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LOGIC AND PSYCHOLOGY: A PHILOSOPHICAL DISCUSSION

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Abstract: In this article I have tried to discuss two important aspects of human life: firstly, it can be molded according to logical principles, and secondly, the psychological analysis about human character. Although these are two different approaches, one is descriptive science and the other is normative science, yet they relate each other. One is difficult to be understood without study of other. All sciences have, perhaps, much the same possibilities of broad theory and subtle analyses. Logic and Psychology stand in the difficulty sustains the persuasion that its point of view is worth applying. In this research article it was presumed to think of the mind as a course of consciousness, a continuous connected presentation, more or less emphasizing within it various images, and groups of images and ideas, which were roughly said to act and react upon each other, to coherence in systems, and to give rise to the perception of self. This course of consciousness, including certain latent elements, for the existence of which it is necessary to assume, is an individual mind, attached to a particular body, and so far as we know, are not separable from the actions and affections of that body is the connection between such a course of consciousness in any individual, and the world as that individual knows as wills it. This is the point at which psychology passes into Logic. Psychology treats of the course of ideas and feelings. Logic of the mental construction of reality. The way the course of private ideas and feelings contain in it, a world of things and persons which are not merely in my mind. So, I have tried to through light on all these relevant issues of logic and psychology.

Key Words: Logic, Psychology, Mind, Matter, Possibilities, Behaviorism, Ego-activity

In every sphere of human enquiry, whether in physics or in geology, in biology or in psychology, logical principles and forms of thought are employed; and in every enquiry into human behavior, made whether by the historian or by the statesman or by the economist, a psychological study of men's actions, opinions, habits and expectations is involved. At the same time it is also true that on account of the extensive power of logical principles, this psychological study is accomplished in accordance with the principles of reasoning. By nature we are endowed with powers of reasoning. Logic is the study of uses of these powers. Logic is the study of the methods and principles used to distinguish correct from incorrect reasoning[1]. An enquiry into the meaning of a logical concept often brings in psychological discussions; and a psychological discussion of the mental phenomena takes into account the logical meaning. It is, therefore, considered necessary to enquire into the nature of these two important sciences.

The different fields of human enquiry may first be broadly classified into physical and non-physical. The non-physical world may again be divided into the Biological and the mental. Physics, Chemistry, etc., are physical sciences; botany, zoology, etc., are biological sciences; and logic, psychology, etc., are mental sciences. The physical and the biological sciences, again, come under the class of natural sciences.

Science believes that everything in the universe is causally connected either directly or indirectly. There is thorough-going determinism in nature and there is no scope for freedom.[2] The conception of science is bound up with the concept of causality. A natural science seeks to discover causal relation between particular phenomena within its scope. It explains the phenomena by natural laws. It assumes the principles of uniformity and causation, and employs methods of analysis, observation and experiment. It forms hypothesis when necessary. Psychology of today has followed these procedures and it promises to explain mental phenomena in the manner of the natural sciences.

According to Russell, popular Metaphysics divides the known world into mind and matter, and a human being into soul and body.[3]The subject-matters of the sciences are different. In a sense, it may be held that the subject-matter of all the sciences is one. But that view has not been adopted here. Not only does the subject-matter distinguish one science from another, but the ways of understanding the subject-matters are also different. The same object and the same fact may be judged

differently. We describe the rose before us; we may admire it as beautiful. The subject-matter of the sciences may also differ in kind. Some sciences deal with the physical objects, some with the phenomena of life, and some with the mental objects. Logic deals with the inference or reasoning, psychology with the mind, its states and processes. Psychology is a behavioral science that has primary reference to human beings acting alone and in groups. Psychology began as a part of philosophy, and it was not until the late 19th century that it became a separate experimental science.[4]The methods of logic and psychology are different, though both are mental sciences. Psychology is called a positive science of mind as it deals with the actual mental processes involved in thinking, feeling and willing. It deals with the bodily processes also, in so far as these are expressions of mental states. It aims at establishing mental laws to explain mental phenomena. Logic, on the other hand, is a normative science as it defines or determines the standard of truth. It also lays down rules for the attainment of the ideal and helps us to correct our errors and shortcomings by estimating evidence.

My object here is to determine the true nature of logic and psychology by examining some views regarding their nature and distinction. First, the common distinction between logic and psychology, considered as a normative science and a positive science respectively, will be examined. It is said that psychology is concerned merely with what is and logic with what should be. It will be evident from what follows that the distinction is unconvincing. Secondly, it will be shown that the distinction between logic and psychology on the ground that one deals with the mental products and the other with the mental processes; is not intelligible. Thirdly, it will be pointed out that the current tendency, in its treatment of psychology as a subject akin to natural sciences, has brought about a distinction of psychology.

1. Positive and Normative Sciences

Psychology, it is said, deals with the actual mental phenomena. In his consideration of that mental state which is called 'belief,' the psychologist would endeavor to determine the grounds for conditions of belief. He would enquire whether it is intellectual, or emotional or volitional in nature. In the case of a particular belief the psychologist seeks to find out how the belief was formed and how it occurred in the mind with such and such characteristics. Russell says, 'Truth or falsehood of a belief does not depend upon anything intrinsic to the

belief, but upon the nature of its relation to its objective.'[5] But the logician would examine the truth or falsity of the belief. He will examine the relation of the belief to facts. In other words, he will see if the belief amounts to knowledge. It may be pointed out that, though belief has emotional or co-native aspects, it is not purely subjective in character. There is also an objective reference in belief. The content of belief is determined by knowledge. Hence, a psychological analysis of belief involves the question of truth or falsity of belief. ''The subjective conclusion has an objective ground.''[6]

Psychology in describing mental phenomena and in its investigation into the occasioning causes of these phenomena employs the principles and forms of thought. Psychology uses the norms of thought in dealing with its own subject-matter. It describes the mental processes and also evaluates them with a reference to some standard of truth in making discrimination between true and false perceptions, good and bad memory, belief and knowledge, the intelligent and the stupid, etc. Johnson says,'' From a certain point of view every science may be said to exercise an imperative function in so far as any mistake or confusion in the judgments of the ordinary man is corrected or criticized by the scientist as such. Every science, therefore, can, without any confusion of thought, be regarded as normative.''[7]Johnson objects to the division of the sciences in general into the normative and the positive. Even the positive or descriptive treatment of the mental processes 'is (like all sciences) normative in the sense of being potentially corrective of false judgments on the topics directly dealt with; while the treatment in logic, aesthetics and ethics of these same processes is normative in the more special sense that these sciences examine and criticize the norms of thought, feeling or action themselves.'[8]

It may be contended that logic, being a science of the necessary principles and forms of thought, it is not concerned with the matter of thought. In reply it may be said that logic assumes the objects of thought though it does not consider the nature of such objects. Thought implies objects of thought. Thinking cannot be studied in abstraction. It is to be studied in reference to objects. But at the same time it is also true that a science, to be general, is bound to be abstract. As the laws of thought are universal and necessary in character, logic cannot but ignore the differing character of the objects. It is only the special sciences that formulate empirical laws by taking into consideration the differences in the objects of a particular class only. A special science is also abstract in

the sense of selecting its subject-matter. The generalizations of the sciences are true in the sense of being empirical; the principles and forms of thought are true because they are universally and necessarily applicable to objects of thought or experience.

Psychology as a positive science deals with sensible facts. It may be pointed out that psychology, in order to explain facts of consciousness, presumes non-conscious factors. The postulation of the sub-conscious state of 'mental dispositions' in psychology may be taken as an illustration. Such subjective factors are supposed to exist for explaining the facts of our conscious experience. It is an explanation of the known by the unknown. This is true not only of psychology but also of physical sciences. The cases of energy and ether may be taken as examples.

The principles of sciences are true in so far as they are applicable to the facts of experience, but they may not explain the true nature of things. Similarly, the psychologist lays down principles, and makes generalizations to explain facts of our conscious experience. 'The psychologist as such, Bradley says, 'is not interested in knowing if his principles are true when taken categorically. If they are useful ways of explaining phenomena, if they bring unity into the subject and enable us to deal with the fresh facts which arise, that is really all that, as psychologists, we can be concerned with. Our principles are nothing but working hypotheses.[9]

2. The Processes of thought and Products of Thought

In a syllogistic or inductive inference we start with the premises or data and pass on to the conclusion which they yield. It is said that the conclusion is the product of thought and there is a process of thought distinct from its product. By process is meant mind's transition from the premises to the conclusion. Logic, we are told, deals with the product of thought and psychology with the processes of thought. This implies that logic does not deal with the actual mental processes that lead to the conclusion or the processes involved in forming a concept or a judgment. Logic, then, deals with the formed concept, formed judgment and reasoning; whereas psychology deals with conception, judgment or reasoning as actual mental processes which are generally attended by feeling, emotion and volition. Let's take an arbitrary case. Suppose the arguer, after starting with the premise, ''All men are mortal,'' thought of his friend with his red coat on and then through the premise ''X is a man'' passed to the conclusion,"X is mortal". The business of psychology, in this case, will be to investigate into all the psychic events

and processes that actually occurred before arriving at the conclusion ''X is mortal.'' For logical consideration the psychic details, specially the occurrence of the ideas of the friend and of his red coat, are irrelevant. These irrelevant psychic details are eliminated for the purpose of logic; whereas, the aim of psychology is to establish a connection between the so-called relevant and irrelevant psychic details.

What then is the precise line of demarcation between the 'process' and the 'product'? More precisely: What is the point at which the 'process' of thinking ends and the 'product' of thinking begins? In the judgment 'The fan is moving' we cannot at all mark out where the process of thinking ends and the product, that is, the judgments, begins. It has been maintained that logic deals with concepts and judgments, as products of thought, and compares them. Suppose in the formation of the concept 'man', there are four stages. Our question is: Is the concept 'man' reached at the fifth stage in the process of thinking? If it is so the concept 'man' is formed immediately after the fourth step has ended, and subsequently at the fifth stage the concept 'man' emerges in the mind. But in and between the fourth and the fifth stage indefinite number of steps in the process may be conceived. Hence, separation of the process from the product is not possible. The product cannot be distinguished from the so-called last stage of the process. So, is not what we call the formed concept also an item in the process?

In the foregoing account 'concepts'[10] have been considered as ready-made ideas which enter into relation with judgment. Every concept involves previous judgment and derives its meaning from it. It is only when words are substituted for thoughts that concepts are thought of as existing independently of judgments. Concepts, thus conceived, enter into relation with, 'Concepts are not dead things but living thoughts in constant process of development.''[11]Concepts and judgments are interwoven.

Again, the view that distinguishes process from product of thought involves the notion of inference as yielding conclusions containing entirely new facts. But it is the gradual development of thought by means of identity by which conclusion is arrived at. The conclusion does not contain entirely new facts that may enable us to distinguish it from the antecedent processes.

A concept is not a substantive. It does not exist independently of judgments. It is an idea. It does not exist merely as a psychic state in the

consciousness of an individual; it also refers to a meaning. 'The essence of the idea,' Bosanquet says, ''does not lie in the peculiarities of any one of their varying presentations, but in the identical reference that runs through them all, and to which they all serve as material, and the concept of this reference is the object of our thought.[12]

Schiller's polemics against formal logic have some reasonable grounds in so far as he says that, 'the formal view is restricted to the words''.[13] But his attempt to reduce logic into psychology seems to be far from truth. He says that 'in actual fact logical assertion grows up in the jungle of wishes, desires, emotions, etc. Further he says that 'in real life logical assertion is intimately bound up with this context.'[14] So to Schiller, the psychical concomitants cannot be banished from logic. As already pointed out the meaning of an idea or judgment is not contained in the mere presentations. An idea or judgment refers to something beyond the mere psychical presentations or the images. This something is the meaning of an idea or judgment.

3. Psychology as dealing with the actual

Physics deals with the actual physical events with a view to discovering the laws governing the physical universe. Psychology, similarly, deals with the actual mental states and processes with a view to arriving at mental laws in order to explain mental phenomena. It deals with the occasioning causes. For this reason it is called a natural science.

Let us consider how far psychology deals with the actual mental states. We put a question: Do we perceive the present? A mental state is fleeting and evanescent. It is gone before we can fix on it. In our attempt to attend to the present we do not find the present there. It vanishes as soon as we try to perceive it. For this reason, James offers us a conception which he calls 'the specious present.' The 'specious present' includes a little of the past and a little of the future. It is this so-called present that is the fact of our immediate apprehension. This theory of 'specious present' has been maintained also by Russell and Broad. But it may be argued that such a short finite time which Russell conceives cannot sensibly be present in an act of immediate cognition. The real present cannot be perceived. It is an ideal construction which is made with the help of memory and imagination. Professor Paton, while commenting upon the notion of 'specious present', says, ''it appears to me to be impossible that in an atomic moment we can sense a change which begins before that moment and continues up to that moment. I do

indeed believe that in an atomic moment we could sense anything, any more than we could see color in a mathematical point''.[15]

It may be argued that mathematics or logic or mathematical logic deals with abstractions. These studies begin with certain abstractions and deduce consequences which are abstractions to the extreme. Johnson and Mace of the Mathematical school hold that logic deals with the possible and not with the actual. In his ''Principles of Mathematics'', Russell has defined mathematics as a science which deals with 'deduction by logical principles from logical principles'. Again while examining the traditional logic in his ''Knowledge of the External World'', Russell defines the true function of logic and says, 'As applied to matters of experience, it is analytic rather than constructive; taken a priori, it shows the possibility of hitherto unsuspected alternatives more often than the impossibility of alternatives which seemed prima facie possible. Thus, while it liberates imagination as to what the world may be, it refuses to legislate as to what the world is.[16] Russell has tried to establish close relation between mathematics and logic, and has endeavored to define mathematical concepts in terms of logical ideas.

We ask: Are mathematical principles merely formal principles which have no reference to actuality? Do the mathematical logicians work out 'possibilities' as an intellectual gymnastic? Confusion exists with regard to the meanings of 'possible' and 'actual'.

An actual is that which has been presented in a sense-experience or that which is connected with the objects of experience. But the notion that in immediate experience the actual can be found is untenable. For, when our sense-experience is analyzed we discover that our actual sense-experience of 'the table', for example, is very little compared to our knowledge of 'the table'. Similarly, our judgments which are based on experience cannot be said to be based merely on experience. They involve elements of thought. It is to the above sense of so-called 'actual' that the 'possible' has been contrasted.

The common belief is that the 'possible' is opposed to the actual and is imaginary. It may be argued that even imagination is founded on empirical materials.
Johnson distinguishes three meanings of 'possible'.[17]

1- Possible may mean that which is not false from the point of view of our present knowledge. This has been called 'the epistemically possible'.
2- Possible may mean that which is not incompatible with 'a proposition whose truth is certified by pure thought or person'.[18] This has been called 'the formally possible'.
3- Possible may mean that which is not incompatible with 'pure law of nature'. This is 'the nominally possible'.

In view of these different meanings of 'possible,' it may be said that 'possible' is not really opposed to the actual. The 'possible' is not imaginary too. It may be abstract. But abstraction is involved in thought and generalization also involves abstraction.

Sciences, of course, do not give us absolute certainty. The abstract deductions contain probable truth. These are merely approximations to truth. It is only when these abstractions can explain the objects of experience that we become confident of their truth.

Mathematics or mathematical logic is based on pure logical principles. The abstract deductions either of mathematics or of logic are, possibly, not far removed from reality or actuality in the sense that may explain objects of sense by such abstractions. Newton discoveries regarding the law of gravitation were based on extremely abstract deductions and calculations, yet these abstract deductions could explain the planetary motions, solely because the entire investigation rested on accurate observation made by Kepler. Stebbing has remarked that 'the value of the method of extensive abstraction can be gauged by the fact that it shows how abstract deductive systems can be applied to the world presented in sense'.[19]

4. Emancipation of Psychology from Philosophy

With the predominance of the natural sciences since the seventeenth century, a revolt against the traditional psychology was noticed. The world of enquiry was divided into the world of physics and the world of mind. Thinkers sought a science of the mental phenomena to make it a 'counterpart science' of physics. The mental science should follow the methods of the progressive sciences. The human behavior is to be studied by the scientific procedures of observation and experiment.

The traditional conception of psychology was that, psychology was a science of soul. The modern conception, broadly speaking, is that it is an empirical study of the mental states and processes and of behavior. The

whole development of psychology indicates two contrasting tendencies. McDougall[20] expresses these two contrasting tendencies by such expressions as 'psychology without a soul' and 'psychology with a soul'.

The influence of physics on psychology was great. The ideas of motion and inertia brought a change not only in physics but also in psychology. The mechanical and biological concepts were being employed in psychology. The influence of physiology was also remarkable in the nineteenth century. The associationists revolted against the faculty psychology, and explained the mental processes by the laws of association. Early in this century, experimental psychology and behaviorism gained ground. Experimental psychology aims at measurement of aspects of consciousness; the behaviorist's principle is 'that man should be treated just as the animal is treated'. Pavlov.[21] The Russian psychologist discovered the fact of conditioned reflex. Watson[22] made his first public appearance in 1908 with his doctrine of behaviorism.

Behaviorism denies the method of introspection and adopts the method of observation and experiment. Watson says, 'psychology as the behaviorist views it is a purely objective experimental branch of natural science. Its theoretical goal is the prediction and control of behavior. Introspection forms no essential part of its methods… The time seems to have come when psychology must discard all references to consciousness…It can be done in terms of stimulus and response, in terms of habit formations, habit integration and the like'.[23]

Then, again, existentialism insists on the study of individual experiences as 'existences' without making any reference to the meaning or value of such experiences. Tichener[24]'believes that existential psychology is the only brand that can take its place as a pure science alongside of physics and biology.'[25]

As a reaction to the above tendencies, Stout[26] rejects the theory of psychical atomism and maintains that physiological and psychological studies are separate. He makes psychology a study distinct from that of the natural sciences. McDougall opposes mechanistic or sensationalistic psychology. He rejects any form of psychology which makes use of physical categories or mechanistic concepts. Though McDougall defines psychology as 'a positive science of the behavior of living beings',[27] yet

his psychology is anti-behaviorist; for, to him behavior cannot be explained without purpose. Human and animal behavior, according to him, is dominated by purpose.

A further reaction against the conception of psychology as a natural science may be noticed in the Understanding School, the chief exponent of which is Dilthey[28]. This school classifies sciences into two groups: natural and cultural. A natural science explains nature; a cultural science understands man and stresses upon value. Psychology is a cultural science. Man is to be conceived as 'more than a self-preservative machine'.

The foregoing account has shown that the current tendency in psychology is to reduce psychology to a natural science. The tendency in behaviorism, in particular, is to avoid the concept of mind altogether and to study the behavior of human beings merely as a response of the whole organism to the stimuli. Mind has been conceived as a by-product of the brain. The existential psychology avoids search into the meanings and values. It avoids any reference beyond the mere individual's experience as such. Such views labor under the misconception in that psychology can explain mental phenomena in terms of human behavior just as the physical sciences explain everything of nature in terms of motion, inertia, etc. The notion that all facts of experience can be explained by the concept of physical causation is mistaken. Experience implies an experience and without it experience is not possible. Experience is meaningful only in reference to the experiencing self. The idea of self is necessary to explain unity of conscious life, personal identity and knowledge. The individual again, is not entirely determined by circumstances. The individual is a self-determining being. His will is determined by his own self. Iqbal says Life offers a scope for ego-activity, there are no pleasure-giving and pain-giving acts; there are only ego-sustaining and ego-dissolving acts.[29] The concept of physical causality cannot explain the life of a self-conscious, self-determining being.

To return to the other side of the subject-matter: the attempt of Schiller to reduce logic into psychology has been extremely one-sided. Logic does not undertake to construct an ideal of knowledge which has no relation to actual human knowing. Truth has both logical and psychological aspects. We agree with Schiller that 'in actual fact logical assertion grows up in the jungle of wishes, desires, emotions…' If we

stop with existence, say MacTaggart, and refuse to go any further, the existent is a perfect and absolute blank, and to say that this exists is equivalent to saying that nothing exists.[30] We also agree that, 'in real life logical assertion is intimately bound up with this context'. But just as psychology is abstract inasmuch as it does not attempt at an evaluation of our experience, so as logic is abstract in so far as it considers thinking in isolation from the actual desires, wishes and emotions. At the same time it is also true that logic and psychology throw light upon each other. Each has its own attitude, interest and separate province. These two sciences deal with the same matter, but, as Bradley says, they 'take up that matter each one-sidedly and in the end untruly.'[31] Philosophy today, someone said, is half science and half sentiment. In Russell's view, ''what we need, is not the will to believe, but the wish to find out, which is the exact opposite.''[32]

End Notes

[1] Irving M. Copi, and Carl Cohen, *Introduction to Logic*, (America:13th.ed.n.d), 1

[2] Irrespective Determinism or Fatalism holds that the future is fixed of our attempts to affect it. Seldom held as a philosophical doctrine this view often appears in literature (e.g. the Oedipus legend) other forms of determinism allow that our choices and actions are effective as links in the causal chain, but insist that they are themselves caused.

[3] Bertrand Russell, *An Outline of Philosophy*, (London: George Allen and Unwin, ed.1983) ,235

[4] *Encyclopedia Britannica*, ed. William Bento, V-18 (Chicago:1966), 742-743

[5] Bertrand Russell, *The Analysis of Mind* (London: George Allen and Unwin, 6th ed.1951) 232

[6] A.D Lindsay, *A Treatise of Human Nature*, Vol-1, (J. N. Dent and Co.1964), xiii

[7] Johnson, W. E, *Logic,* Part-1(Cambridge University Press,1st. ed.,1921), 225

[8] ibid., .225-226

[9] F. H. Bradley, *The Principles of Logic*,Vol.-1 (London: Oxford University Press, 2nd ed.1922), 340-341

[10] A concept is an idea conceived in the mind.

[11] Creighton, J. E., Ed. By H. R. Smart, *An Introductory Logic* (New York: The Macmillan company,ed.1946), 379

[12] Bernard Bosanquet, *The Essentials of Logic* (London: Macmillan and Co. Ltd. ed, 1906), 75

[13] Schiller, F.C.S., *Formal Logic: A Scientific and Social Problem*, (London: The Macmillan and co. ed.1912), 10

[14] ibid, 9

[15] Paton, H. J., *In defense of Reason*, (London: Hutchinson's University Library, 1st ed. 1951), 106

[16] Bertrand Russell, *Our Knowledge of the External World*: *As a Field for Scientific Method in Philosophy*, (London: George Allen and Unwin, ed.1914), 18,19

[17] Johnson, W. E., *Logic*, Part-1, 61

[18] 18-ibid, 56

[19] Stebbing, L. S., *A Modern Introduction to Logic*, (London: Methuen and Co. Ltd., ed. 1930), 452

[20] Rudolf Metz., *A Hundred Years of British Philosophy*, (Tr. by J.W. Harvey, Ed., J.H, Moorhead (London: George Allen and Unwin,1st. ed,1938) P.762

[21] Pavlov, Ivan (1849-1936) *A Russian Psychologist*

[22] John B. Watson. He was an American Philosopher. His Theory states

that human behavior is a scientific study.

[23] Woodworth, R. S., *Contemporary Schools of Psychology* (New York: Ronald press, 8th Ed.1948), 70

[24] Edward Tichener (1867-1927) A British Psychologist

[25] ibid, (seventh edition), 42

[26] George Stout (1860-1944) He was a leading English Philosopher

[27] Rudolf Metz, Dr., *A Hundred Years of British Philosophy*, 767

[28] Dilthey, Wilhelm (1911-1833) A German Idealist Philosopher, His Philosophy is philosophy of life; and central Idea of his philosophy is ''living soul''.

[29] Muhammad Iqbal, *The Reconstruction of Religious Thought in Islam*, Ed. and annotated by M. Saeed Sheikh (Lahore: Institute of Islamic Culture, 1st ed.1986), 95

[30] McTaggart, J. M. E. *Nature of Existence*,Vol.1, sec.,7, Ed. By C.D Broad (Cambridge: ed.1921), 60

[31] Bradley, F. H., *The Principles of Logic*, Vol. 2, 613

[32] Bertrand Russell, *Sceptical Essays* (New York: 1928), 157

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