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XII - FRAGMENTS OF STATEMENTS AT THE "WEDNESDAY" GATHERINGS

STRUGGLE OF I. P. PAVLOV AGAINST IDEALISTS [EXPERIMENTS WITH ANTHROPOIDS.
CRITICISM OF THE CONCEPTS OF YERKES AND KOEHLER]
EXTRACT FROM THE STENOGRAPHIC RECORD OF THE "WEDNESDAY" HELD ON MAY 16,
1934

I have gone back to the grudge that I had against certain psychologists. At first I renounced them, then I became reconciled with them to a degree, but now the facts have turned me against them once more. They, apparently, want their subject to remain unexplained. How strange, indeed! How they love the mysterious. Everything that can be explained physiologically they reject.

It seems to me I have already said that if we wish strictly to adhere to objective terminology, we must replace the American term "trial and error"¹⁶⁵ by the term "chaotic reaction." There is a nuance of subjectivity in the first term. But from the objective point of view this is a chaotic reaction. Take, for example, infusoria which move hither and thither in their medium in pursuit of definite aims-food, favourable conditions, better temperature, more appropriate composition, oxygen, and who knows what else; suddenly one of the infusoria gets caught in a certain noxious substance in a cold or hot current; it begins to zigzag back and forth, and from side to side until it finds a suitable medium. This is termed the "method of trial an error." But I would prefer to call it "chaotic reaction," especially since every child begins with chaotic reaction.

M. A. Ussievich: A dog with which I am working, upon being placed in the stand for the first time and seeing a revolving food receptacle, immediately began to turn it with his paw.

I. P. Pavlov: That is in complete accord with what I have said. The tendency to draw a psychological difference between ape and dog based on the process of association is nothing more than the secret desire of the psychologists to evade a clear solution of the problem and to render it mysterious and extraordinary. In this pernicious, I should say, disgusting tendency to depart from the truth, psychologists like Yerkes or Koehler fall back on such barren notions as, for example, that the ape went away, "meditated at leisure" in a human-like way, "has found a solution," etc.

We know very well that a dog often tries to accomplish a definite task but is unable to cope with it; however, it suffices to let the dog rest, say, for two days, and the task is successfully accomplished. Can we seriously say that the dog spent the two days considering the problem? Of course not. Simply fatigue has brought on inhibition, which confuses everything, renders difficult and destroys.

[CRITICISM OF SHERRINGTON'S IDEALISTIC CONCEPTS]
EXTRACT FROM THE STENOGRAPHIC RECORD OF THE "WEDNESDAY," HELD ON
SEPTEMBER 19, 1934

Comparing the laws of the brain and its mechanisms, he draws a very strange conclusion. It appears that up to now he is not at all sure whether the brain bears any relation to our mind. A neurologist who has spent his whole life studying the subject is still not sure whether the brain has anything to do with the mind. This is clearly expressed by him in the following words: "If nerve activity have relation to mind...." I did not trust my knowledge of English and so I requested others to translate it for me.

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How can it be that at the present time a physiologist should doubt the relation between nervous activity and the mind? This is the result of a purely dualistic concept.

This is the Cartesian viewpoint, according to which the brain is a piano, a passive instrument, while the soul is a musician extracting from this piano any melodies it likes. Obviously this is his viewpoint. Probably Sherrington is a dualist who resolutely divides his being in two halves: the sinful body and the eternal, immortal soul.

I am all the more surprised that for some reason or other he regards knowledge of this soul as something pernicious and clearly expresses this point of view; according to him, if the best of us acquire some knowledge of the nervous system this would be a most dangerous thing threatening the extinction of man on earth. He makes the following statement which appears to me rather strange: if man learns to know himself and on the basis of this knowledge to govern himself in an economical way (such economy is not bad since it means that he will preserve himself for a longer time), then our "planet will be re-liberated, free for the next era of animal domination." What do you think of that?

What does it mean?

Why, it's simply preposterous!

Very good, we will suppose that the relation of the soul to the body is similar to that of the pianist to the piano, but it still leaves us in the dark as to why knowledge of the soul may be pernicious. I would like to know how on earth it can lead to the extinction of man. Socrates counselled: "Know thyself."

How, then, can a scientist, a neurologist, say: "Do not dare know thyself"?

Strange as it may seem, Sherrington adheres to the motto proclaimed at one time by Dubois-Raymond, a man who was always ready to sacrifice truth to eloquence, to a witty phrase, and who said that the function of the brain should never be made known, "ignorabimus." (168)

Sherrington, it seems, gets pleasure from repeating the same words fifty years later. What does this signify?

[CRITICISM OF THE GESTALT PSYCHOLOGY 171]

EXTRACT FROM THE STENOGRAPHIC RECORD OF THE "WEDNESDAY," HELD ON NOVEMBER 28, 1934

Academician I. P. Pavlov: Today our discussion will be devoted to psychology, or to be more precise, to the marriage of psychology and physiology....

I shall devote myself specially to the gestaltists....

First of all, what do the gestaltists represent? They are representatives, advocates, adherents of the idea of integrality. According to them, it is necessary to consider and to keep in mind the integral whole, the synthesis, the system, and not isolated manifestations, which for some reason they dislike. Gestalt means design, pattern or image. The word is differently translated into different languages. For example, the English translate it as "form" or, even better, as the author calls it, "configuration." The English gestaltists are "configurationists." Gestalt is a German word and it has the same meaning....

A few words about the radicalism of this psychology. I must tell you that it is quite young. It originated in 1912, and is but twenty-two years old. It represented a revolt against Wundt, i.e., against associationism-the system of psychology which dates from the 16th or 17th centuries and which to this day is, to a degree, predominant among psychologists.

"The Gestalt psychology revolted against analysis as the fundamental problem of psychology," as its principal task. This is a somewhat strange approach in view of the fact that all positive, modern science is fully based on analysis and inevitably begins with it.

We shall never arrive at any psychology if we do not analyse the human behaviour or experience. Further, the Gestalt psychology has proclaimed that the notion of association is simply a misconception. What a queer radicalism, indeed!

"Gestalt psychology was as opposed to the simple reflex as to the simple sensation." Such is their true radicalism! It cannot be expressed in a more distinct, in a more definite form. The gestaltists attacked Wundt and associationism solely because the latter defended the principle of analysis. Wundt stated that he first identified the elements and then worked up to larger and larger compounds, which is what science does in general. But the gestaltists refer to this approach as the "brick psychology"-a play upon words-or the "mortar psychology" crumbling everything with its pestle. Very nice, in deed!...

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The author goes on to inform us that a still more important impulse to the development of this psychology was given by the notion which appeared on the intellectual horizon in 1890 and which was introduced by a certain Ehrenfels, namely, the notion of "form quality."

This "form quality" means that elements remain elements, and are not worthy of any attention; of real importance only is the fact that from one and the same elements it is possible to obtain different wholes. The following example is cited. Take definite musical notes and compose from them different melodies. The melodies, of course, will be absolutely different. But this does not mean that the elements are of no value; it is thanks to them that the melodies can be formed and if they did not exist the melodies would be inconceivable. But this is no novelty! Why does the notion of form quality date only from 1890? Good gracious, how often do we meet the same in organic chemistry? Carbon, oxygen, hydrogen are elements which form carbon hydrates, acids, alcohols, etc. Where, then, is the novelty? And how can it be affirmed that the notion of form quality originated in 1890? Actually the idea is a very, very old one. But it made quite an impression on the psychologists. Woodworth even finds that it played the role of an impulse.

I must say that we have to deal with rather strange psychologists. At present I know them fairly well; I have also frequently met some of them. When I pointed out in my book the mosaic of the cerebral hemispheres, on the one hand, and the dynamic system, on the other, M. Piéron, a Paris psychologist, was greatly astonished and confused. Thereupon I wrote: let him open any page of any book on organic chemistry and consider any formula of chemical compound. He will see, on the one hand, a mosaic of hydrogen, oxygen, carbon, and on the other hand, their combination, the formation of a dynamic system. Do not all bodies represent dynamic systems?

Such is their thoughtlessness! They amuse themselves with a play on words, but disregard reality. This is absolutely clear.

Such, according to the author, is the origin of this "form quality"; it greatly attracted them and they chose it as their fundamental principle.

Since 1912 the Gestalt psychology has endeavoured to prove that any distinction in psychology between the elements and the whole is a misconception, that psychology invariably and exclusively deals with the study of the whole. But how can anyone get to know the whole without breaking it up? Take, for example, the simplest machine.

How can the principle of its working be understood, if it is not dismantled, if the interdependence of its parts is not considered?

This is truly strange reasoning and it passes my comprehension.

.Further, it is said that our behaviour is not a mere sum of reflexes. Again, what a truth! That is a commonplace. But they picture the matter in such a way as if a system were a sort of a sack filled pell-mell with potatoes, apples, cucumbers, etc. Nobody has ever expressed such an idea.

The moment one has to deal with an organism, it is clear that all its elements act one upon another, just as hydrogen, oxygen and carbon act in a chemical body depending on their location-from above, from the sides, from the right, from below, etc. This is a well-known, long-established fact...

The gestaltists have given much attention to perception. What is perception? Some fifty or sixty years ago when I was studying in the seminary, and when there was not even a sign of the gestaltists, I learned from the same old professors and psychologists all about perception and what distinguished it from sensation, which is a more elementary process. The course of psychology at the seminary taught us that sensation is a kind of purer, so to speak, physiological stimulation, produced by a certain external agent on the sense organs; perception, however, is that which arises in the brain, when this stimulation is not single, but connected with other stimulations and old traces. It is this that enables us to get an idea of an external object. Such is perception. The final result of internal elaboration constitutes its very essence. So you see this is quite a commonplace fact, well known to everybody....

These gentlemen should have made a proper study of physiology, i.e., they should have thoroughly read Helmholtz. But instead, they content themselves with a play on words: "the sensory brain process is ... subjected to the influence of the distance,"-but how-about this not a single word is said. Perception, if considered profoundly, is simply a conditioned reflex; however, since Helmholtz knew nothing of conditioned reflexes he called them unconscious conclusions....

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So you see that the gestaltists, far from contributing anything new to the problem, are not even aware of what was regarded as a truth more than fifty years ago. This is an indisputable fact. I defy the physiologists or psychologists to prove that I am not right.

Now let us turn to another point-to the gestaltist study of behaviour.

The following is literally stated: "Gestalt psychology dislikes the stimulus-response conception." What does this mean? These are scandalous words.

"It objects, first of all, to the idea that behaviour can properly be analysed into stimulus-response units." Thus they do not admit stimulations and reactions, i.e., they deny, for example, the fact that if I choke, it is because something is irritating my throat. They do not want to make any distinctions. But this won't get them very far!

And what do you think of this? "It objects to the notion of a bond between stimulus and response."

This is literally stated. Read it and see for yourselves. They object to the notion, consequently, to the importance of a connection between stimuli and responses, whether provided by nature or inculcated by practice.

These are not my words; they are the words of the author.

I shall read one more passage, since it is a collection of magnificent absurdities.

They object to the theory that an instinct is simply a chain of reflexes; they object to the theory that learned behaviour consists of reflexes linked together by the process of conditioning. Moreover, they object to the loose way in which the term "stimulus" is used by psychologists.

(CRITICISM OF THE GESTALT PSYCHOLOGY)

(Continued)

EXTRACT FROM THE STENOGRAPHIC RECORD OF THE "WEDNESDAY," HELD ON
DECEMBER 5, 1934

Consequently, gentlemen, the gestaltists start not at the beginning, but at the end. There are inborn connections; but when it is a question of a connection that is not inborn, it proves that if one thing follows another, you can establish such a connection. This is absolutely clear. All learning consists in the formation of temporary connections, and it is this which constitutes thought, thinking, knowledge. Thus, association, thinking, are the fundamental factors; this has long been known and has been properly appraised by some psychologists. The significance of the Gestalt psychology, which denies associationism, is wholly negative; it contains nothing positive.

I am fully convinced that thinking is an association and I challenge anyone who disagrees with me to prove the contrary. Association is knowledge, it is thinking, and when you make use of it, it is insight. But beyond this there is considerable confusion.

This means that up to a point thinking is nothing else but associations; at first these are elementary associations connected with external objects, and subsequently they become chains of associations. Thus, each slight association, including the very first one, is the moment of the birth of thought. As I said at our previous gathering, these associations grow and increase in number. We then say that the thinking becomes more profound, more extensive, etc.

From my point of view, the Gestalt psychology is one of the most unsuccessful essays of the psychologists. Its role, I should say, is definitely negative. Indeed, what has it contributed to the knowledge of the subject? Absolutely nothing. On the contrary, it is destroying that which is most essential and most correct-associationism, synthesis, connection. Such is my attitude to this Gestalt psychology.

[EXPERIMENTS ON APES AND CRITICISM OF KOEHLER'S CONCEPTS]

EXTRACT FROM THE STENOGRAPHIC RECORD OF THE "WEDNESDAY," HELD ON JANUARY
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Nevertheless, for him all this is but a working hypothesis, an audacious hypothesis, and he adds the following, which seems to be his criticism: "We only see how on the basis of general ideas it is possible to deduce the real system of personal emotions superimposed on the structural properties of corresponding cerebral processes." This, it appears, is his criticism. But with us this is a constant fact; we know plenty of subjective manifestations that can be connected with objective data. Even in conversation during a private visit to him I told him how I interpreted the fact about a dog kept in a cage but within sight of meat which was placed beyond the grille. When the meat was placed at a distance from the cage, the dog immediately found a way out of the cage and took the meat. But when the meat was placed near the cage and greatly excited him, he behaved stupidly, trying all the time to get the meat through the grille. This means that a strong stimulus apparently produced negative induction. But for Koehler that is but an audacious hypothesis. He concludes: "... The system of personal emotions superimposed.

on the structural properties of corresponding cerebral processes, which are of decisive importance for the interpretation and observation of the behaviour" ... and adds: "doch solange bis jetzt nicht beobachtet worden,"

i.e., which so far, however, have not been observed. What does this mean? Please explain it to me. I simply cannot understand him. The only possible explanation is that the torments of animism, deeply rooted in him, make him inconsistent, slow-witted and contradictory.

[CRITICISM OF KOEHLER'S IDEALISTIC CONCEPTS]

EXTRACT FROM THE STENOGRAPHIC RECORD OF THE "WEDNESDAY," HELD ON JANUARY 23, 1935

The animal organism, ours included, is, in like manner, a closely interconnected whole. Is not its study made possible thanks first and foremost to its decomposition into larger or smaller units and to their subsequent intermittent composition? Why, then, should the product of the higher animal organism, the phenomena of our subjective world, be studied by other methods which exclude decomposition and analysis? Precisely for this reason the new trend in the Gestalt psychology, its violent opposition to associationism, is an obvious scientific error.

The unmerited success of this psychology among modern psychologists is to be explained solely by the fact that dualism still makes itself felt in their midst; dualism is manifested in the form of animism which admits the existence of a peculiar substance opposed to the rest of nature and therefore requiring special treatment on the part of researchers compared with material phenomena.

Undoubtedly, close contact has been established between our physiology of the higher nervous activity, in the form of the theory of conditioned reflexes, and psychology. We are studying one and the same problem. Of this there can be no doubt. But whereas from the factual point of view our concepts and notions are fully grounded, practically indisputable, theirs are not. I should like to attach great importance to this fact, clearly emphasizing that in some things physiology at present offers more truth than psychology, that is, if Koehler is to be regarded as a serious psychologist.

(CONCERNING THE ANIMISM OF SHERRINGTON AND THE CONSERVATISM OF ENGLISH SCIENCE]

EXTRACT FROM THE STENOGRAPHIC RECORD OF THE "WEDNESDAY," HELD ON FEBRUARY 6, 1935

Academician I. P. Pavlov: ... Here is another interesting fact concerning the general significance and interpretation of our work. When the German edition of my lectures on the higher nervous activity appeared, a characteristic notice, written by one of Sherrington's adherents, appeared in the English magazine Nature. It begins with different compliments and then says that the correctness of the interpretation accorded this vast and grandiose material is open to doubt. For this reason, it continues, some people doubt whether the Pavlovian terminology can contribute to clear understanding of the matter. It is possible that in view of the present state of our knowledge it would be more advantageous to interpret these discoveries in psychological terms, such as association, distraction, interest, consciousness, attention, memory, etc.

What do you think of that? They themselves erect this structure, fully convinced that they are doing useful work. Sherrington himself investigated the reflex activity of the spinal cord, but he is decidedly against attributing this activity to the higher parts, to the brain; in the latter case this structure becomes in their eyes hypothetical.

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This is animist reasoning. Sherrington has built a nest of animism. This is proved by the fact that he doubts whether the mind has any relation to the nervous system. Hence the mind is something beyond and above the nervous system, something that can be detached from the nervous activity altogether.

I can understand the influence usually exerted by a teacher on his pupils. But must all the pupils necessarily be, animists if their teacher is an animist? Is there really such intellectual serfdom among Englishmen?

[THE INFLUENCE OF THE IDEALISTIC WORLD OUTLOOK ON THE ATTITUDE OF SCIENTISTS TOWARDS THE THEORY OF CONDITIONED REFLEXES]
EXTRACT FROM THE STENOGRAPHIC RECORD OF THE "WEDNESDAY," HELD ON
NOVEMBER 6, 1935

Academician I. P. Pavlov: As you are aware-I mentioned this in dealing with the history of the theory of conditioned reflexes-our conditioned reflexes encounter strong opposition in the heads of those imbued with dualism. What is taking place here is a collision between physiological law and psychological law, between the dualistic conception and the monistic conception of man.

The attitude of some people to our physiology of the higher nervous activity and who will deny that this is physiology?-is quite different. You probably remember that in my first laboratory for the study of conditioned reflexes one of my colleagues resented our attempts, our new methods of studying the behaviour of dogs. He is still going strong and feels some what ashamed when we meet.

On the other hand, the Englishman Sherrington displays similar scepticism. In 1912, in the course of conversation he said to me: "You know, your conditioned reflexes would hardly be popular in Britain, because of their materialistic flavour," because they oppose the dualistic concept. There you have the reason for his unbelief; this is confirmed by the lectures which he delivered last year and in which he manifested his dualistic concept by affirming that man is a complex of two substances: the supreme spirit and the sinful body. Strange as it may seem for a modern physiologist, he clearly says that there is probably no connection between the mind and the brain....

...We must understand that the conditioned reflexes occupy an exceptional place in the world of physiology because there is a dislike for them on the part of many who have a dualistic world outlook. This is quite obvious. The conditioned reflexes force their way to the forefront. They wage a continuous fight against this dualism which, of course, does not surrender. This is seen in greater or lesser degree from the fact that the conditioned reflexes are accepted by physiologists with a certain reluctance. Strange as it may seem, many physiologists, authors of text-books, do not cite any data concerning our experiments with conditioned reflexes. Not long ago Heber's reputable manual was translated in Moscow; this manual makes no mention of the conditioned reflexes.

NOTES AND COMMENTARY

Being a successor to the progressive traditions of the revolutionary Russian intelligentsia of the 19th century, Ivan Petrovich Pavlov throughout his entire lifetime was a partisan of true democracy; he frequently opposed the reactionary tsarist officials, and fought vigorously for a progressive science free from prejudice.

In the period of Soviet rule Pavlov became an ardent supporter of the new regime created by the Great October Socialist Revolution under the wise leadership of the Communist Party. The great scientist became an outstanding public figure. In his brief, but brilliant addresses, speeches and letters he revealed his attitude towards social developments, his firm belief in the great historical role of his motherland, in the greatness of the Russian people.

168 Dubois-Raymond – well-known German physiologist of the 19th century. In his speech "Seven Enigmas of the World" he declared that the mysteries of mental life would never be disclosed by natural science. Since then the term "ignorabimus" has become the motto of all agnostics and avowed idealists.

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171 Gestalt psychology - reactionary trend in contemporary bourgeois psychology. According to the adherents of this trend, a psychical state constitutes an integral structure-a "gestalt," or "configuration." The latter cannot be decomposed into separate elements and is inaccessible to analysis, owing to which it cannot be made known. Koehler and Koffka, who head this trend, deny that behaviour consists of different reactions to these or other stimuli: The external situation and the reaction to it constitute a single structure which tends to a state of equilibrium. In this connection the adherents of the Gestalt theory reject the doctrine of the behaviourists, their theory of "trial and error," as well as the very principle of associationism (i.e., the formation of functional links between the sensations in the course of individual experience). The principles of the Gestalt theory, which affirms that mental activity is unknowable, and which, therefore, admits the existence of a particular, nonmaterial and spiritual source, are applied by the adherents of this theory (for example, by Koffka) to all biological and even physical phenomena. They endeavour to prove that the latter represent definite structures, i.e., close integral processes, which cannot be decomposed into elements, since each part is fully determined by the whole to which it belongs.