The Philosophical Issue Regarding Knowledge

The largest philosophical issue regarding knowledge is the casting of knowledge in a philosophical form that reveals its reality and essence and shows whether it is a material phenomenon present in matter when matter reaches a certain stage of development and completion, as materialism claims, or a phenomenon free from matter and, together with its manifestations, supported by a certain kind of existence, as it is understood philosophically in metaphysics.

Since Marxism is a materialistic school, it of course emphasizes the materialistic notion of thought and knowledge. This is made clear in the following texts from Marx, Engels, Georges Politzer and Roger Garaudy, respectively: Thought is inseparable from thinking matter. This matter is the substance of all changes. [1] (p. 372) Regardless of the apparent superiority of our consciousness and thought, they are nothing but a bodily or material organic product – this being the brain. [2]

Engels continues:

It is necessary that any driving force in people passes through their brains. This is true even of food and drink which begin by a sensation of hunger or thirst. This sensation is also felt in the brain. The influences of the external world on a human being are expressed in his brain, where they are reflected in the form of sensations, ideas, motives and intentions.[3]

The natural sciences show that a deficiency in the development of the brain of a certain individual is the biggest impediment in the face of the development of his consciousness and thought. This is the case with stupidity. Thought is a historical product of nature's development to a high degree of perfection represented in the sense organs and nervous system of the living species, especially in the highest central part which rules the whole organic being, i.e. in the brain. [4]

The material formation of thought presents us, as we will see, with proofs that deserve to be believed and accepted. [5]

The philosophical notion of knowledge is not the only notion of knowledge (p. 373) worthy of research and study, for knowledge is the meeting point of many [types of] research and studies. Every scientific discipline has its own notion that treats one of the many problems concerning knowledge, and one aspect of the secrets of the intellectual life whose mysteriousness and complexity make it exciting. Behind all these scientific notions lies the philosophical notion in which conflict between materialism and metaphysics arises, as

mentioned earlier. The present issue, therefore, is the subject of different types of philosophical and scientific discussions.

Many writers and researchers fell into error [by] not distinguishing between the aspects on whose scrutiny and analysis scientific studies must concentrate and the aspect in which philosophical consideration must have its say. On the basis of this error, the materialistic claim was established, this is the claim which asserts that knowledge in the philosophical notion of metaphysics is incompatible with knowledge in the scientific notions. We have already seen how Georges Politzer attempted to prove the materiality of knowledge from a philosophical point of view by means of pieces of evidence drawn from the natural sciences. Others also made the same attempt.

For this reason, we find it necessary to determine the philosophical position with regard to this issue, so that we can thwart the attempts seeking to confuse the philosophical and the scientific fields, and to charge that the metaphysical explanation of knowledge is on the opposite side of science and that it rejects the scientific truths and assertions.

That is why we will isolate [our] general position regarding knowledge and shed some light on the various kinds of scientific research that will determine the points of difference between us and materialism in general, and Marxism in particular, as it will determine the aspects that scientific studies can take up and explore; so that this will make it clear (p. 374) that such studies cannot be considered in support of materialism in the intellectual battle it fights against metaphysics for the purpose of establishing the most complete philosophical notion of knowledge.

We have already remarked that the aspects of knowledge touched upon or treated by those scientific studies are many, owing to the relation of the sciences to the various aspects of knowledge, rather due to the fact that a science has a variety of scientific schools, every one of which investigates knowledge from its own specific point of view. Physical and chemical researches, for example, explore certain aspects of knowledge.

Physiology has its own share in exploring knowledge; also psychology, with its various schools, including the schools of introspectionism (al-istibtaniyya), [8] behaviorism, functionalism (al-wazifiyya), [9] and so on. Every one of these schools studies a various aspect of knowledge. After all of this, the role of philosophical psychology emerges to treat knowledge from its own perspective. It investigates whether knowledge in essence is a material state of the nervous system or a pure spiritual state.

In what follows, we will clarify those various aspects to the extent needed to light up the path of our investigation, and to show our position regarding materialism and Marxism.

Knowledge on the Level of Physics and Chemistry

On their own level of research, physics and chemistry treat the physical and chemical events that often accompany the acts of cognition. These events are exemplified in the reflection of light rays from visible things, the influence of those electromagnetic vibrations on a healthy eye, the chemical changes that occur (p. 375) because of this, the reflection of sound waves from audible objects, the chemical particles that issue from odoriferous and flavored things, as well as other similar physical stimuli and chemical changes. All such events fall in the domain of the scientific application of physics and chemistry.

Knowledge on the Level of Physiology

In light of physiological experiments, a number of events and processes that occur in the sense organs and in the nervous system, including the brain; were discovered. Even though such events are of a physical and chemical nature, as are the above processes, nevertheless, they are distinguished from those processes in that they occur in a living body. Thus, they have a certain relation to the nature of living bodies.

By means of such discoveries, physiology was able to determine the vital functions of the nervous system and the role that its various parts play in the acts of cognition. Thus, according to physiology, the brains are divided into four lobes: the frontal lobe, the parietal lobe, the temporal lobe and the occipital lobe. Each of these lobes has its specific physiological functions. The motor centers, for example, are in the frontal lobe. The sensory centers, which receive messages from the body, are in the parietal lobe. The same is true of the sense of touch and that of pressure. As for the specific centers of taste, smell and hearing, they are in the temporal lobe; while the visual centers are in the occipital lobe. There are further details [of the brain].

Usually, one of the two main physiological procedures, ablation (al-isti'sal) and stimulation (at-tanbih), is used to obtain physiological information about the nervous system. (p. 376) In the former procedure, various parts of the nervous system are ablated. Later, a study is made of the changes in the behavior that occur as a result of this ablation. In the latter procedure, on the other hand, specific centers in the cortex of the brains are stimulated by electrical means. The sensory or motor changes that result from this are then recorded.

It is very clear that by means of their scientific tools and experimental methods, physics, chemistry and physiology cannot disclose anything other than the events and contents of the nervous system, including whatever processes and changes it undergoes.

However, the philosophical explanation of the reality and essence of knowledge is not the

prerogative of these sciences, since they cannot prove that such particular events are the same as the knowledge which we have as a result of our own experiences. The indubitable and indisputable truth is chat such physical, chemical and physiological events and processes are related to knowledge and to the psychological life of a human being.

They play an important role in this sphere. However, this does not indicate the soundness of the materialistic claim that insists on the materiality of knowledge. There is a clear difference between knowledge as something preceded or accompanied by preparatory processes on a material level and knowledge as something that is in essence a material phenomenon or a product of matter at a specific stage of growth and development, as the materialistic school asserts.

The natural sciences, therefore, do not extend their study to the philosophical field – that is, the field of investigating knowledge in its reality and essence. Rather, they are negative in this respect. This is so in spite of the fact that the school of psychological behaviorism attempted to explain knowledge and thought in light of physiological discoveries, especially the conditioned reflexive act whose application to the psychological life leads to a purely mechanical view of mankind. This will be discussed later. (p. 377)

Knowledge in Psychological Research

Psychological research that addresses psychological problems and issues divides into two branches. One of them is the scientific research that constitutes experimental psychology; the other is the philosophical research for which philosophical psychology or the philosophy of psychology is responsible. Psychology and philosophy each has its own methods and procedures for research and exploration.

Psychology begins where physiology stops. Thus, it studies and scrutinizes the mental life and its psychological processes. In its practical studies, psychology employs two main procedures. One of them is introspection, which is used by many psychologists. In particular, this procedure is a distinguishing mark of the school of psychological introspectionism which adopts subjective experience as an instrument for its scientific research, and which advocates feeling as the subject of psychology.

The other procedure is objective experience. Lately, this procedure has occupied the most important position in experimental psychology. Its importance was particularly emphasized by behaviorism, which considers objective experience as a basic constituent of science. Because of this, behaviorism claims that the subject of psychology is external behavior, since it is the only thing to which outward experience and objective observation can be applied.

The facts addressed by psychology are chose that can be disclosed either by introspection or by outward experience. As for those facts that lie outside the limits of experience, they cannot be the subject of experimental psychology. This is to say that this school of psychology extends just as far as the experimental field extends,. and ends where this field ends. There, the philosophy of psychology begins, where the experimental science stops, as (p. 378) psychology begins its scientific march where physiology stops.

The most basic function of the philosophy of psychology is to endeavor to disclose those facts that lie outside the scientific and experimental field. Philosophy pursues this [end) by admitting the psychological postulates given by experimental science, and studies them in light of general philosophical laws. With the guidance of such laws, philosophy gives the scientific results a philosophical interpretation, and posits a more profound explanation of mental life.

Thus, the relation between psychology and the philosophy of psychology is analogous to the relation between the experimental natural sciences and the philosophy of such sciences. The natural sciences investigate the various phenomena of electric currents and fields, electric exhaustion and velocity, as well as other physical laws of electricity.

The different phenomena of matter and energy are also studied along the same lines. The nature of electricity and that of matter or energy, on the other hand, are the concern of philosophical research. The same is true of mental life. Scientific research takes up the psychological phenomena chat fall in the sphere of subjective or objective experience. Discussion of the nature of knowledge and the reality of the internal content of the mental processes is entrusted to the philosophy of psychology or philosophical psychology.

In light of this, we can always distinguish between the scientific and the philosophical sides of the issue. Following are two examples of this, drawn from the subjects of psychological research.

The first is mental dispositions concerning which both the philosophical and the psychological sides meet. The philosophical side is represented in the disposition theory (nazariyyat al-malakat) that asserts that the human mind is divided into powers and numerous dispositions for various kinds of activities. These powers and dispositions are exemplified by attention, imagination, memory, (p. 379) cognition, will and similar features. This idea falls under the scope of philosophical psychology. It is not a scientific idea in the sense that it is 'experientially scientific'.

This is because whether experience is subjective, as is introspection, or objective, as is scientific observation of the external behavior of others, it cannot scientifically disclose the multiplicity or unity of dispositions; for neither the multiplicity of mental powers nor their unity

can be subjugated to experimentation, regardless of its kind.

The scientific side of the disposition issue, on the other hand, points to the theory of formal training in education. This theory states that mental dispositions may be developed as a whole and, without exception, by training in one subject matter and one kind of facts. This theory has been admitted by a number of educational psychologists who accept the disposition theory that prevailed in psychological thought up to the nineteenth century.

They assumed that if a disposition is strong or weak in a certain individual, it is also strong or weak in every area [in that individual]. Clearly, this theory is subsumed under the scope of experimental psychology. It is a scientific theory, since it is subject to the scientific criteria. Thus, it is possible to try to find out how memory is influenced in general by training in memorizing a certain subject matter.

With this, it becomes possible for science to assert its judgement in light of experiments of this sort. Subsequently, the scientific result of the experiment is presented to the philosophy of psychology, so that this philosophy may study, in light of philosophical laws, the philosophical significance of this result and its meaning of the multiplicity or unity of dispositions.

The second example is drawn from the heart of the subject matter under consideration. It is the act of visual perception. This is one of the main subjects of research in both scientific and philosophical fields alike.

In scientific research, a sharp debate (p. 380) between the associationists (al-irtibatiyyin), [10] on the one hand, and the defenders of the doctrine of shape or form (the Gestalt), [11] on the other hand, centers on the explanation of the act of perception.

Associationists are those who consider sensory experience as the only foundation of knowledge. As chemists analyze chemical compounds into their primitive elements, associationists analyze the various mental experiences into primary sensations linked and composed by instrumental and mechanical processes, in accordance with the laws of association. There are two aspects to this theory of association. The first is that the source of the composition of mental experiences is primary sensations, or simple ideas that are apprehended by the senses. The second is that this composition occurs mechanically and in accordance with the laws of association.

The first aspen has already been studied in the theory of knowledge when we discussed the primacy source of human conception and the empirical theory of John Locke, who is considered the founder of the school of associationism. There, we concluded that the source of some units of conception and rational thought is not the senses. Rather, such units are produced by the positive, efficient activity of the soul.

The second aspect, on the other hand, was addressed by the Gestalt school that rejected the analytic approach to a study of the conscious states. It responded to the mechanical, associationistic explanation of the acts of knowledge by insisting that it is necessary to study every experience as a whole, and that wholeness is not just the melting or composition of sensory experiences. Rather, it has the nature of a dynamic rational order that is in keeping with certain laws.

After having clarified the above two tendencies, let us see their scientific explanation of the act of visual perception. In light of the associationistic tendency, it is said that the image of a house, for example, that is formed on the retina is transported to the brain part by part. There, in a specific part of the brain, an image is found that resembles the image that occurs on the retina.

The mind is then activated and supplies this brain image with ideas from previous experiences in the mind chat are mentally associated with a house. This is accomplished in accordance with the mechanical laws of association. (p. 381) The result of this is rational knowledge of the image of the house.

In light of the shape or form tendency, on the other hand, knowledge from the very beginning is dependent on things as wholes and on their general forms, since there are primary shapes and forms in the external world that correspond to the shapes and forms in the mind. Therefore, we can explain the order of mental life by the order of the laws of the external world themselves, and not by composition and association. A part in a form or a whole is known only in accordance with the whole, and is changed in accordance with the changes of the form.

We give the name 'scientific explanation' to the explanation of such a visual perception, since it is included in the experimental field, or organized observation. Hence, knowledge of the form and the change of a part in accordance with the change of the farm are empirical. That is why the Gestalt school proved its theory by experiments chat show that human beings do not only perceive parts.

Rather, they perceive something else, such as the shape or the tune. All putts may come together without chat shape or tune being perceived. Thus, the form reveals all the parts. We do not wish at this point to elaborate the scientific explanations and studies of the act of visual perception. Rather, the above presentation is intended to help us determine the position of the philosophical explanation that we attempt to give such an act.

With respect to this, we say that after all those scientific studies, the mental perception of the visual image raises a question for both the Gestaltists and the associationists alike. This question concerns the image that is grasped by the mind and chat is funned in accordance

with the mechanical laws of association, or in accordance with the laws of shape or form: 'What is the essence of such an image, and is it a material or an immaterial image?' This basic question forms the philosophical problem that philosophical psychology must study and address. Materialism and metaphysics respond to this question (p. 382) by two contradictory answers.

By now, it is very clear that scientific psychology (experimental psychology) cannot insist on the materialistic explanation of knowledge in this area, and cannot deny the existence of anything in the mental life which lies outside matter, as the materialistic philosophy does; for psychological experiments, whether subjective or objective, do not extend to this mental field.

Knowledge in the Philosophical Sense

Let us now begin our philosophical study of knowledge, after having clarified its significance and relation to the various practical studies, in accordance with the philosophical method of psychological studies. This method can be summed up, as mentioned, in the adoption of scientific truths and experimental postulates, and in the discussion of these truths and postulates in light of the laws and principles accepted in philosophy, so that one can infer a new truth behind the truths already discovered by experiments.

Let us take the mental perception of a visual image as a living example of the general mental life whose explanation is the subject of disagreement between metaphysics and materialism. Our philosophical notion of knowledge is based on the following: (1) the geometrical properties of the perceived image; and (2) the phenomenon of stability in the acts of visual perception.

I Geometrical Properties of the Perceived Image

in the former, we begin from an intuitive truth which we draw from our daily lives and various ordinary experiences. This is the truth that the image given to us (p. 883) by the mental operation of visual perception involves the geometrical properties of length, width and depth and appears in various shapes and volumes.

Let us assume that we visit a garden that extends for thousands of meters, and that we cast one glance at it by means of which we are able to perceive the garden as one solid whole in which there are date palms, ocher kinds of trees, a large water pool, flowers and leaves bursting with various forms of life, chairs placed in order around the water pool, nightingales, as well as other kinds of birds singing on tree branches. The issue that faces us with regard to this beautiful image that we fully grasp in one glance is this. What is this image that we grasp? it is the same as the garden and its objective reality as such? Or is it a material image in a

specific material organ of our nervous system? Or is it neither this nor that, but an immaterial image that resembles the objective reality and speaks of it?

An ancient theory of vision [12] advocated that the garden in its external reality is the image that is represented in our mental perception. This theory assumed that human beings perceive the very objective reality of things due to the fact that a certain kind of light rays emitted by the eyes fall on the visible object. But this theory was dropped from philosophical consideration early on. The reason is that the deception of the senses that makes us perceive certain images in certain unreal forms proves that the perceived image is not the same as the objective reality. If this is not so, (the question arises as to) what the objective reality perceived in the deceptive sense perception is. This theory was later discarded from science, for science proved that light rays are reflected on the eye from visible things, and not vice versa; and that we have nothing from visible things other than the rays that are reflected on the retina. Science even proved that our vision of a thing may occur years after the destruction of that thing. For example, we do not see Sinus in the sky !p. 884) except when the light rays it emits reach the earth a number of years after they had been emitted from their source.

They fall on the retina of the eve; thus we say that we see Sirius. But these light rays that lead to our seeing Sirius give information about Sirius as it was a few years earlier. It is possible that Sirius had disappeared from the sky a long time before we saw it. This is a scientific proof that the image we now perceive is not the same as Sirius soaring in the sky -that is, as the objective reality of that star.

It remains for us to consider the last two assumptions. The second assumption, which states that the perceived image is a material product in the perception organ of the nervous system, is the assumption that determines the philosophical doctrine of materialism. The third assumption, on the other hand, which states that the perceived image or the mental content of the act of perception cannot be material, but is a form of metaphysical existence outside the material world, is the assumption that represents the philosophical doctrine of metaphysics.

At this point of the discussion, we can consider the materialistic assumption as completely improbable. The reason is that the perceived image with its volume, geometrical properties, and extension - lengthwise and widthwise - cannot exist in a small material organ of the nervous system. Even if we believe that light rays are reflected on the retina in a certain form, and are then transferred in sensory nerves to the brain where an image resembling that which occurs on the retina is produced in a specific area of the brain, nevertheless, the material image is other than the mental image. This is because the latter does not have the same geometrical properties that the perceptible image has.

As we cannot take down on a small, plain piece of paper a photograph of the garden that we perceive in one glance equal to the garden in width, form and extension, (p. 385) so also we cannot take down on a small portion of the brain a mental or a perceptual picture of this garden that resembles the garden in width, form and geometrical properties. This is so because the imprinting of a large thing on a small thing is impossible.

Therefore, it is necessary to suppose the following. The perceived image, which is the real content of the mental operation, is a metaphysical form that has an immaterial existence. This is all that is meant by the metaphysical, philosophical notion of knowledge.

Here it may occur to some minds that the issue of perceiving an image with its shapes, volumes, dimensions and distances was responded to by science and treated by psychological research, which showed that there are a number of visual and muscular factors that help us grasp these geometrical properties. The sense of sight does not grasp anything other than light and color. The grasping of the geometrical properties of things is dependent on the link of the sense of touch to specific movements and sensations. If we free the visual sensation from all other sensations, we will see nothing but spots of light and color.

Moreover, we will not be able to perceive shapes and volumes. We will be unable even to distinguish between a circular thing and a cubic thing. This is because the primary qualities and forms are objects of the sense of touch. By repeating the touch experiment, a conjunction is produced between those tactile qualities and a number of visual sensations, such as specific differences in light and visible colors, as well as a number of muscular movements, such as the movement of adapting the eye to seeing proximate and distant things, and the movement of the meeting of eyes in the case of visual perception. After this conjunction occurs, we can dispense with the tactile sensations in the perception of shapes and volumes, due to the muscular sensations and movements that are associated with them.

If, subsequent to this, we see a circular body, we will be able to identify its shape and volume without touching it. We do this by depending on (p. 386) the muscular sensations and movements that have been associated with the tactile objects. This is how we finally perceive things with their geometrical properties: that is, not merely by the visual sensations, but by vision accompanied by other kinds of sensory movements that have acquired a geometrical significance because they were associated with the tactile objects. However, habit prevents us from noticing this.

We do not wish to study the theory of muscular and visual factors from a scientific point of view, for this is not the concern of philosophical inquiry. Let us, therefore, admit it as a scientific postulate and assume its soundness. This assumption does not change our

philosophical position at all. This must be clear in light of the above delineation of the philosophical inquiry in psychological research. The theory is tantamount to the assertion that the mentally known image – with its geometrical properties, length, width and depth – does not exist due to a simple visual sensation only.

Rather, its existence is the result of cooperation with other visual sensations and muscular movements that had acquired a geometrical significance by means of their relation to the sense of touch and their conjunction with it in repeated experiences. After admitting this, we face the very first philosophical question – namely, that which concerns the mental image that is formed by the visual sensation plus other sensations and movements: 'Where is this image? Is it a material image existing in a material organ? Or is it a metaphysical image fret from matter?'

Once again, we find ourselves required to adopt the metaphysical point of view. The reason is that this image with its properties and extension of thousands of meters cannot exist in a small material organ, as it cannot exist on a small paper. Therefore, it must be an immaterial image. This is with respect to the phenomenon of the geometrical properties of the known mental image.

II Stability in the Acts of Visual Perception

The second phenomenon on which our philosophical notion can rest (p. 887) is the phenomenon of stability. By this phenomenon we mean that the known mental image is inclined to stability and does not change in accordance with the changes of the image which is reflected in the nervous system. If, for example, we place a pencil at a distance of 1 meter from us, a specific light image will be reflected from it. If we double the distance separating us from it and look at it at a distance of 2 meters, the image it reflects will be reduced [in size] to half what it was in the first case.

This is in spite of the fact that the change in our perception of the volume of this pencil is minimal. This is to say that the mental image we have of the pencil remains stable in spite of a change in the reflected material image. This is clear evidence that the mind and its knowledge are not material, and that the known image is metaphysical. It is clear that this philosophical explanation of the phenomenon of stability is not incompatible with any scientific explanation of it that may be offered in this respect. Thus, you may be able to explain this phenomenon on the ground that the stability of known subjects in its various manifestations is ascribed to experience and learning.

Similarly, you may, if you wish, say in light of scientific experiments that there are determined

relations between stability in its various manifestations and the spatial organization of the external subjects that we know. However, this does not solve the problem from a philosophical point of view, for the known image, which does not change in accordance with the material image but remains stable as a result of a previous experience or due to specific spatial arrangement, cannot be the image that is reflected on the matter of the nervous system from objective reality.

The reason is chat such a reflected image changes in accordance with the increase in distance between the eye and reality, while that known image is fixed.

The philosophical conclusion we draw from this discussion is that knowledge is not material, as materialism claims; for the materiality of an object is one of two things: it is either that that object is essentially a matter, or that it is a phenomenon existing in a matter. Knowledge is not essentially a maser, nor is it a phenomenon existing in, or reflected on, a material organ, such as the brain; (p. 888) for knowledge is subject to laws different from the laws to which the material image that is reflected on a material organ is subject.

Knowledge primarily possesses geometrical properties, and secondarily possesses stability, something that no material image reflected on the brain possesses. On the basis of this, metaphysics holds that the mental life, with its knowledge and images is the richest and most superior form of life, since it is above matter and its qualities.

But the other philosophical issue stemming from the previous issue is that if the knowledge and images that form our mental life are not in a material organ, then where are they? This question called for the discovery of a new philosophical truth: namely, that such images and knowledge come together or move successively on the same level – that is, the level of thinking humanity. This humanity is not at all material, such as the brain or the medulla. Rather, it is a certain level of immaterial existence that a living being attains through his development and completion. Thus, the knower or thinker is this immaterial humanity.

In order to make the evidence for this point very clear, we must know that we face three positions. One of them is that our knowledge of this garden or of that star is a material image existing in our nervous system. We have rejected this position and given reasons for its rejection. The other is that our knowledge is not material but immaterial images that exist independently of our existence. This is also an unreasonable assumption. If these images were independent of us, what is our relation to them then?

Further, how do they become our knowledge? If we eliminate both of the above views, the only remaining explanation of this will be the third position: namely, that knowledge and mental images are not independent in existence from a human being, as they are not independent

states or reflections in a material organ. Rather, they are immaterial phenomena subsisting in the immaterial side (p. 889) of a human being. Therefore, the immaterial or spiritual humanity is that which knows and thinks; it is not the material organ that does this, even though the material organ prepares the cognitive conditions for a firm relation between the spiritual and the material sides of the human being.

The Spiritual Side of a Human Being

At this point, we reach an important conclusion – namely, that there are two sides to a human being. One of them is material; it is represented in his organic composition. The other is spiritual or immaterial. The latter is the playground for mental and intellectual activity. A human being, therefore, is not just a complex matter; rather, his personality is a duality of material and immaterial elements.

This duality makes it difficult for us to discover the kind of relation or link between the material and the immaterial sides of a human being. We know first of all that the relation between the two sides is solid, so that each of them constantly affects the other.

If, for example, a person imagines that he sees a ghost in the dark, he experiences a shudder. Also, if a person is made to speak publicly, he starts to perspire. Further, if any of us begins to think, a certain activity occurs in his nervous system. This is the influence of the mind or soul over the body. Similarly, the body has its own influence over the mind. If old age creeps upon the body, the mental activity is weakened.

Again, if a wine drinker indulges in drinking, he may see one thing as two. How then can each of the body and the mind affect the other if they are different and have no quality in common? The body is a piece of matter that has its own qualities of weight, mass, shape and volume. It is subject to the laws of physics.

The mind or soul, on the other hand, is an immaterial existent that pertains to a world beyond that of matter. Taking into consideration this gulf that separates the two sides makes it difficult (p. 390) to explain their mutual influence. A piece of stone can crush a plant in the soil, since both are material; and two pieces of stone can touch and interact. However, one must give some explanation as to how two beings from two (different] worlds can touch and interact. Most likely, the [difficulty of giving such an explanation] delayed modern European thinkers from adopting the notion of dualism, after they had rejected the ancient Platonic explanation of the relation between the soul and the body as a relation between a driver and the chariot he steers. [13]

Plato thought that the soul is an old substance free from matter and exists in a supernatural

world. Later, it descends to the body in order to manage it, as a driver gets out of his home and enters the chariot in order to steer it and manage it. It is clear that Plato's explanation of this pure dualism or gulf that separates the soul and the body cannot explain the close relation between them that makes every human being feel that he is one, and not two, things that came from two different worlds and then met.

The Platonic explanation remained incapable of solving the problem in spite of the revisions made in is by Aristotle, who introduced the idea of form and matter, and by Descartes, who introduced the theory of parallelism (nazariyyat al-muwazana) between the mind and the body. This theory states that the mind and the body (the soul and the matter) move along parallel lines. Every event occurring in one of them is accompanied by a parallel event in the ocher. This necessary accompaniment between mental events and bodily events does not mean that either of them is a cause of the other.

The mutual influence between a material thing and an immaterial thing makes no sense. Rather, this necessary accompaniment between these two kinds of events is due to the divine Providence that has willed the sensation of hunger always to be accompanied by the movement of the hand for reaching the food, without this sensation being a cause of this movement. It is clear that this theory of parallelism is a new expression of Plato's dualism and gulf that separates the mind and the body. (p. 891)

The problems resulting from the explanation of the human being on the basis of a union of soul and body led to the crystallization of a new inclination in European thought for explaining the human being on the basis of one element. Thus, materialism in philosophical psychology developed to assert that a human being is nothing but matter. Similarly, the idealistic tendency was generated; it tended to give a spiritual explanation of the whole human being.

Finally, the explanation of the human being on the basis of the two elements the spiritual and the material, found its best formulation at the hand of the Muslim philosopher Sadr al-Muta'allihin ash-Shirazi. This great philosopher apprehended a substantial movement at the heart of nature. This movement is the most primary source of all the sensible movements that occur in nature. It is the bridge that ash-Shirazi discovered between matter and soul. Matter in its substantial movement pursues the completion of its existence and continues its completion, until it is free from its materiality under specific conditions and becomes an immaterial being - that is, a spiritual being. Thus, there is no dividing line between spirituality and materiality. Rather, they are two levels of existence. In spite of the fact that the soul is not material, yet it has material relations because it is the highest stage of the completion of matter in its substantial movement.

In light of this, we can understand the relation between the soul and the body. It seems familiar that the mind and body (the soul and the matter) exchange influences, since the mind is not separate from matter by a wide gulf, as Descartes imagined when he found it necessary to deny their mutual influence and to assert their mere parallelism. Rather, the mind itself is nothing but a material image made superior by the substantial movement. Further, the difference between materiality and spirituality is just a matter of degree, as is the difference between intense heat and lower heat.

But this does not mean chat the soul is a product of matter and one of its effects. Rather, it is (p. 392) a product of the substantial movement which does not proceed from matter itself. The reason is that every movement is a gradual emergence of a thing from potentiality to actuality, as we learned in our discussion of development according to the dialectic. Potentiality cannot bring about actuality, and possibility cannot bring about existence. Therefore, substantial movement has its cause outside the matter that is in motion. The soul that is other than the material side of a human being is a product of this movement. As for this movement itself, it is the bridge between materiality and spirituality.

The Conditioned Reflex and Knowledge

Our disagreement with Marxism is not limited to its materialistic notion of knowledge, for even if the philosophical notion of the mental life were the main point of disagreement between us, we also remain in disagreement with it regarding the extent of the relation of knowledge and consciousness to social circumstances and external material conditions. Marxism believes that the social life of a human being is what determines for him his conscious thoughts, and that such thoughts or ideas develop in accordance with the social and material circumstances. But since these circumstances develop in accordance with the economic factors, the economic factors, therefore, are the primary factors behind the intellectual development.

Georges Politzer attempted to establish this Marxist theory on the basis of a scientific principle. Thus, he established it on the basis of the conditioned reflexive action. In order for us to have a good grasp of his view, we must say something about the conditioned reflexive action. This kind of action was discovered by Pavlov when he once tried to collect a dog's saliva from one of the [dog's] saliva glands.

He prepared a certain apparatus for this purpose. He then gave the dog food to make him salivate. He noticed that the saliva began to flow from the trained dog before the food was actually placed in his mouth. (p. 398) This was only because the dog saw the plate of food, or sensed the approach of the servant who used to bring the plate of food. It is clear that the

appearance of a person or his footsteps cannot be considered a natural stimulus for this response, as is the placing of food in the mouth. Indeed, these things must have been associated with the natural response during the long course of experimentation; so that they came to be used as initial signs of the actual stimulus.

According to this, the excretion of saliva when placing food in the mouth is a natural reflexive action produced by a natural stimulus. As for the excretion of saliva when the servant approaches or is seen, it is a conditioned reflexive action produced by a conditioned stimulus used as a sign of the natural stimulus. Were it not for its being conditioned by a natural stimulus, it would not cause a response.

Due to similar conditioning operations, living beings acquired their first system of signs. In this system, conditioned stimuli play the role of indicating natural stimuli, and eliciting the responses appropriate to the natural stimuli. After that, the second system of signs came into existence. In this system, the conditioned stimuli of the first system were replaced by secondary signs of themselves that they have conditioned in repeated experiences. Thus, it became possible to elicit the response or the reflexive action by means of the secondary sign, due to the fact that this sign had already been conditioned by the primary sign. Similarly, the system of primary signs made it possible to elicit the same response by means of the primary sign, due to the fact that this sign had already been conditioned by the natural stimulus. Language is considered the secondary sign in the system of the secondary signs. This is the theory of Pavlov, the physiologist. Behaviorism exploited this theory. (p. 394) It claimed that mental life is nothing more than reflexive acts. Therefore, thinking is composed of internal linguistic responses evoked by an external stimulus. This is how behaviorism explained thought as it explained the dog's act of secreting saliva when heating the footsteps of the servant. As the secretion is a physiological reaction to a conditioned stimulus that is the servant's footsteps, so also is thought a physiological reaction to a conditioned stimulus, such as a language, for example, that has been conditioned by a natural stimulus.

But it is clear that the physiological experiments on the conditioned reflexive action cannot prove that the reflexive action is the essence of knowledge and the real content of the acts [of knowledge], since it is possible that knowledge has a reality beyond the limits of experimentation. Add to this that in adhering to the view that thoughts are conditioned responses, behaviorism destroys itself and eliminates [its] power to disclose the objective reality and value,

not only of all thoughts, but also of behaviorism itself, since it is a notion subject to the behavioristic explanation. This is because the behavioristic explanation of human thought has

its significant influence on the theory of knowledge, the determination of the value knowledge, and the extent of the ability of knowledge to disclose reality. According to the behavioristic explanation, knowledge is nothing but a necessary response to a conditioned stimulus. This is exemplified in the flow of saliva from the dog's mouth in Pavlov's experiments. Knowledge, then, is not the result of evidence and demonstration. Consequently, all knowledge becomes an expression of the presence of a conditioned stimulus of it, and not an expression of the presence of its content in external reality. But the behavioristic notion itself is not an exception to this general rule and is not different from all other ideas in being influenced by the behavioristic explanation, the reduction in its value, and the inability to be a subject of inquiry in any foam. (p. 895)

However, the truth is exactly the opposite of what behaviorism intended. Knowledge and thought are not, as behaviorists claim, physiological acts reflecting conditioned stimuli, as is the excretion of saliva. Rather, the very excretion of this saliva indicates something other than a mere reflexive reaction; it indicates knowledge. This knowledge is the reason why the conditioned stimulus evokes the reflexive response. Knowledge, therefore, is the reality behind the reactions to conditioned stimuli, and not a form of those reactions. We mean by this that the dog's excretion of saliva at the occurrence of the conditioned stimulus is not a mere mechanical action, as behaviorism holds. Rather, it is the result of the dog's knowledge of the significance of the conditioned stimulus. The servant's footsteps accompanied by the arrival of food in repeated experiments began to indicate the arrival of food. Thus, the dog came to realize the arrival of food when hearing the servant's footsteps. Hence, he excreted his saliva in preparation for the situation whose approach was indicated by the conditioned stimulus. Similarly, the infant appears relieved when his nurse prepares to nurse him

The same thing happens when he is informed of her arrival - if he comprehends language. This relief is not a mere physiological action resulting from an external thing associated to the natural cause. Rather it is the result of the infant's knowledge of the significance of the conditioned stimulus, since he then prepares himself to nurse and feel relieved. That is why we find a difference in degree of relief between the relief caused by the natural stimulus itself and the relief caused by the conditioned stimulus. This is because the former is an authentic relief, while the latter is the relief of hope and expectation.

We can prove scientifically the inadequacy of the behavioristic explanation of thought. We can do this by the experiments on which the Gestalt doctrine in psychology was based. These experiments proved that it is impossible for us to explain the essence of knowledge on a purely

behavioristic basis, and as a mere response to material stimuli whose messages are received by the brain in the form of a number of separate neurological stimuli. (p. 396) Rather, in order for us to give a complete explanation of the essence of knowledge, we must accept the mind and the positive, active role it plays behind the neurological reactions and responses that are evoked by stimuli.

Let us take sense perception as an example. The Gestalt experiments have proved that our vision of the colors and properties of things depends greatly on the general visual scene we encounter and the background surrounding those things. Thus, we may see two lines as parallel or as equal within a group of lines that we encounter as a situation and as a whole whose parts are held together. Then within another group, we see them as not parallel or unequal. This is because the general situation that our visual perception encounters here is different from the previous situation. This shows that our perception is first concentrated on the whole. We visually perceive the pares in our perception of the whole.

That is why our sense perception of the part varies in accordance with the whole or the group including it. Therefore, there is an order of the relations among things that separates things into groups, determines the place of everything in relation to its specific group, and develops our view of a thing in accordance with the group to which it belongs. Our knowledge of things within this order is neither subject to the behavioristic explanation, nor is it possible to say chat it is a material response or a bodily state produced by a specific stimulus.

If it were a bodily state or a material phenomenon produced by the brain, we would not be able to perceive things visually as an orderly whole whose parts are linked in a specific manner, so that our perception of such parts would be different when we perceive them within other relations. This is because all that reaches the brain in knowledge consists of a group of messages divided into a number of separate neurological stimuli that come to the brain from the various organs of the body.

How then can we know the order of relations among things, and how is it possible for knowledge to be concentrated first of all on the whole, so that we do not know things except within a firmly knit whole, instead of knowing them in isolation, as they are transported to the brain? How would all of this be possible had there not been an active, positive role (p. 397) played by the mind behind the reactions and divided bodily states?

In other words, external things may send different messages to the mind. According to behaviorism, these messages are our responses to external stimuli. Behaviorism may wish to say that such responses or material messages that pass through the nerves to the brains are by themselves the real content of our knowledge. But what would behaviorism say about our

knowledge of the order of relations among things which makes us perceive first of all the whole as united in accordance with chose relations, even though this order of relations is nothing material that can produce a material reaction in the thinker's body, or a specific bodily response or state? Thus, we cannot explain our knowledge of this order, and consequently our knowledge of things within this order on purely behavioristic grounds.

Marxism adopted Pavlov's theory and drew from it the following conclusions. First, consciousness develops in accordance with external circumstances. This is because it is the product of conditioned reflexive actions that are evoked by external stimuli. Georges Politzer makes the following point: By this method, Pavlov proved that what primarily determines the human consciousness is not the organic system. But, on the contrary, this determination is made by the society in which human beings reside and by the knowledge that human beings acquire from this society. Therefore, the social circumstances in life are the real organizers of the mental, organic life. [6]

Second, the birth of language was the fundamental event that transported (p. 398) human beings to the stage of thought. This is because the thought of a thing in the mind is the mere result of an external conditioned stimulus. Therefore, it would not have been possible for a human being to have a thought of anything were it not for the fact that some instrument, such as language, played the role of a conditioned stimulus. The following is a passage from Stalin: It is said that thoughts arise in the soul of a human being before they are expressed in language, and that they are produced without the instrumentality of language. But this is completely erroneous. Regardless of what the thoughts that arise in the human soul are, they cannot be produced or directed except on the basis of linguistic instruments. Language, therefore, is the direct reality of thought. [7]

We differ from Marxism with regard to both points. We do not admit instrumentality in human knowledge. Thoughts and knowledge are not mere reflexive reactions produced by the external environment, as behaviorism claims. Moreover, they are not the product of such reactions that are determined by the external environment and chat develop in accordance with this environment, as Marxism believes.

Let us clarify this matter by the following example: Zayd and 'Amr meet on a Saturday. They converse for a while, and then attempt to separate. Zayd tells 'Amr the following: 'Wait for me at your home next Friday morning.' Then they separate. Each of them attends to his usual life. After the passage of some days, the time comes to make the visit. Each of them remembers his appointment and understands his position differently from the way the other understands his position. 'Amr remains at home waiting, while Zayd leaves his home setting out to visit

'Amr.

What is the external conditioned stimulus that caused (p. 399) different understanding in each of them, a few days after the previous meeting, and at this specific time? If previous conversations were sufficient for the present stimulation, why then do these two individuals now not remember all the conversations they had exchanged? Further, why do those conversations not play the role of stimuli and causes?

Another example is this. You leave home after having put a letter in your briefcase. You are determined to deposit this letter in a mailbox. While on the way to school, you see a mailbox. You realize immediately that it is necessary to deposit the letter in it and, thus, you do so. Later, you may come across many mailboxes that do not at all attract your attention. What is the stimulus that causes your realization when you see the first mailbox? You may say that the cause is the sight of the box itself, since you have conditioned it by the natural stimulus. It is, therefore a conditioned stimulus. But how can we explain our unawareness of the other boxes? Further, why does the conditioning disappear when our need is met?

In light of the above examples, you know that thought is an efficient, positive activity of the soul, and not something at the disposal of physiological reactions. Similarly, thought is not the direct reality of the cause, as Marxism claimed. Rather, language is an instrument for the exchange of thoughts. But it is not itself what forms thoughts. That is why we may think of something, yet make a long search for the appropriate word to express it. Again, we may think of a subject at the same time at which we are conversing about another subject.

In our detailed study of historical materialism in the work Our Economics, we offered an extensive criticism of the Marxist theories of human knowledge, [in particular,] the relation of knowledge to social and material conditions and the explanation of knowledge on the basis of economic conditions. Similarly, we studied in detail the Marxist view that asserts that thought is produced by language and is dependent on language. For this reason, we now consider that what appeared in the first edition of the present book to be sufficient as a recapitulation of our detailed study in the second series, Our Economics. (p. 400)

Therefore, social life and material conditions do not mechanically determine people's thoughts and conscious feelings by means of external stimuli. Indeed, a human being may freely shape his thoughts in accordance with the community and environment, as the school of functionalism in psychology asserts, from its influence by Lamarck's [14] theory of evolution in biology. As a living being organically adapts in accordance with his environment, so also does he ideationally adapt in the same way. However, we must know the following. First, such adaptation is a part of the practical thoughts whose task is to organize

the external life. But it cannot be a part of the reflective thoughts whose task is to disclose reality. Hence, logical and mathematical principles, as well as other reflective thoughts, proceed from the mind and are not shaped in accordance with the requirements of the social community.

If this were not so, every truth would be destined to absolute philosophical doubt. This is because if all reflective thoughts were shaped by certain factors from the environment, and if they were to change in accordance with those factors, then no thought or truth would escape change and replacement.

Second, the adaptation of practical thoughts by the requirements and conditions of the community is not mechanical. Rather, it is freely chosen. It grows out of human free motives that lead one to create a system that is in harmony with one's environment and community. With this, opposition between the school of functionalism and the school of instrumentalism in psychology is completely eliminated.

In Our Society, we will study the nature and limits of this adaptation in light of the Islamic notions of society and the state, because this is one of the main issues with which the study and analysis of society are concerned. In that study, we will treat in detail all the points that are briefly mentioned in the present discussion of knowledge.

Our final appeal is for gratitude to God, the Lord of the universe!

Author's Notes:

[1] al-Maddiyya ad-Dialaktikiyya wal-Madddiyya at-Tarikhiyya, p. 19.

[2] Ludwig Feuerbach, p. 57.

[3] Ibid., p. 64.

[4] Al-Maddiyya wal-Mithaliyya fi al-Falsafa, pp. 74-5.

[5] Ma Hiya al-Madda, p. 32.

[6] Al-Maddiyya wal-Mithaliyya fi al-Falsafa, pp. 78-9.

[7] Ibid., p. 77.

[8] Introspectionism is a school advocating reflection on, or subjective observation of the mental processes and states. Watson's behaviorism was a rejection of introspection. It viewed the conscious states only in terms of observable data.

[9] Functionalism is a tendency in psychology asserting that mental processes, thoughts, sense perceptions and emotions are adaptations of the biological organism. Among the exponents of this tendency are: W. James, C.T. Ladd, C.S. Hall, J. Dewey and J.R Angell.

[10] Associationism is a tendency insisting that all mental states are analyzable into simple

elements. Locke is a forerunner of associationism in psychology.

[11] In German, Gestalt is 'shape' or 'form'. The Gestalt school in psychology was founded in Germany around 1912 by Max Wertheimer, Wolfgang Kohler and Kurt Koffka. It interprets a person's experience in terms of organized wholes. It is through the whole that the parts acquire their existence and character. Without the whole, the parts do not exist. This is a clear rejection of the associationist's analytic tendency or atomism.

[12] This ancient theory of vision was held by Empedocles.

[13] Plato, Phaedrus, 246 a6ff.

[14] Jean Baptiste Lamarck, French naturalist (1744-1829). He is the founder of modern invertebrate zoology. He coined the words 'vertebrate' and 'invertebrate'. He is best known for his theory of evolution. Although he was not the first to propose evolutionary development of living species, he was the first to speak daringly and openly of the view that species are not immutable. Living beings use some parts of their bodies quite a bit, while they use some other parts very little. The parts that are used a lot develop, while the parts that are little used die out. The development or death that a part undergoes is transmitted to the offspring. Hence, acquired traits are inherited. His most important writings are: Natural History of the .Invertebrates and Zoological Philosophy