a dark room. Adaptation depends on a change in the operation of the analyzers, and it cannot be arbitrarily destroyed, paying attention to the corresponding sensations.

§Thirteen. Sensation Interaction

Sensitivity to any stimulus is highly dependent on other sensations available at the moment. This dependence is very complex, and not all laws governing it have been studied at present. But one simple pattern is valid in most cases. Mild irritants increase sensitivity to other, simultaneously acting stimuli, while strong stimuli decrease this sensitivity.

If I have to see some dimly luminous point in the dark, then I will more easily see it when there are other dimly luminous points in the field of view. If there is a rather strong light in the field of view, then this makes it difficult to see a faint light. Sensations from other sensory organs have a similar effect on visual sensitivity: soft sounds, light taste or temperature sensations increase visual sensitivity, while very strong sounds or sudden cooling and heating reduce it.

The fact that weak stimuli increase sensitivity to other simultaneously acting stimuli is explained by the
irradiation of an excitatory process that enhances excitation in the surrounding areas (irradiation, as Pavlov showed, is most significant precisely under the action of weak irritants). Stronger irritants, due to negative induction, cause inhibition of the surrounding areas, and as a result, sensitivity to other stimuli decreases.

One of the most striking manifestations of the interaction of sensations is the contrast of sensations. After a sweet cake, the apple seems sour, and if you eat it before the cake, it would seem sweet. After saline, distilled water seems sweet. The gray rectangle on a white background seems darker than on a black one. The same gray rectangle on a red background will appear greenish, on a yellow background it will appear bluish, etc.

Due to contrast, the sensation changes in the direction opposite to the neighboring or previous sensations. Against a dark background, colors lighten, against a light background, they darken. Due to the contrast, the distinction between adjacent or successive sensations is enhanced. This is of great importance in the process of perception, since sensations are more sharply separated from each other.

Various cases of contrast find their explanation in the light of the teachings of I.P. Pavlov. The intensification of the difference between stimuli is based on the induction relationship between opposing processes of excitation and inhibition. The effect of mutual induction of excitation and inhibition in the cortical part of the analyzer is manifested both in cases of simultaneous contrast (simultaneous induction) and in cases of sequential contrast (sequential induction). IP Pavlov notes that “the phenomena of mutual induction completely coincide with the large group of contrast phenomena studied in the current physiology of the sensory organs.”

§14. Sensitivity Change Under The Influence Of Life And Activity Requirements

We have seen how great the sensitivity of the human senses can be. However, in fact, for most people, the development of sensations far lags behind the possibilities that are given by the arrangement of the senses.

What determines the development of sensations? - Mainly on what requirements life imposes on sensations, and, first of all, the activity that a person is engaged in.

1) Auditory sensitivity

The most important hearing function for all people is speech perception. Deafness is severe mainly because it makes it impossible to hear speech. It is not surprising that for all of us, auditory sensations develop primarily in relation to the sounds of speech, and, moreover, not to any sounds of speech, but to the sounds of our native language. Distinguishing between these sounds, starting in early childhood, is our most important need. Therefore, it seems to us incomprehensible how not to distinguish between them. However, in reality, the difference between many sounds of speech is very small and requires very fine auditory sensitivity. We have to make sure of this for everyone who wants to properly master the correct pronunciation in any foreign language.

In Russian, for example, to understand the meaning of words, it is necessary to distinguish between hard consonants and soft consonants. Words such as “chalk” and “shallow” or “mole” and “mole” have very different meanings, but according to rumors they differ from each other only in that in one case the last consonant is hard and in the other soft. Neither in French, nor in English, nor in German language is there such a difference between hard and soft consonants. In these languages, the meaning of a word can never change from replacing a hard consonant with a soft one. These languages do not require a person to distinguish between the hardness and softness of consonants. As a result, it is very difficult for a Frenchman, a German, or an Englishman to hear the difference between a hard and soft consonant; it seems to them extremely subtle, almost elusive. And while learning the Russian language, they constantly make mistakes.

With similar difficulties, but in relation to other sounds, Russian is also encountered, learning any of the foreign languages. In French, for example, the meaning of a word may depend on whether it is pronounced e: closed or open (for example, nez - nose and net - clean). For the Frenchman, the difference between these sounds seems enormous, while the Russian needs a lot of time and effort to learn how to “hear” this difference. In German and English, the distinction between long and short vowels, which is not present in Russian, has the same meaning.

Thus, from childhood, every person needs to develop a special hearing for the sounds of their native language, suggesting a very subtle differentiation of sounds close to each other. Good mastery of a foreign language requires that a similar hearing be developed for the sounds of that language, and this can only be achieved through the use of this language.
In the other direction, auditory sensations develop when playing music, which requires, first of all, a very subtle distinction of the relationship between sounds in height. In the process of practicing music, a musical ear is developed.

Some professions develop a very subtle sensitivity to all kinds of special sounds. So, for example, an experienced pilot hears in the sound of the engine the subtlest shades by which he judges his work, while to an outsider it seems that the engine is always noisy.

The remarkable subtlety of hearing is often observed in the blind. Many of them can determine the size of a room by how the sounds of steps or voices are heard in it; by the same sounds they judge whether the room is furnished or empty, whether there are carpets on the walls or not. Blind people recognize people well, not only by voice, but sometimes by the sound of their steps. There have been cases when the blind distinguished tree species (poplar, acacia, oil tree) by the noise of the leaves.

Of course, the natural properties of the hearing aid in the blind are the same as in the sighted, but life requires them to better differentiate the auditory stimuli. By hearing, they judge that the sighted can be much easier to see with their eyes, and therefore they learn to distinguish some of the subtlest shades of sounds.

2) Visual and tactile sensitivity

In most types of human activity, vision plays a particularly important role, and therefore it is visual sensations that are most highly developed in most people. No wonder a person is sometimes called a "visual animal." But even in the field of vision, our sensations, as a rule, are very little developed in comparison with the possibilities we have. It is known, for example, that some textile workers specializing in the production of black fabrics distinguish up to forty shades of black color where most people see only two or three shades.

In some activities, no less subtle tactile sensitivity is developed. Experienced millers can, using touch, accurately determine the quality of the flour and even find out in which area the wheat from which the flour is grown.

3) Olfactory sensitivity

In the vast majority of people, olfactory sensations play an insignificant role in life. Therefore, they remain underdeveloped. However, the possibility of developing olfactory sensations in humans is very great. This is revealed whenever a person's activity begins to demand that he be guided by olfactory sensations.

The olfactory sensations in the deaf-deaf, that is, in people who, in early childhood, lost their vision and hearing, are of utter importance. The sense of smell is the main means for them to recognize people and objects from a distance. By smell, they recognize the person who entered the room, determine if there was a person of interest to them in the room a while ago: walking along a familiar street, they smell what house they are passing by now.

4) Vibration sensitivity in the deaf and blind deaf

Vibration sensations are called sensations that we receive from the entire surface of our body from air vibrations produced by moving bodies. These sensations play almost no role in our life, since we perceive air vibrations much more subtly through hearing. Therefore, under ordinary conditions, we do not even notice these sensations. But if a person loses his hearing, vibrational sensations become very important for him. There are cases when people who are completely deaf show a great love for music, although they cannot hear a single sound. Some of them prefer playing the piano and, in order to perceive music, put their hand on the instrument cover. Others are more likely to “listen” to the orchestra and, while attending concerts, sit with their backs to the stage, since with their backs they best perceive air vibrations.

Even more important are the vibrational sensations of the deaf-blind, especially those of them that are deprived of smell. The deaf-blind with the help of vibrational sensations perceive a knock on the door, they recognize when someone enters the room, they can even recognize friends they walk; on the street, with the help of vibrational sensations from a distance, they notice the approach of a car. Some of the deafblind people manage to talk from the other end of the room with the help of Morse code, knocking their feet on the floor; they feel vibrations and understand everything that is transmitted to them.

All of us have the same opportunities for developing vibrational sensations, but they usually remain unused, since in similar cases we use other, more advanced sensory organs.

5) The development of sensations
So, with a healthy state of the senses, it is possible to achieve an extreme subtlety of sensations. To do this, we must set ourselves tasks that necessarily require high sensitivity in some form of sensation. By practicing such activities, we can achieve significant results in a relatively short time.

Of particular importance from this point of view is the occupation of art. Painting, drawing, performing all kinds of artwork are the most powerful means for the comprehensive development of the functions of vision. Sculptural works develop along with visual and tactile sensations. Classes in music lead to a subtle development of musical hearing, and classes in fiction, poetry, and theatrical art raise the "speech ear" to a great height. A person with a high culture in the field of art usually has well-developed sensations.

Questions To Repeat

1. What is called sensation?
2. What is the difference between the terms “irritation” and “agitation”?
3. What are the two groups of sensations shared?
4. List the types of skin sensations.
5. What sensations are called motor sensations?
6. What is called touch?
7. What is called the absolute threshold of sensation?
8. What is the threshold of discrimination?
9. How to explain the thresholds of distinction in the light of the teachings of IP Pavlov?
10. What conditions affect the sensitivity?
11. What is adaptation?
12. Indicate the differences between rod and cone vision.
13. What patterns of interaction of sensations do you know?
14. What is the physiological nature of contrast phenomena?
15. What determines the development of sensations?

Chapter IV. PERCEPTION

§15. General Concept Of Perception

Our sensory organs are always affected by a huge amount of irritants, and a significant part of them lies above the threshold. Thus, we always have many sensations that reflect the individual properties of things. Based on these sensations, the perception of objects and phenomena of reality surrounding us is formed.

Perception is the mental process of reflection of objects or phenomena of reality that are currently acting on our senses.

The most important feature of perception is that it always reflects things, objects, phenomena, and not just their individual properties and signs. Under ordinary conditions, we see no colors and no spots of light and shadow; we see certain objects. We hear not just sounds of different heights, loudness and timbre; we hear a man’s voice, the sound of rain, the cries of children playing, the sounds of a tram.

Let's read a few lines from the description of the spring night in the Notes of the Hunter by Turgenev.

“Do you know, for example, what a pleasure to leave in the spring before dawn? You go out onto the porch ... On a dark gray sky here and there the stars blink; from time to time a humid breeze comes in a light wave ... the trees make a faint noise, drenched in shadow ... The attentive ones cluck, snort and dapper cross their feet; a pair of just awakened white geese silently and slowly moving across the road. Behind the fence, in the garden, a watchman snores peacefully.”

Here, as it were, a report is given that a person who went out onto the porch at the end of a spring night. A lot of sensations - visual, auditory, temperature, tactile, etc. - arise at him at this moment. But in the description of Turgenev, we are not talking about these sensations, but about those objects and phenomena that are perceived through these sensations: about stars in the sky, trees, swing, a pair of geese, a snoring watchman.

Take the phrase: "A humid breeze occasionally runs in a light wave." How does a person know about the incident waves of the breeze? Of course, from a number of different sensations. The most important role here is
played by skin sensations - light touch sensations in combination with sensations of cold in open areas of the skin (face, hands); try to blow yourself into your arms and you will get this characteristic combination of sensations of touch and cold. These skin sensations are joined by olfactory - a slight smell of dampness (“wet” breeze), auditory ones — the noise of trees shaken by the wind, and perhaps visual ones — the weak movement of dark spots, like the silhouettes of trees in the dark. All these sensations, standing out from the mass of other sensations, form an integral image of the “incoming wave of a wet breeze”.

The same is with the perception of other objects. From a certain group of visual and auditory sensations, an image of tight-fitting, cringing, sniffing and crossing legs is created; Moving dark spots of a certain shape in combination with a very complex group of peculiar sounds, a person perceives as the movement of contiguous. On the basis of another group of visual sensations, the perception of a pair of geese is built; seeing light spots of a characteristic shape, moving in a certain way, a person recognizes geese. Another group of visual sensations forms the perception of the wattle fence enclosing the garden. Hearing characteristic sounds coming from the same side, a person recognizes the snoring in them.

As a result of perception, an image of an object or phenomenon arises in consciousness. This image of perception is always based on sensations, but, however, it does not come down to a simple sum of these sensations. Any perception implies this or that understanding, comprehension of this image.

A characteristic feature of perception is the naming of perceived objects or phenomena, i.e., the inclusion of a second signal system in the perception process. It is with the help of speech, thanks to verbal designations, that we usually perceive objects so easily and instantly, we recognize and understand them.

It is easy to understand what important role a person’s past experience plays in the process of perception. Anyone who has never seen geese other than in the picture hardly recognizes them immediately, and even at night; he will see something bright, moving across the road, and wonder what it could be.

We see, therefore, that perception is a very complex process, which is based on the selection of a certain group of sensations, combining them into a holistic image, a certain understanding, or conceptualization, of this image and recognition of the corresponding object or phenomenon.

Without recognition, meaningful perception is impossible. If I say that, having met a friend on the street, I did not recognize him, this does not mean that in this case there was no recognition. In any case, I learned that this is a man, a man dressed in a coat, etc. This kind of recognition is called nonspecific recognition. With nonspecific recognition, we can only determine which category of objects a given object belongs to: this is a person, this is a table, this is a passenger car, but we do not recognize the individual features and characteristics of this very object. If we recognize precisely the individual traits of a given person or a given subject, then specific recognition takes place; I learn that this is the same person I met on the train the other day, I recognize my coat among many other clothes in the theater’s wardrobe.

§Sixteen. The Physiological Basis Of Perception

Since perception always includes sensations received from different senses, the physiological processes underlying perception include excitation processes that begin in the senses under the influence of objects of the external world and are transmitted through centripetal nerves to the cerebral cortex. Depending on which analyzer reflects objects and phenomena of the external world or which analyzer is the leading one, perceptions are divided into visual, auditory, motor, skin, taste and olfactory.

Experiments on the study of conditioned reflexes showed that when the analyzer is not systematically stimulated by an isolated stimulus, but by a combination of stimuli (for example, a series of stimuli presented at a certain pace), the response begins to depend not on the individuality of each stimulus, but on the peculiarity of their connection, their correlation. So, in some experiments, a sound stimulus was used, interrupted a certain number of times per minute; it turned out that the reflex developed for such an intermittent sound does not depend on which sounds are used in this case. The same thing was observed with light stimuli, when a reflex was developed for the ratio between stimuli: some light signals could be replaced by others presented with a certain frequency. This phenomenon was called I.P.

The connections between the individual stimuli that were revealed in the study of reflexes to relationships play a significant role in the processes of perception. The formation of such connections in the auditory analyzer makes it possible to recognize the melody by the ratio of the sounds included in it, despite the difference in their absolute height and strength. The formation of such connections in the visual analyzer provides recognition of
the contours of the figure, regardless of size, color, etc. Thus, the perception of integral objects includes the perception of the ratio of stimuli.

In addition to the processes occurring within a single analyzer, the relationship of the analyzers to each other is of great importance. The role of temporary connections in the process of perception can be shown by the example of visual perception of a quantity.

The visual perception of the size of an object depends primarily on the magnitude of the image of the object on the retina. The subject, twice as long, will give a twice as long image on the retina. However, this is only the case with the perception of objects equally distant from the eyes. According to the laws of optics, the magnitude of the image of an object on the retina changes depending on the distance to the object. For example, an object twice as long, but located twice as far, will give an image of the same length as an object twice as short but twice as close. How do we manage to accurately perceive the size of objects located at different distances?

Turns of the eyes are essential for the process of visual perception. When the gaze is transferred from a distant object to a close visual axis of the eyes, they are reduced, and the eyes turn inward. In the case of the inverse translation of the gaze from a close object to a distant one, the separation of the visual axes takes place - the eye turns outward. Eye turns are caused by contractions and relaxation of the eye muscles; motor sensations arising at the same time, which we usually don’t notice, play an important role in the perception of the size of an object.

It is also important that the shape of the lens changes when approaching and removing objects. This is achieved again by contraction and relaxation of a particular muscle, which is associated with some sensations that we usually do not notice.

The visual perception of the magnitude is carried out due to the formation from early childhood of a strong connection between irritation from the retina, as well as irritation from the muscles that establish the direction of the eye, and from muscles that change the curvature of the lens in relation to distance. The neural connections in the cortex that underlie visual perception are developed gradually through a long experience beginning in the first months of our lives.

The neural connections that underlie the visual perception of magnitude are, in their origin, a conditioned reflex. This complex conditioned reflex is developed in early childhood, when acquaintance with the actual size of objects also occurs through palpation; tactile irritations thus play a role of reinforcement.

Using the example of visual perception of a quantity, it is clearly seen how, thanks to the formation of stable nerve connections that underlie perception, it is possible to cognize in the external world properties that are not accessible to individual sensations.

§17. Perception Analysis

1) Isolation of an object in perception

As we have seen, the most important in the process of perception is the selection of a certain group of sensations from the whole set of sensations related to this object.

I look out the window into the street and notice in the crowd walking along the sidewalk my acquaintance. I'm starting to follow him. Then the figure of my friend becomes an object of perception, and everything else that I see on the street: houses, a pavement, a moving crowd, cars driving, forms the background from which this object stands out.

In the lobby of the theater, I have a conversation with someone. Against the background of many voices, the noise of the steps of hundreds of people and other sounds, the speech of my interlocutor stands out for me as an object of perception.

In the vast majority of cases, the selection of an object from the background is done without any difficulty, instantly, “by itself”. However, such conditions are possible under which the selection of an object becomes a difficult task (...). One of the most important conditions for good observation is the ability to easily and quickly distinguish objects that are important for the observation from the background.

The selection of an object is based on certain groups of spots and lines in the visual perception, sounds in the auditory perception, etc. This kind of association of individual elements into groups depends on a number of conditions. In visual perception, distance plays a significant role: closely spaced elements are combined into one group. (...) No less significant is the similarity of color. (...) The camouflage coloring with spots of different colors is based on this principle: as a result of “falling off to the background” of some spots, the shape of the object seems distorted. However, factors of a different kind are much more important for the results of grouping.
With a cursory glance at the room, I immediately distinguish between tables, chairs, cabinets, paintings, etc. as separate, independent things. But here I am guided mainly not by the proximity of the individual perceived spots to each other and not by their similarity in color. The table leg can be very close to the legs of the chair and have the same color with them. And yet it does not unite with them, but with the other legs of the same table, although they are much further away from it, and with its lid, although it is upholstered in green cloth and, therefore, is not at all similar in color to the legs. Separate spots in the field of view are combined with each other on the basis that they correspond to separate parts of the same subject. And this is possible only because our perception is meaningful and with its lid, although it is upholstered in green cloth and, therefore, is not at all similar in color to the legs. Separate spots in the field of view are combined with each other on the basis that they correspond to separate parts of the same subject. And this is possible only because our perception is meaningful and with its lid, although it is upholstered in green cloth and, therefore, is not at all similar in color to the legs. Separate spots in the field of view are combined with each other on the basis that they correspond to separate parts of the same subject. And this is possible only because our perception is meaningful.

Looking at the room, I comprehend everything that I see. I understand a long brown spot of a certain shape as a table leg, and as a result, it combines with spots corresponding to other parts of the same table. Such semantic groups, which play a central role in our perception, are possible only on the basis of acquaintance with objects, which we gradually acquired, starting from the very first years of our lives.

2) The value of past experience for perception.

The content of perception is much larger than the content of present sensations, because in the process of perception an important role is played by the communication systems that arose in past experience.

Looking at the marble of a table or window sill, I perceive its surface as solid and cold. But neither hardness nor cold can be seen. These properties are recognized only by tactile and temperature sensations. Without touching the marble, of course, I can not get these sensations. But in the past I have received them many times by touching marble. As a result, I formed a strong connection between the appearance of marble and those properties of it that are recognized by touch. Just looking at the fur, I perceive its softness, hairiness, warmth. It is known that some things “look” heavy, others light, although vision alone cannot produce feelings of heaviness or lightness. All this happens due to the revival of the nerve connections that arose in the past experience, reflecting the totality of the properties of the object.

The significance of the temporary connections that arose in past experience is very vivid in the reading process. As the exact experiments show, we can simultaneously see with complete clarity no more than six or seven letters of the usual printed font, since the images of the remaining letters no longer fall into the central fossa of the retina, giving a clear vision of objects. However, every person easily reads familiar words in 10-12 letters when they are shown for only one tenth of a second. He clearly sees only a part of the letters, the rest are added by virtue of the developed ties.

To conduct such experiments, they use special devices called tachistoscopes (from the Greek words: “tachistos” - the fastest, fastest, and “scopeo” - I look). These devices allow you to show a card with the letters depicted on it, words, drawings, pictures, etc. for any short period of time, starting with a thousandth of a second.

The ability to correctly read a long word, having managed to catch only a few letters, is explained by the fact that in the case of firmly fixing the underlying temporal connections in the cortex, a corresponding dynamic stereotype is formed in the cortex. The dynamic stereotype facilitates the process of perception and allows you to read the word even with an incomplete set of ordinary stimuli, sometimes only by a few letters of the word. Expecting the appearance of a familiar word, we immediately “grasp” it, because the system of nervous processes is already prepared for the corresponding stimuli by repeating the sequence of these stimuli in a past experiment.

If a new sequence of stimuli, falling onto the system of nervous processes that developed in the past experience that came into excitement, does not completely correspond to it, then perception errors may occur. For example, waiting for the appearance of a certain word, we may mistakenly “recognize” it in a word with an incomplete set of letters or with a permutation of letters.

If you show in a tachistoscope the following meaningless set of letters: "electric", then most people will read the word "electricity", and moreover, they will be firmly convinced that they perceived this word. Obviously, the image of the word “electricity” arose in this case on the basis of a system of temporary connections that had become established in past experience, on the basis of a strong dynamic stereotype.
§Eighteen. Illusions

Illusion is an incorrect, distorted perception.

We will get acquainted with some illusions that are caused by certain laws of sensation and perception and arise under these conditions in all or most people.

1. Illusions of contrast. In addition to the examples given in paragraph 12, we also point out cases where an object seems larger due to its proximity to smaller objects, and less because of its proximity to large ones. In fig. 11 the middle circles are actually equal, but seem different, because one is surrounded by larger circles and the other by smaller circles.

2. Revaluation of the upper part of the figure. When dividing a vertical line by half in half, an inexperienced person almost always makes a mistake by pointing the middle too high. In printed numbers 3 and 8, the upper half appears to be the same as the lower half, while in reality it is smaller; this can be easily verified by turning the book over.

3. Transferring the properties of the whole figure to separate parts of it. The segment included in the composition of a large figure appears to be longer than the segment equal to it included in the composition of a small figure.

4. The apparent change in the direction of the line and the distortion of the shape of the figure under the influence of the direction of other lines. In fig. 13 and 14, the parallel lines appear to be non-parallel under the influence of the direction of the lines adjacent to or intersecting them. Fig. 15 and 16 show how the shapes of the square and the circle are distorted by the lines intersecting them.

In illusions, our understanding, comprehension of the lines and figures we see, can be of great importance. In some cases, it can cause an illusion, in others it can destroy it.

In fig. 17 all three columns are the same in size, but the right one seems larger than the left. This happens because we understand this picture as an image of columns gradually moving away from us, and from experience we know that with sufficient distance, the apparent size of the object should decrease. We know that in the drawings, distant objects are depicted smaller in size. If in this figure the distant column is drawn in the same size as the close one, then, obviously, we assume that it depicts a larger column. Here, a certain understanding of the meaning of the picture causes an illusion.

We give the opposite case. There is one widely known illusion: segments of a straight line intersected by two parallel lines do not seem to be a continuation of each other. In fig. 18 segment CD is the true continuation of the segment AB. But it seems to be shifted downward, and the continuation of AB seems to be more likely to be a segment of EF. However, we need to supplement the figure so that the segments AB and CD acquire a certain meaning - they began to be understood as parts of one rope that two people pull in different directions, and we begin to see them as a continuation of each other (Fig. 19). The illusion disappears. Here, a certain understanding of the meaning of the picture destroys the illusion.

The truth of perception, as we know, is verified by practice. It is enough to measure the size of the middle circles in Fig. 11 or diagonals in fig. 12 to make sure that they are actually equal, that the impression of their difference, obtained at first glance at the figure, is erroneous. The study of various illusions of perception reveals the causes that in some cases cause distorted, incorrect perception of objects. And knowledge of these causes helps to combat perception errors and correct perception errors.

§Nineteen. Observation

A special kind of perception is observation. This is a deliberate, systematic perception undertaken for any specific purpose. Observation is the study, the study of an object, carried out in the process of perception.

The ability to observe is of great value in a wide variety of fields. It is enough to recall, on the one hand, the role of observation for the artist, on the other hand, the place that observation occupies in scientific research. This skill is not given immediately, it is brought up. To acquire it, it is very useful to know what the quality of observation depends on, what conditions it is determined by. The most important of these conditions we will now meet.

Good observation requires, first of all, a clear statement of the problem. It is impossible to observe “in general” without having any specific task in front of you. Invite someone to stand at a busy street intersection and watch. An intelligent person will surely ask you what exactly he should observe and for what purpose. In
other words: what is the task of observing it? The task facing the observer organizes his attention, indicates what exactly it should be directed to. We will call a good observer one who knows how to subordinate his perception to the task before him.

Observation should be as complete and detailed as possible. But the completeness of observation is not characterized simply by the amount of information collected. The observation made by an artillery observer in a combat situation will not be fuller from the fact that he will notice what plants are in the meadow and open the bird's nests in a neighboring tree. The completeness of observation implies the ability to notice everything essential from the point of view of the task at hand. In the same sense, one must understand the requirement for detailed observation. A good observer can notice the smallest details that elude the attention of another person, but not any details at all, namely those that are significant in terms of the purpose and task of observation.

The success of the observation is highly dependent on prior knowledge of the observed object. Therefore, the best observers are good experts in this subject. Observing an agronomist for young seedlings will be more effective the more he knows about the sown variety of seeds, the nature of the soil, and those agricultural techniques that can be used. In order to successfully conduct observation, one must be well prepared for it. Knowledge not only gives a person the opportunity to think deeper and more meaningfully; they also give him the opportunity to perceive things deeper and more meaningfully. Who knows a lot, he knows how and see a lot in things. A knowledgeable nerd will discover a lot of important and interesting in an inconspicuous blade of grass in which an uninformed person will not see anything worthy of attention.

Observation should be systematic and systematic. If you ask a student of eight-nine years old to list the objects that are in the room, he will immediately begin to call what first catches his eye, snatching from one or the other corner of the room. This is an example of unsystematic and unplanned observation. Obviously, in this way you can never compile an exhaustive list. An adult, having received the same offer, acts in most cases differently. He outlines a plan, system or observation procedure: “I will start from the door and first I will call what stands along the walls”, or: “first I will list all the large things - tables, cabinets, sofas, then what stands on them, then what hangs on the walls. ” With more complex and substantive tasks, the observation plan will be correspondingly more complex.

A characteristic feature of observation is the connection of perception with the active work of thinking. No wonder observation is sometimes called “thinking perception” or “thinking perception”.

Cognitive activity in the process of observation is most clearly manifested in the comparison of observed things. Comparing this object with another, it is easier to grasp its essence, to understand what category of things it belongs to and what its originality is.

Of great importance for observation is the verbal formulation of the results of the observation. The process of focused observation cannot give fruitful results if we restrict ourselves to a simple contemplation of the object. A person can often highlight a certain side, a line of an object only when he calls it, denotes it with a word. If a person knows that at the end of the observation he must give an account of everything that he has seen and heard, the completeness and accuracy of the observation will increase significantly. This is explained by the fact that, in preparation for the upcoming report, we already in the process of observing ourselves strive to fix the content of perception with words: find the exact name of the objects that we notice, describe their distinctive features, etc. And this makes us fully comprehend the perceived facts, focus on everything essential, seek clarity and accuracy of observation. On this side, the habit that some people have during travel, when visiting museums, exhibitions, performances, and in the event of a random encounter with interesting events, is to mentally prepare a story to friends, comrades, or relatives about what they had to see and hear.

To become a good observer, it is not enough to master the art of full and accurate perception; one must also acquire the art of consolidating the results of perception, in one form or another, reporting on them.

Observation differs from simple perception in that here the leading role is played by the operation of the second signaling system. The entire observation process is based on the close interaction of the first and second signal systems.

§Twenty. Individual Differences In Perception And Observation

Having become acquainted with how complicated the process of perception is, we can easily understand that it varies in different people. Each person has his own individual "manner" to perceive, his usual methods of
observation, which are explained by the general characteristics of his personality and the skills that were created in the course of his life.

We list the most characteristic signs in which individual differences in perception and observation can be expressed.

Some people tend to pay attention mainly to the facts in the process of perception and observation, while others tend to pay attention to the significance of these facts. The former are mainly interested in the description, the latter in the explanation of what they perceive and observe. Perception and observation of the first type are called descriptive, the second type - explanatory.

These typological differences are largely explained by the peculiarity of the relationship between the two signal systems. The propensity and ability to explain the type of observation associated with the relatively greater role of the second signaling system.

The difference between the objective and subjective types of perception is very significant. Objective is perception, which is distinguished by accuracy and thoroughness, which is little influenced by the biased thoughts of the observer, his desires and mood. A person perceives facts as they are, without bringing anything from themselves and resorting little to speculation. Subjective perception is characterized by opposite traits: to the fact that a person sees and hears, images of imagination and various assumptions are immediately joined; he sees things not so much the way they really are, but the way he wants to see them.

Sometimes the subjectivity of perception is expressed in the fact that a person’s attention is directed to those feelings that he experiences under the influence of perceived facts, and these feelings obscure the very facts from him. Often you have to meet people who, whatever they talk about, most talk about their own experiences, about how they got excited, scared, moved, and about the events that caused all these feelings, they can say very little.

In other cases, the subjectivity of perception manifests itself in the desire to make up as soon as possible a general impression of the observed fact, even if there were not enough data for this. This feature is quickly revealed in experiments with a tachistoscope when a word is shown for such a short time that it is obviously impossible to read the whole thing. The word “desk” is shown, for example. With an objective type of perception, a person reads first “cont”; at the second showing he can already read the “office” and, finally, after the third showing, the “office”. The process of perception in a representative of a subjective type is quite different. After the first showing, he reads, for example, “basket”, after the second - “castor”, after the third - “desk”.

In characterizing individual differences in perception and observation, the trait called observation is of paramount importance. This word denotes the ability to notice in things and phenomena signs and traits that are essentially important, interesting and valuable from any point of view, but hardly noticeable and therefore escaping the attention of most people. Observation is not limited to the ability to conduct observation alone. It involves curiosity, a constant desire to learn new facts and their details, a kind of "hunt for facts." Observationality is manifested not only in those hours when a person is specially occupied with observations in the laboratory, museum, at the observation post, etc.

We call observant a person who is able to notice valuable facts “on the go”, in any situations of life, in the process of any activity. Observation assumes a constant readiness of perception.

Observation is a very important quality, the value of which affects all areas of life. It is especially necessary in some activities, for example, in the work of a scientist. No wonder the great Russian scientist I. P. Pavlov wrote on the building of one of his laboratories: "Observation and observation."

The work of a writer-artist is impossible without observation: it enables the writer to accumulate those reserves of life impressions that serve as material for his works.

Questions To Repeat

1. What is perception and how does it differ from sensation?
2. What are the physiological foundations of perception?
3. List the conditions on which the association in groups (grouping) of individual spots and lines in visual perception depends.
4. What is the significance of past experience for perception?
5. What is called an illusion?
6. Explain the illusions shown in fig. 12 and 13.
7. What is called observation?
8. List the conditions on which the quality of observation depends.

Chapter V. ATTENTION

§21. General Concept Of Attention

Attention is the focus of consciousness on a specific object. The object of attention can be any object or phenomenon of the external world, our own actions, our ideas and thoughts.

I read a book and am completely occupied with the content of the story; I hear conversations taking place in the room, but do not pay attention to them. But one of those present began to tell something interesting, and I notice that my eyes automatically run through the lines of the book, and my attention turned to conversation.

And first and then I simultaneously heard a conversation and read a book. But the organization of my mental activity was completely different in both cases. At first, my mind was aimed at understanding what was being read; the content of the book was in the center, and the content of the conversation on the periphery, on the edge of consciousness. Then consciousness went to listen to the conversation; the conversation became the center of consciousness, and reading the book was on the edge of it. My attention, we say, has shifted from reading a book to listening to a conversation.

As a result of the orientation of consciousness to a certain object, he is recognized clearly and distinctly, while all other stimuli acting at the same time are experienced more or less vaguely and indistinctly. At that time, when my attention was taken by the book, I perceived its content with full clarity, but I heard the conversation vaguely, as they say, "out of the corner of my ear." If I were suddenly asked what the conversation was about, I would probably be able to reproduce only fragments of phrases that are little related to each other. But the matter immediately changed as soon as my attention shifted from the book to the conversation. Now I perceive the content of the conversation with complete clarity, and only vague scraps of thoughts reach me from the book, although my eyes continue to read.

In the phenomena of attention, the selective nature of consciousness is revealed: if a person pays attention to some objects, then he thereby distracts from others.

Attention cannot be called a special mental process in the same sense as we call special processes perception, thinking, memory, etc. At any moment in one’s life, a person either perceives something, or remembers something, or thinks about something, or dreams of something. But there cannot be such a moment that a person is busy with the process of attention. Attention is a property of the psyche, it is a special side of all mental processes.

§ 22. Physiological Basis And External Expression Of Attention

The basis of attention is one of the most important laws of the cerebral hemispheres, studied in detail by IP Pavlov, the law of induction of nervous processes (p. 8). According to this law, any focus of excitation in the cortex of the hemispheres causes inhibition of the surrounding areas. Thus, excitement never spreads evenly throughout the cortex. At any given moment, there is one section in the cortex in which the most favorable, or, as they say, "optimal" conditions for excitation are created. This area with optimal excitability is currently the creative department of the cortex. Associated with it is the clearest work of consciousness.

"If it were possible to see through the cranial lid,” wrote I. P. Pavlov, "and if the place of the cerebral hemispheres with optimal excitability shone, then we would see on the thinking conscious person how constantly changing in form and the size of fancifully irregular outlines is a bright spot surrounded by a more or less significant shadow on the rest of the space of the hemispheres. ” Moving along the cortex of a site with optimal excitability causes phenomena that appear in our consciousness as a change in the focus of attention.

The presence of a site with optimal excitability and the law of induction explain to us how, from the mass of various stimuli - objects and phenomena that a person encounters - many are inhibited, pushed to the
background, while others are amplified, are brought to the fore. Increased excitation in the area with optimal excitability according to the law of mutual induction enhances the inhibition of the remaining sections of the cortex. Therefore, the more attention is focused on one object, the less a person notices other objects.

A strong tension of attention is usually associated with characteristic external manifestations.

Firstly, movements of an adaptive nature arise, aimed at better perceiving the object to which attention is directed; these are the movements of peering, listening, etc. When attention is directed to one’s own thoughts, the eyes are usually "set to infinity", that is, they are directed as if looking into the distance; Due to this, the surrounding objects are perceived unclearly and do not distract attention.

Secondly, all unnecessary movements are delayed. For intense attention, immobility is characteristic. The consequence of this delay in movement is that intense silence in the audience or in the auditorium of the theater, which indicates that the lecturer, speaker, artist managed to capture the attention of the audience.

Thirdly, finally, with intense attention, breathing becomes more superficial and rarer. In addition, the ratio of the duration of inhalation to the duration of exhalation changes: the inhalation becomes shorter and the exhalation lengthens. With short-term, but intense tension of attention, a complete holding of breath often occurs: a person listens or looks, "holding his breath."

§23. Involuntary And Arbitrary Attention

When a person watches an interesting movie in a movie, attention without any efforts on his part is directed to the screen. When, walking down the street, he suddenly hears a sharp whistle of a policeman close to him, he “involuntarily” draws attention to it. This is involuntary attention directed to a given object without our conscious intention and without any efforts on our part.

With involuntary attention, the occurrence of a site with optimal excitability in the cerebral cortex is caused by directly acting stimuli.

But when a person has to break away from an interesting book and do the necessary, but not very exciting work at the moment, for example, to learn foreign words, he has to make an effort to direct his attention in this direction, and maybe even more effort to not to let attention be distracted, to maintain attention in this work. If I want to read a serious book, and the room has loud conversations and laughter, I must force myself to be attentive to reading and not pay attention to the conversations. Such attention is called arbitrary. It is distinguished by the fact that a person sets himself the conscious goal of directing attention to a certain subject and, when necessary, applies certain efforts and efforts to achieve this goal.

With arbitrary attention, the area with optimal excitability is supported by signals coming from the second signal system. A conscious goal, intention is always expressed in words, most often pronounced to oneself (the so-called "internal speech"). Due to the temporal connections formed in the previous experiment, these speech signals can determine the movement along the cortex of the site with optimal excitability.

The ability to arbitrarily direct and maintain attention has developed in a person in the process of work, since without this ability it is impossible to carry out long and systematic labor activities. In any matter, no matter how much a person loves him, there are always such sides, such labor operations, which in themselves have nothing interesting and are not able to attract attention.

You must be able to arbitrarily focus your attention on these operations, you must be able to force yourself to be attentive to what is currently not attracted to you. A good employee is that person who can always focus on what is needed in the course of work.

The power of a person’s voluntary attention is very high. Experienced artists, lecturers, speakers well know how difficult it is to start playing, giving a speech or giving a lecture in case of severe headache. It seems that with such pain it will be impossible to finish the performance. However, it is only by an effort of will to force oneself to start and focus on the content of the lecture, report or role, how the pain is forgotten and again reminds itself only at the end of the speech.

What objects are able to attract our involuntary attention? In other words: what are the causes of involuntary attention?

These reasons are very numerous and varied, can be divided into two categories: firstly, the external features of the objects themselves and, secondly, the interest of these objects for a given person.

Any very strong stimulus usually attracts attention. A strong thunderclap will attract the attention of even a very busy person. Of decisive importance is not so much the absolute strength of the stimulus as its relative
strength compared with other stimuli. In a noisy workshop of a plant, a person’s voice may go unnoticed, while amid the complete silence of the night, even a faint creak or rustle can attract attention.

A sudden and unusual change also attracts attention. For example, if an old wall newspaper, hanging for a long time and already ceasing to attract attention, is removed from the wall in the classroom, then its absence in the usual place at first will attract attention.

The main role in attracting involuntary attention is played by the object’s interest for a given person. What is interesting?

First of all, that which is closely connected with the life activity of a person and the tasks facing him, with the work that he is passionate about, with the thoughts and concerns that this work excites in him. A person captured by some business or any idea is interested in everything that is connected with this business or with this idea, and, therefore, pays attention to all this. A scientist working on a problem will immediately pay attention to a seemingly small detail that eludes the attention of another person. One of the major Soviet inventors says about himself: “I am interested in the principles of all machines. I’m riding a tram and looking out the window, how the car is going, how it turns (then I thought about driving for the cultivator). I look at all the cars, for example, the fire escape, and I see that it can also be used.”

Of course, people are interested in not only what is directly related to the main business of their life. We read books, listen to lectures, watch plays and movies that do not have a direct connection with our work. What is required in order for them to interest us?

Firstly, they should be related to some extent to the knowledge we already have; their subject should not be completely unknown to us. There is hardly a person who has never studied the physics of sound and does not understand anything in the technology of metals, may be interested in a lecture on the topic "The use of ultrasounds in metallurgy."

Secondly, they should give us some new knowledge, contain something still unknown to us. A popular lecture on the topic just mentioned will not be interesting for an ultrasound specialist, since he knows the whole content of it.

The interesting thing about the main thing is that it gives new information about things that we are already familiar with, especially the one that gives answers to questions we already have. What is interesting is what we do not yet know, but what we already want to know. Plots of interesting, fascinating novels are usually built on this principle. The author leads the story in such a way that we are faced with a series of questions (who committed such an act? What happened to the hero?), And we constantly expect to get an answer to them. Therefore, our attention is in constant tension.

Interest is the most important source of involuntary attention. Interesting captivates, captures our attention. But it would be completely wrong to think that voluntary attention has nothing to do with interest. It is also guided by interests, but interests of a different kind.

If a fascinating book captures the attention of the reader, then there is a direct interest, interest in the book itself, in its content. But if a person, having set himself the goal of building a model of some apparatus, makes long and complicated calculations for this, what interest is he guided by this? He has no direct interest in computing itself. He is interested in his model, and computing is only a means to build it. In this case, the person is guided by an indirect, or, what is the same, mediated interest.

Such an indirect interest, interest in the result, is found in almost every work that we carry out consciously and voluntarily; otherwise we would not produce it. But since the work itself is uninteresting, does not interest us, we must use the effort to focus our attention on it. The less the process of work interests and captivates us, the more arbitrary attention is needed. Otherwise, we will never achieve the result that interests us.

It happens, however, that the work that we first undertook due to some indirect interest and in which we first had to arbitrarily, with great effort to keep our attention, gradually begins to interest us. There is a direct interest in the work, and attention begins to involuntarily focus on it. This is the normal course of attention in the labor process. With the help of arbitrary efforts, without any direct interest in the activity itself, it is impossible to work successfully for a long time, just as it is impossible to conduct lengthy work on the basis of only direct interest and involuntary attention; from time to time, the intervention of arbitrary attention is necessary, since due to fatigue, the boring monotony of the individual stages, all kinds of distracting impressions involuntary attention will weaken. So, the performance of any work requires the participation of both voluntary and involuntary attention, their constant alternation.

In the end, we can say: the central importance in the organization of attention is the tasks that put before us life
and the activity that we are engaged in. Based on these tasks, we consciously direct our voluntary attention, these same interests determine our interests - the main engines of involuntary attention.

§24. Fighting Distraction

A lot of effort is sometimes required to direct attention in the direction we want. But even more efforts are needed in order to maintain a sufficient concentration of attention for a long time and not allow him to be distracted to the side. The fight against distracting irritations is the most difficult of the tasks facing arbitrary attention. There is no doubt that voluntary attention, that is, the action of the signals of the second signaling system - words visible, audible and, most importantly, pronounced to oneself - can overpower the action of very strong immediate stimuli.

To study the effect of strong distracting stimuli, experiments were performed in which it was necessary to perform more or less complicated mental work in the presence of very sharp interfering sounds: whistles, bells, the sound of a pipe, the rattle of a circular saw working nearby, a gramophone playing funny music. The results showed that for people with well-organized attention (especially young people), work in such conditions can be performed as quickly and as well as in a calm environment. Those irritants that do not correspond to consciously directed attention are completely inhibited, delayed. However, the harmful effect of distracting stimuli is reflected in the fact that it takes a lot of effort to deal with them, and therefore working in such conditions is more tiring than usual. Trying to focus on work, despite the hindrances, a person resorts to strong muscle tension, clenches his fists, sometimes clenches his head with his hands, occasionally sharply shakes his head; the majority begins in such conditions to think, reason, calculate not for themselves, but in a whisper or out loud.

What distracts most is what interests or affects the senses. The roar of cars does not interfere as much as the cheerful conversation of the neighbors, at least this conversation was in a whisper. For people who love and understand music, the latter is one of the most powerful distracting irritants, while people who are indifferent to music can easily not notice it.

Of great importance is the person's attitude to distracting irritations. The noise in the next room is annoying, angry, and quite often the annoyance and anger that arise at the same time distract from work much more than the noise itself. If it is impossible to eliminate the interference, you need to treat it calmly; this is the only way to combat its distraction.

For most people, the best concentration of attention is achieved in a calm environment, in solitude and silence, when there are no any strong distracting irritations. Pushkin, for example, worked best in the countryside, in the autumn and, moreover, in rainy weather, when it was impossible to either go anywhere or wait for guests to come to him. “You cannot imagine,” he wrote to his wife, “how vividly the imagination works when we sit alone between the four walls, or we walk through the woods when no one bothers us to think, to think so that our head will spin.” He did not even like paintings in his office, since they could entertain attention. Tchaikovsky also sought to work in complete solitude, avoiding all kinds of interference and distractions.

However, there are many people who can concentrate especially well in noisy environments, among a multitude of seemingly disturbing and distracting impressions. In his youth, Chekhov wrote many of his stories to the accompaniment of noisy conversations and laughter of a crowded society. The famous Russian composers Mussorgsky (author of the operas Boris Godunov and Khovanshchina) and Borodin (author of the opera Prince Igor) willingly wrote their compositions “in public”, for example, while visiting.

Such differences in the way they work are partly dependent on the habit that has developed, mainly on the individual characteristics of attention. But whatever these features may be, attention should be brought up in such a way as to be able, when necessary, to cope with all kinds of obstacles.

The same Tchaikovsky, who was easiest to compose in conditions of complete solitude and silence, was able, however, to work in any situation if it was impossible to create the desired conditions.

One of the reasons for the low productivity of some people extraordinary in their abilities is pampered, spoiled attention, not able to cope with the action of distracting irritations. The whole life of such people goes in vain waiting for the moment when nothing will distract them from work.

§25. The Main Properties Of Attention
1) Sustainability of attention

Sustainable, we call attention that is capable of over time being continuously focused on one subject or on the same work. The opposite of sustained attention will be wavering attention, which is constantly weakening or being distracted to one side.

What determines such fluctuations in attention and how to deal with them?

Try for some time to stare with full attention to any fixed object, such as a geographical map. You will not succeed.

During the first minute you will notice that your gaze involuntarily deviates to the side or that you look at the map automatically, without any attention, and think about something else. In this situation, fluctuations in attention inevitably occur in every person. Special experiments show that with aimless and passive looking at a stationary object, it is impossible to maintain the full tension of attention for more than 5 seconds.

The situation is completely different when you are looking not at a fixed map, but at the movie screen, on which the film’s action unfolds. In this case, you can follow the course of action for a long time without any hesitation of attention.

Let’s go back to the geographical map. Suppose now that you did not just set out to carefully look at it, but that you are faced with the task of comparing separate regions of the USSR with each other in terms of providing them with different types of transport. Everyone knows that in this case he can work with the card for more or less long time without any hesitation of attention.

So, frequent fluctuations inevitably occur when there are two conditions: if attention is directed to a completely unchanged, motionless object with which nothing happens, and if we ourselves are passive, we do not do any work.

Experiments show that when a person performs active work that does not allow attention to weaken or be distracted even for a few seconds, complete stability of attention can remain for 10, 15 and even 20 minutes. In practice, this is quite enough. The distraction for a few seconds after 10 or 20 minutes of continuous concentration allows the organization of all work. If such short rests are acceptable to the attention, it can remain stable for several hours.

In many activities, very stringent requirements are imposed on sustainability. Such, for example, is the work of the stenographer: if attention is diverted at least for a few seconds, an irreparable gap in the transcript will result. The corrector’s work is the same: every fluctuation in attention can lead to a misspelling error. The work of a rejecter, telephone operator, etc., belongs to the same category.

2) The amount of attention.

Very long ago, people began to ask themselves the question: how many objects can attention be directed at the same time? how many objects can it cover at once in one act? This is a question about the amount of attention, which is understood as the number of objects covered by attention simultaneously.

It is not easy to answer this question. When I look at the stage in the theater, my attention seems to be simultaneously occupied by many objects, especially in scenes with a large number of characters. But if you take a closer look at yourself, it is easy to notice that in fact attention is constantly moving from one actor to another, so it remains unknown whether at any given moment it can capture more than one object. To answer this question, one must obviously show a person several different objects for such a short period of time that his attention does not have time to move from one object to another. (This gap should be no more than one tenth of a second.) If a person can notice, learn, perceive several objects with such a brief show, then his attention can really capture them at the same time.

For such experiments, as we already know, they use special instruments, tachistoscopes (see § 17). The results of tachistoscopic experiments have found that an adult can simultaneously grab attention with four to five, maximum six independent from each other objects. If letters that are not connected with each other and do not form words are printed on the tachistoscope card, then more than six letters cannot be perceived immediately. Thus, we can say that the amount of attention usually ranges from four to six objects.

At the same time, however, one must be aware of what is meant by the “object”. For an illiterate person who does not know letters, not every letter is one object. He will probably perceive the letter O as one object (“circle”), but already the letter P will be more likely two objects for him: “wand” and “circle”. As a result, he can never immediately grasp not only six, but even four letters.

On the other hand, if we show to a completely literate person not separate letters, but whole words, it turns out that he can immediately perceive not six, but much more letters. A short word of three to four letters is one
object for him, and therefore he can perceive three or four such words in a tachistoscope (i.e., up to 14-16 letters). Well-literate people do not read letters, but immediately with whole words.

The most important means to increase the volume of attention is to develop the ability to perceive in large complexes, that is, to see a whole group of objects as a whole, as a “single object”. An increase in the volume of attention is nothing but the expansion of a site with optimal excitability. This expansion occurs due to the merger, the combination in one system of excitation processes caused by simultaneously acting stimuli.

Some activities require as much attention as possible. For example, the productivity of a typesetter depends to a large extent on how many characters he can grab right away when looking at the text from which he is typing. Even more important is the breadth of the volume of attention when observing in a combat situation, where the possibility of long-term viewing of objects is often ruled out, and you need to immediately notice, find out, count them. A large amount of attention is certainly necessary for the pilot.

The amount of attention should be taken into account when solving many practical problems. If it is necessary that the inscription on a poster or announcement can be understood even with a cursory glance, so that its meaning can be caught on the fly, then it should consist of no more than four to five words (and even that is not very long). If the inscription should be longer, it is necessary to highlight three or four main words from it (in font, color, etc.), sufficient for a person to understand what is being discussed.

3) Distribution of attention

Can attention be distributed simultaneously between two different activities? Can it be sent in different directions at the same time? Can a person, while performing some kind of work, at the same time carefully monitor other objects or think over a question that is not related to this work?

Practice shows that the distribution of attention is possible. Moreover, life at every step requires you to distribute attention. It is impossible, for example, to record the teacher’s explanations in the classroom if you do not know how to distribute attention. Teacher does not interrupt his presentation for the time being, as I write down the thought he said. He continues to speak further, and I must, while writing down one thought, at the same time carefully listen to the further exposition. Recording always lags somewhat behind the teacher’s speech, and the attention of the writer should be divided between what he is recording and what is being said at the moment.

Observations show that the ability to distribute your attention among different people is extremely different. Some can easily do two things at once, for others it is very difficult: immersed in one thing, they are definitely not able to notice anything else. To a certain extent, it depends on the individual characteristics of a person: some people have concentrated attention, others have concentrated, etc. e. tends to concentrate entirely in one direction. But since we are talking about ordinary tasks required in most activities, the distribution of attention is mainly a matter of skill, skill.

No man can do two things at the same time, if he does not know how to do one of them well, if each requires him to think about every step, attention to all the details of the execution. In order to successfully carry out two work simultaneously, it is necessary to own at least one of them so that it is carried out to a large extent automatically, “by itself”, so that it is only necessary to consciously control and regulate it from time to time.

The inept person while he writes down one thought of the lecturer, hears nothing more and does not notice. The recording process is so difficult and unusual for him that it requires a full and continuous strain of attention. On the contrary, an experienced person is very little busy with the recording process itself. At the center of his consciousness is mainly the content of what the lecturer is saying, and he devotes only a small part of his attention to writing.

This is the basis for the distribution of attention. To be able to distribute attention means to be able, having one activity in the center of consciousness, to devote some attention to another activity, that is, to keep it close to the center of consciousness.

The distribution of attention is explained by the fact that habitual activity, which does not cause particular difficulties, can be controlled by areas of the cortex that are to a certain degree of inhibition. “Is it not an ordinary thing,” wrote I.P. Pavlov, “that we, who are busy mainly with one thing, one thought, can simultaneously perform another thing, very familiar to us, that is, work with those parts of the hemispheres, who are in a certain degree of inhibition by the mechanism of external inhibition, since the hemisphere point associated with our main business is, of course, then very excited? ”

In all driving professions (locomotive driver, driver, car driver), the ability to distribute attention is a prerequisite. Extremely high demands on the distribution of attention are made by the work of a pilot, conductor,
and teacher.

The attention of the lecturer, speaker, speaker should usually be focused on the content of the thoughts that he sets out. Without this, it is impossible to speak without a written text in front of you. But a good lecturer should pay a certain amount of attention to other subjects. He should monitor the audience, sensitively pick up all signs of understanding or misunderstanding, interest or boredom; a lecturer who thinks only about the content of his speech and does not pay attention to the audience will never be able to interest and captivate this audience. Sometimes he must look at his watch and mentally compare the remaining time with the amount of material that he must have time to communicate; without it, he will never meet the deadline. All these objects at an experienced lecturer are located near the center of consciousness. He doesn’t lose sight of them,

Insufficient ability to distribute attention is often the cause of failures in a chess game. A person who is so inclined to immerse himself in his own plans and combinations that everything else that is happening on the board remains out of his attention, inevitably allows “yawns” and does not respond in a timely manner to the moves and combinations of the opponent. A good chess player must be able, no matter how busy he is to develop his idea, to follow the entire board, paying some attention to even its most uninteresting sections.

4) Switching attention

From daily experience, we know that every beginning is difficult. When you write an essay or a letter, the most difficult thing is to write the first phrase. In public speaking, especially among inexperienced speakers, the beginning of speech goes much less smoothly than the continuation. One of the reasons for this is the difficulty of immediately focusing on a new job, switching your attention entirely to it. Many people need a certain period of time in order to have time to concentrate, to collect their attention on the activity to which they are starting.

Switching attention is the conscious and meaningful movement of attention from one object to another.

Attention switching is a movement along the cortex of a site with optimal excitability, mainly regulated by the signals of the second signaling system. The ability to quickly switch attention to a large extent depends on the mobility of nervous processes.

Some people can easily and quickly move from one activity to another and immediately begin to carry out it with full attention. These are people whose attention is mobile, flexible. For others, the transition from one business to another is associated with some effort: they need some time to “gather their thoughts”, “get into work”. These are people with little moving attention.

The ability to quickly switch attention is especially urgently needed in cases where you need to immediately respond to short-term and unexpected irritation. Such tasks are constantly confronted by a pilot, a driver, a train engine.

If it is necessary that at some point attention be prepared for the perception of some kind of irritation, you should first give a signal. This is done, for example, when a command is issued: the “preliminary command” serves as a signal for the “executive team”.

It is important that the signal is issued in a timely manner. If you give it too late, attention will not have time to prepare; if given too early, attention will tire of passive expectation and there may come a "fluctuation of attention." It is best to give a preliminary signal in 2 seconds.

§26. Distraction

The word "distraction" is used in two senses. This word designates two types of carelessness, stemming from different causes. Absent-mindedness in the first sense is the weakness of voluntary attention; its consequence is extremely easy distractibility and complete instability of attention.

The weakness of the focus of excitation caused by the signals of the second signaling system determines the state when weak external stimuli distract attention. A person does not focus on anything for a long time, his attention constantly jumps from one to another. These features are observed very often in young children. Every adult can sometimes fall into this kind of distraction, for example, in a state of great fatigue. If such distraction is a constant feature of a person, this indicates the disorganization and lack of education of his attention.

A striking example of distraction in this sense is Khlestakov (Gogol's "Examiner"). This is one of its most characteristic features. "He is not able to stop constant attention on any thought," Gogol says about him. And Khlestakov himself is very naive, but also very true, says about himself: "I have an extraordinary ease in my thoughts." His attention at every moment is directed at what appeared before his eyes or accidentally came to his
mind, and with ease, truly extraordinary, jumps from one subject to another.

Absorption in the second sense has a completely different character. It is expressed in the fact that a person is so much focused on one subject that he is not able to notice anything else, so immersed in his thoughts that at times he ceases to be aware of the most basic things. With such distraction, of course, one cannot speak of weak attention; on the contrary, the power of concentration is very great here. But still there is a lack of attention: this is a failure to distribute attention and a poor ability to switch. Such people have strong, but narrow and slightly mobile attention.

The main reasons for this type of distraction are: firstly, the excessively inhibition of the entire cortex, except for the site with optimal excitability, and, secondly, the low mobility of nervous processes.

Akaky Akakievich from Gogol’s short story “The Overcoat” is a complete illustration of distraction in this second sense. All his thoughts and interests are focused on one subject: rewriting papers, and his attention can never be torn off from this subject. “Not once in my life,” Gogol writes, “did he pay attention to what is being done and is happening every day on the street ... But Akaki Akakievich, if he looked at anything, he saw all his clean, even writing written lines "And only if, coming from nowhere, the horse’s muzzle was placed on his shoulder and let the whole wind blow into his cheek with his nostrils, then he only noticed that he was not in the middle of the line, but rather in the middle of the street."

§27. Nurturing Attention

We know that attention is manifested throughout our mental life. Therefore, a good work of attention is a prerequisite, without which success in any activity is impossible.

The first condition for good attention is the presence of sufficiently broad and stable interests. Indeed, as we know, all attention depends on interest: involuntary - on direct interest in the activity itself, arbitrary - on interest in the results of this activity. A person who is not seriously interested in anything can hardly have a higher level of attention than Khlestakov’s.

The second thing you need to develop attention is to develop the ability to force yourself to arbitrarily focus at any moment and on any subject. It is necessary to make attention your obedient instrument. Not attention should be the master of man, but man should be the master of his attention.

The third way to educate attention is to accustom yourself to work in adverse conditions. Accustomed to struggle with distracting irritations, a person tempers his attention, makes him strong and hardy.

The fourth condition is never to work inattentively. It must be remembered that any inattentive work accustoms a person to be inattentive.

Finally, the last condition is that it is possible to better know the features of your attention, its strengths and weaknesses. To completely correct the drawbacks of your attention, you need a lot of work on yourself. But one cannot begin this work without first understanding what these shortcomings are.

Review questions

1. What is called attention?
2. What is the law of induction of nervous processes and what is its relationship with the phenomena of attention?
3. Under what conditions does an object become “interesting” for a given person?
4. What is the role of involuntary and voluntary attention in the process of work?
5. How to deal with distraction?
6. Under what conditions can sustained attention span be maintained?
7. What is the difference between the concepts of “volume of attention” and “distribution of attention”?
8. What is the amount of attention?
9. Under what conditions is the distribution of attention possible?
10. What is the difference between switching attention from fluctuations in unstable attention?
11. List the most important means of raising attention.
Chapter VI. MEMORY

§28. General Concept Of Memory

Temporary (conditional) connections formed in the cerebral cortex can persist for many years and decades.

In those cases when the connections that have arisen from time to time are reinforced, renewed, they can be valid throughout life.

The ability to preserve and subsequently revitalize temporary connections is a necessary basis for mental activity. Memory is manifested in recognition and reproduction.

Recognition is a manifestation of memory that is usually associated with perception. Reproduction can occur outside the process of perception.

I close my eyes and reproduce the look of my room, the street on which I live, or some familiar face. I can say a poem by heart. A pianist can recite a play familiar to him. I can briefly describe the contents of the previous chapter of this textbook. All these are different cases of reproduction, i.e., restoration, detection of previously formed temporary connections.

A necessary condition for recognition and reproduction is the memorization and subsequent preservation of what I perceived, thought, felt or did.

Memorization, storage, reproduction and recognition are the main processes of memory. Memorization is a condition or prerequisite for preservation in memory, and reproduction and recognition is the result or discovery that a given object is stored in memory.

So, memory is a reflection of past experience, which consists in remembering, preserving and subsequently reproducing or recognizing what we previously perceived, experienced or did.

§29. Associations And Their Physiological Basis

Remembering any images, thoughts, words, feelings, movements, we always remember them in a certain connection with each other. Without the establishment of certain links, neither memorization, nor recognition, nor reproduction is possible.

What does it mean to remember a poem? This means remembering a series of words in a certain connection, in a certain sequence. When a person learns by heart Lermontov’s poem “To the Poet’s Death”, he doesn’t try to remember separate words at all: “died”, “poet”, “slave”, etc. — he knows these words without that; he tries to remember the sequence of these words, seeks to form a connection between them so that the words “the poet died” evoke the following words “slave of honor” in their consciousness.

What does it mean to remember a foreign word, for example, the French word “latable”? This means establishing a strong connection between this word and the subject that it denotes, or the Russian word “table”. If I know the word “latable”, then, hearing it or seeing it printed, I think of a table, and vice versa: when I see a table or the Russian word “table”, the French word “latable” appears in my mind. What does it mean, finally, when someone says: “I perfectly remember the face of such and such a person and I can always recognize him”? This means that a strong connection has been formed between the face of this person and his name (or other signs characterizing him), so that when you see this person his name is remembered.

Thus, one or another connection always underlies the activity of memory. Remembering is binding. To remember an object means to associate it with any other objects. These connections that underlie the activity of memory are called associations in psychology.

If any objects are perceived, imagined or conceived simultaneously or directly one after another, then a connection is formed between them and subsequently the perception or representation of one of them can cause others to be conscious. This pattern is called the law of association.

The physiological basis of associations is the mechanism of the formation of temporary neural connections, discovered by I.P. Pavlov in the study of conditioned reflexes in animals (see § 3).

Associations are formed when the corresponding mental processes are experienced simultaneously or directly one after another. The basic rule for the formation of conditioned reflexes is the same. In order to develop a conditioned reflex for a dog to saliva to some stimulus, such as a bell, it is necessary that this stimulus be
accompanied several times by feeding. In other words, it is necessary that the bell and feeding several times occur simultaneously or one after another: first the bell, then the feeding. Thus, coincidence in time is the main condition for the formation of both associations and conditioned reflexes.

The second most important condition for the formation of conditioned reflexes and associations is repetition. To develop a conditioned reflex to a call, you need to accompany the call a sufficient number of times, and the more often the coincidence in time of the call with feeding is repeated, the stronger the conditioned reflex will become. This is also the case with the formation of associations. To remember the phone number, you need to repeat it several times. In order to firmly grasp the meaning of a foreign word, you need to repeat it as many times as possible, meet it more often in the text, hear it most often, and use it yourself in a conversation.

The neural connections underlying the conditioned reflexes and associations are formed when the two processes of excitation in the cerebral cortex coincide in time and are fixed as a result of repetition. These connections were called IP Pavlov temporary connections.

“Temporary nervous connection,” wrote IP Pavlov, “is a universal physiological phenomenon in the animal world and in ourselves. At the same time, it is also psychic, something that psychologists call an association, whether it will be the formation of compounds from all kinds of actions, impressions, or from letters, words and thoughts.”

The studies of I.P. Pavlov and his students established the basic laws of the formation of this kind of relationship. Thus, the physiological basis of associations has now been studied in sufficient detail.

§Thirty. Memorization

Memorization may be unintentional and intentional.

In case of unintentional memorization, we do not set ourselves the special goal of memorizing and do not make any efforts for this. Memorization occurs regardless of our intention, as it were "by itself." So it is mainly remembered that we are keenly interested in or arouse in us a strong and deep feeling. “I will never forget this,” we say about an event that has made an exceptionally great impression on us or of great importance to us. A significant part of vivid life memories that each person has is the result of unintentional memorization. Such memories can be very lasting; some unintentionally imprinted childhood memories persist throughout life.

But no matter how bright and strong such memories are, they still have an episodic and random character. They cannot form systematic knowledge in any field. All activities require that a person remember many such things that are not remembered by themselves. You need deliberate, conscious memorization.

Of great practical importance is the distinction between mechanical and semantic memorization. Mechanical memorization is mainly based on the consolidation of individual ties, associations. Meaningful memorization is characterized by the fact that with it the processes of thinking are of primary importance. In order to remember new material, a person must first of all understand it, comprehend it, that is, find possibly deeper and more meaningful relationships between this new material and the knowledge already available to a person. The physiological basis of semantic memory is the inclusion of newly formed connections in the system of already existing human connections.

The basic condition for rote memorization is repetition; the main condition for semantic memorization is understanding.

Both mechanical and semantic memorization are of great importance in the mental life of a person. When memorizing the proof of a geometric theorem or analyzing historical events, semantic memorization comes to the fore. In other cases, for example, when storing a phone number, house, apartment, etc., the main role belongs to mechanical memorization. But in most of those cases when our memory faces responsible and more or less difficult tasks, it should be based on both understanding and repetition. This is especially pronounced in the academic work.

Take memorization of a poem as an example. It is obvious that one cannot do without understanding. Purely semantic memorization would make it possible to reproduce the content of the poem, its main thoughts and images, but would not provide knowledge by heart. The latter requires strong associations between the words of the poem, requires that each word of the poem immediately evokes the next word in consciousness, and that this happens “by itself”, without any thought, consideration or deliberation.

But, on the other hand, it would be very unreasonable to try to memorize a poem using mechanical memorization alone. Special experiments have shown that a poem is memorized much faster and memorized
much stronger than an equally long series of meaningless syllables: if memorizing a poem consisting of 80 words requires 8 repetitions, then memorizing 80 meaningless syllables requires about 80 repetitions, i.e. 10 times more. The reason for this difference is that memorization of meaningless syllables is carried out with the help of mechanical memorization alone, while semantic memorization also plays an important role in memorizing a poem. And the greater the participation of the latter, the easier the poem is learned and the more firmly it is held in memory.

Remembering your own names and all kinds of numerical data is primarily a matter of mechanical memorization. But here, one should try whenever possible to attract semantic memorization to help. Consider from this point of view the memorization of chronological dates. For many, it is associated with great difficulties. This occurs mainly from the inability to use semantic memorization in solving this problem. To make it easier to remember the chronology, you need to connect separate dates as varied as possible, using, as starting points, or “milestones”, dates of especially large historical events, as well as “round numbers”: the beginning of the century, the middle of it, etc. P.

Here are a few examples of this kind of linking of historical dates. Pushkin was born in 1799, i.e., a year earlier than the beginning of the century. Therefore, his age is always 1 year more than the last two digits of the corresponding date: during the Patriotic War of 1812 he was 13 years old; He wrote Boris Godunov in 1825, that is, twenty-six years old, and so on. Gogol was 10 years younger than Pushkin, therefore, he was born in 1809. Lermontov was 5 years younger than Gogol, therefore, he was born in 1814. In addition, Gogol was born 3 years before the Patriotic War of 1812, and Lermontov 2 years after it.

Sometimes it’s useful to resort to more artificial methods of interpreting numbers that you need to remember: Lermontov was born in 1814 and died in 1841 - the last two numbers are the same on both dates, but the order is reversed; Turgenev was born in 1818 - two times eighteen.

The techniques of the latter type are called mnemonic techniques, i.e., artificial techniques that help memorize. All that has been said so far shows the difficulty of memorizing on the basis of mechanical memorization alone and the consequent need to resort to the help of semantic memorization as widely as possible.

But the opposite should not be forgotten: for the lasting memorization of any material, semantic memorization alone is not enough. True, in order to remember for a short period any meaningful text, sometimes it is enough to properly understand it. But to make the contents of this text a lasting possession of memory, understanding alone is not enough; repetition is necessary.

If memorization is in the nature of specially organized work associated with the use of certain techniques for the best assimilation of knowledge, it is called memorization.

Now we must get acquainted with the conditions on which the success of memorization depends, with the methods that we use in order to achieve the best possible memorization.

The first condition for the success of memorization is the installation of memorization: we must set ourselves the task of remembering and subordinate the entire organization of work to this task. It has been proved by various experiments that if a person does not set himself the goal of remembering, he can read a text many times without retaining almost anything in his memory. But as soon as he learns that “you need to remember,” he learns this text more or less quickly.

It is also proved that the strength of memorization depends on whether a person sets himself the task of remembering for a long time or remembering for a short time. In one study, students were asked to memorize two passages of equal difficulty, but they said that the first passage would have to be answered the next day, and the second in a week. In fact, a test of the knowledge of both passages was carried out two weeks later. It turned out that students reproduced the second passage much better; the consciousness that it needs to be remembered for a longer period of time, provided a more durable memorization.

If a person sets himself the goal of remembering something “until tomorrow”, the strength of memorization will be completely different than in the case when he seeks to remember “forever”.

Another important condition for the success of memorization is an active attitude to the process of memorization, which is impossible without intense attention. For remembering, it is more useful to read the text twice with full attention than to read it ten times inattentively. Therefore, attempts to memorize something in a state of severe fatigue, when it is not possible to concentrate properly, are a waste of time.

The worst and most uneconomical way to memorize is to mechanically reread the text that you need to memorize, while waiting for it to be remembered. In contrast, intelligent and economical memorization is active work on the text, which uses a number of techniques leading to better memorization.

The first stage of this work is the study of the text with the aim of understanding it as best as possible and
finding as many supports for semantic memory as possible. For this, it is necessary to subject the text to special processing: mentally break it into “semantic pieces” and find “semantic reference points”, or “milestones” in each such piece, that is, individual words, sentences, images that express the “essence” of this pieces are, as it were, its headings. Next, you need to establish connections between these pieces, to understand why they are located in this, and not in any other order. The result of this mental processing of the text can be useful in writing, in the form of a plan or abstract. It is very important that this plan, from the outside, be as clear as possible, clear and orderly, and even with a cursory glance at it, give a clear outline of the content.

The result of such processing of the text should be not only the compilation (mentally or on paper) of its plan, but also the allocation in it of the most essential, that which must be remembered in the first place; the rest should be temporarily relegated to the background and memorized only after the basic semantic framework of the text has been firmly mastered.

Thus, the first stage of memorization is not just reading the text, but special processing of it. This explains that the vast majority of people remember better when they are able to read the text themselves than when they listen to someone else's reading: when listening it is impossible to produce this processing, and a person is forced to limit himself to passive perception.

When the study of the text is made, we must proceed to the second stage, which should consist of attempts to reproduce the text, alternating with repeated readings of this text. Whether we learn a poem by heart, or we are faced with the task of learning some educational material that does not require verbatim memorization (for example, when working on a history textbook, literature), we still need to start trying to reproduce the text as early as possible. An unproductive way of memorizing is to confine oneself only to reading until there is confidence that the text has been learned.

The advantage of such attempts at reproduction is, firstly, in the fact that they necessarily require internal activity and to a great extent mobilize attention. A simple re-reading of the same text can easily turn into a mechanical action, while it is impossible to mechanically and inattentively reproduce what you still do not quite know.

Secondly, the words of the poem, which I managed to recall with a certain effort, or my own formulations made when trying to reproduce the contents of the text, are remembered much more strongly than what I just read.

After each attempt to reproduce it is necessary to immediately turn to the text and re-read it, establishing what errors were made, what was missed at all, and what could be reproduced correctly. Such re-reading, pursuing the goal of active self-control, is very different from simple re-reading that is not associated with attempted reproduction.

After the material is learned, that is, when it is possible to correctly and fully reproduce it, the third stage begins - consolidation by repetition.

Studies of memory show that memorization is faster and more durable when repetitions do not follow each other directly, but are separated by more or less significant time intervals. In one study, it turned out, for example, that it took 16 repetitions to learn a poem, if all these repetitions followed directly one after the other in one step, and only 8 repetitions when two repetitions were made per day.

This pattern can be formulated as follows: the distribution of repetitions in time increases the efficiency of memorization.

It follows that from the point of view of the ease and strength of memorization, hasty preparation for exams or learning lessons "last minute" is very unprofitable, since in these cases no distribution of repetitions is possible.

§31. The Struggle With Oblivion

Not all of what we once remembered (intentionally or unintentionally) is forever stored in our memory. We forget a lot. Forgetting is a long process that develops gradually. To successfully combat it, the following main points must be taken into account:

1. The main means of combating forgetting is repetition. Any knowledge not fixed by repetition is gradually forgotten.

2. Forgetting begins shortly after memorization and at first proceeds at a particularly fast pace. If we compare the reproduction of the learned material after 5 and 10 days after memorization, it turns out that forgetting for the first five days is more than additional forgetting for the second five days.
3. Repeat the learned should not be when it is already forgotten, but while forgetting has not yet begun. In the words of the famous Russian teacher and psychologist Ushinsky, it is necessary to “strengthen the building”, and not “repair the already collapsed”. A quick repetition is enough to prevent forgetting, and a lot of work is needed to restore the forgotten.

Taking into account what was said in the second and third paragraphs, we can draw the following conclusion: it is necessary to repeat after a relatively short period of time after memorization, since it is in the first period that forgetting is most rapid.

We said that forgetting begins soon after memorization. This does not mean, however, that it always begins immediately after memorization. Experiments show that often reproduction is most complete not immediately after memorization, but after a day, two or even three days. During this time, the learned material is not only not forgotten, but, on the contrary, is “fixed” in memory. This phenomenon is observed mainly when memorizing vast material.

I.P. Pavlov encountered a similar phenomenon when conducting his experiments. Sometimes in the experiments he conducted, the result achieved was not found directly at the end of the experiment, but later. IP Pavlov explained this phenomenon by the fact that when solving a difficult problem, fatigue of the corresponding cortical cells arises. Only after some time, when fatigue disappears, the nervous system is able to detect the achieved result. It can be assumed that this feature of reproduction is explained by the removal of fatigue that arose in the process of memorization.

One practical conclusion follows from this: one should not think that it is best to answer in an exam or in a lesson what is learned immediately before the answer, for example, on the same morning; more favorable conditions are created in the case when the learned material is “tracked down” for some time.

The preservation of memorized material in a very strong degree depends on what we do immediately after memorization.

Follow-up can sometimes erase the results of previous learning. If I, having learned a lesson in history, immediately begin to learn a lesson, say, in literature, then this last material can largely erase from the memory already acquired historical material. This negative effect is especially strong when it comes to similar material.

The following practical conclusions follow from this:
1. Moving from memorizing one material to memorizing another, you should always take a short break (5-10 minutes), giving yourself complete rest from any mental work at this time.
2. You should organize your classes in such a way that in the immediate vicinity you find yourself working on as less similar subjects as possible. If during this evening you need to deal with algebra, history and literature, then from the point of view of the productivity of assimilation, the order: 1) history, 2) algebra, 3) literature is more profitable than 1) history, 2) literature, 3) algebra.
3. It is useful to renew particularly responsible and difficult material in memory immediately before bedtime, since a dream provides the most favorable conditions for consolidating the results of memorization.

§ 32. Play

Reproduction, as well as memorization, is unintentional and deliberate.

In case of unintentional reproduction of certain ideas, thoughts, words are remembered by themselves, without any conscious intention on our part.

Associations may be the cause of inadvertent playback. Having met the name of a little-known city in the newspaper, I unexpectedly recall one of my acquaintances. The fact is that this acquaintance lived at one time in this city and the name of the latter was closely connected for me with the name of this acquaintance.

Often the cause of an unintentional memory of an object is its external or internal resemblance to what we currently perceive. In such cases, one speaks of reproducing on the basis of relations of similarity. A chance meeting on the street with a stranger makes me remember an old friend whom I had not recalled for many years; the reason for this is the striking resemblance between this comrade and the person he met.

Reading in the textbook of psychology literary examples illustrating the features of the course of various mental processes, we involuntarily recall similar cases from our own lives.

Associations in the opposite are also possible. For example, a story or movie about hot countries can evoke the memory of a recently read book about the Arctic. At the sight of tractors and combines working on a collective farm field, in our minds the image of a lone plowman following the plow can arise.
Moreover, associations, connecting with one another, form, as it were, long chains, and therefore involuntary memories can lead a person very far from the perception that caused these associations.

Sometimes such reproduction is easy and does not require any effort on our part. Memorizing a well-known poem or story about an incident just observed by us are examples of deliberate reproduction, carried out without any effort. In other cases, reproduction is associated with greater or lesser difficulties. We are not able to immediately name the surname we need, recall the chronological date, or utter a line of the poem that “jumped out of our memory”. We must remember them.

Recall is called conscious reproduction, associated with overcoming certain difficulties and requiring effort and diligence.

It would be a mistake to think that only memorization is a difficulty, and the remembrance of the once learned is realized by itself. It's not like that at all. Being able to remember is hardly easier for many than being able to remember. And both of these skills are equally important. What benefit will a person derive from a rich supply of knowledge if he does not know how to recall at the right moment that little of this supply of knowledge that is currently required?

Remembering, we use a variety of tricks. We point out some of them.

Of great benefit in the process of recalling is the intentional use of associations: we reproduce all sorts of circumstances directly related to what needs to be remembered, in the expectation that they will cause the forgotten in consciousness. Remembering where we put the missing key, we try to more clearly imagine where we were and what we were doing at the moment when, according to our assumptions, the last time we held it in our hands. Remembering the name and patronymic of the writer, we try to imagine the cover of the book with his initials, a lesson in the school that spoke about him, etc.

Sometimes recall can be based on recognition. Trying, for example, to recall a forgotten middle name of a person, we quickly pronounce his name in conjunction with various middle names - “Pyotr Aleksandrovich”, “Pyotr Alekseevich”, “Pyotr Andreevich”, “Pyotr Antonovich”, - relying on the fact that, by chance correct middle name, we will immediately recognize him, having experienced a "sense of familiarity."

Remembering is a complex and very active process. It requires, on the one hand, perseverance and perseverance, and on the other, resourcefulness, quick wit, and the ability to use a variety of techniques.

§33. Representations And Their Characteristics

One of the main manifestations of memory is the reproduction of images. Representations are images of objects or phenomena that we do not currently perceive.

In contrast to the perception caused by the direct action of an object on analyzers, representations arise due to the revitalization of previously formed temporal connections; they can be called by association mechanism. For example, with the sounds of a melody, an image (representation) of a person with whom we listened to this melody together may arise in consciousness. Using the signals of the second signaling system (verbal designations, descriptions), we can call up a variety of images. The representations themselves and their primary source - sensations - belong to the first signaling system.

Representations are divided into types corresponding to the types of sensations. Along with visual representations that play a major role in the mental life of most people, there are auditory (try to imagine some familiar motive, the sound of a violin, the voice of a person, a dog barking), olfactory (try to imagine the smell of hay, kerosene, smoke ), tactile (imagine a touch of marble, velvet; imagine that you are holding a fluttering bird in your hand), etc.

Representations are characterized primarily by visibility, i.e., by direct resemblance to the corresponding objects. To have a visual representation of an object means internally, or mentally, to “see” it; to have an auditory representation of any sound means to mentally “hear” it. Not without reason in musical practice the ability to represent the sound of music is called “internal hearing”.

Visibility is different from other forms of knowledge about the subject. I can, for example, know that such a house is two-story, stone, separated from the street by a grill, etc., and yet have no idea of this house, that is, mentally do not “see” its image. I can remember that such and such a person has a low and hoarse voice, but still cannot imagine this voice, that is, do not “hear” it internally.

This does not mean, however, that perceptions are no different from perceptions. Psychological analysis shows the following most important differences between perceptions and perceptions:
1. Representations are usually much paler than perceptions.

Try to imagine the face of one of the well-known people, and you will agree that this mental image cannot be compared with the brightness that you have in perception, that is, when you really look at this person.

By the degree of brightness and liveliness of ideas, people are very different from each other. In some, the visual representations are very pale, in others they reach exceptional brightness. There are people who are at a loss even to understand what it means to “internally hear” sounds, that is, to have some sort of vivid auditory performance, while some musicians can accurately reproduce by hearing a very complex piece of music by hearing it once.

That ability, usually called ear for music, is largely reduced to the ability to have vivid and accurate auditory representations of music. But no matter how bright the ideas are in some cases, nevertheless in these cases they only come closer to perceptions, but can never quite equal them and even more so replace them.

2. Representations never convey with the same brightness all the features and signs of objects.

Usually they reflect only some aspects, some features of the subject. This feature of representations is called their fragmentation (from the word "fragment" - an excerpt). When we try to imagine some kind of well-known face, we clearly and distinctly reproduce only individual features, individual details, acting against the background of a more or less vague and indefinite image.

In the story of Leo Tolstoy's "Childhood", the hero of the story describes the image of his mother that he had lost in his childhood as he remembered: “When I try to remember my mother, I only see her brown eyes, which always express the same kindness and love, a birthmark on my neck ... an embroidered white collar, a gentle dry hand that caressed me so often and that I kissed so often, but the general expression eludes me.”

In the representations associated with any particular activity, those parties of objects that are essential for this activity are transmitted. Painters, for example, have vivid representations of colors, while architects' visual representations are often colorless, but they clearly convey the shape of objects. In the auditory representations of the language specialist, the sound composition of the words clearly appears, in the auditory representations of the actor, the timbre of voice and intonation are highlighted, while in the musician, the auditory representations mainly convey melody and rhythm.

3. Representations are very unstable and unstable.

Try to call up the image of some well-known subject and focus on it carefully. You will notice that after a few seconds it will disappear, no matter how you try to hold it, and you will have to make an effort again to cause it. In addition, the views are very fluid and variable: one or the other details come to the fore.

Only people who have highly developed representations of a certain kind, such as musicians, have hearing, artists have visual, etc., are they relatively stable and constant.

Representations of one kind or another often arise only if there are currently certain perceptions. For example, many people doubt that they have any kind of lively taste. Indeed, it is rare that anyone succeeds in arbitrarily provoking a taste of sour apple. But when you see an immature apple in front of you, or, even better, when you see how another person eats such an apple, a very bright and vivid idea of a sour taste often arises. It is no less difficult to provoke the idea of pain without any external reason, but it can arise with very great vivacity if you see how another person has burned himself or pinched his finger. The emergence of ideas is greatly facilitated when it is supported in perceptions. Some chess players note, for example, that they cannot play a game of chess without looking at the board at all, but they can play it if they are allowed to look at an empty chessboard; in this case, they imagine the figures in certain places and can monitor their movement. Not everyone who can fantasize well at the piano can compose music without an instrument. This is explained by the fact that musical images more easily arise in the presence of real sound.

Representations, always always to a certain degree visual, are inferior, however, to perceptions in this regard. Is it possible on this basis to consider representations only as weakened copies of perceptions? No you can not. Representations contain not only less than perceptions, but they in a certain sense contain more than sensations and perceptions. They always contain a greater element of generalization than perception. Representations are not just visual images of reality; they are always to a certain extent generalized images of reality.

A generalization exists not only in those representations that relate to a whole group of similar objects (the representation of a horse in general, the representation of a table in general), but also in the representations of any individual subject. Each object familiar to us was perceived by us many times, and each of these perceptions was different from the rest. I saw my desktop from different sides, from different distances, with different lighting, etc. And yet, when I imagine it, I have some kind of image, and not many different images that correspond to different perceptions. This generalized image is characterized primarily by the fact that it
emphasizes, gives with the greatest brightness the constant signs of a given object, and, on the other hand, there are no signs or very pale signs characteristic of individual, private perceptions.

Our ideas are always the result of a generalization of individual perceptions. The degree of generalization contained in the presentation may vary. Representations characterized by a large degree of generalization are called general representations. A view that relates to a whole group of similar objects, such as a tree view, will always be a general view.

§34. Types Of Memory

To characterize the memory of a person, it is not enough to say that it is bad or good. It is known that memory can be good with respect to some objects and bad with respect to others. Some people have a wonderful memory for numbers, but all their life they suffer from poor facial memory. Others, having a good memory on their faces, experience constant difficulties recalling names and surnames. Still others memorize verses with extraordinary ease, but must spend a lot of effort memorizing mathematical formulas. A type of memory is an individual feature of a person’s memory. The most significant difference is between the figurative and verbal-logical type of memory.

Some people remember better the visual images of objects and events, while others mostly remember the thoughts expressed in words. Remembering the contents of the read book, people of the figurative type of memory mentally see actors, nature pictures, separate scenes of the story, people of the verbal-logical type of memory primarily recall the main thoughts of the book, the most interesting verbal formulations.

The brightest representatives of the figurative type of memory can be found among artists: artists, musicians, writers, actors, while verbal-logical memory is more often found among scientists.

Many examples of exceptionally strong figurative memory can be found in the biographies of artists. The famous Russian artist N. N. Ge in his painting “Peter I Interrogates Tsarevich Alexei in Peterhof” (located in Moscow, in the State Tretyakov Gallery) depicted the room of one of the Peterhof palaces. “In my head, in my memory I brought home the whole background of the painting“ Peter I and Alexei, ”he wrote later,“ with a fireplace, with eaves, with four paintings of the Dutch school, with chairs, with a floor and with lighting, - I was only once in this room, and was intentionally once, so as not to break the impression I made. "

No less vivid examples of exceptional imaginative memory give biographies of musicians. According to contemporaries, the Russian composer Balakirev was distinguished by his "amazing", "incomprehensible" musical memory. Having heard only once in a concert one of Tchaikovsky’s symphonic (orchestral) works, two years later he was able to remember it exactly and play the author, who by this time had already largely forgotten his work. Equally amazing was the musical memory of Rachmaninov. Once, composer Glazunov came to his teacher, Taneyev, to play his new, just written and still unknown symphony. He liked to make a joke, before the arrival of Glazunov, Taneyev hid Rachmaninov, then still a student of the conservatory, in his bedroom. A few times after Glazunov played a symphony, Taneyev led Rachmaninov. A young student sat at the piano and played the Glazunov symphony. The author was completely puzzled how this young student of the conservatory could find out a work whose manuscripts he had not yet shown to anyone.

In the process of schooling, we constantly use both figurative and verbal-logical memory. Imaginative memory is very closely connected with imagination. It can be of significant importance in various fields of human activity.

Verbal-logical memory is expressed in the memorization and reproduction of thoughts. Our thoughts are inextricably linked with speech; therefore, the reproduction of thoughts is always associated with one or another speech expression. We memorize and reproduce thoughts expressed in words. On this basis, this type of memory is called verbal-logical.

Man uses verbal-logical memory constantly. In the academic work, its role is extremely great. Considering in the previous paragraphs the processes of memorization, storage in memory and reproduction, we had in mind mainly verbal-logical memory.

The physiological basis of the difference between the figurative and verbal-logical type of memory are the features of the relationship of two signal systems. If the activity of the first signaling system plays a significant role in memorization, then there is a figurative type of memory. If memorization and reproduction are carried out mainly in the activity of the second signaling system, then there is a verbal-logical type of memory. The memory of many people belongs to the middle type, which harmoniously combines the action of both signal systems.
The types of memory are caused not only by the interaction of signal systems (figurative and verbal-logical memory), but also by the type of analyzer that is leading in memorization and reproduction. Depending on the role of the main analyzers, the type of memory can be visual, auditory and motor.

Some people, in order to remember, need a visual perception of what is remembered (visual type). Others need auditory perceptions or at least auditory images (auditory type) to remember. Still others, for memorization, need movements and, in particular, speech movements (motor and, in particular, speech-motor type).

Motor memory is the basis for developing motor skills (writing, working on a typewriter, playing musical instruments, controlling an airplane, etc.). Of vital importance is motor memory in physical education and sports (ice skating, cycling, swimming, etc.).

In most people, the visual type of memory is predominant - when memorizing objects, and speech-motor - when memorizing verbal material.

Representatives of pure types are not common. Most people have a mixed type of memory.

Belonging to one type or another largely depends on the practice of memorization, that is, on what exactly a person has to remember and how he is accustomed to remember. Therefore, the type of memory can be developed through exercise. This is of great practical importance: one must strive to develop the most versatile type of memory in oneself.

§ 35. Qualities Of Memory

In the previous paragraph, we talked about the fact that it is impossible to characterize a person’s memory simply as bad or good, because it can be different in relation to different objects. Now we must further clarify this issue. Even with certain objects in mind, it’s not enough to say about memory that it is good or bad. It can be good in one respect and bad in another. In relation to, for example, historical facts, the memory of a person may be distinguished by great strength of conservation and at the same time be insufficiently accurate.

Characterizing a person’s memory, it is necessary to distinguish its individual qualities. The most important of these are:

1. The speed of memorization. To remember one material, one person needs to work long and hard, while another remembers the same material very quickly. This quality of memory is most striking, and therefore many tend to evaluate memory, mainly in terms of speed of memorization. Such an assessment, however, is unfair. The speed of memorization in itself is not critical; it acquires value only in combination with other qualities of memory.

2. Strength retention. Remembering something, some people keep it in their memory for a long time, others quickly forget it ("short memory"). Differences between people in this regard are no less than in terms of speed of memorization. Various relationships are possible between these two qualities of memory. Experimental studies show that the greater speed of memorization is often associated with strong preservation: whoever remembers soon, he remembers for a long time. However, the opposite cases are also observed: some of the fast-remembering people just as quickly forget and while some slowly memorizing for a long time keep in memory what they once learned.

3. The accuracy of the memory. It is characterized by the absence of distortions, omissions of any significant and subjective additions. Accuracy is one of the most important qualities of memory that requires special attention. If you give yourself a clear account of the importance of the accuracy of reproduction in many areas of life, it becomes clear how much each person needs to work to improve the accuracy of his memory. The main tool for this is to cultivate a critical attitude towards one's own memories. It is necessary to be able to distinguish what I remember reliably from what I just think, to distinguish the true reproduction of what was seen and heard from subjective additions, conjectures and interpretations. In the absence of fidelity, all other qualities of memory lose most of their value.

4. Readiness of memory. Under this name, of course, the ability to quickly extract from the memory reserves what is needed at the moment. Some people, with extensive knowledge, cannot, however, quickly find answers to the requests that life presents. They say about such people: "They have a lot of knowledge, but they do not know how to use it." Without the readiness of memory, that trait of the mind that is usually called “resourcefulness” is impossible. In some professions, resourcefulness, the ability to quickly extract the necessary material from your stock of knowledge, is crucial; this includes the activities of a military leader, attending physician, teacher, etc.
The readiness of memory depends, firstly, on the ability to recall that we spoke about on page 99, and secondly, on the systematization of knowledge. Only if the “memory reserves” are dominated by the complete order and the strictest system, you can quickly find the necessary material in them. It is not for nothing that the major military leaders - people with extremely high readiness for memory - especially emphasized the need for orderly knowledge. “Memory is the pantry of the mind,” said Suvorov, “but there are many partitions in this pantry, and therefore, everything should be packed where it should be.”

§36. Nurturing Memory

Everyone would like to have the best memory possible. This desire is quite natural, but in order to fulfill it, it is necessary to give yourself a clear account of what is meant by good memory.

The presence of an exceptionally strong mechanical storage ability is not in itself a very valuable property. The scientific literature describes many cases proving this point.

One person possessed such a strong mechanical auditory memory that, not understanding a single word in Latin, he could accurately repeat 30 lines of Latin verses, once listening to them. This did not prevent him, however, from displaying an extremely poor memory in life; he constantly forgot half of the instructions given to him, and in the rest he made a number of mistakes. Another person was distinguished by such an exceptional visual memory that he memorized word for word a whole page of newspaper text after he read it only once. But he was heavily weighed by this ability and said that when he needed to recall any one thought or one fact from what he read, he was forced to mentally run through the entire text from the very beginning.

These cases speak of exceptional mechanical memorization with the underdevelopment of semantic memorization. A good memory is a highly developed semantic memorization, only relying on the help of a mechanical one.

In the biographies of many prominent people, their wonderful memory is noted. Psychological analysis shows that in most of these cases it is not a question of any mechanical memorization abilities, but of the exceptional development of semantic memorization. What determines the development of semantic memorization?

Firstly, by what the mental life of a person is aimed at, what are his interests. Meaningful memorization, as we know, is characterized by the fact that a person memorizes not everything equally, but mainly that which is essential for him is necessary and interesting. It is understandable, therefore, that the wider, more diverse and substantive the interests of man, the richer and more substantial the “reserves” of his memory. What a person remembers depends to a large extent on what he is interested in.

Everyone who knew Y. M. Sverdlov was amazed at his phenomenal memory in names, on persons, on dates, on everything connected in any way with the personality and activity of party workers. “His head,” recalls Yaroslavsky, “was a kind of accounting and distribution department, she kept in her memory the images of thousands of clandestine workers, and she recorded, cemented the images of thousands of new workers who came to us in the days of the revolution.”

Sverdlov, both in his talent and in the main direction of his work, was a wonderful organizer. “The organizer to the marrow of bones,” wrote JV Stalin about him, “the organizer by nature, by skills, by revolutionary education, by instinct, the organizer of all his ebullient activity, - such is the figure of Y. M. Sverdlov.” It is easy to understand that for Sverdlov, as an organizer, all the data characterizing each individual employee was of primary interest. On this basis, his exceptional memory could develop.

Secondly, the development of semantic memorization is determined by the general mental development of a person. Those who have great and versatile knowledge will easily find many semantic links for the new material that they need to remember. A person who knows how to think will more deeply understand the material to be memorized, and understanding, as we know, is the main condition for the development of semantic memorization. People usually think: the better a person’s memory, the more knowledge he can have. This, of course, is true. But one should not forget the inverse relationship: the more knowledge a person has, the better his memory becomes in the corresponding areas.

Thirdly, organization in memorization is the most important condition for the development of memory. It is necessary to strive for a system of knowledge, and not for a simple accumulation of facts.

Organization in memorization involves a habit of semantic grouping of what is memorized. Often, with insufficient sequence and systematicity of the memorized material, with difficulties in understanding, semantic grouping is not achieved immediately and requires considerable effort. But this effort will be fully justified. The
order and system during memorization to a large extent contribute to the strength of preservation in memory. In turn, the organization of the material stored in memory contributes to the speed and accuracy of reproduction. Everyone who wants to develop their memory must accustom themselves to systematic and organized organization when memorizing and reproducing.

Finally, the development of memory is achieved by mastering the techniques of remembering, remembering and the fight against forgetting, which we discussed in detail in paragraphs 30, 31 and 32. In order to develop our memory, we need to constantly cultivate the ability to remember, keep in mind and remember.

Questions To Repeat

1. What is memory?
2. What is called the law of association?
3. What is the physiological basis of the association?
4. What is the basic condition of mechanical and what is semantic memorization?
5. What is the significance of mechanical and semantic memorization in human life?
6. List the conditions for successful memorization.
7. What are the stages of the process of meaningful memorization of the text?
8. List the most important ways to combat forgetting.
9. Indicate the reasons for inadvertent playback.
10. What techniques can be used in the process of recalling?
11. List the most important differences between perceptions and perceptions.
12. List the types of memory.
13. Describe the figurative and verbal-logical memory.
14. List the most important qualities of memory.
15. List the conditions on which the development of memory depends.

Chapter VII. IMAGINATION

§37. General Concept Of Imagination

The images of objects and phenomena that we do not currently perceive are called representations. If a representation is a reproduction of a past perception, it refers to the area of memory. Such, for example, are the ideas that each person has of his room, the house in which he lives, his close acquaintances, etc. But we can create ideas for ourselves and things that we have never seen before. A man who has never traveled outside the middle zone of the USSR still imagines the ice of the Arctic, and the tundra, and tropical forests, and sand deserts. Such representations will be imagination.

How can such representations be created? Where does the material come from for them?

All representations of the imagination are built from material obtained in past perceptions and stored in memory. The activity of the imagination is always a processing of the data that is delivered by sensations and perceptions. “Out of nothing” imagination cannot create. A person who is deaf from birth will never be able to imagine sound, just as a blindborn will never create a color image in his imagination.

A person who has not been to the Far North can imagine the tundra only because he saw images of it in paintings and photographs, he saw and in reality individual elements included in the tundra landscape - he saw a snow-covered plain, a small shrub, he saw deer in the zoo. The processing of such material obtained in past perceptions makes it possible to create a representation of the tundra, and the richer this material, the brighter and fuller the imagination can be. There are times when elementary school students, starting to study the history of the USSR, imagine the Russian boyar in the form of a modern man in a coat and cap. This happens because they do not have material from which to build a faithful image of the Russian boyar, the material that is usually given by examining paintings and illustrations, visiting museums,

Now we can define imagination. Imagination is the creation of new images based on material from past perceptions.
The most bizarre and fantastic products of the imagination are always built from the elements of reality. These are all the fantastic creations of the people's imagination: the mermaid (a woman with a fish tail), the ancient Greek sphinx (the body of a lion, the head and chest of a woman, the wings of a bird), the hut on chicken legs, etc.

Read such a characteristic example of fairy-tale poetry as the beginning of Ruslan and Lyudmila "Pushkin:
At the onion, the oak is green;
The golden chain on the oak is that:
Day and night, the scientist cat.
Everything walks around the chain;
It goes to the right - the song starts,
To the left - it tells a fairy tale
There are miracles: the goblin wanders there ... etc. It is fantastic here only the combination of elements, the extraordinary meaning and significance that they receive, the elements themselves are taken from reality. Oak, golden chain, cat, songs - all this exists in reality and is familiar to everyone. But the image of a learned cat walking around an oak tree on a golden chain and singing a song is a product of the poet’s creative imagination.

The imagination of man was born and developed in the process of labor. By working, a person changes, transforms reality, creates new things necessary to satisfy his needs. A prerequisite is the presence of a conscious goal: a person imagines in advance the result of his labor, those things and the changes in them that he wants to receive. This is a significant difference between humans and animals.

“The spider performs operations,” writes Marx, “resembling the operations of a weaver, and the bee by construction of its wax cells shame some architects. But even the worst architect from the best bee from the very beginning differs in that before building the wax cell, he already built it in his head. At the end of the labor process, we get the result that already at the beginning of this process was in the mind of the employee ... "

The transformation of reality “in perception”, the construction “in the head” of new things is carried out by the imagination.

§38. Passive And Active Imagination

In the processes of imagination, we can distinguish between different degrees of activity.

An extreme case of a completely passive imagination is dreams in which images are born unintentionally, change themselves and come into unexpected, bizarre, sometimes completely meaningless combinations. At its core, involuntary is also the activity of the imagination, which unfolds in a drowsy, drowsy state, for example, before falling asleep.

A very accurate and detailed description of such a work of imagination is given by L. N. Tolstoy in War and Peace. Fifteen-year-old Petya Rostov is in the partisan detachment of Denisov; night; in the morning a detachment attack is planned on the French column; Petya has just returned from intelligence and is napping while sitting on a wagon.

, “Petya should have known that he was in the woods, in the party of Denisov ... that he was sitting on a truck, recaptured from the French ... that there was a Cossack Likhachev sitting under him and sharpening his saber, that a large, black spot to the right was a guard, and red, a bright spot below to the left - a burning fire ... but he did not know anything and did not want to know this. He was in a magical kingdom in which nothing resembled reality. The big black spot might be a guardhouse, or maybe there was a cave that led into the very depths of the earth. The red spot could be fire, or maybe the eye of a huge monster "..." Burn, burn, burn, burn ... - the sharpened saber whistled. And suddenly Petya heard a harmonious choir of music playing some unknown, solemnly sweet anthem ... Music played more audibly and audibly. The chorus was growing, moving from one instrument to another ... Each instrument,

These musical images arise and develop by themselves. In this sense, they are like a dream. But Petya does not sleep; he only sleeps, and therefore he can still influence the course of his images.

“He tried to lead this huge chorus of instruments. "Well, hush, hush, freeze now." And the sounds obeyed him. “Well, now fuller, more fun. More, more joyful. “ And from an unknown depth, amplifying, solemn sounds rose. “

The phenomena of sleep and dreams, surrounded by mystery for many centuries, received a scientific
explanation in the works of I.P. Pavlov. IP Pavlov found that sleep is a diffuse inhibition of the cerebral hemispheres. Complete and deep inhibition of the cortex is a dream without dreams; dreams are caused by the work of groups of cells that remain uninhibited. The fact is that inhibition encompasses cells of the cortex gradually and unequally deeply; the uneven distribution of inhibition noticeably appears in the initial stage of sleep and in its last stage before awakening. In nerve cells that perform higher mental functions associated with the activity of the second signaling system, inhibition occurs earlier and deeper, and these cells disinhibition later than cells that perform the functions of the first signaling system. Therefore dreams

Unnatural course of events, the appearance of strange images, which are like a fantastic combination of real images and objects, are characteristic of dreams. This is the result of an unusual combination of functioning cells due to the uneven inhibition of individual sections of the cortex. In dreams, there is no intentionality and conscious control over the flow of ideas, so dreams are considered as an extreme degree of passivity of the imagination.

In the waking state, the activity of the imagination can have the most varied degrees of intentionality and activity. At the highest stages of its development, in the creative work of a writer, artist, scientist, imagination becomes a process of conscious and active creation of images that meet a strictly defined plan and satisfy equally stringent requirements. The ability to deliberately evoke sufficiently vivid images is a prerequisite for the development of imagination.

§39. Recreating Imagination

Recreating imagination is the construction of an image of an object in accordance with the description (or drawing, diagram, etc.) of this object. Reading the description of an experiment in the textbook of physics or chemistry, the student should as clearly as possible imagine the arrangement of objects and devices, the actions that need to be performed, the result of these actions, etc. This is the activity of the recreating imagination.

When considering a plane drawing of a machine, one must be able to clearly visualize the arrangement of the individual parts of this machine in space and their interaction. It is also the work of a recreating imagination, namely that kind of it called “technical imagination”. The technical imagination necessary in the activities of an engineer, technician, skilled worker, involves the ability, looking at the drawing, mentally "see" the machine, apparatus, part, shown in this drawing.

A particularly important role is played by the recreational imagination in the study of such sciences, the objects of which cannot be familiar from personal experience. This applies to botany, zoology, geography, especially to history; events of the distant past, people of those times, the environment in which they acted, can be imagined only with the help of imagination. The study of history, which does not rely on the work of recreating imagination, remains at the level of mechanical memorization of words.

However, it is not enough — no matter what science is being discussed — to imagine anything. The task is not just to provoke some representation of the subject being studied, but to create the correct representation. Recreating imagination should not only be vibrant, rich and flexible, it should also be true, accurate, give images that correspond to reality.

Ego is possible if there are two conditions:

1. You need to be able to correctly understand those descriptions of the scheme, drawings, from which the work of the imagination is sent.

To imagine a car from a drawing, one must be able to “read the drawing”, understand the image methods used in it, and know the legend. To create a true picture of the events of the past, one must first of all correctly understand the text of the historical description and story.

2. You need to have a sufficient supply of visual images from the corresponding field of reality.

In the first paragraph of this chapter, we have already said that without sufficient material obtained in perception, the productive work of the imagination is impossible, and we gave an example of incorrect historical representations arising from the lack of such material.

Recreating imagination is crucial in the mental development of a person. Giving the opportunity to imagine something from someone else's story and description that you yourself did not see and cannot see, it takes a person beyond the narrow framework of his personal experience and makes his knowledge concrete and alive.

The activity of recreating imagination when reading fiction is most clearly developed. The heroes of the works of Pushkin, Gogol, L. N. Tolstoy, Gorky and other major writers come to life in the imagination of the reader
themselves, and the picture of the events depicted by the author unfolds by itself. Everyone knows that it is much easier to get vivid and vivid images of the past by reading a historical novel or story than by studying a history textbook or a scientific historical essay. Remember from this point of view such works as “The Captain's Daughter” by Pushkin, “Taras Bulba” by Gogol, “Peter I” AH Tolstoy. Reading fiction is the best school of imagination, the most powerful means of educating it.

But not every reading of fiction is such a school. A cursory examination of the work, pursuing one goal — to find out “what is being said here” and “what will happen next” — not only does not develop imagination, but, on the contrary, accustoms it to inaction. The ability to read fiction requires the active work of the imagination, requires the reader to mentally “see and hear” all that is being discussed. People who do not have this adolescent tend to skip descriptions when reading a work of art. This is quite natural: for a person with a "lazy imagination", an artistic description should seem boring and unnecessary.

To understand the artistic description, it is not enough to understand the meaning of the words and figure out what subjects we are talking about; it is necessary to fully visualize the picture that the author deploys. Little of. In order for this picture to come to life, in many cases it is necessary to supplement the visual image with a whole series of other representations: auditory, olfactory, etc. Only then can you really be carried by imagination into the environment in which the writer wants to transfer you, to “relive” it.

Read the following lines from Turgenev’s description of the July morning:

“Who, besides the hunter, experienced how gratifying it is to wander through the bushes at dawn?” A green line is the trace of your feet along the dewy, whitened grass. You will spread the wet bush - you will be enriched with the accumulated warm smell of night; the air is full of fresh bitterness of wormwood, honey of buckwheat and “porridge”; in the distance, an oak forest stands against a wall and glistens and grows red in the sun; still fresh, but the proximity of heat is already felt. My head is languidly spinning from an excess of fragrances ... Here is a cart creaking ... The sound clang of a braid is heard behind you.”

To really understand these lines, one must mentally “see” the wall of the oak forest, shining and fading in the sun, and a green footprint on the white grass, one must mentally “hear” the creaking of the cart and the clang of the braid. Moreover, one must imagine the bitter smell of wormwood and the honey smell of buckwheat and “porridge”, imagine the freshness of the morning and the proximity of heat beginning to be felt, and imagine the feeling of “languid” dizziness. Then you can really experience what you would have experienced by “wandering through the bushes at dawn,” that is, you can really be transported to the depicted situation.

The art of reading fiction must be studied, and mastering this art, at the same time you develop and improve your imagination.

§40. Creative Imagination

Creative imagination refers to the independent creation of new images, included in the process of creative activity, i.e., activity that results in original and valuable products. Such is the imagination of a writer, artist, composer, scientist, inventor, etc.

Creative imagination is a much more complex and difficult process than a recreating imagination. Creating images of Onegin, Pechorin or Plyushkin is incomparably more difficult than imagining them and understanding them by reading an already written work. Creating a new model of the machine is incomparably more difficult than imagining it according to the finished drawing.

There is no such area of creativity where the imagination does not play a significant role.

All labor, which is creative labor, includes the activity of creative imagination. A Stakhanovite worker, breaking old standards and achieving a huge increase in labor productivity, must imagine, “create in his imagination,” a new, most rational arrangement of tools, new ways of doing things, a new arrangement of labor.

It is easy to understand how important creative imagination is for an inventor who is not looking for an abstract idea, but for a specific thing - a machine, apparatus, device, etc.; Before realizing his invention in the form of a model, he must build it “in his head”, he must imagine it. The imagination of the inventor is a technical imagination, but not a recreational technical imagination, which we spoke about in the previous paragraph, but creative.

No less important is imagination for the scientist. Conceiving an experiment, a scientist must create in his imagination such a combination of conditions that would make it possible to verify the hypothesis he is planning or the law he has established.
Creating new hypotheses and establishing new laws, the scientist must also “give full play to his imagination”. Without the ingenious power of imagination, Newton would not have thought to deduce the movement of the planets from the movement of an abandoned stone or shell and explain with one reason the fall of bodies on Earth and the movement of planets around the Sun. There is no science that does not require imagination. Lenin emphasized the need for imagination even in mathematics, the most abstract science, pointing out that without mathematics major mathematical discoveries would have been impossible.

Nowhere, however, does imagination have such exceptional significance as in art, in the process of artistic creation. In science, the images of imagination are only material used by the creative thought of a scientist. In art, creating images is the goal of creativity; the artist - writer, painter, composer, actor embodies his ideological concept in images. Therefore, the work of the imagination is central to the process of artistic creation. Take the writer’s work of imagination as an example.

First of all, it is necessary to note the extreme brightness and liveliness of the imagery of the great artists of the word. In most cases, these images are created even before the writing process begins. The author mentally “sees” his heroes and their actions, “hears” their conversations, and he can only ponder over the meaning of events unfolding in front of his inner gaze, select what should be included in the work, and possibly describe the selected more accurately.

“I do not compose the contents of the book,” Dickens said, “but I see it and write it down.” Goncharov also characterized the process of writing the novel: “Persons haunt me, pester, pose in scenes; I hear excerpts from their conversations - and it often seemed to me that I wasn’t making it up, but that it was all in the air around me, and I just had to look and think.

Of course, the writer only thinks that he does not “compose”, does not “invent” his work. It seems, firstly, because the images are usually created even before the writing process, and secondly, because these images come closer to the images of perception in brightness and liveliness. Alexei Nikolayevich Tolstoy, noting this last line, says about himself that he often, recalling, “confused the former and the imaginary.”

Another important feature of the writer's imagination is that he not only “sees” and “hears” his heroes, but, in the words of A. N. Tolstoy, “lives with them.” The writer must be able to imagine himself as his own hero, put himself in his place, and experience in the imagination of his feelings.

Gorky saw in this the most important difference between the imagination of a writer and the imagination of a scientist. “A science worker,” he wrote, “while studying a ram, there is no need to imagine himself as a ram, but a writer, being generous, is obliged to imagine himself avaricious, being unselfish — to feel like a greedy money-grubber, being weak-willed - to convincingly portray a person of strong will.”

We can say that the writer, along with the visual and auditory imagination, must also have an emotional imagination, that is, the ability to experience other people's feelings in the imagination. Such a powerful and rich work of the imagination is possible only with sufficient material. The accumulation of this material assumes the following conditions:

1. High development of observation, which we have already discussed in the chapter on perception (p. 67).
2. A thorough and in-depth study of the area of reality that the writer depicts in his work.
3. The richness of one's own emotional life and, in particular, the high development of emotional memory, that is, memory of feelings, providing material for emotional imagination.

The most important, decisive condition determining the activity of creative imagination is the ideological orientation of man. Imagination only then deserves the name of the creative, when it serves the realization of the idea, when the idea of the creative worker is embodied in the created images.

The ideological orientation, determined by the worldview of a person, is the main engine of creative imagination.

§41. Dream
A special form of imagination is a dream. Like creative imagination, a dream is the independent creation of new images. But it differs from the creative imagination in two essential ways:

1. The dream is the creation of the desired images, while the images of the creative imagination do not always embody the desires of the author. One cannot call the negative images of Chichikov, Plyushkin, Nozdrev "Gogol's dream." Dreams find their figurative expression of a person’s desire, that which attracts him to himself, to which he aspires.

2. A dream is a process of imagination that is not included in creative activity, that is, that does not immediately and directly give an objective product in the form of an artwork, scientific discovery, technical invention, etc.

This does not mean, however, that the dream has nothing to do with activity. The dream is aimed not at the present, but at the future activity, and therefore it often forms the first, preparatory stage of creative imagination. By the power of creative imagination, the inventor creates the design of the apparatus on which he is currently working, and in dreams he draws the outlines of his future works, the embodiment of those creative ideas that attract him to himself.

A dream is a process of imagination aimed at the future and, moreover, a desired future.

It is wrong to understand a dream as the result of a passive, involuntary game of imagination. Of course, there are such dreams (they are often called "dreams"), but they form only the lower stage of this form of imagination. At higher levels, the dream becomes an active, voluntary, conscious process.

The value of a dream is determined mainly by how it relates to human activities.

Lenin in one of his works cites the following words of the well-known critic and publicist of the 60s Pisarev, emphasizing the correctness of their thought about “a useful dream, as an impetus to work”:

“My dream can overtake the natural course of events, or it can grab completely to the side, where no natural course of events can ever come. In the first case, a dream does no harm; it can even support and enhance the energy of a working person ... If a person were completely deprived of the ability to dream in this way, if he could not occasionally run ahead and contemplate with his imagination in a complete and complete picture the very creation that was just beginning to take shape under his hands “- then I definitely can’t imagine what motivating reason would compel a person to undertake and bring to the end extensive and tedious work in the field of art, science and practical life ...”

Characterizing in the person of Oleg Koshevoy the best representatives of the “new, youngest generation” of Soviet people, Fadeev emphasizes in them such “seemingly unconnected features” as “dreaminess and effectiveness, flight of imagination and practicality”. “Unconnected” these features can only seem at first, superficial glance.

Dream and imagination are a powerful impetus to activity. While dreaming, a person looks forward to the future, and in his dreams sees a program of future activities, its prospects. His desires and aspirations, embodied in the images of dreams, become more powerful and effective. This is especially vividly shown in The Young Guard in the images of Sergey Tyulenin and Lyuba Shevtsova: a passionate dream of a feat played an exceptional role in their spiritual growth.

A dream has a completely different character when it appears to a person as a substitute for activity, when a person dreams, instead of acting when he leaves the dream in life. Such people, dreaming, do not look forward, but to the side. In dreams they find an imaginary fulfillment of their desires, and this saves them from having to fight for the actual fulfillment of these desires. Such people are called "empty dreamers."

§42. Imagination And Feeling

The activity of the imagination is closely connected with the emotional life of a person. This communication is two-way. On the one hand, feelings evoke the activity of the imagination: under the influence of fear, the imagination depicts the prospects of innumerable dangers, and for a person inspired by the joy of success, it unfolds vivid pictures of future successes and achievements. On the other hand, images of imagination give rise to feelings or reinforce existing ones: many people, when they are about to pull out a tooth, so vividly imagine the suffering that awaits them, that they experience a feeling of fear much stronger than the short-term nuisance that they really face in the doctor’s office.

The connection of imagination and feeling in art is especially vivid. The process of creativity never unfolds in full measure until the artist is indifferent to his plan, until the intended plot does not excite, does not ignite it.
Significant creations of creative imagination are always born with the participation of great feeling.

Regarding his opera Eugene Onegin, Tchaikovsky wrote: “If music was ever written with sincere enthusiasm, with love for the plot and for the characters, then this is music for Onegin.” I melted and trembled with inexpressible pleasure when I wrote it. ” In the further process of creativity, imagination created under the influence of feelings themselves become a source of feelings: they can excite the artist who created them no less than the events of real life.

Glinka recalls that Susanin’s position in the scene with the Poles in the forest worried him so much that he "had his hair standing on end and the frost was rubbing on his skin." Tchaikovsky, on the day that the last picture of The Queen of Spades was completed, wrote in his diary: "I cried terribly when Herman lost his spirit."

Such is the connection of imagination and feeling in the process of perception of a work of art. The more the work excites us, the more intense the activity of the recreating imagination becomes, and as we more clearly imagine the heroes of the work and the environment in which they operate, we experience their feelings deeper and stronger.

Art is not only a school of imagination, but also a school of feeling. By enabling a person to experience a world of deep and significant feelings, the accumulator of which are great works of literature, music, painting, it pushes the boundaries of a person’s emotional experience and thereby enriches the content of his spiritual life.

A rich and diverse emotional life is impossible without imagination. A man deprived of imagination is inevitably closed in a close circle of narrowly personal feelings. In order to have fun with another's fun and sympathize with another's grief, you need to be able to use your imagination to transfer to the position of another person, mentally to take its place. A truly responsive and responsive attitude towards people involves a lively imagination.

§43. Transforming Imagination

The activity of the imagination, as already indicated, is always the processing, transformation of the data that is delivered by the perception. Let us now get acquainted with how this transformation is carried out. We will take examples from the field of creative imagination of the writer, since here the characteristic features of the imagination are very bright and convex.

Talking about how the image of the heroine of War and Peace by Natasha Rostova was created, L. N. Tolstoy once said: "I took Sonya, dragged her with Tanya, Natasha came out." Sonya is the wife of Lev Nikolaevich Sofya Tolstaya, Tanya is her sister Tatyana Andreevna. So, the image of Natasha Rostova was created by merging the images of two very familiar women to Tolstoy (1).

How is such a merger possible? After all, it is quite obvious that one cannot simply connect together the integral images of two people. It is necessary to decompose the images into separate traits or signs and then combine some of the traits taken from two different images into a new image.

In this process, therefore, two sides are distinguished: 1) analysis, that is, the isolation of individual traits or signs from the holistic image, and 2) synthesis, that is, the combination of individual traits or signs into a new holistic

1. Actually the origin of the image of Natasha Rostova is more complicated. In the words quoted, Tolstoy indicated only his main sources.

Both of these points - analysis and synthesis - constitute the necessary parts of the creative imagination process. Imagination separates individual traits from those images of reality that perception gives, and from these traits it again creates single and integral images.

When the “Hero of Our Time” was published, some critics suggested that Pechorin’s image was not just a portrait of the author. Responding to these critics, Lermontov in the preface to the second edition of the novel indicated that Pechorin is “for sure, a portrait, but not of one person; this is a portrait made up of the vices of our entire generation, in their full development. ” Consequently, the image of Pechorin, according to the testimony of Lermontov himself, is built from the features distinguished by the author from the many people he has observed: “composed of the vices of our entire generation” (of course, not “the entire generation” in the literal sense, but of a certain class group of this generation).

Gorky also describes the process of creating an artistic image. “The character of the hero,” he says, “is made of
many separate features taken from various people of his social group ... It is necessary to look very closely at a hundred or two priests, shopkeepers, workers, in order to write the portrait of one worker, priest, shopkeeper approximately correctly ". In this way all those artistic images that can be called typical are built. An image becomes a type when the features characteristic of a whole group of people are gathered in it, when it is, in Gorky's words, “an extract from a number of homogeneous facts”. The process of creating such an image is a process of generalization, i.e., the extraction of signs common to a number of objects, and the expression of these signs in a single image.

The originality of the image created by the creative imagination of the writer lies in the fact that, as a result of generalization, he still remains the image of an individual person, conveying all the individual characteristics of this person. Pechorin is not just a collection of vices of a generation. This is a living person with many traits inherent to him personally, and not to all representatives of his generation, and possessing not only vices, but also a whole series of positive qualities.

But the synthetic work of the imagination is not something like a mechanical folding and fitting to each other the features highlighted by the previous analysis. In this way, you can get a dead scheme, and not an image of a living person. The creative work of the imagination comes from those bright and vivid images that crowd in front of the writer's inner gaze. An artist works on these images, gradually changing them in accordance with his creative plan.

In this case, one feature of our ideas, which we spoke about above, is of paramount importance (p. 101). Representations never convey with equal brightness all the features and characteristics of an object; always some features, for some reason the most important or interesting for us, come forward against the background of a more or less vague image. The creation of typical images is carried out primarily by such a highlighting, emphasizing, highlighting typical, common features in the image of a living, concrete person. Recall that the image of Pechorin is made up not just of the vices of the whole generation, but of these vices "in their full development." Highlighting a certain trait often manifests itself precisely in the fact that it appears “in full development,” that is, it is expressed to the greatest extent possible.

In this regard, the role that hyperbole can play in the creative imagination, that is, the exaggeration of individual features and attributes of an object, becomes clear. It increases the brightness and expressiveness of the image, in the strongest way contributing to highlighting certain features of it.

Questions To Repeat

1. What is called imagination?
2. What is the relation of imagination to perception?
3. What is the meaning of the imagination in work?
4. What is called a recreational imagination?
5. What conditions must the recreational imagination satisfy?
6. What is called creative imagination?
7. Describe the work of creative imagination.
8. What is a dream?
9. What is the value of a dream?
10. What is the role of analysis and synthesis in creating imagery?
11. Describe the process of building a typical image.

Chapter VIII. THINKING AND SPEECH

§44. General Concept Of Thinking

Waking up in the morning, a man approaches the window and sees that the roofs of the houses are wet. “So it was raining at night,” he thinks.

This case gives us a typical example of the thought process. Man did not directly perceive rain. He found out about him indirectly, through other facts, that is, indirectly. When solving any kind of complicated task, we get
the answer through a number of considerations. The first sign of thinking lies in the fact that it is a process of mediated knowledge of things and phenomena of reality.

Any science gives us countless examples of mediated knowledge. For example, a doctor, based on a patient’s examination, can judge the state of internal organs inaccessible to direct observation. The structure of the atom cannot be observed directly, but it has been studied in detail and accurately. It is impossible to directly observe the physiological processes taking place in the cerebral cortex, however IP Pavlov established the basic laws of higher nervous activity.

What is the basis for the possibility of such indirect knowledge? First of all, on the awareness of the connections and relationships between things and phenomena. Even the simplest conclusion that it was raining at night could only be made by a man because he knew the causal connection between rain and the humidity of the roofs.

The second no less important sign of thinking is that it is a generalized knowledge of reality.

Our knowledge begins with sensations and perceptions. But we always perceive single facts. How could we know how quickly this piece of sugar dissolves in hot tea if we have not tried to dissolve this piece, and we did not generalize what happened when the other pieces of sugar were lowered into tea? Dipping sugar into tea, we know what will come of it, only because we have summarized the results of our past observations and we know some common properties of sugar, we know the relationship between the rate of dissolution of sugar and the temperature of the liquid.

It is not enough to notice that once the rain caused the humidity of the roofs. No conclusion can be drawn from this yet. It is necessary to come to a general position: after any rain of sufficient strength the roofs are wet. In other words, it is necessary for a person to generalize the results of his observations. It is not enough to notice the connection between the two facts; it is necessary to realize that this connection has a general character, that it is determined by the general properties of things. In our example, the causal relationship between rain and the humidity of the roofs is determined not by the particular features of any one rain, but by properties common to any rain of sufficient strength.

In every process of thinking, we are dealing with the reflection of the general properties of things, that is, properties relating to a whole group of similar objects or phenomena. The basis of thinking is the formation of temporary connections that reflect the objective connections of objects of real reality. The teachings of I.P. Pavlov about two signaling systems indicate a physiological mechanism of thinking: this is the formation of temporary connections in the second signaling system, based on connections in the first signaling system.

Thinking gives us the opportunity to know what we did not directly observe. Moreover, it gives us the opportunity to foresee the course of events and the results of our own actions.

It is known, for example, with what great accuracy astronomy predicts eclipses of the Sun and the position of planets at a certain moment in time. It is well known that mastery of the laws of Marxist-Leninist science of society makes it possible to foresee the course of social events.

So, we can say: thinking is a process of reflecting the general properties of things and finding regular relationships and relationships between things. In other words, this definition can be expressed as follows: thinking is a process of generalized and mediated knowledge of reality.

§45. Speech And Her Attitude To Thinking

Our thinking is inextricably linked to speech. First of all, people use their speech to communicate their thoughts to each other. Speech is a means of communication between people.

Secondly, people think through speech. Speech is thus an instrument of thinking. If you ask a person: "What language do you think?" - he won’t be surprised at all, but will immediately answer: “in Russian”, “in Ukrainian”, “in Uzbek”, etc. A person who speaks two or three languages very well can think one or the other from these languages. We think in words.

“Language is a means, an instrument by which people communicate with each other, exchange thoughts and achieve mutual understanding. Being directly connected with thinking, the language registers and fixes in words and in the combination of words in sentences the results of the work of thinking, the successes of cognitive work of a person and, thus, makes possible the exchange of thoughts in human society” (Stalin).

To serve as a means of communication, speech must have either another external expression, accessible to the hearing or sight of other people. In contrast to such external speech, this internal soundless speech process by
which we think is called internal speech.

Human thinking is impossible without the participation of a second signaling system. Unlike animals in
humans, IP Pavlov wrote, “signals of the second degree appeared, developed and improved enormously ... in the
form of words spoken, heard and visible. These new signals, in the end, began to mean everything that people
directly perceived both from the external and from their inner world, and were used by them not only in mutual
communication, but also in private with themselves. ”

Speech (the second signaling system) introduced the “new principle of nervous activity”, which led to
unlimited orientation in the surrounding world and created “the highest adaptation of man - science”. Through
the second signaling system, said I.P. Pavlov, a person "becomes the master of reality."

But speech (the second signaling system) cannot in itself provide knowledge of reality. IP Pavlov drew
attention to the futility of the thinking of those people "who, operating only with words, would like, without
interfering with reality, to derive from them all knowledge." “Words were and remain only the second signals of
reality” (Pavlov). This means that a word that has lost its connection with those real objects and phenomena that
it means, ceased to be a signal of reality, loses its cognitive meaning. This means that purely verbal knowledge,
memorization of verbal formulations without a clear understanding of which particular aspects of reality are
reflected in them, is purely formal and useless knowledge.

From the physiological point of view, this means that normal thinking is possible only with the inextricable
participation of the first and second signaling systems. Speech is a necessary tool of thinking. But it does not
follow from this that the process of thinking is reduced to speech, that to think is to speak aloud or to oneself.
The difference between the thought itself and its verbal expression is evident from the fact that the same thought
can be expressed in different languages. At the same time, the thought remains unchanged, although all words
change. One and the same thought can have a different speech form, but without a speech form it does not exist
in a person.

“No matter what thoughts arise in a person’s head and whenever they arise, they can arise and exist only on the
basis of linguistic material, on the basis of linguistic terms and phrases. Bare thoughts, free of linguistic material,
free of linguistic “natural matter” - do not exist ”(Stalin).

How, then, can one explain the state familiar to every person when you feel that you understand some thought,
but cannot express it in words? “I know what’s the matter,” the person says, “but I just can’t put it into words.”
An assumption may arise that such cases constitute an exception to the general rule that there is a “thought
without words” for which no verbal expression can be found.

Such an assumption will, however, be wrong. The point is not that it is not possible to find any speech
expression for a thought that exists without words, but that it is not possible to move from the expression of
thought in internal speech to its expression in external speech. If a person really understands the thought, then
this understanding is expressed in him in some words. But one thing is an expression of my thought that is
understandable only to myself, and another thing is an expression that is understandable to another person.
When someone finds it difficult to express his thought in words, this means that he finds it difficult to express it
in a way that other people understand, to express it in the forms of external speech.

In addition, for the most part, it’s difficult for us to “put into words” a thought that is vague for us, not entirely
clear. The best way to fully understand your own idea is to try to transfer it to another. If this fails, then the
thought itself has some gaps, ambiguities, uncertainties. A thought gets full clarity and completeness only when
it finds a clear and complete verbal wording. If a person speaks and writes only in a dim and confused way, then
his train of thoughts cannot have full clarity and clarity.

Finding expression in external speech, our thought is being improved, developed, and understood.

Speech is a means of communication between people and an instrument of their thinking. Both of these speech
functions are intimately connected with each other. Developing and improving as a means of communication,
speech thereby becomes a more subtle and perfect tool of thought.

§46. Concept And Word

In the process of thinking, we always operate with concepts. A concept is a form of thinking in which the
general and, moreover, essential properties of objects and phenomena are reflected.

So, for example, in the geometric concept of "triangle" reflects properties common to all triangles and,
moreover, significant from a geometric point of view. Such signs as the color of the paper on which the triangle
is depicted, or the thickness of the lines that form it, are insignificant from a geometric point of view and therefore are not included in the content of this concept.

In concepts, our knowledge of objects and phenomena of reality crystallizes. A concept differs from a presentation by its more generalized and abstract, non-visual character. Representation is an image of an object, a concept is a thought about an object.

Not everything that we think about can be represented in the form of visual images. A bright illustration of this situation is given by Lenin: one cannot imagine movements at a speed of 300 thousand kilometers per second (speed of light), but one can think of such a movement.

Try to imagine a thousand. You will not succeed. In the best case, you will have an image of some kind of polygon with an indefinitely large number of sides, an image that is equally suitable for a thousand triangle, a pentagon, and a triangle. However, we have a completely clear and definite concept of a thousand-gon, which does not mix with the concepts of a pentagon, a gon or even a polygon with 999 sides. Using this concept, we can give a completely accurate solution to problems, for example, calculate the sum of the internal angles of such a polygon.

Thinking about something and imagining something is not the same thing. The concept is inextricably linked with the word and appears in our thinking in the form of the meaning of the word.

The word is that real irritant, without which human thinking is impossible. In this case, the word can appear in three forms: as an auditory stimulus in understanding speech spoken aloud, as a visual stimulus (a word written or printed), and finally, as a kinesthetic stimulus in pronouncing a word. I.P. Pavlov attached particular importance to kinesthetic stimuli (coming to the cortex from the speech organs), calling them the basis, or "basis," of speech.

The second signaling system makes it possible to collectively reflect the surrounding world. In order to fully understand this very important point, we must realize that the words of our speech, although they may refer to single objects, always have some common meaning. Every word generalizes.

The words "table", "animal", "steam locomotive" do not refer to any one subject, but to a whole group of similar objects. The word "solid" denotes a property common to many objects. The word "write" refers to an action performed by many people in various circumstances.

A friend who met me on the street, when asked where he was, replies: "In the reading room." It is possible that I have never been to the reading room from which he returns, that I do not know this reading room, and yet I fully understand the meaning of his answer, because I know what the reading room in general means, I understand the general meaning of the word "Reading room", I have a concept about the reading room.

If perception and representation reflect in the whole image the connection of the properties of an object or phenomenon, then the concept is a system of relations that reflect the relations of objects among themselves. Even the concept of a single subject implies an awareness of the difference between a given subject and others, that is, its relation to other objects.

If I understand the meaning of a word, a corresponding concept arises in my mind - sometimes clearly, sometimes dimly. Very often, a concept also arises in the mind, but in most cases it plays the role of only an illustration to the corresponding concept.

In one experiment, test subjects had to say what kind of ideas they have when they hear certain words. At the word “animal”, one person got the image of a cat belonging to his neighbors, the other - the image of a saddled horse, the third - the image of the word “animal”, written in large letters on a light gray background. The word "infinity" caused in one the image of the steppe, which stretches endlessly in all directions, in the other - the image of a straight line, the third imagined a mathematical sign.

Obviously, these images, which are completely different in different people, are only a clear illustration of the content of concepts, but they do not completely convey this content. Of course, the first of the mentioned people did not think that the word "animal" means a neighbor's cat, and the second did not think that it means a saddled horse. All these persons thought about the same meaning to themselves the meaning of this word, as well as other common words of their native language. Therefore, they easily understood each other in conversation, although the same word evoked completely different images from each of them.

The content of the concept cannot be conveyed by a single, concrete representation. The latter plays the role of, as it were, an example of one of the special cases to which the general content of the concept may relate.

But this does not mean that thinking that takes place in concepts does not need the help of ideas, that images do not play any role in the processes of thinking. Just as the knowledge of the general rule should be based on
the awareness of concrete examples, so the thinking that operates with concepts, in many cases, needs the help
of specific images. Many geometrical problems cannot be solved if one cannot imagine with complete clarity the
arrangement in space of the lines, angles and figures in question. One cannot understand the description of the
principle of operation of any mechanism unless you have a clear idea of the location and interaction of its parts.

Experiments show that visual images especially often arise in us when a thought encounters any difficulties. If
you can’t immediately understand the meaning of the general situation, you try as clearly as possible to imagine
in visual images the specific cases to which it may relate.

§47. Main Thought Processes

1) Generalization and abstraction.

The formation of concepts is based on the process of generalization, that is, the mental unification of objects
and phenomena of reality having one or another common property.

In the fullest form, generalization is carried out in concepts, but it begins even with the formation of ideas.

If we take the representations of memory that we have, our images of remembrance, then they can be divided
into two groups: firstly, representations that reproduce a given object in one specific, especially memorable
moment, and secondly, representations that reproduce an image of this object in general, our common memory
of him.

A typical example of the presentation of the second group is the image of the mother preserved by the hero of
the story of Leo Tolstoy's “Childhood” (see above, p. 101): “When I try to remember my mother ... I only see
her brown eyes, always expressing the same kindness and love, a mole on the neck ... an embroidered white
collar, a gentle dry hand ... "

Representations of the first group do not contain generalizations: this is a simple reproduction of the image
obtained in perception. The representations of the second group, which make up most of our images of memory,
although they relate to a single object, are the result of the generalization of many individual perceptions, a kind
of extraction from them. I saw my desktop from different sides, from different distances, in different lighting
conditions. And yet, when I imagine it, I have some kind of one image, and not thousands of different images
Corresponding to different perceptions. In this generalized image, the constant, essential characteristic features of
the object are emphasized, given with the greatest brightness, and the features associated with individual
perceptions are absent or very pale.

Thus, a significant part of our representations of single objects already contains some element of
geneneralization. The further generalization process, covering entire groups of similar objects, can go in two
different ways.

The first path leads to the typical image that we studied in the chapter on imagination (p. 126), the second path
leads to the concept.

A typical image, as we know, preserves all the individual features and characteristics of a separate object, and
the generalization is expressed in the fact that among these features are highlighted, those that are common for a
whole group of objects that characterize this group are highlighted and emphasized. The situation is different in
the concept.

In order to master some concept, we digress from all random signs and properties of individual objects and
save only properties that are essential for this group as a whole. This process of distraction from non-essential
features and the mental selection of only the essential features of this group of objects is called abstraction. As a
result of generalization, which is carried out with the help of abstraction, we get no longer an image, but an
abstract thought. This is the difference between a concept and a typical image.

The thought processes of generalization and abstraction are based on the activity of the second signaling
system. Verbal speech introduced a new principle into the activity of the cerebral hemispheres, which consists in
distracting from reality and allows generalization of the signals of the first signal system. IP Pavlov writes: "...speech, especially kinesthetic stimuli coming to the cortex from the speech organs, are second signals, signals of
signals. They are an abstraction from reality and allow generalization, which is ... specifically human higher
thinking."

Initially, generalization is closely related to action. One group combines objects that can perform the same
function in practice. As the essential features of the subject, those features are distinguished on which “what can
be done with this subject” depends. This is manifested very clearly in the definitions given to things by young
children: “A knife is to cut,” “A horse is to ride,” etc. The ability to theoretical generalization is gradually developing, based on highlighting the properties of things that are most significant not only in terms of the direct practical use of these things.

2) Analysis and synthesis

Studying the activity of the imagination, we identified two sides in the process of creating the image - analysis and synthesis (p. 125). Studying the activity of thinking, we again meet with these two opposite processes necessary in the work of thought.

Analysis is the mental dismemberment of an object or phenomenon, the allocation of its individual parts, signs, properties; synthesis is a mental combination of individual elements, parts, signs into a whole.

In individual stages of the thought process, either analysis or synthesis comes to the fore. But any somewhat complicated process of thought requires the participation of both.

Consider, for example, how the process of understanding a sentence proceeds in a little-known foreign language. At the first reading, the meaning of the sentence remains incomprehensible. Then the work of analysis comes to the fore: a person selects individual words and sets their meaning (recalls, looks into a dictionary, etc.). But this does not end there: you can know the meanings of all words individually and still not understand the meaning of the sentence as a whole. A synthetic work of thought is also needed — the unification into one meaningful whole of all the meanings of individual words. And only when this unification happened, a person begins to understand the meaning of the proposal. However, the process of understanding does not always follow this path - first, analysis, then synthesis. It often happens that a person, not yet knowing the meanings of certain words,

Analysis and synthesis arise first in practice. In order to learn how to mentally distinguish separate parts of a complex mechanism or to mentally assemble an entire mechanism from separate parts, one must have sufficient practice in real disassembling and collecting such types of mechanisms. A person who has never actually tried to disassemble and assemble an alarm clock certainly will not be able to do this “in his mind”. But, developing on the basis of practical activity, analysis and synthesis can subsequently be carried out as purely mental operations. The creative activity of the designer, for example, is impossible without the ability to analyze complex mechanisms in the mind and carry out the mental synthesis of their individual parts.

The processes of analysis and synthesis are based on the fundamental properties of the activity of the cerebral cortex. The cerebral hemispheres are the organ of analysis of stimuli and the organ of the formation of new bonds, i.e., synthesis. The analyzing and synthesizing brain activity determines the breadth and depth of fitness, balancing the body with the environment. Analysis and synthesis can, of course, be of a very different level and complexity.

A specific feature of analysis and synthesis in humans is that a person may not directly contact the subject to highlight its specific properties and qualities or to combine them. This is achieved with two signaling systems.

The analysis and synthesis carried out in the cerebral cortex of a person encompasses not only the signals of the first signal system, but also the signals of the second signal system in its interaction with the first.

§48. Thinking Processes In Solving Problems

The process of thinking usually begins with the fact that a person has a need to cope with some kind of difficulty, to understand something, to solve some problem. In other words, thinking always begins with a question.

You can not cause the active work of thought by simply recommending - to yourself or another - to "think". It is necessary that a person faces a question for the resolution of which it is necessary to “think”, and that a person feels the need to resolve this issue.

Therefore, the first sign of a thinking person is the ability to see questions where they really are. Only for those who are not accustomed to think independently, there are no questions, and everything seems to be taken for granted. Any expansion of knowledge opens up new problems for us where everything seemed obvious before, and thereby wakes up the thought, pushes it to work independently.

However, it is not enough to “see” the question. It is necessary to fully realize what exactly this issue is. Success in solving a problem primarily depends on how well the question is formulated. To understand the task is, first of all, to correctly pose the question, which sometimes requires considerable mental work. But when this
is done, the first step towards solving the problem has already been taken.

Awareness of the question is followed by the process of solving the problem. Depending on the nature of the task itself, the decision process can be carried out in various ways. The most typical and frequently occurring course of the thought process when solving a problem is to outline hypotheses, i.e., suggestions about how the problem should be solved, and to test these hypotheses.

Having returned home in the evening, I go to the table and turn the table lamp switch. The light does not light. What's the matter? Where is the reason? A task has arisen, and the work of thought begins to resolve it. Various hypotheses are put forward and tested. Maybe the cork burned out? I turn the ceiling lamp switch: it lights up. So the cork is fine. Maybe the bulb burned out? I unscrew the bulb and inspect it: no, the hairs are intact. Probably the plug has gone bad.

Armed with a screwdriver, I remove the outlet, I find that the fuse in the plug has really blown. The problem is solved.

In this example, hypothesis testing was carried out by practical action, however, based on thought processes. The hypothesis of damage to the light bulb was tested in a direct way: through perception, I made sure that the hairs were intact. The hypothesis that the cork burned out was verified indirectly, indirectly. Instead of unscrewing the cork and inspecting it, I limited myself to turning the switch of the other bulb and, by reasoning, made sure the cork was intact: if the cork burned out, the ceiling lamp could not light up. The conclusion greatly simplified the implementation of the practical test.

In other cases, hypothesis testing is entirely carried out mentally, “in the mind”.

I have two hours at my disposal. During this time I must visit several places located in different parts of the city. In what order to visit these places and what means of communication to use to keep up to date? What is a plan of action? Such problems have to be solved constantly. The solution here comes down to the sequential outlining of hypotheses, i.e., possible action plans. But in the sense of the matter, in such tasks it is impossible to try in reality each of the plans outlined and then make a choice. Testing plans should be done mentally.

In solving many problems, the so-called mental experiment plays a crucial role, that is, the implementation of certain actions in the mind in order to determine what results they can lead to. The importance of mental experiment in solving all kinds of technical, constructive problems is very great. You can’t mount a radio or make an electric bell unless you can mentally experiment. The role of a mental experiment in a chess game is vivid. Pondering a move, the player is forced to check all the options in his mind: “if I go this way, the opponent will go this way, then I will do this ...”

The implementation of a mental experiment involves the joint activity of imagination and thinking: on the one hand, it is necessary to imagine the situation more accurately and clearly, on the other hand, it is necessary to make an inference about what result should flow from this situation.

The condition for the successful solution of any problem is the availability of the necessary knowledge. In the absence of knowledge of electrical engineering, it would be impossible in our first example to outline hypotheses or test them, just as in the second example it would be impossible to do this without knowing the location of streets and tram routes.

But having knowledge alone is not enough. It is necessary to be able to mobilize this knowledge at the right time, the ability to apply it. You can well know the chapter on electricity in the physics textbook and still be completely helpless in solving the problem that is given in our example.

The presence of knowledge and the ability to possess it are necessary prerequisites for the productive work of thought and the development of the mind.

§49. Qualities Of The Mind

In striving to develop and educate the mind, one must take into account its individual qualities. The most important of these are the following.

1. The criticality of the mind, that is, the ability to strictly evaluate the work of thought, carefully weigh all the arguments for and against the emerging hypotheses and subject these hypotheses to a comprehensive check. A person with an uncritical mind is inclined to consider the first solution to the problem that comes to his head as final. An indicator of the criticality of yma is the ability to look at one’s assumptions as hypotheses that need to be tested, to discard those that have not passed this test, to abandon the actions taken if it is found that they do not meet the conditions and requirements of the task. The critical mind is a disciplined, “strict” mind.
People with a lively and rich imagination should especially take care of instilling in themselves the true criticality of the mind. A rich imagination in conjunction with a strict and disciplined thought is the basis of creative activity. Imagination, not disciplined by the critical mind, can make a person a dreamer, living unrealizable projects and impossible plans.

2. The flexibility of the mind, which means freedom of thought from preconceived assumptions and stereotyped methods of solution, the ability to find new solutions when changing the situation and conditions of the problem.

The flexibility of the mind is expressed not only in freedom from the shackling influence of stencil techniques, but also in the ability to diversify attempts to solve, not to repeat those attempts, the incorrectness of which has already been discovered. Many people cope poorly with problem solving, mainly because in search of a solution they return again and again to the method that first came to their minds, although every time they are convinced that this method does not lead to anything. Here a kind of “inertia” of thought is revealed: a person does not know how to move his thought from the path that it once went.

3. The breadth of thought, expressed in the ability to cover the whole issue as a whole, without losing sight of all the details and details that are essential for the case.

The success of solving a complex problem always depends on how much it is possible to simultaneously capture with thought all the data of this task, how much it is possible, proceeding from one data group, not to forget at the same time about those requirements, conditions, restrictions that arise from other data. A significant part of the difficulties and errors observed in solving complex mathematical problems is determined precisely by the inability to cover all these problems at once.

The breadth of thought distinguishes major statesmen and military leaders, as well as great scientists. All persons who had to talk with Comrade Stalin or observe his work are amazed at his absolutely exceptional ability, when resolving complex issues, to delve into the smallest, but essential for the case details. “When a difficult issue is being discussed at the meetings, Comrade Stalin listens with exceptional attention to the opinions of ordinary workers who talk about the smallest details of their business. Comrade Stalin always pays special attention to these details and specific features ”(Hero of the Soviet Union Yumashev). “Comrade Stalin asked such purely special questions regarding aircraft manufacturing that I often thought that the rash answer would not“ mislead ”... I was struck ... where did the person come from,

4. Speed of thought. Different types of activities impose different requirements on the speed of solving mental problems. It is enough to compare the work of a scientist and military leader on this side. Sixteen years have passed between the birth of Newton's basic idea of the law of gravity and the moment when he managed to give decisive proof of this law. Darwin spent twenty years preparing to write The Origin of Species. The military leader has completely different terms for solving the tasks before him. “One minute decides the outcome of the battle,” said Suvorov. “I do not act for hours, but for minutes.”

Undoubtedly, for a scientist, the speed of thought is a very valuable quality, but nevertheless, under ordinary conditions, a scientist has much more time than, for example, a pilot. In many cases, driving an airplane does not allow the slightest delay, and therefore a person who is slowly thinking cannot be a good pilot.

The speed of thought is the result of the high development of other qualities of the mind, and this differs from the haste of thinking, which at first glance can be confused with the true speed of thought, but which in essence is a property directly opposite.

The speed of thought depends on the ability to concentrate at the right moment all the forces of the mind, to show the greatest activity of thinking; it depends, further, on the breadth of thought, allowing you to immediately see all sides of the issue, and on the flexibility of the mind, eliminating the loss of time for repeated returns to incorrect methods of solution; it presupposes, finally, the high development of critical ability, which makes it possible to quickly evaluate hypotheses and immediately discard unsuitable ones.

In contrast, the haste of the mind is the result of a kind of laziness of thought, forcing a person to clutch at any decision, just to stop the hard mental work, and pushing to follow unverified hypotheses and make decisions based on only a part of the data. A decisive struggle against the haste of thinking is a necessary condition for the development of positive qualities of the mind.

The combination of exceptional quickness of thought and wise leisurelyness when solving complex issues distinguished Lenin's ingenious mind. Comrade Stalin, emphasizing Lenin's ingenious insight, "the ability to quickly grasp and unravel the inner meaning of impending events," says that he was wise and unhurried "when solving complex issues, where comprehensive orientation and comprehensive consideration of all the pros and cons are needed."
§Fifty. A Culture Of Speech

We already know that our thought reaches full clarity and clarity only when it receives expression in external speech. We know that the inability to make one’s idea understandable to another indicates that it has not been fully understood by ourselves. It follows that the development of thinking is intimately connected with the development of speech. It is difficult to achieve a high culture of mind with a low culture of speech.

External speech can be oral or written. In addition, within oral speech we can distinguish between two types: dialogical speech (from the word "dialogue" - conversation), proceeding in the form of a conversation between two or more persons, and monologic speech (from the word "monologue" - speech of one, which is a story, report, lecture, etc., delivered by one person, while the rest are only listeners). Thus, we distinguish three types of external speech: oral dialogical speech, oral monologic speech and written speech.

Any speech not only conveys a specific content, but also expresses the attitude of the speaker or writer to this content. In other words, it not only conveys thoughts, but also expresses feelings. This side of speech is called its expressiveness. Speech, devoid of expression, no matter what meaningful thoughts it conveys, gives the impression of a dead, lifeless one. In oral speech, the speaker’s emotional tone is expressed in intonation, facial expressions, gestures; in written speech, these means are absent, and the writer can make his speech expressive only by appropriate selection and arrangement of words.

To have a speech means to be able to convey your thought in the most perfect way possible, to convey not only the main content, but also its subtlest shades. In other words, owning a speech means being able to be fully understood by another. This is achieved in various ways in oral dialogic, in oral monological and in written speech. The psychological difference between these types of speech is very great; An example of this is the fact that many major writers were weak speakers and, conversely, many spoken masters are far from being good writers.

Dialogical speech is sometimes called supported speech. This means that in a conversation the speech of each of the participants is constantly supported by questions, answers, objections of the interlocutors; if this support ceases, then either speech will turn into a monologue, or the person will shut up. In contrast, both monologue and written speech can be called unsupported speech.

Supported speech is easier than unsupported. This is explained by the fact that in the conversation the interlocutors are in the same situation, perceive the same thing and therefore can sometimes understand each other even at a glance. When several people, standing at the stop, are waiting for the tram, it is enough for one of them to say “coming” or “fourth” so that everyone else understands it. Much, in addition, in the conversation is complemented by gestures. In general, the dialogue makes relatively few demands on the ability to build coherent and detailed speech.

Written language is constructed in a completely different way, in which everything must be said to the end. The reader can understand only from the speech itself what exactly the author means, why he touches one or another subject, what question he answers with his reasoning. One of the most common reasons for poor written language skills is the inability to put oneself in the place of the future reader, to take into account the fact that the reader is not obliged and cannot know in advance the situation, the way the writer is posed. Therefore, the most difficult thing in writing out your thoughts is the beginning. The writer himself, beginning the exposition, already knows the meaning of the entire composition as a whole, while the reader, while reading the first phrases, cannot know it. Without considering this, inept writers often start with such phrases, which can only make sense if you know all the rest. Written speech should be fully developed and coherent. Almost to the same extent this applies to monological speech. Hence it is clear that these types of speech require a much higher level of speech culture and that it is impossible to develop real skill in expressing one’s thoughts in a coherent, understandable and expressive way, without mastering written and monological speech (or at least one of them).

However, one should not lose sight of the fact that dialogical speech also presents its own peculiar requirements, the non-fulfillment of which makes a person a difficult, boring and even unpleasant interlocutor. The most important of these requirements is the ability to listen to the interlocutor, to understand his questions and objections and to answer precisely to them, and not to his own thoughts.

For some people, a lack of interest in other people's words and inability to listen are manifested in a very unpleasant habit - to interrupt the interlocutor, not allowing him to finish to the end. Awareness of this kind of drawbacks of dialogic speech and the fight against them are an important part of the work to improve the culture of speech.
Let us dwell on another significant difference between written and oral speech.

When a person writes, he consciously and arbitrarily builds his speech, searches for suitable words, finds the best phrase construction, chooses the word order, etc. Writing means working on the verbal expression of thought.

The greatest mistake is to think that a good command of the skill in writing eliminates the need for such work. It's good to write - this does not mean to write quickly, without labor, "automatically." It is not he who really owns a written speech who easily brings out any expression of his thought, but he who seeks the best expression, who knows how to work hard to create such an expression.

A person who is content with the first expression that comes to mind and does not know how to work on improving it cannot be called a master of writing.

Nobody works on a word so much as the great masters of the word. “We must forever abandon the idea of writing without amendment,” said L. Tolstoy in his youth. “Three, four times — that's not enough.” He repeated the same thought in old age: “I don’t understand how to write and not to redo everything many times” And the main purpose of this work on the word was for Tolstoy not to achieve the beauty, artistry of speech. The main difficulty is to express your thoughts exactly and clearly for others:

“To express in words what you understand so that others understand you as you are is the most difficult thing, and you always feel that far, far from reaching what it should and can. ”

That is why Tolstoy and many times reworked not only his works of art, but even letters that did not pursue any artistic goals.

The manuscripts of Pushkin, Tolstoy, and other great writers confirm these statements, clearly showing the “terrible”, as Tolstoy put it, writers work on the word.

Conscious work on the written expression of their thoughts does not always take the form of alterations on paper. You can mentally search for the desired expression, finish and improve it “in the head”, and only the final result of this work can be entered on paper. The essence of working on a word does not change from this, its form only becomes different.

Speaking in this regard is very different from writing. Good spoken language does not allow any extensive and lengthy work on the word. It is impossible in a conversation, before pronouncing a phrase, to think about its construction for a long time; all the more, one cannot pronounce the same phrase several times, gradually improving it.

This cannot be done in monological speech: in a report, lecture, etc. Oral speech should flow freely and without delay. By themselves, the right words should come to mind and by themselves they should fit into the correct and expressive phrases. This is possible only because oral speech, as we have seen, makes less demands on the coherence and development of the speech expression of thought.

So, oral speech is easier, simpler in its structure, but it does not allow prolonged work on a word in the process of speaking; writing is more difficult, more complex in design, but it allows you to carefully work on the verbal expression of thought in the process of writing. From this it is clear what important place in the development of the general speech culture should take written speech, which gives the greatest opportunities for conscious work on the word.

**Questions To Repeat**

1. What is called thinking?
2. What is the relationship between thinking and speech?
3. What is the difference between concept and concept?
4. What is the meaning of the idea in the process of thinking?
5. What do the terms “generalization” and “abstraction” mean?
6. Define the concepts of “analysis” and “synthesis”.
7. Indicate the main stages of the process of thinking when solving problems.
8. What is meant by the criticality of the mind?
9. What expresses flexibility and breadth of thought?
10. What is the difference between speed of thought and haste?
11. Give a comparative description of the psychological characteristics of oral and written speech.
Chapter IX. FEELINGS

§51. General Concept Of Feelings

Feeling, or emotion, is a person’s experience of his attitude to what he cognizes and does: to things and phenomena of the world around him, to other people and their actions, to his work, to himself and his actions. Pleasure and displeasure, joy and sadness, love and hate, military excitement and fear, excitement and calmness - all these are examples of different feelings, or emotions.

It is necessary to fully understand the difference between feeling and sensation. In everyday speech, these words are often confused. They say, for example: “I smell”, “I feel vague anxiety.” Both of these expressions are inaccurate: smell is sensation, and vague anxiety is sensation. The sensations reflect the properties of things and phenomena that exist independently of man. In feelings, a person experiences his attitude to these things and phenomena. Sensations speak about the things themselves, and feelings - about how a person relates to these things, what state they cause in him.

I hear a sound, and it awakens a joyful feeling in me. The sound with its pitch, volume and timbre, which is the content of my sensation, exists independently of me; if I had not heard it, it would still exist, and nothing in it would have changed. But the joy that I feel exists only in me; if I had not heard the sound, then there could have been no joy for me about it.

Feelings are caused by certain objects and primarily depend on the properties of these objects. Therefore, we are talking about “pleasant” or “unpleasant” things, about “scary” or “funny” stories. However, feelings do not reflect the very properties of these objects, but our attitude towards them. Therefore, the same object can sometimes cause completely different feelings in different people.

Feeling is a person’s experience of his attitude to the reality in which he lives, to himself and his activities. But man lives in society, and his activity is social activity. Therefore, a person’s feelings are of a social nature, determined by his social being. Under any social conditions, a person is capable of experiencing feelings such as pleasure or displeasure, love or hate, joy or anger. But what these feelings are aimed at, their nature, how they are experienced - all this is determined by the social being of a person.

It is impossible to separate feelings from human consciousness, to look at them as something independent of consciousness. A person’s consciousness is changing, his views, his beliefs, his worldview are changing - his feelings are changing.

Gorky showed the change in the whole system of feelings with a change in human life and activity, with a change in his views and beliefs with great depth and subtlety in the novel Mother. As Nilovna first becomes a witness, and then an active participant in the revolutionary work of her son, Pavel Vlasov, and his comrades, as she gets acquainted with revolutionaries, people who sacrifice themselves for the happiness of the working class, as they open up to it great ideas in the name of which these people go to fight the autocracy, the whole system of her feelings is changing.

Previously, her whole life was full of one feeling - fear; this fear left no room even for love for his son. “All my life I lived in fear, - my whole soul was overgrown with fear!” She says. “Beatings ... work ... she saw nothing but her husband, she knew nothing but fear! And how Pasha grew up - she didn’t see, and whether she loved him when her husband was alive - I don’t know!

Now a world of new feelings has opened up for her. “Everything has become different! She says. “Woe is different, joy is different ...” In place of fear, selfless love first came to the son, then to his comrades and, finally, to all working people for whose happiness they are fighting.

“All my life I was thinking about one thing - how to get around the day, live it quietly, so as not to touch me only! And now I’m thinking about everyone - maybe I don’t understand it, your business, but I’m all close, I feel sorry for everyone, I want good things for everyone. ”

Fear, because it stayed, it also became different: there used to be fear for oneself, now - for others. “All life is not like that and the fear is different - it’s alarming for everyone.” But even this fear is more and more replaced by another feeling - hatred of the enemies of the cause for which the son and his comrades are fighting. During the first search of her house, she felt mostly fear. Her feelings during the second search were different: “Now she was not so scared as during the first search, she felt more hatred for these gray night guests ... and hatred consumed anxiety.”
And when the opportunity opened up for her to engage in revolutionary work herself - to transfer proclamations to the factory - for the first time in her life she experienced great exciting joy: "And, feeling capable of completing the task, she trembled with joy."

The richness of feelings is a necessary condition for the high and diversified development of inner life. Poverty and pallor of feelings impose a seal of dullness and boredom on life, make a person inactive and insignificant.

A person who is indifferent and dry cannot be a real fighter: in order to fight, one must love what one is fighting for and hate what one is fighting against. "... You cannot defeat the enemy without learning to hate him with all your might" (Stalin).

Love for the motherland and hatred of the enemy - these two great, sacred feelings led to the exploits of countless heroes of the Great Patriotic War, gave strength to the workers of the Soviet rear with selfless work to forge the weapon of victory.

An indifferent and dry person cannot be a creator. "... Without "human emotions", there never has been, is not and cannot be a human search for truth" (Lenin).

The great scientist I.P. Pavlov, in his letter to the Soviet youth, written shortly before his death, wrote: "Science requires man to exert great tension and great passion. Be passionate in your work and in your quest." This applies to any other area of human activity. Without a fiery love for one’s work, there is never a creative attitude towards it. Without enthusiasm and "great passion" there can be no major successes and achievements in any case.

§52. The Physiological Basis Of Feelings

In humans, as we know, all mental processes are based on nervous processes in the cerebral cortex. How, on the physiological side, does feeling differ from other mental processes?

Every mental process - sensation, perception, representation, thought - gets an emotional coloring, that is, it causes a certain feeling, in the case when the corresponding nervous process spreads from the cortex to the subcortical centers: visual tubercles and other nerve centers. Here, by the way, there are centers that control the autonomic nervous system. When nervous excitement captures these last centers, numerous bodily changes occur, which, as we will see later, characterize any emotional process.

It should be emphasized that the autonomic nervous system, which affects the work of internal organs and endocrine glands, is subordinate to the activity of the cortex. Speaking about the role of the brain as the highest department of the central nervous system, I. P. Pavlov wrote: "... the higher department is in charge of all the phenomena occurring in the body."

Some cases of the occurrence and course of feelings are explained by the peculiarities of nervous processes in violation and, conversely, the maintenance of stable, entrenched communication systems. So, considering the issue of installing and replacing a dynamic stereotype, I. P. Pavlov notes: "I think there are good reasons to accept that the described physiological processes in the cerebral hemispheres respond to what we subjectively call ourselves feelings ... Here is a feeling of difficulty and lightness, vigor and fatigue, satisfaction and grief, joy, triumph and despair, etc."

A significant influence on the emergence and change of feelings is exerted by the connections of the second signaling system. Based on the activity of the second signaling system, which is inextricably linked with the work of the first signaling system and influencing the activity of the subcortex, a person is able to control his feelings.

§53. Expression Of Feelings

One of the most important features of the senses is that they change the vital activity of the body and are expressed in a number of bodily symptoms.

Firstly, they cause changes in the functioning of the respiratory and circulatory organs. When excited, for example, the pulse accelerates, breathing becomes faster and deeper. With fear or sudden shock, the blood drains from the face, the person turns pale. People blush with embarrassment or shame. In a state of anger, some turn pale, others blush. Of course, not always, of course, changes in blood circulation find external expression in blanching or redness, but these changes with a strong feeling happen almost always. No wonder people have long associated feelings with the heart and the word "heart" refers to the emotional side of the psyche. Such a
meaning has the word “heart”, for example, in the following phrases: “The mind with the heart is not at odds” (Chatsky's words from “Woe from Wit”); “From all that is sweet to the heart, then I tore off my heart ...” (“Eugene Onegin”, Onegin’s letter to Tatyana).

Secondly, feelings are manifested in facial expressions, i.e., expressive movements of the face, and pantomimics, i.e., expressive movements of the whole body.

Thirdly, feelings are expressed in the intonation and timbre of the voice. One short word “What?” depending on the intonation with which it is pronounced, it can express a wide variety of feelings: indignation, fear, malevolent triumph, confusion, and good-natured mockery. No less expressive is the timbre of the voice. According to how the voice of a person pronouncing, it would seem, quite calm words “trembles”, we sometimes notice how excited he is.

The most striking manifestations of feelings include laughter and crying.

Darwin showed that some of the expressive movements of man are the remnants of those actions that were once appropriate in the life of our animal ancestors. In intense anger, a man clenches his fists, clenches his teeth, breathes heavily through his nose, as a result of which the nostrils expand. All these manifestations, useless in modern man, originate from those times when the anger of our ancestor was a state preceding the struggle, and this struggle was carried out with fists and teeth.

This does not mean, however, that all expressive movements in the life of a modern person are only a useless relic of instinctive actions. They acquired a new, very important function - they became a means of communication between people. By facial expression, pantomimic, intonation and timbre of the voice we judge the state of mind of a person.

Of course, the most important means of communication between people is speech. But just feelings with all their subtest nuances are not easily transmitted by means of ordinary prosaic speech. Each person knows for himself how difficult it is to describe his mood in words. In the course of historical development, mankind has created other means for transmitting feelings. The thinnest and most powerful of them is art, especially music and lyric poetry, which can be called a real "language of feelings." But in the process of everyday communication, people, of course, cannot use the means of music and poetry, and here gestures, facial expressions, especially the eyes, and intonation of the voice are of great importance. A simple frowning of the eyebrows, a slightly noticeable smile, a slight shrug of the shoulders sometimes help to understand a person’s attitude to a fact.

What significance such a particular thing as eye expression can have in the process of communication is well shown by L. N. Tolstoy in the description of the first meeting of Hadji Murat, who passed to the Russians, with the governor of the Caucasus Vorontsov:

“After listening to the translator, Vorontsov looked at Hadji Murat, and Hadji Murat looked at Vorontsov's face. The eyes of these two people, meeting, spoke to each other a lot, inexpressible with words, and not at all what the translator said. They directly, without words, expressed the whole truth about each other: Vorontsov’s eyes said that he did not believe a single word from all that Hadji Murat had said, that he knew that he, the enemy of everything Russian, would always remain so and now obey only because it is forced into it. And Hadji Murat understood this and still assured of his devotion. The eyes of Hadji Murat said that this old man should think about death, and not about war, but that he, although old, was cunning, and he had to be careful with him. And Vorontsov understood this and still told Hadji Murat what he considered necessary for the success of the war. ”

§54. Feelings And Cognitive Processes

The source of feelings is a variety of objects of reality with which a person comes into contact in the process of his life and activity. It is clear, however, that any object can become a source of feelings only if a person either directly perceives it, or learns about it in some other way. In order to survive a certain attitude to the object, one must somehow know it. Therefore, feelings are always experienced in connection with certain cognitive processes: sensations, perceptions, images of memory or imagination, thoughts, etc.

Sometimes the source of feelings are those properties of objects (or those processes in our body) that we currently feel. Colors, sounds, smells, etc., can themselves evoke in us certain feelings. This feeling, directly related to the sensation, is called the sensory, or emotional, tone of sensation.

Some types of sensations always have a sensual tone. These are, first of all, pain. By the word "pain" we
usually mean not only the very sensations (stitching, cutting, tearing, burning, pulling, etc.), but also that unpleasant or even painful feeling that is associated with them. Constantly associated with sensual tone and organic sensations. Feelings of thirst, hunger, appetite, satiety, nausea, etc. are always either unpleasant or pleasant.

If not always, then for the most part olfactory sensations have a sensual tone. As we already know, most people rarely use olfactory sensations for practical purposes; usually we don’t have to recognize or distinguish things by smell. But then the smells almost always have an emotional color, cause a pleasant or unpleasant feeling and therefore have a noticeable effect on the well-being of a person.

The sensual tone of the sensation strongly depends on the needs that the person is experiencing at the moment. The smell of food is pleasant for the hungry and indifferent or even disgusting for the well-fed. Ice cream is pleasant on a hot day and quite unpleasant in the cold.

In other cases, feelings do not depend on the most felt properties of objects, but on the significance that these objects have for us in this situation, on what these objects tell us. The same sound, for example, can cause a wide variety of feelings, depending on what it matters. The sound of artillery fires caused a feeling of alarming tension when he talked about the raid of enemy aircraft, and he also evoked a sense of proud glee when it was the sound of salute, which the capital of the homeland greeted the valiant troops of the Soviet Army.

In some cases, individual objects acquire a very stable emotional coloring for a person due to the memories that are associated with this object. In these cases, the significance of the mechanism of temporary connections is clearly pronounced; any object connected in the past with this feeling can cause it again. Thus, many of the neutral properties of objects and phenomena become causative agents of feeling according to the general mechanism of the conditioned reflex. If in our past life any smell, color or sound was associated with a joyful or difficult event, then this connection can be so strong that the very smell, color or sound subsequently always seems to be painted with a joyful or heavy feeling. This often explains why a person especially loves or does not like any smell or color.

Sometimes, finally, the feelings that arise in us are not related, directly to what we currently feel and perceive, but entirely relate to what we think, remember and imagine.

Thus, emotional coloring can have not only sensations and perceptions, but also ideas and thoughts. Any cognitive process can cause these or other feelings.

The philosophers of antiquity Plato and Aristotle expressed one remarkable idea: the beginning of philosophy is surprise. This means that the active, creative work of thinking begins when a person not only encounters something incomprehensible, giving rise to a question, but when he is "surprised," that is, he will emotionally light up with this question when the incomprehensible will cause him to be surprised. This thought emphasizes the role in the process of cognition of intellectual feelings, that is, feelings directly related to thought processes.

The most important intellectual feelings include, along with a sense of surprise, or amazement, a sense of doubt and a sense of confidence.

A sense of doubt arising in the absence of solid evidence and not allowing you to calm down on any seemingly appropriate solution to the issue makes you complete the mental work, despite any difficulties that stand in its way.

A sense of confidence gives a person strength to fight for his convictions, firmly and courageously uphold the correctness of his views. The impassive knowledge that such and such thoughts are correct is not enough to become a genuine fighter for the idea.

A thought acquires all its strength and sharpness only when it is permeated with a deep feeling. It never happened that big thoughts were created by a person indifferent to the subject of his studies. Copernicus, the creator of one of the greatest upheavals in science, wrote that his astronomical reflections were born from the "incredible sense of uplift and inspiration" that he experienced "when contemplating and uncovering the wonders of the sky." It is possible, however, and the opposite - negative - the influence of feelings on thought processes. This happens when a thought submits to feeling, while losing its independence. Instead of weighing all the pros and cons of any hypothesis, a person begins to biasedly choose the arguments in favor of the decision on which the feeling pushes him. And thinking ceases to be a means of cognition.

In life, situations are always possible when the "arguments of the heart" are in conflict with the arguments of the mind, when, according to Chatsky, "the mind with the heart is not at odds." The correct way out of such a situation can never be to drown out the "voice of reason." In the final analysis, the solution of the question should always belong to the mind.
Feelings And Activities

The strongest source of feelings is in human activity. Whichever of the main types of activity we take - work, study, play - we will always see how many diverse feelings arise in the course of this activity. In relation to the game, this is completely obvious: no one will, on their own hunt, take up any game if it leaves him completely indifferent. It is easy to understand, however, that even deeper, stronger and more diverse feelings should be associated with labor and educational activities, which constitute the main content of human life and which largely determine the life fate of a person.

The very process of activity - labor, educational, gaming - can be a pleasure. Doing what you love is always a source of joy.

This is evidenced, for example, by an excerpt from the biography of A. G. Stakhanov, depicting his emotional state while working in the mine on August 31, 1935, on the night when he first broke the established norms, giving instead of 13-14 tons of coal 102 t. "Stakhanov did not feel tension. Extraordinary gaiety swept over him. He wanted to sing, it seemed to him that his hammer was laughing with joy and lightness."

"Suddenly, someone screams through the roar that the shift is over. This Stakhanov least expected. He was just getting into work. It seems that no more than an hour has passed, nothing said about fatigue - neither muscles nor a hammer, and suddenly - six hours have passed!"

In many types of activities, there are some crucial points on which the result of all previous preparatory work depends. Passing exams for the student, the first performance in a new role for the actor, conducting a responsible, long and carefully prepared operation for a novice surgeon are examples of such crucial moments. Approaching these moments is characterized by the experience of a peculiar feeling of tension, more and more increasing and changing, when the decisive moment passes, a sense of resolution, release from tension. In some activities, a very sharp change in feelings of tension and resolution can be observed over short periods of time. Nowhere does this manifest itself so vividly as in a combat situation, when such short and seemingly simple moments in activity,

Sholokhov in one of the chapters of the novel “They Fought for the Homeland” will give a wonderful image of the change of tension and resolution, telling about how a fighter Lopakhn, when repelling an attack by dive bombers, shot down a fascist plane.

“Slightly paled Lopakhin with his gun out and firmly resting his foot on the lower ledge of the trench, carefully aimed ... No, this time Lopakhin could not, had no right to miss! It was all petrified, as it were, only his hands, of an iron fortress, the hands of the slaughterer, merged together with a gun, moved to the left, and narrowed eyes, bloodshot and blazing with hatred, glided in front of the plane pulling upward, taking the necessary lead.” After two misses, Lopakhin managed to get on the enemy plane and shoot him down, “and only then Lopakhin sighed with enormous and joyful relief, sighed with all his chest ... - Here's how to beat them! - he said, blowing out his whitened nostrils, no longer hiding his triumph."

He" with trembling hands hastily folded the cigarette, tired and somehow limp, sat on the bottom of the trench, several times in a row eagerly inhaled.

- I thought that he would leave, damned! - he said calmer, but from excitement still slowing down the speech.

“... The source of diverse and very strong feelings is the difficulties without which not a single activity can do. Attitude to difficulties can be very different. They can cause a feeling of uncertainty, confusion, helplessness, frustration, but they can also be a source of directly opposite feelings: self-confidence, self-awareness of one's strength, peculiar experiences of vivacity and arousal. The very process of overcoming difficulties can be associated with a joyful upsurge and give pleasure unknown to people who are accustomed to avoiding difficulties and evading the struggle against them. “Remember, comrades,” said Comrade Stalin at the graduation of the academicians of the Red Army, “that only those cadres are good who are not afraid of difficulties, who are not hiding from difficulties, but rather who meet difficulties in order to overcome and eliminate them.” The life of prominent figures of the Bolshevik party, and above all of Lenin and Stalin,

Failure, failure to achieve the set goal can be experienced very differently. In some people, failure gives rise to despondency, sadness, an oppressed and depressed mood, while in others it causes a rise in feelings of tension and a characteristic feeling of anger at oneself, at one’s ineptitude, a feeling that forces one to mobilize all one’s strength and at all costs achieve one’s own. A person who is “angry” after failure can sometimes achieve a result that was stubbornly not given to him while he was in a calm state.
No less vivid feelings are caused by success, by the consciousness of the goal achieved. Feelings of joyful satisfaction, glee, legitimate pride, relief after strenuous efforts usually accompany the completion of a large and difficult work.

§56. Emotional Memory

Emotional memory is expressed in remembering and reproducing feelings.

Remembering the past events of our lives, we not only reproduce the visual images of people and environments, the words spoken by our interlocutors, the thoughts evoked in us by these words; sometimes with such recollections feelings experienced earlier come to life in us. A meeting with a person who is not indifferent to us, but who is associated with a memory of a very joyful event in our lives, can color the whole day in a joyful mood. We can fade at one memory of a long-held fear or blush at a simple mention of an act that at one time caused an acute sense of shame.

The great Russian artist and director Konstantin Stanislavsky writes in his book “The Work of an Actor on You”: “Since you are able to turn pale, blush at one memory of what you have experienced, since you are afraid to think about a long-lived misfortune, you have a memory for feelings, or emotional memory.”

A.I. Herzen, as an epigraph to the first part of his famous book, The Past and Thoughts, took the following lines of N. Ogaryov:

> When we, in our memory,  
> Pass the old road,  
> In the soul, all the feelings of the old days  
> Come back to life a little,  
> And the sadness and joy are the same in her,  
> And she knows the alarm ...

Emotional mumble is an important condition for a person’s mental growth. Anyone who would have completely forgotten the feeling of joy and satisfaction that accompanied the fulfillment of a noble deed, as well as the feeling of shame caused by a bad deed, that person would have a weak impulse to a new deed of noble deeds and to abstain from evil ones.

The significance of emotional memory lies, in addition, in the fact that it increases the richness and diversity of emotional life: not only the present, but also the past becomes a source of feelings.

§57. The Main Qualities Of The Senses

Feelings are distinguished by a huge variety of qualities and shades. In this case, one feature that distinguishes feelings from other mental processes can be noted. Most feelings can be easily grouped into pairs with opposite qualities: pleasure - displeasure, joy - sadness, fun - sadness, love - hate, excitement - calmness, etc. This feature is called the polarity of feelings. Opposite emotional qualities form, as it were, poles, between which various intermediate shades of feelings are located. These very opposite qualities are called polar qualities.

Of the greatest importance are two pairs of such polar qualities that characterize feelings.

The first of these pairs is pleasure and displeasure. Almost every feeling is pleasant or unpleasant, associated with pleasure or displeasure. Feeling, as we know, is called a person’s experience of his attitude to what this feeling is aimed at. The attitude is always positive or negative. Therefore, feelings are positive or negative. In feelings of pleasure, joy, happiness, fun, glee, love, a positive attitude is experienced, while in feelings of displeasure, suffering, sadness, grief, sadness, despair, hatred, disgust - a negative attitude.

It is very important to note that a person’s experiences often combine both positive and negative relationships, so that the same experience includes both pleasure and displeasure. Remembering the past happiness is pleasant, because it makes it possible to relive this happiness at least mentally, but it also contains sadness from the knowledge that this happiness is no longer there. Feelings associated with overcoming difficulties also usually include both positive and negative sides. After all, one can’t call an overcoming of difficulties such an action that does not contain anything unpleasant, heavy, which gives only pleasure. To overcome this difficulty, one has to go through a lot of unpleasant, and maybe even painful moments. However for a person
Another, no less important opposite, or polarity, of emotional qualities is the opposite between the active and passive character of feeling. Feelings of excitement, tension, uplift, vivacity are active; feelings of peace, carelessness, depression, depression, despondency have a passive character. A striking example of the polarity between the active and passive character of a feeling is the change of a feeling of tension with a feeling of resolution, of relief, which accompanies the execution of a decisive action in the course of some responsible activity.

From this point of view, stenic feelings are distinguished (from the Greek word “stenos” - strength), which increase vital activity, increase strength and energy, and asthenic feelings (from the Greek word “asthenes” - weak, powerless), lower vital activity and reduce strength and energy. There is a stormy, excited joy that causes a surge of strength and a thirst for activity - this feeling is stenic, but there is a quiet joy associated with liberation from cares and work and causing a thirst for peace; such joy can be called asthenic feeling. Grief can act on a person oppressively, overwhelmingly, lead to dull apathy and inaction; but there may be courageous and deep sorrow, causing not relaxation, but the tension of all human forces.

The opposition between stenic, active, and asthenic, passive, feelings in those emotions that arouses danger in a person is very clearly revealed. Collision with danger can cause a person to have a heavy, depressing sense of asthenic nature; this feeling is called fear. Fear makes a person helpless, weakens his physical and mental powers, suppresses his mental life. However, a collision with danger does not always cause fear. A directly opposite reaction to danger is also possible - a stenic feeling, which can be called a feeling of military arousal. It increases the physical and mental strength of a person, aggravates his quick wit and resourcefulness, increases the speed and accuracy of actions.

“A Soviet pilot,” writes A. Tolstoy, “will never shy away from battle, and the closer the danger is to him, the angrier his heart, the more calculated his movement, the faster his reflexes. This is the intense, calculated delight of the battle."

Feelings of fear and military excitement are polar in terms of the antithesis between passive and active feelings. But they are also polar in terms of the antithesis between displeasure and pleasure. Fear is definitely a negative feeling; it is always unpleasant, and with severe degrees it is painful. The feeling of military excitement includes positive experiences: the joy of struggle, the proud consciousness of one's strength, etc.

There are people who, in the fight against danger, find the greatest joy of life. Such, for example, was the great Russian commander Suvorov, about whom one of his biographers writes: “Whenever he had to spend several years outside the combat situation, he literally began to grow weak. Figuratively speaking, he slept well only under the roar of guns. So it was with him all his life until his very old age."

A remarkable Russian revolutionary, one of the best associates of Lenin and Stalin, Yakov Mikhailovich Sverdlov says in one of his letters: “... The struggle of people with external conditions and with each other for the dominance of new beginnings of life is full of exciting interest. To take part in this struggle is a great pleasure.”

Marx, in response to a question about his idea of happiness, answered in one word: “Struggle”.

§58. Affects

Affects are called emotional processes that quickly and violently take hold of a person and have the character of relatively short-term outbreaks. Such, for example, explosions of anger, despair, fear.

An example of an affective outburst of anger is the reaction of Kutuzov described by L.N. Tolstoy during the Battle of Borodino to a progress report on the left flank brought to him by the adjutant wing Volzogen. The foreigner Volzogen, a man deeply alien to the Russian army and the great patriotic upsurge that animated it, completely falsely understood the meaning of the unfolding military operations. Being dismissive of the Russian troops and their commander in chief, he reported to Kutuzov with a half-mocking smile that all points of position were in the hands of the enemy and that there was nothing to repel them, since the troops were in complete frustration and could not be stopped.

- "You saw? Did you see? ... - Kutuzov cried frowningly, quickly getting up and stepping on Volzogen. - How do you ... how dare you! ... - making threatening gestures with shaking hands and choking, he cried out. - How dare you, gracious sovereign, say this to me. You don’t know anything ... The enemy was hit on the left and hit on the right flank. If you saw poorly, gracious sovereign, do not allow yourself to say what you do not know ... Everyone was silent, and one heavy breath was heard of the panting old general."
A variety of feelings can have an affective character. It is quite possible, for example, an affective flash of joy, the picture of which is painted by L. Tolstoy in War and Peace, depicting Nikolai Rostov’s arrival from the theater of operations home: “he didn’t have time to reach the living room, like something swiftly, like a storm, flew out of the side door and hugged and began to kiss him. Another, third, the same creature jumped out of another, third door; more hugs, more kisses, more screams, tears of joy. He could not make out where and who was dad, who was Natasha, who was Petya. Everyone shouted, talked and kissed him at the same time. ""Natasha ... jumped like a goat, everything was in one place and screeched shrilly.

Every feeling, as we know, changes the vital activity of the body and is expressed in a variety of bodily symptoms. With affects, this outward, bodily expression of feeling is especially vivid. Usually it has the character of motor overexcitation in affect, manifesting itself in many violent movements, words, actions. But sometimes affect has exactly the opposite external expression - the delay of all movements, the complete cessation of all activity. A person may be “numb” from fear, anger, or despair.

In the 55th and 56th chapters of Volume IV of War and Peace, two affective experiences of grief are depicted: Mount Natasha after the death of Prince Andrei and Mount Old Countess Rostova after the news of the death of her youngest son Petya. A sharp contrast to the violent reaction of the old countess (she beats, screams, rushes about) is Natasha’s “stupor”. “Natasha spent most of her time, alone in her room, with her legs in the corner of the sofa and, tearing something apart or crushing something with her thin, strained fingers, stubbornly fixed her gaze at what my eyes were stopping at.”

It is often said that in a state of affect a person "loses his head", "does not remember himself," "does not realize what he is doing." This is not true. Only a mentally ill person can in a fit of frenzied anger or rage really not recognize anything and subsequently not remember what he did at that time. A healthy person never loses consciousness and memory from anger or any other affect. An example is the hero of one of the works of L. N. Tolstoy, who committed the murder in a state of frenzied anger. He says, talking about his crime: “When people say that in a fit of rage they don’t remember what they are doing, this is nonsense, not true. I remembered everything and did not stop remembering for a second.” “Every second I knew what I was doing.”

It is equally erroneous to think that in a state of affect a person cannot control himself and therefore should not be responsible for the actions that he performed at that time. Indeed, with a strong affect, a person sometimes loses power over himself and commits acts in which he subsequently bitterly repents. However, the reason for this is not so much the affect itself as a lack of will, a lack of self-control. Affects do not have irresistible power over a person.

Having given free rein to affect, “surrendering to it”, it is really difficult to pull yourself together and master yourself. But “difficult” does not mean “impossible”. A person with a strong will will be able to overcome this difficulty. Much easier, however, is another: do not give vent to affect, do not allow yourself to "surrender to it."

To prevent an affective flash, you must prevent it from starting. There is an old everyday rule: before surrendering to a flash of anger, you must mentally count to ten. (One of Chekhov’s heroes, a very quick-tempered person, counted up to a hundred in such cases.) Turgenev advised a person who was overly heated in a dispute and began to lose power over himself to hold ten times with his tongue inside his mouth before uttering a word.

The psychological meaning of these very useful tips is to delay the onset of the outbreak and thereby get time to pull yourself together; in addition, distraction of extraneous mechanical operation can be cooling.

§59. Mood

Feelings are usually directed at some object: a person is happy about something, sad about something, angry at something, afraid of something, loves someone. But along with such feelings relating to certain objects, we notice another kind of emotional state. We say that a person is in a joyful, cheerful mood. This means that he is not happy with just one fact; this means that at this time he is generally inclined to joyful, cheerful feelings that he can be glad of such a thing that at another time would leave him indifferent. When a person has an angry, irritated, “bad” mood, everything is angry with him: both the tram - because it does not come to a stop in a timely manner, and the neighbor on the tram - because he inadvertently pushed him, and the newspaper - because he didn’t easy to fold.

We call a mood a general emotional state that stains for some time all behavior and all human experiences. The mood can be joyful or sad, angry or good-natured, peppy or lethargic, upbeat or dull, etc. Very often the mood is
based on a certain feeling caused by some event that has significant significance for a given person. Bad news received in the morning can spoil a person all day, creating an alarming or sad mood. Serious success in work can cause a joyful, high spirits for several days. Feeling has the ability to spread or spread from the object to which it is caused, to other objects associated with it. As a result, we get that general emotional state called mood.

This process of “spreading” feelings, creating a mood, is well shown by L. N. Tolstoy in the story “After the Ball”. Captured by love for Varenka B., the hero of the story during the ball, especially significant and happy for him, has a loving, enthusiastic feeling for everything that he sees: “I hugged the whole world at that time with my love. I loved the mistress ... and her husband, and her guests, and her lackeys ... But to her father (i.e., Father Varenki.- B.T.), with his boots and with a tender smile that looks like her, I experienced at that time some kind of enthusiastic, tender feeling.” After the ball, he can’t sleep, because he feels too happy. He goes outside, and the feeling of happiness with which he is full again colors the whole world for him. “And horses swaying evenly under wet arches under glossy arches,

Not always a person is aware of what caused his mood. The event that caused the initial feeling could be outwardly not very noticeable: a remark thrown by one of the interlocutors, a frown, a smile that seemed mocking. The very fact was soon forgotten, but the feeling evoked by him remained and created an alarming, dissatisfied mood, which may seem unreasonable.

To a certain extent, the mood depends on the physical well-being of a person. Strong fatigue, lack of sleep, and malaise “lower” mood, while healthy rest, good sleep, and physical alertness contribute to a “raising” of mood.

The mood of some people is greatly influenced by nature, season, weather. Of all the seasons of the year, Pushkin was fond of autumn most of all, when he was especially easily able to create an elevated, vigorous mood, causing a surge of creative forces.

You should not think that mood is a passive reflection of those external conditions in which a person is. People with a rich content of mental life and with a strong character can in the most difficult conditions maintain a cheerful, elated and even joyful mood. To a certain extent, the man himself is the "master of his mood."

Read, for example, the following passage from a letter from Yakov Mikhailovich Sverdlov. Sverdlov wrote this letter to his wife from the remote Ostyak village Maksimkin Yar, where he was in exile: “Imagine my position. In a miserable shack, which is difficult to call a room ... with a small seven-linear light bulb, without the slightest hint of any friendly environment ... almost without books, without newspapers, without letters. And at the same time, I am not discouraged, not miserable ... I have not lost my usual vigor, but, perhaps, my cheerfulness. It seems to you a contradiction. Meanwhile, it is the way I write ...

§60. Call Of Duty

A sense of duty is the most important, central in that group of feelings, which are called moral feelings and which are associated with a person’s experience of his attitude to other people and especially to certain social groups: his people, the party, the Komsomol, his collective farm, his factory, my school, my family.

The basis of a sense of duty is a person’s consciousness of the interests of the social group to which he belongs, and his obligations towards it. But knowledge of these interests and obligations is not enough. A purely rational, dry knowledge of how to act, what should be done, cannot be the basis for the development of debt. It must turn into a strong and deep experience. If a person experiences the misfortunes of his homeland as acutely as his own misfortunes, the production success of his plant, as his own success, the success of his class, as his luck, then he becomes able to survive his duty, and not just know it. Therefore, we are talking about a sense of duty, and not about simply knowing it.

Out of the consciousness of duty, an assessment of human actions as good or bad arises. Such an assessment is always associated with the recognition of the social significance of these actions and this essentially differs from the assessment of actions as pleasant or unpleasant.

Evaluation of their own actions as good or bad, and the assessment is not only rational, but also emotional, is called conscience. Consciousness of the correctness of one’s actions - “a calm conscience” - can bring a person the greatest joy and satisfaction, give self-confidence and strength to resist slander and unfair accusations. Consciousness that a bad deed was committed causes “remorse”, “pangs of conscience”, a feeling of remorse. The voice of conscience in these cases requires an effective correction of the committed act. If a person does not reveal his repentance at all, he shies away not only from correction, but also from an open admission of his
mistake, he creates that long state of severe internal anxiety, which is characterized by the words "unclean conscience."

And a sense of duty and a sensitive conscience arising from it suggest a person’s high consciousness. But they also suggest the presence of deep and effective feelings: love for the homeland, devotion to the party, a sense of organic connection with your team, etc. Under this condition, performance of a duty ceases to be a heavy duty. It becomes a joyful affair, happiness in life.

§61. Individual Differences In Feelings

Differences in the emotional side of the psyche are crucial for the psychological characteristics of a person. To understand a person, one must know not only how he thinks, how he acts, but also how he feels.

What are the features of feelings with which people differ from each other?

1) The direction of the senses

The most important differences in the emotional field are determined by what the feelings of the person are directed at, what is the content of these feelings. In the poem "Duma" Lermontov wrote: "And we hate, and we love by chance." If feelings are sprayed on random objects and arise on random occasions, they cannot serve as a powerful engine in creative work and life struggle. Moreover, they can become an obstacle, constantly distracting a person from the main task of his life, knocking him off his chosen path.

To understand the emotional life of a person, you must first understand how connected the feelings that play the greatest role in his life, with his worldview, the main goals that he sets himself. You need to understand whether he loves, hates, inspired, rejoices, upsets, fundamentally or accidentally; to understand whether his feelings flow from beliefs expressing the main focus of his personality, or whether they are caused by the impressions of the moment.

A feeling of hatred, for example, can be both high and shallow, depending on what it is aimed at. Hatred of the enemies of the motherland is a high feeling that inspires a person to exploits and gives birth to heroes. An evil, envious feeling for a person who is ahead of me in the competition is a shallow feeling, causing squabbles and pushing to commit unworthy acts. Among the remarkable Russian people of the past, Vissarion Grigorievich Belinsky was distinguished by his great principle of feelings. It was a man with a fiery soul. The contemporaries were particularly struck and created by his exceptional moral authority that the fiery feelings of him always had a fundamental character, was absolutely disinterested. “Belinsky was ... really passionate and really sincere man ... who knew how to love and hate disinterestedly. I have never met a man like him, either before or after”(Turgenev). In one of his private letters, Belinsky said of himself: “Nature has given me little ability to hate for the injustices that have personally been done to me; I’m rather able to hate a person for a difference of beliefs or for shortcomings and vices, which are completely harmless to me.”

A remarkable document, breathing deeply fundamental indignation, anger and even hatred, is his famous letter to Gogol, provoked by the reactionary and harmful book of the latter, “Selected Places from Correspondence with Friends”: “If you found an attempt on my life,” wrote Belinsky, “then I would no more hate you as for these shameful lines ... This is not about my or your personality, but about an object that is much higher not only me, but even you: here it is about the truth, about Russian society, about Russia.”

2) Depth of feelings

Of great importance for the characterization of emotional life is the depth of feelings. Deep is called a feeling that affects the most essential aspects of a person’s life, has numerous connections with his thoughts, aspirations and desires and is reflected in his whole spiritual life.

Not every strong feeling, characterized by rapid flow and bright external expression, is a deep feeling. Passion is a shallow feeling, although it can be strong.

True love differs from passion primarily in its depth. All affects are strong feelings, but many of them are very shallow. A violent but short-lived outburst of anger is an example of a strong but shallow feeling. Fundamental hatred stemming from a person’s beliefs and determining the path of his life’s struggle is an example of a deep feeling.

The depth of feeling is not necessarily associated with violent experiences, nor - even more so - with violent manifestations. “Calmness is often a sign of great, albeit latent power; the fullness and depth of feelings and
thoughts does not allow furious impulses” (Lermontov, “Hero of our time”).

A rare depth and strength of feelings with extreme restraint of their external expression is a characteristic feature of the psychic appearance of Uli Gromova (The Young Guard). Repeatedly showing “a huge world of feelings and thoughts”, “the whole secretive world of genuine passions” that lived in this wonderful Soviet girl, A. A. Fadeev, however, emphasizes: “Ulya was closed and only revealed herself in moments of a special state of mind”. An internal storm and external calm - this is how we see her, for example, from the moment she was forced to return to Krasnodon after an unsuccessful attempt to evacuate: “She walked all the way next to the cart, silent, as if calm, and only these features of gloomy power that were visible in her eyes, "nostrils, lips, betrayed, what storms the waves went in her soul."

The wealth and richness of a person’s emotional life depends not so much on strength as on the depth of his feelings. There are people who tend to get very involved in people and business. But any strong hobby only then gets vital importance when it turns into deep love. People who are able to get involved, but not able to love, inevitably remain superficial and empty.

3) Stability of feelings.

In their closest connection with the depth of feelings is their stability. A deep feeling is stable and lasting, while a shallow, albeit strong, feeling is short-lived and transient.

The instability of feelings can take two different forms.

In some people, instability of feelings is expressed in the form of capricious variability of mood. Such people easily catch up with feeling for any reason, but since their feeling is not deep, it is just as easily replaced by a new one, even if just the opposite. They are alarmed at any hint of danger, but they need only one calming news to change their anxious mood into a carefree one. They greatly experience grief, but forget about it at the first joyful impression. Their mood depends on any accidental exposure.

In other cases, instability of feelings is expressed in the form of rapid emotional dullness. Many feelings with the frequent repetition of the effects that cause them weaken and, finally, completely disappear. The sounds of artillery fire, frightening a person who first got into a combat situation, do not already have such an effect on experienced, seasoned fighters.

But it would be completely erroneous to think that all feelings weaken as one gets used to the influences that cause them. The feeling deeply affecting a person’s personality, connected with various interests, does not weaken from repetition. Such feelings are not dulled. If a person truly loves a business, if it is his true vocation, then, constantly engaged in this business, he not only does not grow cold towards him, but, on the contrary, begins to love him even more. The pleasure delivered by good music is enhanced by listening to it again. Anyone who loves and understands fiction, he constantly re-reads the best works, and as a result they do not cease to please him and make an impression.

People who do not have deep and persistent interests, who seek only entertainment in life, quickly cool off to everything, since any feeling affects them very superficially. Such people develop severe emotional dullness, and its consequence is boredom. This category of people includes, for example, Onegin and Pechorin. The latter himself admits that rapid dullness is the main misfortune of his life. "Everything is not enough for me: I get used to sorrow as easily as to pleasure, and my life becomes emptyer day by day."

4) The effectiveness of feelings

By the validity of feeling is meant the ability to induce a person to act. In this regard, people's emotional experiences can be very different. In some people, feelings are a powerful incentive; in others, they have little effect on behavior. People of the latter category may very strongly experience a feeling, but this experience does not affect their actions in any way. Differences between people in the degree of effectiveness of feelings are of great importance, since feelings are important mainly because they are the driving force in human behavior.

A persistent and deep feeling, possessing a very large effective force, directing all thoughts of a person and leaving an imprint on all his activities, is called passion. Passion captures a person and therefore is a great power. Love for the motherland, for one’s people, love for science or art, becoming a passion, leads to the achievement of feats and the creation of great works. But passion, aimed at small and unworthy goals, becomes fatal to humans. A remarkable depiction of the disastrous power of the “evil passions” enslaving a person was given by Pushkin in a number of works: “The Queen of Spades” (passion for enrichment), “The Mean Knight” (avarice), “Mozart for Salieri” (envy that became passion).

When they talk about “passionate love”, “passionate hatred”, “passionate attitude to business”, they mean a
deep, persistent and very effective feeling.

The extreme opposites in terms of the effectiveness of feelings are, on the one hand, sentimental people, on the other - passionate people. The former passively admire and enjoy their feelings, talk a lot about them, but have little interest in bringing them to life. The latter do not talk about their feelings, but live by them, trying to translate them into action.

In this respect, the following words of N.K. Krupskaya, said by her at the II Congress of Soviets of the USSR, in the coming days after the death of Lenin, are of deep interest:

“Comrades, these days, when I stood at the tomb of Vladimir Ilyich, I changed my mind all his life, and this is what I want to tell you. His heart was beating with passionate love for all working people, for all oppressed. He never said this himself, and I probably would not have said it at a different, less solemn moment ... This feeling made him passionately, eagerly seek an answer to the question - what should be the ways to free the workers?”

**Questions To Repeat**

1. What is called feeling or emotion?
2. What is the difference between feeling and sensation?
3. What is the social character of feelings expressed in?
4. What is the physiological basis of feelings?
5. In what bodily symptoms are feelings expressed?
6. What is the relationship of feelings with cognitive processes?
7. Describe the intellectual feelings.
8. What is the relationship of feelings with human activity?
9. What is emotional memory?
10. List the basic qualities of feelings.
11. Give a definition of concepts: “affect”, “mood”, “passion”.
12. What feelings are called moral feelings?
13. What is the basis for the development of a sense of duty?
14. List the most important features of the feelings that can characterize a person.

**Chapter X.**

**WILL. §62. Motives And Goals**

The term “will” denotes that side of mental life, which gets its expression in the conscious purposeful actions of man.

Human actions come from certain motives and are aimed at specific goals. Motive - this is what motivates a person to action; the goal is what a person seeks to achieve as a result of this action.

Setting himself this or that goal, a person is always guided by certain motives, certain motives. Goal setting cannot happen for no reason. Something should encourage a person to direct his activities towards this goal. Motives - this is what motivates a person to set these or other goals. Without knowing the motives, it is impossible to understand why a person strives for one and not another goal; therefore, it is impossible to understand the true meaning of his actions.

The initial impulse to activity is need, that is, the need experienced by a person for something. You can distinguish between material needs - the need for food, clothing, housing, etc. - and spiritual, or cultural - the need for communication with people, the need for education, in a book, in music, etc.

Spiritual needs historically arose in the process of social labor as they satisfied and further developed and refined the initial material needs. Labor activity itself was born out of the need to satisfy these pressing material needs. But in the future it became a source of new needs, the most important of which is the need for labor itself, which is based, on the one hand, the organic need for activity inherent in any healthy organism, and on the other, the need for communication with people, the main and initial form which is labor, production communication. This need for work could be fully developed only in a socialist society, when work, having become truly free,
turned “from a shameful and heavy burden, as it was considered before, into a matter of honor,”

Need causes the desire to satisfy it, the desire can be expressed in attraction or desire.

Attraction is a vague aspiration that is not associated with a clear idea of the goal. The peculiarity of attraction is perfectly conveyed in Pushkin’s famous words: “If it were not for the vague attraction of something thirsty soul ...”

Desire is a conscious desire for a specific object, for a specific goal.

The transformation of vague drives into conscious desires is a prerequisite for conscious and focused activity in which the will of a person is manifested.

Not every desire, however, leads to action. A person may wish that he is completely not in his power, which does not depend on his actions: a person may wish that the weather is good tomorrow, that the book he needs is unoccupied, that the performer of interest to the performance takes part, and etc. In these cases there is a conscious orientation towards a specific goal, but there is no desire to act to achieve this goal, because there is no consciousness that its achievement depends on the person who wants it.

Such desires can be called ineffective desires, in contrast to effective desires, which are associated with the thought not only of the goal, but also of the means to achieve it, with the awareness of the possibility of achieving this goal and with the desire to act in this direction.

Effective desires are the basis of the willful activity of man.

Needs are the prerequisite on the basis of which the motives of human activity are formed. On the basis of needs in the process of social life, the feelings of a person and, in particular, his social feelings are developed, his interests are created, his views and beliefs are formed, and finally, his worldview is formed. And in the feelings, and in the interests, and in the beliefs, and in the worldview of a person, as they become a source of effective desires, the motives of his activity are expressed.

§63. Involuntary And Arbitrary Movements

In the previous chapters, studying individual mental processes, we have noted many times that these processes can be involuntary or arbitrary, unintentional or intentional. We distinguished between unintentional and intentional memorization and reproduction; we talked about involuntary and arbitrary attention. In its simplest and most original form, this difference is found in the area of motion.

Typical examples of involuntary movements are unconditioned reflexes: coughing, sneezing, blinking, pulling one's hand during a sudden injection, trembling with a sharp and unexpected sound, etc. Involuntary movements are usually expressive, in which feelings are manifested: with strong anger, a person involuntarily clenches his teeth or clenches his fists; sincere laughter or smile is involuntary.

Let us now take some simple cases of arbitrary movements. I want to raise my right hand and raise it. I want to take a pencil from the table, I reach out and take it. What signs distinguish these movements and give grounds to call them arbitrary?

Firstly, the awareness of the goal and the presence of the desire to achieve it. Secondly, the ability developed in past experience to make this movement. Both of these signs are necessary signs of any arbitrary movement. At first glance, it may seem that there are “aimless” arbitrary movements. “I can,” they say sometimes, “arbitrarily raise my hand without any purpose. Right now, I'll take it and raise it, although I don’t need it for anything.” And to prove the correctness of his words, a man really raises his hand. In fact, a person who argues in this way proves just the opposite: he raises his hand in order to show that he can arbitrarily make a “aimless” movement. Arbitrary movement is a purposeful movement.

A person is not born with a diminutive make voluntary movements: he gradually masters this diminutive. Already in the first years of life, the child learns most of the most important movements, and at first he makes them involuntarily. We can arbitrarily make only those movements that we have learned. The arbitrary implementation of many movements is inaccessible to us only because such movements have never been encountered in our experience.

Arbitrary movements, as indicated by I.P. Pavlov, have a conditioned reflex character.

Arbitrary movements occur on the basis of previously formed temporary connections in the cerebral cortex. Special experiments have shown that the motor analyzer, like other analyzers, is able to enter into a temporary, conditional connection with a variety of stimuli. Irritants, which become the beginning, the impetus of movement, can be very distant and indirect, but their action is a prerequisite for movement.
A specific feature of voluntary movements is the special role of the word as an irritant. It is the words spoken in the inner speech that are the “triggering signals” that cause deliberate movements. Thus, arbitrary human movements are inextricably linked with the operation of the second signaling system, which has a regulatory effect on the operation of the first signaling system.

Performing arbitrary movements is the simplest manifestation of the will. The development of the will in children begins with the fact that the child learns to control his movements. The manifestation of the will, in particular, appears during the inhibition of a particular movement caused by a directly acting external stimulus. At the same time, the delay in the response, as well as the beginning of deliberate movements, is the result of the action of the signals of the second signaling system (when learning a verbal instruction or adopting a certain intention).

Thus, the implementation of movements in accordance with the task, as well as arbitrary inhibition of movements, is the result of the interaction of the second signal system with the first.

§64. Types Of Actions

The activity of an adult does not consist of separate independent movements, but of more or less complex actions that are carried out through a number of movements.

Actions are called individual acts of behavior that come from certain motives and are aimed at a specific goal. Therefore, one cannot speak of completely involuntary actions. A person can make involuntary movements - wave his hands while walking, make “machine” movements with his hands during a conversation, involuntarily smile while listening to a funny story, and involuntarily frown, hearing annoying news, but these movements alone do not constitute action, since aimed at no purpose. Some of them can become an “action”, but only if they become arbitrary. A smile becomes an “action” when a person with this smile consciously wants to show his attitude to any news.

Every human action is arbitrary, but the degree of this arbitrariness can be different.

We can distinguish, on the one hand, actions that are quite conscious, reasonable, and, on the other hand, impulsive actions, characterized by a relatively small degree of conscious control. Impulsive actions include actions performed under the influence of a strong feeling, most often affect.

An example of an impulsive action is the behavior of Pavel Korchagin in a collision with Faylo (“How Steel Was Tempered”). At a party court, Korchagin described his actions in this way: "Everything that is being discussed here happened because I could not restrain myself ... An accident occurred, and before I understood it, Fileo got a skull."

It would be wrong to think that in a state of affect a person is completely unaware of what he is doing, and that therefore impulsive actions are completely devoid of consciousness (see paragraph 58 above). The peculiarity of impulsive actions is not their complete unconcern, but only that, firstly, there is no clear consciousness of the purpose of the action and, secondly, conscious control over their actions is difficult.

In the above examples, the actors could not explain what kind of goal they achieved through their actions. You can say why, but you can’t say why they did this. It is no less clear that at the time of these actions they did not sufficiently control their behavior, i.e., did not control themselves enough. It is necessary, however, to recall what we already said when studying the issue of affects: from the fact that under the influence of affect a person sometimes loses power over himself, it cannot be concluded that in this state he cannot control himself. An example of the Impostor’s behavior in the scene at the fountain very clearly shows the possibility of regaining power over oneself temporarily lost under the influence of an affective flash.

Impulsive actions are thoughtless actions, and therefore they are opposed to deliberate, reasonable actions.

Since an adult does not have actions that are completely involuntary, insofar as in each action the will manifests itself to some extent, and the higher the arbitrariness, that is, the conscious purposefulness of the action, the stronger the manifestation of the will.

It should be borne in mind that volitional actions are not spontaneous, they are due to the impact of those conditions in which a person grew and developed. I.M. Sechenov and I.P. Pavlov constantly pointed out that the volitional act has its causal explanation. Willful actions are the result of upbringing and self-education; they reflect the living conditions and demands of society.

§65. Concept Of Will
Will is the side of the psyche that manifests itself in conscious and purposeful actions. Volitional actions in the true sense are actions that are associated with overcoming internal or external obstacles.

And in everyday life, manifestations of will are spoken only when it is necessary to overcome obstacles. Let's take two simple cases:

1) I need to write a note; I look with my eyes on the table for a pencil, find it, reach out and take it.
2) I have a free evening, and I want to go to the theater; I go to the ticket office and buy a ticket.

In both of these cases, the actions are quite conscious and purposeful, but usually no one looks at such actions as a manifestation of will, and precisely because they are not associated with overcoming any obstacles. In fact, the will also manifests itself in these actions, but the requirements for it are so insignificant that a healthy person does not even notice them. However, for some neuropsychiatric diseases, when a state of “abulia” develops, as a result of deep disturbances of the volitional sphere, that is, painful lack of will, a person may “lack of will” even to take an object he needs from the table, and even more so for having to go somewhere.

Internal obstacles to the commission of an action arise in cases where there is a conflict, a clash of conflicting motives: you want to sleep, but you need to get out of bed so as not to be late; I want to continue a fun and exciting conversation, but you realize that you need to leave and sit down at work. Will manifests itself in the ability to force oneself to do what one deems necessary, to suppress those desires and drives that impede this. Will is, first of all, power over oneself, control over one’s actions, conscious regulation of one’s behavior.

On the other hand, the will manifests itself in overcoming external obstacles: work difficulties, various kinds of obstacles, resistance of other people, etc. A person of strong will knows how to achieve his goal and bring the matter to the end.

A remarkable example of a strong-willed Soviet man is described in the "Tale of a Real Man" by B. Polevoy. Meresyev with broken legs after a plane crash moves to his own, despite unbearable pain in his legs. The desire to reach one overcomes everything. "All his will, all his obscure thoughts, as if in focus, were concentrated in one small point: crawl, move, move forward at all costs." “He climbed into the snowdrift, tightly clenched his teeth and went forward, setting small goals in front of him, concentrating their attention from pine to pine, from hemp to hemp, from snowdrift to snowdrift.”

After amputation of both legs, he again sets himself the goal, dripping, completely impossible. “Even at the hospital, he promised himself to return to aviation. He set a goal and stubbornly strove for it through grief, pain, fatigue and disappointment. " And he reaches his goal, this real Soviet man.

Will is intimately connected with other aspects of mental life. The powerful engine of will is the senses; a man indifferent to everything cannot be a man of great will. But at the same time, the will involves the awareness of their feelings, their assessment and power over them. “Slaves of their passions” are always weak-willed people. The ability to “subordinate the reason of passion” is a necessary condition for strong will.

The greatest feats of will, the samples of which were shown by the heroes of the Great Patriotic War, are characterized from the psychological side by a combination of the strongest feelings - selfless love for the motherland, fiery hatred for the enemy, mighty military excitement - with the utmost self-control, endurance, and strict calculation. The labor exploits of the Heroes of Socialist Labor are also brought to life by a passionate love for the motherland and, at the same time, the businesslike wisdom of genuine specialists in their field.

From all that has been said, it is clear how deep the connection of will with thinking is. Willful action is a deliberate action. Before you force yourself to do the right thing, a person must understand, realize, think about how to act in this case. Before overcoming external obstacles that stand in the way of a goal, we need to find the best ways and means for this, we need to consider the plan of action and draw up a plan for it.

§66. Volitional Action Analysis

Volitional action, as we know, involves a preliminary awareness of the goal of the action and the means leading to the achievement of this goal. This means that a person, before proceeding with an action, mentally plans for what and how he will act - before acting in fact, he acts mentally.

On the other hand, volitional action is an action in difficult conditions, an action associated with overcoming any obstacles. It follows that the “mental action” preceding the actual one cannot be limited to simply recognizing the goal and the means to achieve it, but it involves a complex process of discussing various possibilities: to act or to refrain from action, in which direction to act, in what way and in what ways to act. This process ends with a decision.
Decision-making is followed by a transition from “mental action” to actual, that is, the enforcement of this decision.

Thus, we can distinguish two main stages of volitional action: 1) the preparatory stage - “mental action”, which ends with the decision, and 2) the final stage - “actual action”, which consists in the execution of the decision.

In those cases when it is necessary to act immediately, the decision and execution directly follow each other, the decision goes directly into execution.

An example of this type of volitional action is the episode in N. Ostrovsky’s novel How Steel Was Tempered, when Korchagin, a military commissar of a battalion, receives orders from the chief of staff of a regiment to get off his horse and participate in maneuvers on foot. The order was given in a very sharp form with a touch of mockery of Korchagin's disability.

“Korchagin seemed to be whipped. He pulled the horse in a bridle ... "For several minutes in it" two feelings fought: resentment and endurance. " The second won: “Korchagin was a military commissar of the battalion, this battalion stood behind him. What an example of discipline he would have shown him with his behavior! ... "The decision to obey the order unquestioningly, despite his injustice and harshness, immediately goes into effect:" He released his legs from the stirrups, tears from the horse and, overcoming acute pain in the joints, went to right flank. 

In other cases, the decision does not concern a separate and, moreover, urgent action, but the direction and nature of the activity, sometimes stretching for a very long time and consisting of many separate actions, not current behavior, but a program of future behavior, not what to do now, but what to do in the future in certain situations. A person may decide to graduate from high school, not to smoke, in a certain way to keep himself with one or another person, etc.

An example of a solution of this type can be another episode from the same book by N. Ostrovsky, when Korchagin, having fully understood the formidable course of his illness, faced the question: “What should he do with himself now, after the defeat, when there is no hope of returning to system? ... What to do? ... "Two directions of feelings and thoughts struggle in it. One leads to suicide: "Why live when he has already lost the most precious thing - the ability to fight? ... He knew how to live well, be able to finish in time." Another leads to finding an opportunity to make one's life useful, despite the disease; suicide - “the most cowardly and easy way out of the situation ... Know how to live when life becomes unbearable. Make it useful.

During the long hours spent in the old park of the coastal city, Korchagin, in his words, “arranged a meeting of the Politburo and made a decision of great importance" - to break out of the iron ring and return to duty with new weapons in his hands.

In such cases, the decision does not lead directly to fulfillment, but to the emergence of an intention, which is an internal disposition to act in the future in a certain direction.

However, intentions do not matter on their own. They are needed only as a preparation for action. A man armed with the best of intentions, but not realizing them in his activities, is a man of weak, not strong will. Will manifests itself in decision-making, but it manifests itself much more in the execution of these decisions. Many people make a decision and arm themselves with the intention to quit smoking, but only one who can implement this decision will find a strong will in this matter.

Decision and intention are necessary links of volitional action, but the most important, central point of it is the execution of the decision.

The first preparatory stage of volitional action, ending with a decision, can proceed differently. In the presence of internal obstacles, the initial stage of volitional action sometimes assumes the character of a struggle of motives.

Internal obstacles, as we know, are expressed in the conflict of conflicting motives. This conflict unfolds in the struggle of motives, which includes weighing, discussing, evaluating conflicting desires, aspirations, feelings. In both of these episodes from the life of Pavel Korchagin, we observe this kind of struggle of motives: in the first case, the struggle between feelings of resentment and restraint, discipline, in the second case, between despair and a craving for “paper heroism”, on the one hand, and the desire for struggle, with iron perseverance and a sense of duty of a genuine Bolshevik, on the other.

In the struggle of motives, it is a question of the goal and direction of the action, and not of the ways of fulfilling it. The decision is about what to do, not how to do it. In the first episode, Korchagin is faced with the question of whether to fulfill unquestioningly an unjust order, and not how to execute it.

The struggle of motives in truly strong-willed action is a struggle between a sense of duty, a sense of duty, and
any inconsistencies contradicting duty.

In the episode on maneuvers, Korchagin has a struggle between a feeling of resentment, ready to go into an affective outburst (“He pulled his horse in a bridle ...”), and the consciousness that he must show his battalion an example of discipline. The essence of Korchagin's internal struggle during his long meditations in the old park comes down to solving the question: what should he do? What does the duty of the Bolshevik require of him?

In other cases, in the preparatory stage of volitional action, the choice of the mode of action is put forward in the first place. Most often this happens in cases where the difficulty is to overcome external rather than internal obstacles: there is no conflict of motives, the goal of the action is clear, but it is not clear how to achieve this goal, how to overcome the difficulties that stand in the way. In these cases, you need to make a choice between different modes of action, in other words, you need to draw up a plan of action. The solution here should concern not the question of the goal, but the question of the means and ways to achieve it.

Let's take an example again from the book of N. Ostrovsky “How steel was tempered”. Pavel Korchagin meets on the highway Petliura, leading the arrested Zhukhrai. “Korchagin’s heart pounded with terrible force. Thoughts ran one after another, they could not be seized and framed. There was too little time for a decision. One thing was clear: Zhukhrai was dead. And, looking at those who came up, Paul was lost in a swarm of feelings that gripped him. "What to do?" At the last minute I remembered: in my pocket a revolver. As soon as they pass by, shoot this one in the back with a rifle, and then Fedor is free. And from the instant decision the dance of thoughts ceased. ” He caught up with Zhukhrai, the moment comes when one needs to act. “But a worrying thought drilled my head:“ If I shoot him and miss, then the bullet can hit Zhukhrai ... “How could one think when the Petliur was already nearby? And it happened like this: the red-haired escort caught up with Paul; Korchagin suddenly rushed to him and, grabbing a rifle, with a sharp movement bent to the ground."

There is no question of any struggle of motives. The tremendous tension of all psychic forces is entirely directed in one direction: to find a method of action, a plan of action. Despite a very short time, a complex series of processes unfolds in Paul’s soul. First confusion, bewilderment, “swarm” of successive feelings and thoughts. Then the first solution instantly arises, and the "dance of thoughts" ceases. But when the time is right to act, when it would seem that there is no time to think, the unsatisfactoryness of this decision is clarified, and literally in the last moments it is replaced by a new one: do not shoot, but tear the rifle out of the hands of the guard. The appearance of this last decision is so closely fused with execution that Korchagin himself seems "unexpected" to it. In fact, in this case, the “actual action” was preceded by the “mental”.

The choice of a method of action requires the work of thought and sometimes very complex work (for Korchagin, “thoughts ran one after another”, “the dance of thoughts stopped”, “the head drilled ... thought”, “how could you think? ...", etc.). However, drawing up a plan, which is part of a volitional action, is not only a thought process, but also a volitional process, since the plan is not drawn up as a “plan in general”, not as a plan of actions theoretically possible in a given situation, but as a mental anticipation of a real action, as an obligation for execution. Each of us can, mentally taking the place of Korchagin, solve the problem for him, looking for the best mode of action in his position. But our mental activity in this case will be only mental, while with him it was both mental and strong-willed.

When overcoming both internal and external obstacles, the will manifests itself in the ability to force oneself to do what a sense of duty requires.

A developed sense of duty is the most valuable quality of a person and the most important condition for the formation of a morally educated will. Growing into the strongest motive of human actions, a sense of duty leads to the achievement of feats, makes a person a hero.

On the day of the anniversary of the Red Army, February 23, 1943, a Komsomol meeting of the battalion of the 254th Guards Rifle Regiment was held at rest. They discussed how best to carry out a combat order - to take the village of Chernushka.

Komsomolets Sasha Matrosov, a young blond guy with a gun on his chest, spoke at the meeting. Looking around his comrades, he said solemnly and imperiously:

- We will fulfill the order! I will fight with the Germans while my hands hold weapons, while my heart beats. I will fight for our land, desiring death!

All night the battalion went off-road, through the forest. At stops, Sasha Matrosov repeatedly said this night to his friends:

“Well, lads, remember our agreement: to fight, so to fight.” It will be necessary - die, but do the deed.

The approaches to the village of Chernushka were blocked by three enemy bunkers; they managed to block the two flanks, but the central bunker fired fiercely and prevented them from crossing the clearing that separated the
position of the battalion from the village. Groups of machine gunners sent to eliminate the bunker died as soon as they crawled out into the clearing. It was impossible to break through to the village without stopping, at least temporarily, the fire of an enemy machine gun.

Sasha Matrosov secretly crawled to the side of the bunker and gave the queue for embrasure. His bullets fell into the embrasure; the machine gun was silent, but after a few seconds came to life again. Then Sailors jumped to his feet, rushed forward and covered the embrasure with his body. The fire instantly stopped. The warriors rushed forward, and the bunker was taken.

So Komsomol member Sasha Matrosov kept his word and really did his duty to the end. By the determination to sacrifice his life, he earned the high right to immortality. Guard ordinary Hero of the Soviet Union Alexander Matrosov forever enrolled in the lists of the company with which he went into battle near Chernushka (see "Truth" on September 12, 1943).

§67. Volitional Qualities Of Man

Characterizing the volitional qualities of a person, we will single out, firstly, those that relate to the motivation of volitional actions, secondly, those that are manifested in decision-making, and thirdly, those associated with the execution of the decision.

1. Consciousness of decisions and actions.

A person who can be called conscious in his actions does so, and not otherwise, because he is convinced of the correctness and importance of his goals. He is guided by conscious desires, reflecting more or less strong views and beliefs. He implicitly obeys discipline, because he understands the need for this submission.

True consciousness, which is a sign of developed will, is opposed to properties such as suggestibility and negativism, which indicate a lack of will.

Suggestibility is called easy exposure to other people's influences.

A conscious person follows other people's advice when he is sure of their correctness, understands that they correspond to his views and beliefs. The inspired person lends itself to any advice; with some effort, he can be persuaded to commit an act that is in no way consistent with either his views or his intentions.

The external opposite of suggestibility is formed by negativism, i.e., an unmotivated desire to act contrary to others. Negativism is expressed in the desire to do whatever it takes in their own way and in the internal opposition to obeying some advice or instruction coming from another person.

Negativism, as well as suggestibility, is a sign of weakness, not of willpower. In both cases, a person is deprived of a true consciousness of actions and is guided not by an assessment of the substance of the advice and instructions he receives, but by a blind tendency to obey them - with suggestibility - or contradict them - with negativism.

2. Decisiveness, which means the ability to make sustainable decisions in a timely manner.

Decision should not be confused with the tendency to “decide quickly”. To rush into a decision without sufficient data in cases where circumstances do not require immediate action is a sign of weakness, not of willpower. Such haste is often observed just in people indecisive; for them to make a decision is a painful operation, which they seek to get rid of as soon as possible. True decisiveness implies the ability to delay a decision, if circumstances permit, to the point where it can be made with the greatest knowledge and confidence.

But, on the other hand, decisiveness implies the ability - in those cases when it is impossible to wait - to make a decision immediately. It requires the ability to take risks when risking is necessary. “A pilot,” said Stalin, “is a concentrated will, character, ability to take risks.”

Being basically a volitional quality, decisiveness is closely connected with certain qualities of the mind: it involves great criticality and, at the same time, courage of thought.

We will call decisive a person who, at the right time, can eliminate unnecessary doubts and hesitations. But we will not call resolute a person who is not capable of experiencing any doubts due to the limitations of his horizons and lack of thoughtfulness. It is impossible to say about such a person that he acts decisively, but it can be said that he acts rashly.

The consequence of deliberation, the validity of decisions is their stability. A decisive person is firm in his decisions, while a hesitant person constantly hesitates - both before and after a decision is made. Fear of any final step makes the indecisive person first put off the decision, and then endlessly review and cancel it.

3. Self-control. This side of the will manifests itself in two directions.
Firstly, in the ability to force oneself to fulfill the decision made, to counteract the opposing motives for this: fear, laziness, shyness, etc. In life, it is this volitional quality that is most often called willpower. Without it, not only the outstanding feats of courage are impossible, but also the most ordinary manifestations of conscientiousness and diligence.

Secondly, self-possession is manifested in the ability to restrain unwanted detection of feelings and affects and prevent impulsive actions. In this sense, they speak of endurance and self-control of a person.

A remarkable example of both willpower and endurance is the life of N. Ostrovsky. Blinded and deprived of the ability to move, he forced himself to take possession of a new weapon - an artistic word, not only suppressing any manifestation of despair in himself, but even “forbidding” such “simple human feelings” as sadness to himself, in his own words, with a heroic willpower "Having the right to life for almost everyone, but not for him." To imagine what a feat of will was the creation of his two novels, it is enough to take into account one thing: “Everything that he wrote, he had to remember word for word”; “In the process, he had to read entire pages from memory, sometimes even chapters.” And such work should have been done not by an experienced professional writer, but by a person,

4. Energy and perseverance, manifested in overcoming external obstacles that stand in the way of the goal.

Both of these qualities are not always combined in one person. Some people take up the matter extremely energetically, but soon “run out of steam”; they are capable of only a short onslaught; they lack persistence in overcoming a long series of difficulties. In contrast, people of truly great will are capable of prolonged and unstoppable energy stress; the strength of their strong-willed onslaught not only does not weaken, but even increases when faced with difficulties and obstacles.

Persistence is manifested in the implementation of the plan. In any plan, two sides must be distinguished:

1) The statement of the goal or task: what exactly should be done? how much should be done? by what time should the work be completed? This is the quantitative side of the plan.

2) Outlining those methods, ways and means by which the task should be solved: how exactly, by what methods and in what sequence should the goal be achieved? This is the quality side of the plan.

Persistence implies the steady implementation of the quantitative side of the plan with the most flexible attitude to the method of implementation. The goal must be achieved at all costs, but the funds outlined in the beginning can and should change depending on changes in the situation. The intended course of action should not constrain a person. It is carried out as long as it is the best possible, but replaced by another, as soon as it is discovered that the latter leads better to the goal.

§68. Nurturing Will

The will is expressed in overcoming difficulties, and a person can overcome difficulties only if he knows what he is doing. Therefore, the first and decisive condition for educating the will is the formation of a worldview, the development of social feelings and, on this basis, the education of a sense of duty.

The second condition for educating the will is to master the desire to want. As long as a person’s aspirations pour into a form of languid, vague and inactive desires, there can be no talk of developing a strong will. In the notebook of G. I. Kotovsky, the hero of the Civil War and the fighting commander of the Red Cavalry, there is such an entry: "To want is to be able to." For people of great will, to whom Kotovsky belonged, desire is a powerful force for which there are no insurmountable obstacles. But this can only be a desire arising from the basic life attitudes of a person, and not from fleeting impressions and volatile moods. Such is the “passionate Bolshevik desire” that Comrade Stalin spoke about, emphasizing its decisive importance for achieving success (speech at a meeting of business executives in 1931).

The third condition for educating the will is not to make decisions that are impossible and not to arm yourself with intentions that will not be implemented. No one so often makes decisions and has as many good intentions as people are weak-willed. A person who seeks to cultivate a strong will in himself must treat his every decision and intention as a responsible matter, remembering that failure to fulfill the decision corrupts the will.

The fourth condition for educating the will is the formation of a habit of evaluating one's actions, being aware of their consequences, and looking at them from the side. Without developing a critical attitude towards yourself and your actions, you cannot cultivate a strong will in yourself. Great self-discipline is one of the characteristic features of a person of strong will.

Finally, the last condition for educating the will is the constant training of oneself in overcoming internal and
external obstacles, the constant exercise of volitional effort. That peculiar state of internal tension and activity, which is called “volitional effort”, is a characteristic feature of any volitional action. Where effort is not required, there is no reason to talk about a serious volitional task. But “the ability to volitional effort”, and, consequently, the ability to overcome obstacles develop as a result of practice. “Already a small victory over oneself,” wrote Gorky. “Makes a person much stronger.” Will is formed in action. Only he is able to show a strong will in large matters, who, through a long exercise, tempered it in hundreds of small affairs.

The possibility of a person raising his will is unlimited. Each student must consciously work on the development of their will. Courage and perseverance in work, discipline, a high sense of duty - these are the requirements that our country imposes on young people.

Soviet schoolchildren educate their will not in the order of individual self-improvement, but as members of a collective striving together with the entire Soviet people for a common great goal.

Questions To Repeat

1. What is the difference between motive and purpose of action?
2. What is the difference between attraction and desire?
3. What are the signs of voluntary movement from involuntary?
4. Characterize impulsive actions.
5. What is called will?
6. What is the relationship of will with feelings and thinking?
7. What is the difference between the concepts of “decision” and “intention”.
8. Under what condition does the struggle of motives become a truly volitional process?
9. In what cases does volitional action require a plan?
10. Describe the volitional qualities of man.
11. List the most important conditions for the education of the will.

Chapter Xi. PSYCHOLOGICAL ANALYSIS OF ACTIVITY

§69. Tasks And Motives Of Activity

All activities — labor, learning, play — are aimed at specific goals or tasks: for example, working out a set norm, increasing daily output to three or four norms, learning to read light books in English without a dictionary, passing all exams for the top five, and winning your team superiority in sports, etc.

The reason for setting these or other goals, as we have already indicated (see p. 182), is certain motives. However, in the course of an activity, the relationship between motives and goals or tasks can change: the very fulfillment of a task can become the motive for an activity. Certain motives prompted the tenth grader to set himself the task of graduating from school with a medal. In the future, the desire to accomplish this task itself becomes an incentive force, the motive of its activity. This always happens when a person really seeks to fulfill the tasks facing him, really lives by his activity, and is not an indifferent and indifferent performer of it.

In any activity, a person is guided not by any one task, but by a whole system of tasks subordinate to each other. The student is engaged in English. At the moment, he faces the immediate, immediate task - to understand the meaning of a difficult sentence. According to her, there is a more general task - to translate a whole passage that must be prepared for tomorrow’s lesson. This task through a series of intermediate tasks is part of the big task - to master the English languages, which in turn is a condition for solving an even wider task - to develop a full-fledged specialist in a certain field. According to this last task, it is subordinate to that central, highest task - serving the Soviet motherland and the struggle for communism.

A person’s attitude to activity, and consequently, how he performs it, is largely determined by how far he sees the prospect of his tasks. If the motives of a person’s activity are determined not only by their immediate, but also by more distant, larger, principled tasks, we are talking about distant motivation of activity; in relation to a person who is prompted to work only by immediate tasks that are not included in the system of broad
fundamental tasks, we are talking about short motivation. The latter creates an attitude towards activities that is characterized by a lack of perspective, narrow horizons and insufficient integrity.

Only distant motivation gives a person the desire and strength to fight difficulties and overcome them, because it makes you see in a separate link of activity the necessary stage to achieve the ultimate goal, the stage that needs to be overcome at all costs, since otherwise it is impossible to achieve this goal. If a person does not see prospects beyond the next stage, in the name of what will he overcome the difficulties associated with this stage?

The range of motivation also affects a person’s attitude to success, to victories and achievements. For a person of short motivation, success in resolving a particular problem is experienced as ultimate success, as the end of the matter, and therefore demobilizes him, causing a feeling of calmness. With distant motivation, success in solving one problem is experienced as a step by step, beyond which the prospect of the next steps immediately opens; a sense of success therefore mobilizes a person, turning into a desire for new achievements, for which you need to work and fight. This is how Comrade Stalin describes Lenin's attitude to defeats and victories: “I met Lenin for the second time in 1906 at the Stockholm Congress of our party. It is known that at this congress the Bolsheviks remained in the minority and were defeated. I first saw then Lenin in the role of the vanquished. He was not one iota like those leaders who whimper and lose heart after defeat. On the contrary, the defeat turned Lenin into a bunch of energy, inspiring his supporters for new battles, for future victory.”

“At the next congress in 1907 in London, the Bolsheviks were victorious. I first saw then Lenin as a winner. Usually victory dizzy other leaders, making them arrogant and puffy. Most often in such cases, victory begins to triumph, rest on its laurels. But Lenin was not one iota like such leaders. On the contrary, it was after the victory that he became especially vigilant and wary.”

Human activity always has one or another social significance. Even if a person sets himself only personal goals, his activity with his objective results will inevitably have any - positive or negative - significance for society. Human consciousness is characterized primarily by the extent to which he is able to recognize this social significance of his activities. The level, or the height of motivation, of human activity is characterized by the extent to which social tasks (well-being of the motherland, class interests, tasks facing the production or training team) become the personal goals of a person, the motives of his activity. The greater the place in the motives that motivate a person, is the consciousness of public duty, the higher his level of motivation.

The main activity of man is social labor. “The spiritual image of today's Soviet people,” said Comrade Molotov in a report on the thirtieth anniversary of the Great October Socialist Revolution, “is visible, first of all, in a conscious attitude to his work, as a matter of public importance and as a holy duty to the Soviet state.”

A great influence on a person’s activity is exerted by the assessment that he receives from other people, and a significant manifestation of consciousness is the ability to distinguish whose assessment should be guided by. Despising the opinion of "secular mob", that "cold crowd" for which the inner meaning of his work was unavailable, Pushkin highly valued a truly popular assessment:

“The rumor about me will pass through the whole of Great Russia,
And everyone who speaks her language will call me ...”

(“Monument”)

The famous tractor driver Pasha Angelina writes in her autobiography: “This is a good feeling when you know that everyone needs your work, people want it success to you!”

The assessment of those people who embody a public conscience, the voice of the people, is crucial for human activity, directing it and giving the highest award to human achievements.

The great Russian scientist And V. Michurin, receiving on the day of his 80th birthday a comrade Stalin’s telegram containing a high assessment of his work, wrote in his reply: “The telegram on your behalf was the highest award for me for all 80 years of my life. She is more dear to me than any rewards.”

The mere thought of such an assessment can sometimes inspire a person to exploits. “The English truck driver John, on the battlefield in Spain, under the hurricane fire of the enemy, delivered water to the soldiers who were exhausted from thirst; mortally wounded, he said: “If Comrade Stalin had seen this, he would have patted me on the shoulder and said: “You behaved well, you are a wonderful comrade, John.”

§70. Consciousness And Activity
In the previous chapter, we established that every human action is conscious, although the degree of this consciousness is different. This applies all the more to complex activities consisting of a series of actions. Human activity under normal conditions is a conscious activity.

However, it is equally inevitable that not all components of the activity, i.e., not all its constituent elements, are realized consciously. Any complex activity of any kind includes individual processes, movements, etc., which proceed automatically, that is, without their full awareness. This is a necessary consequence of the feature of the brain, which is manifested in the phenomena of attention. As we know, the presence of a region with optimal excitability in the cerebral cortex is associated with inhibition of other parts of the cortex. This means that consciousness, heading towards a specific object or complex of objects, thereby inevitably distracts from other objects. Naturally, in the process of performing complex activities, consciousness can be directed only to individual components or sides of it.

Speaking about the awareness of certain acts of human activity, we must first of all keep in mind what consciousness is aimed at, what exactly is realized by man.

One of the heroes of “Dead Souls”, Petrushka’s servant Chichikov, had a great tendency to read books, and this reading had a peculiar character: “He didn’t care whether the hero in love was just a primer or a prayer book: - he read everything with equal attention; if they had turned up chemistry, he would not have refused it. He didn’t like what he was reading about, but rather the reading itself, or rather, the reading process itself, that some words always come out of letters, which sometimes the devil knows what it means. ”

Reading Parsley is a typical example of “unconscious” reading, but this does not mean that it proceeds without the participation of consciousness. In this case, “unconsciousness” is expressed in the fact that consciousness is not aimed at what it should be directed at — not at the content of what is read, but at the process of reading.

Conscious performance of an activity presupposes the fullest possible awareness of the content that it is aimed at, its tasks, expected results and possible consequences, and, finally, as we saw in the previous paragraph, its social significance. But this can only be if the largest possible number of components of the activity process itself is carried out automatically. Only those with readings can automatically fully focus on what they read, without requiring awareness. The better a person knows the technique of this activity, the less he pays attention to the very process of performing this activity. And this makes it possible for the pillars of consciousness to focus on the content and tasks of the activity, on finding the best ways and means of resolving these tasks.

In other words: the better a person possesses the skills associated with this activity, the more creativity he can bring into its implementation. In order to creatively perform music, one must have good playing skills on musical instruments; without this, the consciousness of the player will be entirely confined to the technique of performing movements, reading notes, etc. The writer's creativity is possible only if the writing skills are well mastered; otherwise all his attention and all his spiritual powers will be directed to avoid spelling, syntactic and stylistic errors.

Skill and creativity are the two most important aspects of any complex activity. The skill consists in the most perfect, easy and automatic execution of those constant stable operations that make up the technique of this activity. Creativity is manifested in taking into account the uniqueness of these conditions, in finding methods of action that meet these conditions, in comprehending new tasks that have not been encountered before, and in finding ways to solve them, finally, in any manifestation of initiative and overcoming patterns.

In the proper sense, we call creative activity an activity that gives new, original products of high social value. Creativity is shown by scientists, artists, inventors, Stakhanovites of industry and agriculture, who find a way to increase labor productivity. “We think every day,” said A. Kh. Busygin, initiator of the Stakhanov movement in the machine-building industry, “how to organize a better workplace, every day we think up something new and move forward.”

In other activities that are not usually called creative, the creative moment, however, can also be represented quite clearly. Even a student who manages to find a solution to a mathematical problem of a type unfamiliar to him, from a psychological point of view, shows creativity, although the technique used by him is not new in mathematics.

And in all cases, the condition for the manifestation of creativity is the possession of appropriate skills, which enables the consciousness to fully concentrate on the main, decisive points on which the success of the activity depends.

§71. Skills
From what was said in the previous paragraph, it follows that skills are understood to mean such components of complex activity - that is, separate systems of movements, processes that are part of the activity - that occur automatically, that is, without the participation of consciousness. However, unlike those movements that occur automatically from the very beginning, such as, for example, unconditioned reflexes, skills become automatic as a result of a more or less prolonged exercise. Therefore, they should be called automated, that is, “turned into automatic”, and not just “automatic” components of activity.

Skills are automated components of conscious activity that are developed in the process of doing it.

You should never forget that when developing skills, it is not the activity as a whole that is automated, but only its individual components. Reading, writing, shooting, playing the piano, etc., always remain conscious activity, only the operations by which this activity is carried out are automated, only the ways of its implementation. Every skill is a system of conditioned reflex connections; in particular, motor skill is a system of temporary connections in the motor analyzer. In the formation and restructuring of skills, all the laws of education, changes and inhibition of conditioned reflexes are valid.

1) Formation of skills

Let us indicate some of the most important points characterizing the formation of skills.

1. Combining a number of private actions in one holistic action. According to the calculations of some flight training specialists, during a training flight along a rectangular route ("in a circle"), lasting 5-6 minutes, the pilot must perform about 200 actions. It is easy to understand that in such a short period it is impossible to successfully complete 200 independent conscious actions. One of the most important moments in the formation of flight skills is the combination of individual groups of such initially independent actions into one holistic action, subordinate to one task. What used to be a separate conscious action is now becoming an automated operation that is part of a new complex action.

Thus, as you master the skills a person begins to work more and more "large units." Learning to read, the student reads first in letters, then in syllables and, finally, in whole words. In the first steps of teaching writing, the image of each element of the letter (stick, circle, etc.) is in the mind of the student as a special task; the next step is the holistic spelling of individual letters; with full knowledge of writing skills, writing a whole word, and sometimes a whole phrase, becomes a single action, which is carried out by a smooth and continuous movement.

2. Elimination of excessive movements and tension. A characteristic sign of the inept performance of any activity is a large number of unnecessary movements. A child who begins to write, in most cases, cannot produce movement only with his hand; he “helps” himself with his tongue, face muscles, body movements, and sometimes legs. As you master the writing technique, these excessive movements are eliminated. Another manifestation of the lack of skill is the tension accompanying the first attempts to perform an unusual action. When an inept person (especially if he is not at all accustomed to delicate manual work) tries to put a thread into a needle, he can observe such tension in the muscles of his whole body that the energy consumption caused by him is no less than during hard physical work.

The loss of unnecessary movements is the result of differentiation of movements, which are not supported by a successful result, are gradually slowed down, and the movements leading to the desired result are more and more fixed during repetitions.

3. The weakening of the role of visual and the increasing role of motor control. An inept person, trying to work on a typewriter, searches with his eyes for each letter on the keyboard; looking away from the keyboard, he cannot type a single word. In contrast, an experienced typist almost does not look at the keyboard, and typists who have passed the correct school can work completely blind. This happens because their movements are controlled not by visual, but by motor sensations. The same holds true for most motor skills; as a person masters the skill, his eyes are less and less riveted to movements, because the ability to finely control movements with the help of motor sensations is developed.

One of the main signs of the automation of movements is that each movement is directly caused by a motor sensation from the previous one.

4. The ability to carry out activities in various ways, or by methods. Having mastered skills, a person develops some permanent, stable, entrenched ways of performing certain actions. This is a prerequisite for automating these methods. Running differently each time, of course, they could not be executed automatically.

However, complete immutability in the methods of performing this activity is not desirable. Genuine skill requires a flexible change in the way an activity is performed when changing tasks and the conditions in which it occurs. A good master differs from a person who only knows how to carry out this business in that he owns
many techniques and can use any of them depending on the given circumstances. And this means that he owns not one, but many skills of this activity and, in addition, owns skills to use them flexibly.

Let’s take the most elementary example. Every person has walking skills, but not every person has these skills are quite diverse and their use is flexible enough. Some people cause a lot of trouble to others because they do not know how to change, when necessary, a heavy walk to a light and silent, and in the patient’s room they walk in such a step that is appropriate when passing a ceremonial march. Many people quickly get tired with long crossings, because they go in such a walk that is advisable only on short walks. Mastering walking less, which is an important task of physical training, involves the development of sufficient flexibility in the use of walking methods.

Another example is reading skills. One of the conditions for good reading mastery is the ability to read quickly; you must be able to read as quickly as possible when necessary. However, there are people who cannot read otherwise than very quickly. Possessing the skill of fast reading, they do not possess the skill of slow reading, and this skill is no less important. For example, reading fiction should generally be a slow reading; otherwise, the work of recreating imagination, without which, as we have seen, cannot be fully appreciated by a work of art, cannot be developed. This circumstance is no less harmful when reading scientific literature. To be able to read means to be able to read in different ways, depending on what you are reading and why.

The possibility of carrying out the same activity in different ways, or by methods, implies one indispensable condition. Developing automated ways of performing actions, a person should not lose opportunities at any time when it is needed, be aware of these methods; he must maintain the possibility of conscious control over them.

From this it is clear what great importance in the formation of a skill the second signaling system has in its interaction with the first. The second signal system has a regulatory effect on the operation of the first signal system. The use of signals of the second signaling system (verbal instructions, instructions) can lead to the unification of movements accumulated in past experience, and thereby makes it possible to solve a new problem in changing conditions; verbal signals can also achieve the desired inhibition of activity. The formation of a skill with the participation of a second signaling system, that is, the use of the work of consciousness, is therefore of paramount importance. Mastery involves the ability to consciously use automated operations and, when necessary, to consciously control them.

2) Exercise
Skills are formed during the exercise, i.e., the repeated implementation of this activity in order to improve the way it is performed. In order to acquire shooting skills, one has to practice shooting more or less continuously; to acquire swimming skills, one must swim.

However, not every repetition of the same activity can be called an exercise. People with poor handwriting write their whole lives - and some of them write a lot - but their handwriting does not improve on this; there is a constant repetition, but there is no exercise.

We indicate the two most essential conditions without which the repeated fulfillment of an activity cannot become a genuine exercise.

1. The student needs to have the clearest possible knowledge of what he must do, what he must achieve.

   To obtain such knowledge, in some cases, theoretical acquaintance with this activity and analysis of the methods by which it is carried out can be of great benefit (teacher's explanation). Of even greater importance is the direct observation of how this activity is performed by a good master (teacher's show).

   But both this and the other methods can bring real benefit only if the student, when trying to perform this action himself, tries to clearly keep the pattern shown and explained to him in consciousness.

2. The student must know the result of each individual exercise. After each repeated execution of this action, he must be aware of what he achieved, what are the shortcomings of his performance, what mistakes he made, and the next repetition should be aimed at eliminating these shortcomings and errors. Special experiments show that if the student does not know his results, improvement does not occur even with an infinitely large number of repetitions.

The conditioned-reflex nature of skills is clearly reflected in this: the need for reinforcements to form temporary connections. It was noted above that the development of motor skill is a differentiation process based on the inhibition of non-reinforced movements, on the one hand, and the strengthening of reinforced conditional connections in the motor analyzer, on the other. At the same time, the role of the second signaling system is great: verbal indications of an error or indications of correctness act as those inhibitory and reinforcing stimuli that replace immediate (unconditional) stimuli.
Of great importance in this regard are the instructions of the teacher who evaluates the results achieved. However, you should get used to it as early as possible so that, based on the assessments of the teacher, you should be able to evaluate your own achievements and shortcomings yourself. Only he can achieve high mastery in any activity who learns to be his own critic. The ability to see your mistakes and shortcomings is the most important condition for a successful exercise.

§72. Habits

Habits, like skills, are automated behaviors. They differ from skills in the following: a skill involves only the ability to perform certain operations automatically, that is, without special control of consciousness, the habit is associated with the tendency or need to perform certain automated acts.

We say that the child has the ability to wash his hands, if he knows how to complete this process quite deftly and automatically. But we will say that he developed the habit of washing his hands before eating, if he had a need to perform this act, so before sitting at the table, he almost automatically goes to the washbasin or water sink and doesn’t have to specifically “remember” that you should wash your hands before eating.

Every skill is either useful, or at least indifferent; habits can be both good and bad. A skill, that is, skill, to whistle cannot be harmful in itself; on the contrary, in known life situations it can be very useful. The habit of whistling is certainly harmful, expressed in that a person begins to whistle involuntarily, it makes the owner of this habit unpleasant for others. At first glance, “innocent” habits, such as the habit of turning objects in the hands during a conversation or the habit of inserting some obsessive words into a speech (“say so”, “means”, “know”, etc.), are actually if not harmful, then still unpleasant and uncomfortable traits. The first of these habits often leads to that when the owner appears, people who know him begin to hastily hide from the tables all sorts of fragile and valuable objects. The second habit - to insert "parasite words" into speech - makes a person's speech obsessively monotonous, and sometimes funny in the most inappropriate situations for this.

One of the heroes of Chekhov’s vaudeville “Proposal”, the landowner Chubukov, has the habit of inserting the words: “that’s it”, “and the like”, “and so on”, he expresses his joy at the arrival of the groom, who is married to his daughter: “My darling ... I’m so happy and so on ... That’s exactly what’s like that ... I’ll go, call Natasha and the like ...” In a heated argument, he expresses his indignation with these phrases: “That’s it, young man, I’m not used to talking to me in that tone and stuff. Your grandfather drank heavily, and the younger aunt, namely, Nastasya Mikhailovna, fled with the architect and so on ... "Fussing around a man who fainted and trying to give him water, he exclaims:" Drink! ... No, don’t drink ... So , died and the like ...

The speech of people who are accustomed to using such “parasite words” can easily become comically meaningless.

On the other hand, good habits are very valuable in human life. They even more than skills liberate consciousness, providing automation not only of the technique for performing certain necessary acts in life, but also of the fact of their commission. It is useful to be able to maintain order in your workplace, but it is even more useful to turn the maintenance of this order into a habit, by virtue of which a person involuntarily - without thinking or caring about it - puts objects in a certain place. It is necessary to have hygiene skills, that is, to be able to wash hands, brush teeth, but this is not enough; one must also have the appropriate habits, that is, develop a need for these actions in oneself, not be able to do without them without experiencing an unpleasant feeling.

The remarkable Soviet teacher A. S. Makarenko wrote: “Our task is not only to cultivate the right, reasonable attitude to issues of behavior, but also to cultivate the right habits, that is, such habits when we would act correctly not because sat down and thought, but because otherwise we cannot, because we are so used to it."

From the foregoing it is clear how important the development of good habits and the fight against bad, bad habits are of great importance.

Habits are a particularly striking example of the formation of a dynamic stereotype in the cerebral cortex. As we know, a well-fixed dynamic stereotype is characterized by the fact that the entire given sequence of conditioned reflexes can be reproduced only by one “trigger” signal. So the usual actions are carried out “by themselves”, automatically, in the presence of a certain situation, which is a “trigger” signal for them.

One of the important differences between habits and skills is that skills are developed, as a rule, as a result of a conscious exercise, while habits very often arise unintentionally, without any conscious exercise. From the physiological side, this is explained by the fact that the formation of new temporary connections and systems of
these connections, for example, dynamic stereotypes, can occur not only in areas with optimal excitability, but also in parts of the hemispheres that are at a certain degree of inhibition. On this kind of unconscious formation of new temporary connections, IP Pavlov wrote: “Let this act not be recognized then, but it happened, and under favorable conditions it can appear ready in the mind and be presented as having arisen is unknown how.” Indeed, many habits appear to a person to have arisen in him "unknown how."

However, from the fact that habits can be formed unintentionally and without control of consciousness, it does not follow that they cannot be developed consciously. On the contrary, from the laws of higher nervous activity it follows that most quickly and firmly temporary connections are formed in areas with optimal excitability. Therefore, a person can always consciously and deliberately develop desirable habits and eradicate undesirable ones.

In order to consciously develop a desirable habit in oneself, one must steadily, never deviating from the decision made, act in a certain direction. Even more stringently, this rule must be respected in the eradication of unwanted habits. Only a person who is able to arm himself with irrevocable determination and consistently enforce it, without giving himself any indulgences, can learn to manage his habits and, therefore, manage his behavior.

Conscious education of habits requires a strong will, but it is also the best means of educating the will.

§73. Creative Activity

In the proper sense, creative activity is called, as we have said, an activity that provides new, original products of high social value. Scientific research or invention, creation of an artwork, finding by a Stakhanovite worker a way to increase labor productivity or a collective farmer innovator of a new method of increasing productivity are typical examples of creative activity.

The processes of creativity can proceed very differently, depending on the content of the activity itself and on the individual characteristics of the personality and talent of the creator. However, you can specify some points that are characteristic of most cases of creative activity.

1) Inspiration

The first thing that always attracts attention when analyzing the process of creativity is that state of special tension and uplift of all forces and abilities, of a person, which is indicated by the word inspiration. It is usually associated with the most important, decisive moments of creative activity - with the emergence of a concept and idea of a work, with finding a solution to a scientific problem, the principle of an invention or an idea of an operational plan, with the creation of central images of a work of art and its most penetrating and exciting moments.

The state of inspiration is characterized primarily by a full focus on the subject of creativity and a distraction from everything else.

One of the fellow countrymen M.A. Sholokhov, his fishing companion, told such a case. “Having abandoned fishing rods, Sholokhov crouched on the bank of the Don with a pipe in his teeth. He sat like that, not moving, looking at one point, for more than an hour. In vain did the companion speak to him - he did not receive an answer. The tense pose, the motionless gaze fixed on the water, the complete indifference to the surroundings frightened the comrade. He decided to follow every step Sholokhov. Finally, as if waking up from oblivion, Sholokhov began to collect gear and ran home. All day and all night he then sat at the table and wrote. "

The result of such an exceptional focus is the maximum aggravation of consciousness, its maximum clarity. "Inspiration, according to Pushkin, is the disposition of the soul to the liveliest acceptance of impressions and consideration of concepts, and, consequently, an explanation of these." This is the reason for the extraordinary productivity of the work in a state of inspiration.

But just because consciousness is entirely focused on the subject of creativity, the very process of creativity is very little understood in a state of inspiration. An artist usually cannot answer the question of how the most inspirational images were born in him, a scientist cannot say how the decisive idea of his discovery came to mind at the moment of “insight”. In a state of inspiration, a person is less than ever able to monitor how his processes of thinking and imagination proceed. Therefore, in a state of inspiration, creative processes are little conscious. But this does not mean that creativity itself, in a state of inspiration, is sometimes thought to be “unconscious”. Just the opposite. The unconsciousness of creative processes is a consequence of the maximum
consciousness of creativity itself.

Inspiration is characterized not only by focusing on the subject of creativity, but also by emotional immersion in it, by a deep capture of those feelings that are excited by the subject of creativity.

We gave examples related here in § 42 and 54. Inspiration is a state of great emotional uplift, in which, however, an exceptional clarity of consciousness is maintained.

One of the most important psychological features of a truly productive creative process, most clearly manifested in a state of inspiration, is the joint work of imagination and thinking. Creativity is equally impossible without imagination, and without strict critical thought. According to the figurative expression of Leo Tolstoy, “a thinker, artist and critic must act simultaneously in a writer”.

2) Preparatory stages of the creative process

It often happens that the main ideas that provide a solution to a scientific problem, or the central moments of a work of art, are created during relatively short periods of a great upsurge of inspiration. But this does not mean that the whole process of creativity is exhausted by such “flashes of inspiration”. Short periods of exceptional creative productivity always represent only the result of tremendous preliminary work. If the solution to a very difficult scientific problem sometimes comes to the scientist’s head as if suddenly, without any efforts, at the most unexpected moment - on a walk, in a tram, in a theater, in bed before falling asleep or after waking up, then in fact, of course, not this moment gives a decision; it is only the end point of a long process of creative work.

Preliminary work serving as the preparation of a creative solution to a problem, consists in studying, thinking over this task and in collecting the necessary materials. Such preparation takes place not only in the work of a scientist, but also in the work of a writer, artist. From the materials that Tolstoy used when writing "War and Peace", he, in his own words, "formed a whole library."

However, the preparatory work is not limited to collecting materials specifically for the implementation of this plan. No less important is what can be called a collection of materials “for future use”, which is the necessary moment in the creative activity of both a scientist and an artist. Every good specialist is constantly busy collecting evidence in the field of his specialty and pondering, comprehending them. Therefore, faced with a new problem, he already has a significant supply of preparatory material, facts and ideas. The ability to give quick solutions to new issues is the result of such general preparation in a certain field of creative activity.

In some specialties, this kind of “preparing oneself” for solving creative problems is even more important than lengthy preliminary work specifically on this problem. This is the case, for example, in the activities of a military leader, who is often deprived of the opportunity to study and ponder the problem that confronts him for a long time, and therefore must prepare himself and his mind in advance in order to quickly give a creative solution to new, unexpected, unforeseen problems.

In the field of art, creative activity is completely impossible without "collecting material for the future." Let us recall the words of Gorky that we quoted: “It is necessary to look very closely at one hundred, another priests, shopkeepers, workers, in order to approximately correctly write the portrait of one worker, priest, shopkeeper.” If a writer first began to “look closely” at a certain category of people only when he starts working on a work, it would take him several years to create each individual image. The artist’s creative work presupposes a sufficiently large supply of life observations. The continuous replenishment of this stock is affected by that artist’s observation, which is a necessary condition for artistic creation.

Studying the qualities of the mind and the volitional qualities of a person, we noted that the true speed of thought, as well as genuine decisiveness, has nothing to do with haste. The negative value of haste should be remembered in the analysis of creative processes. Every major work should not only be carefully prepared, but also “worn out”. In the words of Alexei Nikolayevich Tolstoy, “impatience must be restrained.” Great figures of art and science were able to carry out their creative ideas for years, and as a result of this they created truly significant works.

Darwin’s work on the Origin of Species is very instructive from this point of view.

In 1837, for the first time, separate sketches of ideas related to the theory of evolution appeared in his notebook. There are reasons to think that in 1839 the general outlines of the theory were already outlined. However, only three years later, in 1842, Darwin wrote on paper the first, still relatively brief, outline of his theory. This “Essay of 1842” already contains all the main sections, all the basic ideas of the “Origin of Species,” but it is 12 times shorter than the famous book and has the character of draft, unformed sketches. Two years later, Darwin wrote four times more detailed and much more finished "Essay on 1844." However, another 15 years passed before Darwin considered it possible to begin writing the book itself. These 15 years were
entirely devoted to the further collection of materials and the finding of new evidence for the basic principles of the theory.

It is easy to understand that after such preparatory work the writing of the book could be done in a very short time: Darwin began to write The Origin of Species in July 1858, and in April 1859 the book began to be published.

3) Labor and creativity

Creativity is, above all, great, constant and intense work. Only he can do it, who knows how to work, who is capable of hard work, tireless, sometimes painstaking work, “terrible work”, as L.N. Tolstoy called the creative work of the writer. Gorky claimed that his success was primarily due to "the ability to work, love of work."

The main condition for the productivity of creative activity is consistency in work and systematic, regular work.

The fact that the most important moments of creativity are related to the state of inspiration can, with a superficial approach to the question, create the impression that creative work is carried out mainly by short flashes and does not require diligent and regular work. This impression, however, is deeply mistaken. Firstly, as we have already seen, rich creative products at the moments of inspiration are created not only by these moments, but by all the long previous work. Secondly, the very state of inspiration is for the most part the result of systematic, regular work. You need to be able to force yourself to work regularly and in the absence of inspiration; only under this condition can one count on any frequent appearance of inspiration itself.

It is extremely instructive to get acquainted with the attitude to this issue of Tchaikovsky, which can serve as an example of a truly inspired artist. “You always need to work,” he wrote, “and a true honest artist cannot sit idly by under the pretext that he is not located. Inspiration is such a guest who does not like to visit the lazy. She appears to those who call upon her. The whole secret is that I worked daily and carefully. In this regard, I have an iron will over myself, and when there is no particular desire for classes, I always know how to force myself to overcome the disagreement and get carried away. “I put myself at all costs to do something every morning and achieve a favorable state of mind for work.”

Turgenev had the same attitude to creative work when he wrote to a young writer: "There is nothing to wait for the so-called gracious minutes of inspiration: it will come - all the better, but no - still work."

Inspiration is the most favorable condition for creative work. But it itself comes as a result of this work. “It seems to me,” wrote Gorky, “that inspiration is mistakenly considered to be the causative agent of work, probably it is already in the process of successful work, as a consequence of it.”

Questions To Repeat

1. What is the relationship between the motives and objectives of the activity?
2. What is called the "height of motivation"?
3. What is called a skill?
4. What is the relationship between skills and creativity?
5. List the most important points characterizing the formation of skills.
6. What is the difference between genuine craftsmanship and simple skill?
7. Under what conditions does repetition become an exercise?
8. What is a habit called and what is its difference from a skill?
9. What are the characteristics of the state of inspiration?
10. What forms are the preparatory stages of the creative process in various activities?
11. What conditions contribute to the productivity of creative work and, in particular, the emergence of a state of inspiration?

Chapter XII. PSYCHOLOGICAL CHARACTERISTICS OF PERSONALITY
§74. Mental Properties Of Personality

Psychology studies not only individual mental processes and those peculiar combinations of them that are observed in complex human activities, but also the mental properties that characterize each human person: her interests and inclinations, her abilities, her temperament and character.

You can not find two people who are completely identical in their mental properties. Each person differs from other people in a number of features, the totality of which forms his individuality.

Speaking about the mental properties of a personality, we mean the essential, more or less stable, permanent features of it. Every person happens to forget something; but not for every person "forgetfulness" is a characteristic feature. Every person once experienced an irritated mood, but "irritability" is characteristic only of some people.

The mental properties of a person are not something that a person receives in a finished form and keeps unchanged until the end of his days. Mental properties of a person - his abilities, his character, his interests and inclinations - are developed, formed in the course of life. These features are more or less stable, but not constant. There are no completely unchanging properties in a human person. As long as a person lives, he develops and, therefore, changes in one way or another.

No psychic trait can be congenital. A person is not born into the world, already having any certain abilities or character traits. Only some anatomical and physiological features of the body, some features of the nervous system, sensory organs and, most importantly, the brain can be innate. These anatomical and physiological features that form the inborn differences between people are called inclinations. Makings are important in the process of forming a person’s individuality, but they never predetermine it, that is, they are not the only and main condition on which this individuality depends. Inclinations, from the point of view of the development of mental characteristics of a person, are ambiguous, i.e.

IP Pavlov found that there are significant individual differences in the types of nervous system, or, what is the same, types of higher nervous activity. Thus, the question of the natural premises of individual differences, the so-called “makings,” received in IP Pavlov’s works his truly scientific basis.

Different types of higher nervous activity differ from each other in the following three ways: 1) the strength of the main nervous processes - excitation and inhibition; this sign characterizes the efficiency of cortical cells; 2) the balance between excitation and inhibition; 3) the mobility of these processes, i.e., their ability to quickly replace each other. These are the basic properties of the nervous system. Different types of higher nervous activity differ from each other in a different combination, a combination of these properties.

The type of higher nervous activity is the main characteristic of the individual characteristics of the nervous system of a given person. Being a congenital feature, the type of higher nervous activity does not, however, remain unchanged. It changes under the influence of living conditions and human activities, under the influence of “continuous upbringing or training in the broadest sense of these words” (Pavlov). “And this is because,” he explained, “because next to the above properties of the nervous system, its most important property, the highest plasticity, is continuously acting.” The plasticity of the nervous system, i.e., its ability to change its properties under the influence of external conditions, is the reason that the properties of the nervous system that determine its type - strength, balance and mobility of nervous processes - do not remain unchanged throughout a person’s life.

Thus, one should distinguish between the innate type of higher nervous activity and the type of higher nervous activity that has developed as a result of living conditions and, above all, upbringing.

A person’s individuality - his character, his interests and abilities - always in one way or another reflects his biography, that life path that he has passed. In overcoming difficulties, will and character are formed and tempered, and in the pursuit of certain activities, the corresponding interests and abilities develop. But since the person’s personal life path depends on the social conditions in which the person lives, the possibility of the formation of certain mental properties in him depends on these social conditions. “Whether an individual like Raphael will be able to develop his talent,” wrote Marx and Engels, “depends entirely on demand, which, in turn, depends on the division of labor and on the conditions for enlightening people that it generates.” Only the socialist system creates the conditions for the full and comprehensive development of the individual. And indeed the central importance for the formation of a person’s individuality, his interests and inclinations, his character is the worldview, that is, the system of views on all phenomena of nature and society surrounding a person. But
the worldview of every single person is a reflection in his individual consciousness of a social worldview, social ideas, theories, views. Never before has the history of mankind seen such massive heroism, such feats of courage, such a selfless love for the motherland, as among Soviet people in the days of the Great Patriotic War and in the days of peaceful labor. The decisive condition for the development of all these qualities was the world outlook of the Lenin-Stalin party, in the spirit of which the consciousness of advanced Soviet man grew, was brought up and developed.

Human consciousness is a product of social conditions. Recall the words of Marx that we quoted earlier. "... Consciousness from the very beginning is a social product and remains it, while people exist at all.

However: “Public ideas and theories are different. There are old ideas and theories that have outlived their lives and serve the interests of the obsolete forces of society ... There are new, innovative ideas and theories that serve the interests of the advanced forces of society ”(Stalin). The assimilation by a person of an advanced worldview, advanced views and ideas is not carried out automatically, by itself. First of all, it requires the ability to distinguish these advanced views from the old, obsolete views that pull a person back and impede the full development of his personality. And besides, simple “knowledge” of advanced ideas and views is not enough. It is necessary that they be deeply “experienced” by a person, become their beliefs, on which the motives of his actions and actions depend.

Conditioned by the person’s personal life path, his beliefs, in turn, influence the course of this path, directing the person’s actions, his lifestyle and activities.

In childhood, upbringing and education are crucial for the formation of a person’s mental characteristics. As the human personality is formed, self-upbringing becomes more and more important, that is, a person’s conscious work on developing his own worldview and convictions, on forming the desired mental properties and eradicating the undesirable. Every person to a large extent is himself the creator of his personality.

§75. Interests And Inclinations

The first thing that characterizes a person’s mental side is his interests and inclinations, in which the personality’s orientation is expressed. The very fact of the orientation of our consciousness at the moment to any particular subject is called, as we already know, attention. By interests, we mean such an attitude towards an object that creates a tendency to pay attention to it mainly. If, characterizing a person, we note his “interest in the theater”, then by this we mean that he seeks to be in the theater as often as possible, reads books about the theater, and doesn’t miss newspapers messages, notes and articles relating to the theater, that participating in a conversation or listening to radio broadcasts, he draws attention to everything in one way or another related to the theater, which, finally, his thoughts are often directed to the theater.

There is some difference between the concepts of “interest” and “addiction”. Interest refers to a focus on a specific subject, while inclination, a focus on a particular activity. Interest is a tendency to familiarize yourself with some subject, to study it, the desire to perceive it, to think about it. Addiction is the tendency to engage in any particular activity.

Often, interest in a subject is associated with a penchant for related activities. Interest in chess almost always arises along with a penchant for playing chess. But interest can exist regardless of addiction. Not all people interested in theater have a penchant for theatrical activity. You can have a lively and steady interest in history and no inclination for the activities of a historian.

At the heart of the emergence of interests and inclinations are needs. However, not every need generates a sustained interest that characterizes a person’s orientation. The need for food is one of the basic needs of every person. When this need does not find sufficient satisfaction, that is, when a person is hungry, he has an “interest in food”; his thoughts focus on food. But such an “interest” is temporary and passes as soon as a person is full; it does not express a stable orientation of the person, he is not a characteristic personality trait.

Interests are the most important driving force for the acquisition of knowledge, for broadening the horizons of a person, for enriching the content of his mental life. Lack of interests or poverty, their insignificance makes a person's life gray and empty. For such a person, the most characteristic experience is boredom. He constantly needs something outside to entertain, amuse him. Left to his own devices, such a person inevitably begins to get bored, because there is no such thing, such a thing, which in itself, regardless of external entertainment, would attract him, fill his thoughts, spark his feelings. A person with rich and deep interests does not know boredom.

Characterizing the orientation of man, we first of all pay attention to the content and breadth of his interests. If
a person’s orientation is limited only by an isolated interest, which has no support either in the worldview or in genuine love of life in all the richness of its manifestations, then no matter how significant the subject of this interest is in itself, neither normal development nor a full-fledged life of an individual is possible.

The full development of the personality presupposes a wide breadth of interests, without which the rich content of mental life is impossible. The abundance of knowledge that amazes us, which distinguishes many prominent people, is based on such a breadth of interests.

When the daughters asked Marx to indicate his favorite saying, he wrote an old Latin proverb: "Nothing human is alien to me."

A. M. Gorky in his conversations with young writers tirelessly called for expanding the circle of interests and knowledge. “In our world,” he said, “nothing exists that would not be instructive.” “Recently,” Gorky said, “one novice writer wrote to me: ‘I don’t have to know everything, and no one knows everything.’” I believe that nothing worthwhile will be developed from this writer. A person who, even in his youth, puts limits on his interests and his curiosity, who tells himself in advance: “I should not know everything at all,” such a person, according to Gorky, cannot achieve anything significant.

The breadth of interests does not exclude, however, the presence of any one main, central interest. Moreover, the diversity of interests only in that case is a valuable quality of an individual, if these interests are united by some basic vital core.

In the same answers to his daughters, where Marx, as his favorite saying, wrote a call for unlimited responsiveness to all human interests, he called unity of purpose as his hallmark. And indeed, his whole life was directed towards the achievement of a single goal - the liberation of the working class.

Mikhail I. Kalinin, speaking about the life path of I.V. Stalin, noted the unified line of the life and work of the great leader: “The seventeen-year-old youth set the task of his life to free the oppressed from the chains of capitalism, from all types of oppression. And he surrendered to this idea without a trace. His whole subsequent life was subordinate to this idea, and only to her.” The greatest example of conscious determination can be the words of Comrade Stalin: “If every step in my work to elevate the working class and strengthen the socialist state of this class was not aimed at strengthening and improving the position of the working class, then I would consider my life aimless”. The unity of the life goal, which finds its expression in the central vital interest, is the core around which all other human interests are grouped.

Everyone should be interested in - at least many - but with one thing in particular.

Suvorov can serve as an example of a person with an exceptionally wide range of interests, subordinated, however, to one sharply expressed central interest. From an early age he showed interest and a penchant for military affairs, which turned into a genuine passion. As a teenager, while still in the village, in his father’s house, he subordinated his whole life to preparing for military activities: he read all the books on military history and technology available to him, spent most of his time in solving tactical tasks, accustomed his body to bear the hardships and deprivations of fighting life. And throughout his entire life devoted to military work, Suvorov never missed a chance to enrich his knowledge in any of the military specialties; at the age of 60, he specially engaged in the study of maritime affairs and passed the midshipman exam.

But along with this, Suvorov was interested in literally all areas of knowledge, he read and studied all his free time until old age, and as a result, he was one of the most educated people of his time. He knew mathematics, geography, philosophy, history. He devoted a lot of time to learning languages. He knew languages: German, French, Italian, Polish, Finnish, Turkish, Arabic, Persian. A particularly large place in the circle of his interests was fiction. He not only constantly read the works of the best writers and carefully followed the current literature, but also wrote poetry. The exceptional breadth of interests and boundless curiosity belonged to the most characteristic features of the great Russian commander.

Equally important is the sustainability of interests. There are people who are interested in a wide variety of subjects, but not for long, one interest quickly gives way to another. For some people, these transient interests are very strong and emotionally exciting; such people are usually called "addicted" people. Becoming a constant and characteristic feature of a person, inconstancy and instability of interests become a disadvantage. A person who is not capable of having stable interests cannot achieve significant success in any field of activity.

Interests have one more feature - this is their effectiveness, or strength.

Interest can be passive in nature, expressed only in the fact that a person willingly stops his attention on any object if this object falls into his field of vision. This kind of interest is sufficient for the student to carefully listen to the story in the lesson, the teacher and willingly, even “with pleasure” to prepare the lesson in this subject, but he cannot encourage the student to actively, on his own initiative, look for sources to expand
knowledge in this area. The extreme degree of passivity of interest is expressed in the fact that a person in relation to an object of interest to him is limited only by intentions to deal with it: “it will be necessary to start reading historical books”, “it would be nice to go to the museum”. For some people, this kind of intention remains forever unfulfilled.

In contrast, a truly effective interest encourages a person to actively seek satisfaction and becomes the strongest motive for activity. A person driven by such an interest can overcome all kinds of obstacles and make any sacrifices.

The interest in military affairs, which reached Suvorov exceptional effective strength in his childhood, defeated the physical weakness of the body, the categorical unwillingness of his father to prepare the boy for military service, and the absence of any help in the study of military art. Lomonosov’s life is a continuous feat, the main driving force of which was the extraordinary strength of interest and love for science.

§76. Abilities And Giftedness

Abilities are called such mental properties that are the conditions for the successful implementation of any one or more activities.

Ability we call, for example, observation, which is of great importance in the activities of a writer, scientist, teacher. Abilities we call visual memory, which is directly related to the work of the artist-painter; emotional memory and emotional imagination, which play a large role in the writer's work; technical imagination necessary in the activities of an engineer or technician; ear for music. Abilities we can call those qualities of the mind that are the condition for the successful implementation of many types of activities.

The totality of those inclinations that make up the natural prerequisite for the development of abilities is called giftedness.

Most important among the inclinations are those signs that underlie the difference in the types of higher nervous activity: strength, balance and mobility of the processes of excitation and inhibition. Therefore, a person’s giftedness is intimately connected with his innate type of higher nervous activity.

However, as indicated earlier, the congenital type of nervous activity does not remain unchanged, but develops and changes in the course of life, as a result of which it is necessary to distinguish between the congenital type of higher nervous activity and the type of higher nervous activity that has developed in life. The properties of nervous processes that characterize the type of nervous activity that has developed as a result of development are crucial for understanding the physiological basis of abilities. From the strength, equilibrium and mobility of the processes of excitation and inhibition depends on the speed and strength of the formation of various kinds of systems of temporary connections.

Consequently, these properties of nervous processes are essential for the success of a person performing one or another activity.

The success of a person performing any activity depends not only on his abilities. First of all, and most of all, it depends on the availability of relevant knowledge, skills, that is, on what kind of system of temporary connections he has developed. Hence the importance of training for a person’s suitability to engage in one or another business.

But the abilities themselves, as mentioned above, although they depend on natural inclinations, are always the result of development. The development of abilities is carried out in the process of the very activity for which these abilities are necessary, and above all in the process of training this activity. In the learning process, firstly, new systems of temporary connections are developed, that is, new knowledge, skills and abilities are formed, and secondly, the basic properties of nervous processes are improved, that is, the corresponding abilities develop. In this case, the second process - the development of abilities - is much slower than the first - the formation of knowledge and skills.

One of the characteristic signs of good inclinations for the development of any ability is an early and, moreover, independent manifestation of this ability that is not requiring special pedagogical measures. It is known that some children, long before the start of systematic instruction in drawing or music, draw attention to themselves with their abilities for these subjects. So, for example, in Rimsky-Korsakov's ear for music was clearly manifested by the age of four. The ability to fine art began to appear in Repin, Surikov, Serov at the age of 3-4 years.

In such cases, they often speak of “innate” or “natural” abilities. However, in these cases, only inclinations can
be congenital, that is, some anatomical and physiological features favoring the development of abilities. Even the most musically capable children must learn to sing or recognize melodies correctly; even the most gifted children should learn to draw. The peculiarity of these children lies only in the fact that the process of this learning takes place at such an early age, so fast and easy, in most cases during the game, that it eludes the attention of parents and teachers.

However, it is far from always possible to observe such an early manifestation of abilities and giftedness. Very often they first begin to appear relatively late, but in the future they reach extremely high development. In these cases, the development of abilities becomes possible only as a result of a systematic study of this activity and its systematic occupation. Therefore, the absence of an early manifestation of any ability should never serve as the basis for the conclusion that there are no inclinations for this ability; it is possible to reliably judge giftedness only by the results of training.

One should not confuse the giftedness of any activity with the mastery of this activity. Endowment is the natural premise of ability; mastery is a combination of knowledge, skills, that is, the most complex systems of temporary connections that arise in the brain during life as a result of learning in the broad sense of the word. And abilities are not the same as knowledge, ability, skills. Of the many beginning writers, it can be said that they exhibit great abilities, but one cannot yet say that they possess great writing skills.

Drawing a distinction between giftedness, ability and skill, we must at the same time emphasize the closest connection between them. The development of abilities depends on giftedness and, at the same time, the ease and speed of acquiring mastery. The acquisition of skill, in turn, contributes to the further development of abilities, while the lack of the necessary knowledge and skills impedes the development of relevant abilities.

No single ability can ensure the successful completion of an activity. Observation alone, no matter how perfect, or just emotional imagination, no matter how strong it is, does not make a good writer. The presence of the finest musical ear does not mean that the owner can become a good musician, just as the presence of a technical imagination alone does not mean that a person can become a good design engineer. The success of any activity always depends on a number of abilities. So, for example, for the writer's work, observation and figurative memory, and a number of qualities of the mind, and the abilities associated with writing, and the ability to concentrate strongly, and a number of other abilities are of paramount importance.

That kind of combination of abilities that provides the ability to creatively perform any activity is called a talent for this activity.

If the presence of one pronounced ability does not yet indicate high giftedness in a given area, then the weakness of any one ability can never be the basis for declaring itself unsuitable for this activity. You can become a great writer with poor verbal memory in your youth, or a great artist with poor visual memory. If other abilities required for this activity are quite pronounced, then a person gets the opportunity to engage in this activity a lot and relatively successfully, and this creates favorable conditions for the development of a lagging ability. As a result, she can “equalize” so much that there will be no trace of her initial weakness.

A very strong, effective and stable tendency to some kind of business, a tendency that becomes a true love for this business, usually indicates the presence of the most important abilities associated with this business. At the same time, such a love of business is itself an essential factor in the development of talent. “Talent develops from a feeling of love for the cause,” Gorky wrote, “it is even possible that talent — in essence, is only love for the cause, for the process of work.” These words do not need, of course, to be understood in a literal sense - talent includes much more than love for the cause - but a very deep and true thought is expressed in them. In the absence of some basic core of abilities, a large, passionate love for the cause cannot arise, and if it arose,

The biography of the greatest speaker of antiquity, Demosthenes, is very instructive on this side. At a young age he had the opportunity to hear a speech by an outstanding speaker. He was shocked at the enormous impact on people of the art of eloquence, and decided at all costs to succeed in it. After careful preparation under the guidance of the best teachers, he made attempts to speak in public, but failed completely and was ridiculed by the people. He understood that this failure was completely legitimate and that he had a number of disadvantages that were unacceptable to the speaker: a weak voice, incorrect pronunciation, short breath, which forced him to make frequent pauses that violate the meaning of phrases, awkward movements, confused construction of speech, etc. that would be enough people to declare himself incapable of oratory and abandon his original intentions. Otherwise, Demosthenes acted. With unparalleled energy and perseverance, he set about overcoming his shortcomings. To strengthen his voice and achieve deeper breathing, he practiced making long speeches on the run or while climbing a mountain. To eliminate the shortcomings of pronunciation, he took small pebbles into his mouth and ensured that, even under this condition, his speech was clean and intelligible, he arranged for
himself a special dungeon in which he could engage in oratory exercises alone and for a long time. Sometimes he stayed in this dungeon for two to three months; so as not to allow himself to go out, he shaved his hair from half his head, giving himself a look that did not allow him to appear in public. Otherwise, Demosthenes acted. With unparalleled energy and perseverance, he set about overcoming his shortcomings. To strengthen his voice and achieve deeper breathing, he practiced making long speeches on the run or while climbing a mountain. To eliminate the shortcomings of pronunciation, he took small pebbles into his mouth and ensured that, even under this condition, his speech was clean and intelligible, he arranged for himself a special dungeon in which he could engage in oratory exercises alone and for a long time. 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Others think - those who hear sounds,
Those who see the sun, the stars and the moon: -
How can she describe her beauty without sight,
How will she understand the sounds and spring without hearing!?

I will hear the smell and dew cool, I
catch the light rustling of leaves with my fingers,
Drowning in the gloom, I will go through the garden,
And ready to dream, and I love to say ...

I will see with my mind, I will hear with my senses,
And I will clothe a free world with a dream ...
Each of the sighted will describe beauty,
smiles eh clear bright beam?

I don’t have hearing, I don’t have eyesight,
But I have more - the feelings of the living
spaces: Flexible and obedient, burning inspiration.
I wove life a colorful pattern ...

The remarkable development of Skorokhodova’s literary abilities is a consequence of, on the one hand, the care for the person that the party and the Soviet government show, and on the other hand, the tireless work on herself of Skorokhodova herself and her passionate love for poetry. “Poetry is my soul,” she writes in one of her articles. Passionate love for work and tireless work made it possible for Skorokhodova to compensate for her lacking abilities by others and achieve the full development of her giftedness.

From what has been said, it follows that the lack of any particular private ability should never stop a person if inclinations, interests and other abilities seriously motivate him to engage in this activity.

Analyzing the question of creative activity, we saw that creativity is always a great and intense work. But the more gifted, the more talented a person is, the more creativity he brings into his work and, therefore, this work should be more intense. Therefore, the prejudice arising under the conditions of the exploiter system should be resolutely rejected, according to which good abilities supposedly save a person from the need to work, talent supposedly replaces labor. In contrast, we can say that talent is “love of the process of work”, love of work. Propensity and ability to work are the most important components of true talent.

A creative attitude to work, which has become a characteristic feature of advanced Soviet man, is one of the most important conditions for the mass flowering of talents in the USSR. Every kind of work in us becomes a creative work, and thanks to this, in all types of activity we can observe manifestations of high giftedness, talent.

In order to consciously build your life, it is very important to be able to correctly assess your abilities. But attention should not be directed at all at how great my abilities are, how high my giftedness for this or that activity, but on what I am more gifted to, what abilities are more clearly manifested in me. The height of giftedness is revealed only by the results of a person’s life, and it is impossible to know these results in advance. The nature and direction of giftedness are manifested earlier: in stable interests and inclinations, in the comparative success of various types of activities, in the comparative ease of assimilation of different subjects.

The famous Russian writer Sergei Timofeevich Aksakov wrote his first book when he was 56 years old, and the works in which his literary talent was fully developed, Family Chronicle and Bagrov’s Grandchild’s Childhood, were written by him at the age of 65-67 years old. Who could predict the height of his giftedness in his youth? But the nature of his abilities showed up very early: even in his childhood he was distinguished by an extraordinary observation, a passionate and steady love for literature, a penchant for literary pursuits.

Of great importance for the question of giftedness and abilities is I.P. Pavlov’s instruction on specially human types of higher nervous activity: the relative predominance of the first or second signaling system in individual manifestations of the higher nervous activity of a person gave reason to I.P. Pavlov to single out “artistic” and “
mental "types. Features of the interaction of two signaling systems are most sharply detected in extreme representatives of these types. The "artistic" type is characterized by increased sensitivity to excitations through the first signaling system: the richness and brightness of the direct impressions delivered by the sensory organs distinguishes representatives of this type. On the contrary, the “thinking” type is characterized by ability and a tendency to abstract thinking. As already noted in the presentation of the question of memory types, that peculiarity of giftedness that distinguishes each person is the key to human value for society. There are no people who are not capable of anything. Each person has a specific talent characteristic of him, which provides the opportunity for the successful implementation of certain types of activities. A wide range of interests and concern for the comprehensive development of abilities are the most important conditions for this giftedness to manifest as soon as possible and more definitively.

In our Soviet Union, youth are provided with the broadest opportunities for obtaining an education and for choosing a profession according to their inclinations and abilities. Our life opens up boundless prospects for each person to use his powers and abilities. Under these conditions, dividing people into “capable” and “incapable” makes no sense. Nikolai Ostrovsky rightly said: “Only lazy people are not talented with us. They do not want to be them. And nothing is born out of nothing, water does not flow under a lying stone.”

But the question becomes even more meaningful to us: what is this person most capable of, what are his abilities and his giftedness?

§77. Temperament

Since ancient times, it is customary to distinguish four main temperaments: choleric, sanguine, melancholic and phlegmatic. Temperament refers to individual characteristics of a person, expressed: 1) in emotional excitability (the speed of the emergence of feelings and their strength), 2) in a more or less tendency to a strong expression of feelings outside (in movements, speech, facial expressions, etc.), 3) in speed of movements, general mobility of a person.

Choleric temperament is characterized by quickly arising and strong feelings, sanguine - by quickly arising, but weak feelings, melancholic - by slowly arising but strong feelings, phlegmatic - by slowly arising and weak feelings. Characteristic of choleric and sanguine temperaments are, in addition: 1) speed of movements, general mobility, and 2) tendency to a strong expression of feelings outside. For melancholic and phlegmatic temperaments, on the contrary, they are characterized by: 1) slowness of movements and 2) weak expression of feelings.

Typical representatives of each of the temperaments can be described as follows.

Choleric is a fast person, sometimes impulsive, with strong, quickly flickering feelings, brightly reflected in speech, facial expressions, gestures; often - quick-tempered, prone to violent emotional outbursts.

Sanguine - a person quick, agile, giving an emotional response to all impressions; his feelings are directly reflected in external behavior, but they are not strong and are easily replaced.

Melancholic - a person characterized by a relatively small variety of emotional experiences, but their great strength and duration; he does not respond to everything at all, but when he responds, he experiences very much, although he expresses little of his feelings outside.

The phlegmatic person is a slow, balanced and calm person who is not easy to emotionally hurt and cannot be pissed off; his feelings almost never appear outside.

Four characters of Turgenev’s novel “The Eve” can serve as characteristic representatives of the four temperaments: Insarov (choleric temperament), Shubin (sanguine), Bersenev (melancholic), Uvar Ivanovich (phlegmatic). Bright representatives of the choleric temperament are the old Prince Bolkonsky (War and Peace) and Chertophanov, the hero of two stories from Turgenev's Notes of the Hunter (Chertophanov and Nedopyuskin and The End of Chertophanov). The finished type of sanguine is Stepan Arkadievich Oblonsky ("Anna Karenina").

The contrast between sanguine and phlegmatic temperaments is clearly shown by Gogol in the images of Kochkarev and Podkolesin ("Marriage"). The contrast between sanguine and melancholy temperaments is clearly expressed when juxtaposing two female images in War and Peace: Lisa, the wife of Prince Andrei (the “Little Princess”), and Princess Marya.

The characteristic features of temperaments are explained by those properties of higher nervous activity, which are the basis for the division of types of higher nervous activity: 1) the strength of the nervous processes, 2) the
balance or unbalance of the processes of excitation and inhibition, 3) the mobility of the nervous processes. For example, the temper of a choleric, his tendency to violent affective outbursts is explained by the lack of balance between the processes of excitation and inhibition, the predominance of excitation over inhibition. This type of nervous system is called the “excitable,” or “rampant,” type. The difference between emotional liveliness and the general mobility of a sanguine person, on the one hand, and emotional equanimity and the general slowness of a phlegmatic person, on the other hand, is explained by differences in the degree of mobility of nervous processes.

We know that the type of nervous system is not something completely unchanged. Temperament is not unchanged. Often temperament changes with age; it can change “under the influence of life education”. But in any case, temperament is a fairly stable property, which is one of the characteristic mental properties of a person.

It would be a mistake to think that all people can be divided into four basic temperaments. Only a few are pure representatives of the types of choleric, sanguine, melancholic or phlegmatic; in the majority, we observe a combination of individual features of one temperament with some features of another. One and the same person in different situations and in relation to different spheres of life and activity can detect traits of different temperaments.

So, for example, in Pierre Bezukhov (“War and Peace”), in most ordinary everyday manifestations, traits of a phlegmatic temperament are striking: slowness, good-natured calm, equanimity. But in rare, extreme circumstances he discovers a temper typical of a choleric and not only gives violent emotional outbreaks, but also commits under the influence of their extraordinary acts. At the same time, we can notice in him the features characteristic of a melancholic temperament: slowly arising, but strong, steady and almost undetectable feelings.

Each of the temperaments has its positive and negative sides. Passion, activity, choleric energy, mobility, liveliness and responsiveness of a sanguine person, depth and stability of feelings of a melancholic, calm and lack of haste phlegmatic are examples of those valuable personality traits, the inclination to which is associated with individual temperaments. But not every choleric is energetic and not every sanguine is responsive. These properties must be developed in oneself, and temperament only facilitates or complicates this task. Choleric is easier than phlegmatic to develop speed and energy of action, while phlegmatic is easier to develop endurance and composure.

To use the valuable aspects of his temperament, a person must learn to own it, subordinate it to himself. If, on the contrary, temperament will control a person, control his behavior, then at any of the temperaments there is a danger of developing undesirable personality traits. Choleric temperament can make a person unrestrained, sharp, prone to constant "explosions." Sanguine temperament can lead a person to frivolity, a tendency to scatter, insufficient depth and stability of feelings. With a melancholy temperament, a person may develop excessive isolation, a tendency to completely immerse himself in his own experiences, and excessive shyness. Phlegmatic temperament can make a person lethargic, inert, often indifferent to all the impressions of life.

Awareness of the positive and negative sides of your temperament and the development of the ability to own and manage them are one of the most important tasks of educating the character of a person.

§78. Character

The word “character” denotes the totality of the core psychic properties of a person, which leave an imprint on all his actions and actions, those properties that first of all depend on how a person behaves in various life situations. Knowing the nature of a person, we can foresee what he will do in such and such circumstances and what to expect from him. If a person’s individuality is devoid of internal certainty, if his actions depend not so much on himself as on external circumstances, we are talking about a “characterless” person.

The mental properties of the personality, from which the character is composed and which make it possible to predict human behavior under certain conditions, are called character traits. Courage, honesty, initiative, industriousness, conscientiousness, cowardice, laziness, secrecy are examples of various character traits. Considering that one person has the courage, and the other is characterized by cowardice, we thereby say what to expect from both when confronted with danger. Pointing to the initiative of a person, we want to say by this what attitude to a new business should be expected from him.

Temperament alone cannot be bad or good; there can only be good or bad ability to control one’s temperament and use it. In relation to character, we constantly use the expression “good character”, “bad character”. This shows that the word "character" we mean those features of a person that are directly reflected in his behavior, on
which his actions depend, which therefore have a direct vital meaning. We always evaluate many of the character traits as positive — courage, honesty, good faith, modesty, and others — as negative — cowardice, deceit, irresponsibility, boasting, etc.

Character is manifested both in the goals that a person sets himself, and in the means or methods by which he realizes these goals. The personality of a person, according to Engels, is characterized not only by what he does, but also by the way he does it.

Two people can do the same thing and pursue the same goal. But one will work with enthusiasm, “burn” with what he does, while the other will work conscientiously, but indifferently, guided only by a cold consciousness of duty. And this difference in how two people do the same thing, often has a deep characterological value, reflecting the stable personality traits of these two people.

The nature of a person is primarily determined by his attitude to the world, to other people, to his business and, finally, to himself. This attitude finds its conscious expression in the worldview of a person, in his beliefs and views, and is experienced by a person in his feelings.

This explains the close connection of character with the worldview and beliefs of man. From firm beliefs, clarity of goals that a person sets for himself is born, and clarity of goals is a necessary condition for a sequence of actions.

People without firm convictions can never have a solid character; their behavior will be determined mainly by external circumstances and random influences. A bright characterization of such people was given by Comrade Stalin: “There are people you can’t tell about who he is, whether he’s good, whether he’s bad, or courageous, or cowardly, or for the people to the end, or he for the enemies of the people ... the great Russian writer Gogol quite aptly said about people of such an indefinite, unformed type: “People, they say, are indefinite, you don’t understand what people are, neither in the city of Bogdan nor in the village of Selifar.” About such indefinite people and figures also quite aptly is said among our people: “so-so man is neither fish nor meat”, “neither a candle to a god nor a damn poker”.

Character is associated with all aspects of mental life. Character traits can be individual characteristics of cognitive processes, and feelings, and will, if only they acquire significant significance in the mental stock of a given person, if they affect his line of behavior, determine his own mode of action.

Signs such as observation or criticality of the mind are often not just features of the processes of perception or thinking in a given person, but essential features of his personality. The criticality of the mind of Onegin or Andrei Bolkonsky is undoubtedly a character trait.

It is even more obvious that character traits can be individual characteristics in the field of feelings. Manilov’s sentimentality, the quick dulling of Onegin’s and Pechorin’s feelings are all pronounced character traits.

However, the features of the will, as that side of the psyche that is directly expressed in actions and actions, are of predominant importance in character. All volitional qualities that we examined in § 67, acquire the value of character traits if they constitute stable personality traits. You can, of course, show decisiveness or perseverance in a particular case without being either a decisive or persistent person. But as soon as determination becomes a constant sign of the willful actions of a given person, it thereby becomes a character trait.

A significant part of character traits has a complex nature and includes the characteristics of the cognitive, emotional, and volitional sphere. This applies, for example, to traits such as courage, hard work, initiative, modesty, and others.

Analysis of individual character traits and their classification are one of the most difficult tasks of psychology. Here we will point out some of the most important groups of character traits.

Firstly, the most common character traits that form the mental warehouse of the individual. Such, for example, the following most important features: integrity, consistency, courage, honesty, discipline, activity.

Secondly, the traits in which a person’s attitude to other people is expressed. This includes such features as sociability (and the opposite trait - isolation), frankness (and the opposite - secrecy), sensitivity, the ability for companionship (the trait that is meant when they say about a person: "he is a good comrade" ), courtesy and a number of others.

Thirdly, traits expressing a person’s attitude to himself. These are: self-esteem, modesty (and the opposite - self-conceit, arrogance), resentment, shyness (which sometimes results from great modesty, and sometimes - the result of great pride), self-centeredness (i.e., the tendency to constantly focus on yourself and own experiences), selfishness (i.e., the tendency to care primarily about your personal good) and others.

Fourth, traits expressing a person’s attitude to work, to his work. These include: initiative, perseverance, hard work (and the opposite trait is laziness), love of overcoming difficulties (and the opposite trait is fear of
Character even less than any other personality traits is an innate and unchanging property. Character traits are not only manifested in actions and deeds, they are formed, formed in them. To become neat, one must systematically act carefully, to become polite, one must constantly behave politely. Courage is formed in the process of performing courageous acts, and it becomes a character trait when such acts cease to be random episodes in a person’s life and turn into a familiar, normal way of acting for him.

The worldview and beliefs of a person create his desire, a tendency to develop certain character traits. But these trends can only be realized if a person constantly and steadily acts accordingly. The only way to make yourself disciplined is to always act in a disciplined manner.

There is no character that could not be redone. Therefore, it makes no sense to invoke inadequacies of character in justification of any bad deed. Man himself is responsible for his character.

§79. Character Traits Of Soviet Man

The most important character traits are determined by the social conditions in which a person lives, and his worldview, his beliefs. Therefore, we can talk about typical characters, which are products of certain socio-historical conditions.

In the images of Pavel Petrovich and Nikolai Petrovich Kirsanovs (“Fathers and Sons” by Turgenev), Oblomov, Rudin, we see typical character traits of Russian landowners in the middle of the 19th century. In the plays of A. N. Ostrovsky and in many of Gorky's works, the typical characters of the Russian merchants are vividly shown. Gorky in the image of Pavel Vlasov (“Mother”) gave typical character traits of an advanced revolutionary worker.

In a class society, one cannot speak of characters typical of the whole people. The features of the mental warehouse characteristic of a given nation recede into the background in comparison with the differences determined by the class belonging of a person. Just as one cannot speak of a worldview common to the landowner and peasant, for the capitalist and worker, so one cannot speak of a commonality of their characters. A careful analysis can identify the features that characterize the mental makeup of a given nation; but these traits do not determine the character of a person in a class society, they are not the central, decisive traits of character.

In our Soviet Union, in the country of victorious socialism, there are no antagonistic classes. All exploiting classes — the landlord class, the capitalist class — have been completely eliminated in our country. We still have the working class, the class of peasants, the intelligentsia. But there are no antagonistic contradictions between these social groups: their interests are not only not hostile, but, on the contrary, friendly. The very difference between them is gradually erased; “... the distance between these social groups is becoming more and more reduced” (Stalin).

The common vital interests uniting all the working people of the Soviet state are immeasurably more important and significant than the interests of individual social groups. The struggle for lasting peace throughout the world, the building of communism in our country make up the meaning of the life of all Soviet people. A single worldview - the communist worldview, the worldview of the great party of Lenin - Stalin - unites the entire Soviet people. The Great Patriotic War showed the monolithic unity of the entire Soviet people, led by the Communist Party and the great leader of the peoples, Comrade Stalin. This unity lies at the basis of the labor exploits that Soviet people perform in all areas of work during the years of the post-war Stalin five-year period.

On the basis of the unity of vital interests and worldviews in the character of Soviet people, common features are typical for every advanced Soviet person, as a person of a socialist society, as a fighter for communism. The new spiritual character that distinguishes the Soviet people of our day is reflected in new character traits. The most important task currently facing psychological science is the study of the typical character traits of Soviet man.

However, one should not lose sight of the fact that in the character of a person, along with common features typical of all representatives of the socio-historical group, there are individual traits that distinguish each given person from other representatives of the same group. This is especially important to emphasize when studying the characters of Soviet people. Under the socialist system, for the first time in the history of mankind, conditions are created for a truly comprehensive development of the individual. And this means that under the socialist system the most favorable conditions are created for the development of the entire infinite variety of individual characters of people.
The unity of worldview does not exclude the diversity of characters. It excludes only certain character traits that conflict with the principles of this worldview. So, for example, cowardice, laziness, and irresponsibility contradict our worldview and are therefore incompatible with the appearance of advanced Soviet man. So, when studying the characters of Soviet people, one should be guided by the following two provisions: 1) There are character traits that are common to all advanced Soviet people and reflect the commonality of their vital interests and worldview. 2) The presence of these common character traits does not preclude an infinite variety of individual characters.

A bright illustration of what has been said can be seen, for example, in Fadeev’s novel “The Young Guard”. All the heroes of the Young Guard are united by common features characterizing their mental appearance as the best representatives of the advanced Soviet youth. But at the same time, their individual characters are sharply different. The individual character traits of Uli Gromova and Lyuba Shevtsova, Seryozha Tyulenin and Vanya Zemnukhov are largely opposite. Let us dwell on some of the most important character traits typical of advanced Soviet man.

1) Ideological orientation and determination. There is nothing more alien to the psychology of Soviet man than the lack of ideology and the consciousness of the aimlessness of its existence, of its activity.

We know that in the past, the “tragedy of life” of many smart and talented people who were not satisfied with the social conditions in which they lived was the lack of a guiding life idea, the absence of a goal for which it would be worth living and fighting. Such people recognized themselves, in Herzen's apt expression, as “clever uselessness.” Let us recall the entry in Pechorin’s diary made on the night before the duel: “I run through my past and ask myself involuntarily: why did I live? for what purpose was I born? ” The complete purposelessness of life and the absence of any guiding idea, leading to the gradual spiritual death of a person, to the destruction of all his best sides, were shown with great force by Chekhov in the story "Ionych".

In Soviet reality, “extra people” or “smart unnecessary things” are impossible. The great goal facing the entire Soviet people — the building of communism, the struggle for communism — puts forward an immense number of subordinate goals and more private tasks that determine the activities of every Soviet citizen. It is impossible to imagine a Soviet man - a worker, a peasant, an intellectual - who would suffer from the aimlessness of his activity. It can only be about how clearly a person is aware of the purpose of his activity and how much he subordinates to this goal all his strengths and abilities. This willingness to devote all of one’s strength and ability to achieve the set goal is called the determination that is characteristic of advanced Soviet people. The ideological approach of the Soviet people lies in the awareness of the connection between the particular goals and objectives that each person faces in his work and the great ultimate goal - the building of communism, which the Soviet people led by the genius of Stalin lead to. The ability to see in each small matter the necessary step to achieve the ultimate goal is the best indicator of a person’s ideology. The remarkable life of Nikolai Ostrovsky was possible only because all of it was a service to the great idea of communism. To the question of one foreign correspondent: “Tell me, if it were not for communism, could you also transfer your position?”, Ostrovsky answered: “Never!” The ability to see in each small matter the necessary step to achieve the ultimate goal is the best indicator of a person’s ideology. The remarkable life of Nikolai Ostrovsky was possible only because all of it was a service to the great idea of communism. To the question of one foreign correspondent: “Tell me, if it were not for communism, could you also transfer your position?”, Ostrovsky answered: “Never!”

2) Soviet patriotism. “Patriotism,” said Lenin, “is one of the most profound feelings enshrined in centuries and millennia of separate fatherland.” And in the past, the peoples of the USSR put forward many remarkable patriots who gave their strength to the interests of the motherland, who fought against all kinds of oppressors and enslavers of their people.

Soviet patriotism is the patriotism of a new, higher type. “For Soviet patriots, the motherland and communism are united into one indivisible whole” (Molotov). Soviet people see in their homeland a country of victorious socialism, a country making the transition to communism, a country that is a beacon for all progressive humanity. The struggle for communism is inseparable for Soviet people from the struggle for the interests of their socialist homeland.

The basis of Soviet patriotism is not racial or national prejudice, but love for the Soviet motherland, which is a fraternal community of working people of all nations of our country. “Soviet patriotism does not separate, but,
on the contrary, unites all the nations and nationalities of our country into a single fraternal family” (Stalin).

Soviet people have an active, effective character for their homeland. This is a passionate, passionate love that does not stop at any sacrifice if it is demanded by the interests of the homeland. This love, inextricably linked with the equally passionate hatred for all enemies of the motherland, love, not knowing mercy for the enemies. Soviet patriotism includes the selfless devotion of the Communist Party, leading the peoples of our country to communism, directing all the grandiose work to build a new, socialist society. Soviet patriotism is inseparable from boundless love, respect and devotion to the great leader of the peoples, Comrade Stalin, who live in the hearts of all Soviet citizens. "For motherland for Stalin!" - with these words hundreds of thousands of heroes went into battle, covering themselves with immortal glory during the Great Patriotic War. And now,

A remarkable manifestation of Soviet patriotism is the popular concern for the great construction projects of communism. The construction of grandiose canals and hydroelectric power stations, afforestation, transforming the nature of our homeland, have become the bloodwork of millions of Soviet people. Soviet patriotism is a great driving force for the development of Soviet society on the path to communism.

3) Collectivism. In Soviet society, there can be no person outside the collective. A Soviet person cannot set vital goals that would be opposed to the goals of the collective, a Soviet person does not consider his personal fate, his personal success is divorced from the fate of the collective, from the success of a common, collective business. Awareness of their inextricable connection with the collective of which the given person is a member, and ultimately with the entire Soviet people, the awareness that the common interests and interests of the collective are above narrowly personal interests is the basis of the collectivism of Soviet people.

In a class society based on the principle of private property, the morality of individualism prevails. “The old society,” Lenin said in a speech at the Third Congress of the Komsomol, “was based on the principle that either you rob another, or another rob you, or you work for another, or he is for you, or you are a slave owner, or you are a slave " And it is clear that people brought up in this society “with mother’s milk” perceive the psychology of a person “who cares only to have his own, but he doesn’t care about the other.”

The destruction of private ownership of the means of production, the transition to a new, socialist system destroyed the material basis of individualistic psychology and created the foundations of a new, collectivist psychology. The psychology of individualism is very pronounced, for example, in the image of Pechorin. The story "Taman", which is an excerpt from the notes of Pechorin, ends with the following words: “What happened to the old woman and the poor blind - I do not know. Yes, and what matters do I have to the joys and misfortunes of men, to me, the wandering officer, and even with the road for official needs! ..."

The attitude towards people reflected in these words is completely impossible for advanced Soviet people. A characteristic feature of the psychology of Soviet man is bridging the gap between personal and public interests, between his personal "joys and calamities" and the "joys and calamities" of other people. True collectivism is expressed in the fact that common interests, interests of the collective, become personal interests, that a person “lives” with collective interests, experiences them as acutely as his own personal interests.

The sense of collectivism of Soviet man is clearly shown in Pavlenko’s novel “Happiness”, in the image of Voropaev. A retired colonel, four times wounded, having lost his leg, suffering from tuberculosis, Voropaev after demobilization comes to the Crimea with the dream of finding happiness in a quiet life together with his little son. Reality overturns these dreams and shows that for Voropaev, a communist, a truly advanced Soviet man, this path does not lead to happiness. He finds his happiness in working with people, with the people, first as a district propagandist, and then as secretary of the party’s district committee. In this work, he found that "excitement, contentment and confidence that make a person happy." “For twenty years I have been in the party,” Voropaev says, “the old man, he has lived a great life, and, you believe, my work with you rejuvenated me.” Not with consciousness, but with the shoulder, with your body, "I feel with my breath that I am a people, among the people, with the people, that I am his voice." The image of Voropaev shows the type of advanced Soviet leader who is characterized by a relationship with the people, concern for people, and an organic need to help people. “It’s nice when there are people in the world who want to help,” says Voropaev. The most essential character trait of Voropaev is expressed in the following words spoken about him by one of the protagonists of the novel: "Voropaev is a man for all."

4) Socialist humanism. The collectivism of Soviet people is inextricably linked with a humanistic, humane attitude towards people, concern for people, love for children, which is the essence of socialist humanism.

In one of his speeches, M. I. Kalinin, answering the question of what the best human qualities should be brought up among Soviet youth, put "love, love for his people, love for the working masses" in the first place. “A man,” said M. I. Kalinin, “must love people. If he loves people, then he will live better, life will be more fun,
The Soviet people see the ideal of a humane attitude towards a person in Comrade Stalin. By “Stalin's concern for people” we mean a sensitive, careful, caring attitude towards every person, the builder of a socialist society.

In the novel “Happiness”, along with Voropaev, whose characteristic feature is caring for people, a remarkable ability to grow cadres, another leader, Korytov, is shown, who, despite his undoubted devotion to the party and ardent love for his region, cannot be recognized as the real leader - a communist. The weakness of Korytov is, first of all, the lack of genuine attention and interest in a person, the absence of Stalin's concern for people, and therefore the inability to find or train personnel. “I, brother, do not interest your individual person,” Korytov tells Voropaev. “I am interested in people. I love to generalize.” The result of this is Korytov’s separation from the masses, from the people, his transformation into a “sole leader” (this is how Voropaev describes him).

The features of truly socialist humanism are vividly shown in the image of Commissar Vorobyov from Polevoy's Tale of a Real Man. His attentiveness to people, their thoughts, concerns, and interests is so great that he, as his neighbor in the hospital ward of the Hero of the Soviet Union, Siberian collective farmer Stepan Ivanovich, expresses, as if as a “sorcerer” “guesses other people's thoughts,” he knows how to pick up your special key.

Being terminally ill himself, he with rare sensitivity takes care to make it easier for Meresyev to survive the biggest misfortune for him - amputation of his legs. "Anticipating the events, the commissioner hid part of his letters so that on a terrible day for Meresyev, sending friendly greetings and news from the airdrome to the pilot, to soften a heavy blow for him." He managed to prepare a decisive turn in the mood of Meresyev, who thought about suicide after amputation, showing him a newspaper article about a Russian pilot who had learned to fly with an amputated foot.

Socialist humanism has nothing to do with sentimental love for all people indiscriminately. He not only admits, but also requires, along with great love and great hatred. Out of effective love for people, for the people, for all workers, an irreconcilable hatred is necessary for the enemies of the workers, for those who are fighting against the interests of the people, who are blocking the path to a happy future.

5) Communist attitude to work. One of the most important character traits of Soviet man is a new attitude to work. For Soviet people, work is the main business of their life, the main form of personality manifestation, the center of the most important interests, the source of great joys. For Soviet people, there is no gap between work and personal life; on the contrary, labor activity is the main content of a person’s personal life. At the same time, the Soviet man is characterized by “a conscious attitude to his work, as a matter of public importance and as a holy duty to the Soviet state” (Molotov). “Under capitalism, labor has a private, personal character. I’ve worked out more, get more and live for yourself, as you know ”(Stalin). In our country, the work of every person has social significance. The labor achievements of every employee are regarded as a matter of public, state significance. Therefore, our work becomes a matter of honor and glory.

In relation to work, the most important feature of the psychology of Soviet man is vividly manifested - the fusion of the personal and the social: as the consciousness of the social significance of labor increases, so does the place occupied by labor in the personal life of a person. Socialist competition, which is the main form of the socialist organization of labor, is fundamentally different from capitalist competition. In capitalist competition, personal success is achieved through the defeat of others. In socialist competition, each individual worker strives to achieve the best results in the interests of the common cause. “The principle of socialist competition: comradely help to the lagging behind from the advanced in order to achieve a general upsurge” (Stalin). Envy of someone else's success.

A characteristic feature of the Soviet worker is his creative attitude to work, which underlies the remarkable labor achievements that our workers, collective farmers, and representatives of the Soviet intelligentsia give. In our Soviet reality, all labor becomes creative labor.

6) Consciousness of duty and responsibility. The high ideological and principled character that distinguishes the advanced Soviet man also presupposes a highly developed sense of duty, a sense of duty. And the consciousness of one's civic duty, duty to the motherland, to the party, to the collective is the basis of a person’s responsible attitude to the work entrusted to him, to his duties, to all his actions and deeds. The Soviet person is characterized by a sense of responsibility not only for his personal work and for his actions, but also for the work of others, for their behavior. From this follows a great demand on ourselves and others.

This feature stands out vividly among all the best, advanced representatives of the Soviet people, the images of which are given in our fiction. Recall Pavel Korchagin (“How Steel Was Tempered” by N. Ostrovsky), Commissar Vorobyov (“The Story of a Real Man” by Polevoy), Colonel Voropaev (“Happiness” by Pavlenko).
A heightened sense of responsibility for the success of all the heroic activities of the “Young Guard” is an integral character trait of Oleg Koshevoy. “He was becoming more aware,” we read in Fadeev’s novel, “that the success or failure of their activities largely depends on how much he, Oleg, among all his comrades can foresee or make mistakes.” Hence, his remarkable composure, inner "fit", steady demanding of himself and others.

7) Willingness to overcome difficulties. The most important in the character are the volitional qualities of the personality, and the will, as we know, is expressed in overcoming difficulties. Often the will is called the "ridge of character." Therefore, the ability to overcome difficulties can also be called the "ridge of character".

In relation to difficulties, strength of character, its firmness, and firmness are most revealed, and without these qualities it is impossible to imagine the spiritual face of a Soviet person. Soviet man is, above all, a fighter for communism and the builder of communism. For a wrestler and a builder, strength of character, willingness to overcome any difficulties, break any obstacles is one of the most necessary mental qualities. Comrade Stalin teaches Soviet people not to be afraid of difficulties, not to turn a blind eye to them, but to boldly face difficulties, fight them and overcome them. “Have you seen fishermen before a storm on a big river, like the Yenisei?” Said Comrade Stalin in one of his speeches. “I have seen them more than once. It happens that one group of fishermen, in the face of a storm, mobilizes all their forces, inspires their people and boldly leads the boat towards the storm: "Hold on, guys, tighter behind the wheel, cut the waves, ours will take!" But there is another kind of fishermen who, feeling the storm, lose their temper, begin to whimper and demoralize their own ranks: “There is trouble, the storm comes, lie down, guys, close the bottom of the boat, close your eyes, maybe somehow bring ashore”. The faint-hearted desire to hide from the storm, to retreat before difficulties is unworthy of a Soviet person. “Difficulties exist for that, in order to fight with them and overcome them” (Stalin). to retreat before difficulties is unworthy of a Soviet person. “Difficulties exist for that, in order to fight with them and overcome them” (Stalin). to retreat before difficulties is unworthy of a Soviet person. “Difficulties exist for that, in order to fight with them and overcome them” (Stalin).

8) Courage. Courage is a complex character trait that includes courage, courage in a direct encounter with danger, willingness, without stopping at anything, to fight for the great idea of communism, perseverance, self-control, self-control.

In his speech on the radio on July 3, 1941, Comrade Stalin said: "The great Lenin, who created our State, said that the main quality of Soviet people should be courage, courage, ignorance of fear in the struggle, willingness to fight together with the people against the enemies of our country." Soviet people answered these words of the leader with military exploits on the battlefields, selfless struggle in the rear of the enemy, heroic deeds on the labor front. Samples of unprecedented courage in the history were shown by Soviet youth - Zoya Kosmodemyanskaya, Alexander Matrosov, Komsomol members of Krasnodon. The courage of a Soviet person stems from a completely conscious sense of duty, a fully conscious responsibility. A courageous person is distinguished not by the fact that he never feels a sense of fear, but by the fact that, despite fear, he does as he should. Different people experience danger in different ways, but every person worthy of the name of a Soviet citizen must behave courageously in any danger. Not the coward who is afraid, but the one who, out of fear, can change his business. “A coward,” Nikolai Ostrovsky rightly said, “is almost a traitor today and certainly a traitor in the fight.” Therefore, "a coward in our country is a despicable creature." An illustration to these words is the terrible story of Stakhovich, who betrayed the heroes of the Young Guard. Therefore, "a coward in our country is a despicable creature." An illustration to these words is the terrible story of Stakhovich, who betrayed the heroes of the Young Guard. Therefore, "a coward in our country is a despicable creature." An illustration to these words is the terrible story of Stakhovich, who betrayed the heroes of the Young Guard.

9) Initiative. Creative attitude to work, readiness to overcome difficulties require initiative as a necessary condition. An initiative person does not wait for a “clue” from the side; he is capable of personal initiative, not afraid of creative risk.

The initiative of the Soviet people is inextricably linked with creative energy, the ability to dare, with that “feeling of the new”, without which the progressive leader of socialist society is impossible. The innovation of our workers, Stakhanovites, advanced collective farmers, our workers in science, technology and art suggests that initiative is a hallmark of the spiritual image of Soviet people.

Initiative is the most important quality of Soviet youth. Addressing the Komsomol workers, MI Kalinin said: “In your speeches creative thought and initiative should be in full swing ... Your energy must boil, and if it does not boil, then what kind of youth are you, what kind of Soviet patriots are you?” An example in this regard is the leaders of the heroic Komsomol of Krasnodon and, above all, Oleg Koshevoi and Sergey Tyulenin. Describing Oleg Koshevoi, Fadeev notes that “the basis of his nature” was “an exceptional thirst for activity, a desire to
express himself all, a desire to intervene in people's lives, in their activities, in order to bring something of their own, more perfect, faster turning around and filled with new content. " Recall Oleg’s first meeting with Tyulenin, even before the Young Guard’s organization, and their conversation, in which Oleg outlined his plan of underground work, a plan that reflected the remarkable initiative of this sixteen-year-old youth: “Oleg developed before his comrade his plan of action: to look closely at young people, to take into account the most faithful, persistent, fit to work; to find out who is arrested in the city and in the area where they are sitting, to find an opportunity to help them and to continuously scout among German soldiers about all military and civilian activities of the command.”

The exceptional initiative of Sergei Tyulenin was already manifested in the fact that he immediately after the Germans occupied Krasnodon, alone, on his own initiative and without any help whatsoever, set fire to the building of the trust, where the German headquarters was located, and then the bathhouse, equipped by the Germans under the barracks. On his own initiative, on the eve of the occupation of Krasnodon by the Germans, part of the wounded who remained in the hospital were placed in private apartments and thereby saved from death.

10) Modesty. Such character traits of Soviet people as ideology, collectivism, and high demands on oneself are in contradiction with an overly high assessment of one’s personality, the desire to highlight their personal merits, with all kinds of conceit and arrogance. Modesty is one of the typical character traits of Soviet man. “Modesty adorns a fighter,” said Nikolai Ostrovsky, “puffiness, arrogance - this is the capitalist old, it is from individualism. The more modest the fighter, the more beautiful he is.” Describing one of the best commanders of the Red Army, the hero of the civil war, Comrade Kotovsky, Comrade Stalin highlighted two features of his character: courage and modesty. “The bravest among the modest of our commanders and the most modest among the brave - that is how I remember Comrade Kotovsky.”

From this point of view, the parallel between the two leading workers of the youth underground organization of Simferopol is very instructive: the secretary of the Komsomol organization and the commissar Boris Khokhlov, later arrested by the Germans and tortured to the Gestapo, and the organization’s commander Anatoly (“In the Crimean underground” I. Kozlova)

Describing his meetings with Boris Khokhlov, the head of the Simferopol underground I. Kozlov says: “From the very first meeting, this young man made an unusually bright, charming impression on me. He was ... unlike Toli, so to speak ... organically modest. He was genuinely embarrassed, even blushed, when once, speaking of their activities in the German rear, I uttered the word "heroic." Everything that they did seemed to him completely natural, taken for granted. It was joyful and strange for me to hear how this young youth, yesterday’s schoolboy, simply and naturally calls the work “heroic” heroic deeds of Komsomol members.”

I. Kozlov gives Anatoly the exact opposite characteristic: “Kostya” (the partisan nickname of Anatoly. - B. T.) was a brave, initiative guy, but he was sick with excessive ambition and self-confidence, which disturbed me very much. It was unpleasant to hear when, in conversations with me, he did his best to belittle the role and merits of Boris Khokhlov in the creation of the Komsomol organization. “This, at first glance, insignificant flaw entailed very serious consequences. After the arrest of Boris, when Anatoly actually became the head of the Komsomol organization, he began to show extreme frivolity and indiscipline. Trying to personally advance, he undertook risky and essentially useless operations that threatened to ruin the whole thing, without coordination with the party leadership of the Simferopol underground.

11) Cheerfulness, self-confidence, optimism. The spiritual image of Soviet people is permeated with cheerfulness and optimism. Their source is the tremendous successes of our homeland in all sectors of socialist construction and deep confidence in the victory of communism. And confidence in the correctness of an idea, in the correctness of its cause gives rise to self-confidence. Modern bourgeois culture is permeated through with decadence and pessimism. “The sense of doom is a feeling understandable to the public consciousness of an endangered group” (Zhdanov). In contrast, the joy of life and optimism triumph in Soviet culture. There is no such difficult situation, there is no such misfortune that could defeat the great love of life that distinguishes fighters for a better future for humanity, builders of a new life.

One of the best sons of the great party of Lenin - Stalin, Nikolai Ostrovsky, broken by paralysis, blind, experiencing severe physical suffering, until the last day did not lose the joy of life. His letters to family and friends are invariably riddled with a love of life and a sense of happiness: “I never thought that life would bring me such great happiness ... All life is filled with all the overwhelming joy of creativity. And who knows when I was happier - a young man with blooming health or now? ... "" Life for my perseverance returned me immeasurable, amazing, beautiful happiness ... ""
“It is joyful to live and fight in a country where the great wisdom of the party and the iron will of its leader Joseph Stalin will forever free a person from the damned skills and prejudices of the past,” wrote M. Gorky. Great happiness fell on Soviet people - the first in the history of mankind to carry out the construction of a communist society.

Questions To Repeat

1. What determines the formation of mental properties of a person?
2. Give a definition of interest.
3. Describe the main features of interests.
4. What is the difference between interest and addiction?
5. What is the difference between the concepts of "giftedness" and "ability"?
6. What is the relationship between giftedness and skill?
7. What is temperament?
8. What is character?
9. What is the relationship between character and worldview of a person?
10. What groups can be divided character traits?
11. List the most important character traits of Soviet people.

[1] The “division of labor” in animals such as bees, ants, etc., has only an outward and, moreover, very superficial resemblance to a genuine division of labor that occurs only in humans. Insect activity is never collective; there is no mutual assistance in their activities. On surface observation, it may seem that, for example, the ants “jointly” drag their prey into the anthill. A more thorough observation shows, however, that each ant drags its prey in its own direction, and only because most ants move in the direction of the anthill, the prey ultimately moves in this direction.

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