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Knowledge Liberated

An Outline of an Eco-centric Epistemology

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Abstract: *Usually scientific knowledge is given a privileged status, often claiming that it is based on incontrovertible observational data. The author challenges both this claim and this justification, and points out that scientific knowledge is ridden with many limitations. In fact, he argues that scientific knowledge is one among many other forms of knowledge. According to him, the dialogical approach is the path to true knowledge, and he advocates the search for a liberated knowledge that can free humans and their claims.*

- Editor

Key Words: *Scientific Knowledge, Mystic Experience, Dialogue, Epistemology.*

What makes knowledge authentic? It is not possible to get a unanimous answer to the question and any answer will be debatable too. But debatabiliiy is seldom recognized by the experts of the disciplines that claim superiority over the other. Theology claimed infallibility and superiority during the middle ages and it considered conformity with "the faith" as the only one methodology to make universal and authentic knowledge. It was the turn of science during the last three centuries to make such claims and it declared that its method is the only one method by which humankind can formulate authentic knowledge. There are differences of opinion among the philosophers of science and among the scientists themselves on the nature of the methodology of science. But everyone except a very few agrees on the point that the methodology which he/she favours is the only method to make authentic claims.

Claims about the Privileged Status of Scientific Knowledge

The logical positivists' model of the philosophy of science (LPM) unambiguously propagates both methodologism and methodological monism. According to LPM, inductivism is the right method of scientific inquiry and that alone is capable of constituting authentic knowledge. It also believes that inductivism is an effective means to formulate infallible scientific generalizations on the basis of factually significant statements. "We say that a sentence is factually significant to any given person, if and only if, he knows how to verify the proposition which it purports to express – that is if he knows what observation would lead him under certain conditions to accept the proposition as being true or reject its opposite as being false."[2] The factual significance of a statement is identified with verifiability, and verifiability in turn is identified with observation. The statement that can never be verified by observation is considered as insignificant and an insignificant statement is treated as unauthentic. The LPM is generous enough to recognize two kinds of verification - `verification in practice' where the actual verification is possible and `verification in principle' where only a possibility of actual verification is envisaged.[3]

The LPM makes a distinction between authentic and pseudo statements. Consequently it bifurcates the human claims-to–know into two irreconcilable systems – science and non-sciences. It has no doubt about the infallibility of authentic claims and the fallibility of psuedo claims. The inductivistic verifiability alone is the criterion to make such a bifurcation, and by means of the verification principle it grants permission to the scientific hypothesis to remain part of the authentic claims though a 'conclusive verification' of hypothesis is not possible. The unkind attack of Karl Popper against the verifiability criterion of LPM is remarkable. But the Popperian falsificationist model (PFM) also unquestionably admits the authenticity of scientific claims as the genuine form of knowledge. He writes: "The central problem of Epistemology has always been and still is the problem of the growth of knowledge. *'And the growth of knowledge can be studied best by studying the growth of scientific knowledge."*[4] His respect for scientific knowledge and his aversion against inductivism forced him to make a distinction between "the psychology of knowledge and the logic of knowledge,"[5] and he eliminates

psycho-logicism from the sphere of scientific theory. He virtually bifurcates science into theory and practice – that is, he bifurcates the logic of scientific discovery and the logic scientific practice as two distinct ways of knowing. The logic of scientific discovery is free from the observation basis where verification is not possible, while the logic of scientific practice is based on empirical content where verification is possible. The PFM believes that scientific theories are falsifiable by accepting a counter instance and the scientific practice, which is based on the empirical content, can be retained as a permanent and authentic knowledge. Therefore Popper says: "If falsifiability is to be at all applicable as a criterion of demarcation, then, singular statements must be available which can serve as premises in falsifying inferences. Our criterion therefore appears only to shift the problem to lead us back from the question of the empirical character of theories to the question of the empirical character of singular statements."[6] One point to be noted here is that scientific knowledge is to be demarcated on the basis of the empirical content of a theory and not on the basis of freely created theories. The freely created theories can be falsifiable and be rejected. Popper identifies the growth of science with the accumulation of the empirical content of the theories and not with the number of theories to be freely created. Hence Ayer's observation that "Popper counted a statement as being falsifiable if it was logically incompatible with some class of what he called basic statements, a basic statement being one which asserted the existence of some observation states of affair at some particular places and times,"[7] is justifiable.

The main allegation against Thomas Kuhn is that he has made scientific discovery an irrational exercise of the community of practitioners. He makes a distinction between normal science and revolutionary science. Normal science "means research firmly based upon one or more past scientific achievements, achievements that some particular scientific community acknowledges for a time as supplying the foundation for its further practice."[8] Normal science according to Kuhn is only a puzzle solving exercise and revolutionary science is a paradigm formation activity by which new trends are created in the theory and practice of science. But the paradigm that is accepted by a community of practitioners need not be able to solve all the puzzles. Kuhn admits, "Normal science does not aim at novelties of facts or theories."[9] It is the

revolutionary science that brings novelties and theories to science. That is to say, only the puzzles that are solvable by an accepted paradigm constitute the normal science. Unsolvable puzzles by an accepted paradigm constitute anomalies and the accumulation of anomalies leads to a crisis and a paradigm shift occurs as a natural response to the crisis, and Kuhn considers it as a revolutionary activity. Kuhn says that "A paradigm is what the members of a scientific community share, *and,* conversely, a scientific community consists of men who share a paradigm."[10] Again he clarifies that "A scientific community consists, on this view, of the practitioners of a scientific specialty."[11]

The commitment of the community, the act of paradigm formation and the shift of the community from one paradigm to another can never be rationally explained.

As far as possible, normal science is concerned with the paradigm functioning as a guiding force, and it is the paradigm that determines the language system of the normal scientific practice of a community. The normal scientific practice is based on observed states of affairs, verifications and normal rational exercises by which science can attain its supremacy. As far as the normal science is concerned, Kuhn never denies the role of observation and verification of empirical facts.

All the philosophers of science referred to above, in one way or other admit the uniqueness of science and the authenticity of its claims. Though none of them is able to connect the theory and practice of science together in a logically consistent manner, every one irrationally believes in the superiority of scientific knowledge over the rest.

Feyerabend,[12] an anarchist in the history of philosophy of science refuses to share the common platform of both the scientists and the philosophers of science. As a methodological pluralist he reserves the epistemological right to dissent with the self-proclaimed authenticity of scientific knowledge. The process of democratisation of scientific claims demolishes the law and order attitude of science.

The Observational Basis of Scientific Knowledge

But still science believes that its claims are superior to the other claims because it can connect knowledge to empirical facts through

observation. As it has already been explained, scientific methods in general accept observational basis as the core of its characteristics. But how far the very act of observation is justifiable is the question that is ignored by both the scientists and the philosophers of science. The act of observation depends on a number of factors on which the observer may not have sufficient control. This paper intends to clarify these factors into three categories for the sake of study. Only the proper analysis and assessment of these factors can help us to understand how our scientific knowledge is exclusively distinct from others. These three categories are (1) physical factors (2) psychological factors and (3) social factors.

Physical Factors

The act of observation depends on the power of the sense organs of the observer. The power of the sense organs in turn depends on the general physical fitness of the body of the observer. The general physical fitness depends on a lot of factors such as the food habits, the socio-cultural aspects, the environmental conditions, etc. Naturally the power of the sense organs varies from person to person in accordance with the changing space-time context. The power of the sense organs of the observer cannot be absolute and complete because it is neither logically nor practically possible to fix the maximum limit of the power of a particular sense organ of the observer. Moreover the power of the sense organs of one and the same observer may be changing from time to time and place to place. For example, an observer at the prime of his youth with a good health condition may have a better power to observe things than an old man with poor health. It is a fact that with the help of some sort of instruments and equipments the power of the sense organs can be extended. For example, the micro level of observation can be extended by the help of a microscope and the macro level can be extended by means of a telescope. Whatever be the available power of these instruments, whatever be the power that can be given to these instruments, they are incapable of exploring the macro and micro areas of observation in toto. If we want to observe everything, whether at the micro level or at the macro level, then either our sense organs have to get infinite power to observe or we have to make instruments with infinite power of sensibility. Since this is not possible either logically or practically, we

have to admit the fact that our observation of the world in and around us is very much limited. But the various scientific methods to which we have made reference in this article have not taken these three factors into consideration while making authentic scientific claims on the basis of the observation of empirical facts.

Psychological Factors

As the physical factors play an important role in the formation of perceptual categories, the psychological factors also play an equal role in the same process. The psychological factors are related to the concept of the mind itself. Different schools of psychology such as functionalism, structuralism, associationism, Gestalt psychoanalysis, etc., have defined the mind differently. Though it is not possible to get a unanimous definition of the thing called the human mind, every school admits that there is something called the mind. It is the mind, which we do not know fully that plays an important role in the act of observation. The anti foundationalist Richard Rorty opposes the very concept of a glassy essence named mind. His opposition to the mind is unacceptable to most scientists as well as philosophers of science even today.[13] The epistemologists recognize the role of the mind and they have identified the main aspects of the mental functions involved in the act of the logical formation of knowledge.[14] A free and fair mind is a necessary precondition to avoid both mal-observation and non-observation, to get the right observation. Only on the basis of right observations can correct concepts be formulated. But the free and fair mind is the result of a mindset that evolves on the basis of a variety of conditions of the observer such as religious faith, cultural heritage, and social ethos, in addition to the revealed and concealed genetic peculiarities. The observer's mindset naturally varies in accordance with the concept in which he/she is born and brought up. Due to the innumerable possibilities of permutations and combinations of all these factors, it is a foregone conclusion that it is very difficult to get an identical mindset for two individuals even if they share the same socio-cultural and religious background. But scientists and philosophers of science usually either ignore these factors or they take them for granted that, in spite of all these factors, somehow the observers are able to formulate the right precepts and concepts.

Social Factors

The act of observation can be completed only when it is expressed in a language form. As far as the expression of the observation is concerned, the social factors are important. Every observation is to be expressed in a language form. Whatever be the definitions that can be given to language, no language can be free from its social implications. Society is a complex phenomenon in which a lot of psychophysical factors play crucial roles. It is a fact that every term in science can be defined in accordance with the requirements of the community of practitioners but all such definitions are in a language system and that language system is a social product. The perceptual and conceptual factors are to be communicated to the public as well as to the community of professionals. Such an act of communication is possible only through a language system, and a language system attains this ability on the basis of its social character. When an observation is expressed in a language system, it knowingly or unknowingly gets a social dimension. Since no society is completely objective in its structure and functions, no social product including language can be completely objective in its structure and function. Since a language is a social product and since it serves a social function, it has to share the common aspect of a society to which it belongs. Consequently it cannot be absolutely objective. The logical function of language is comparatively objective than the emotional functions. But the inbuilt subjectivity of a social product can never be completely eliminated from its structure and function. Since language plays an important role in the expression and communication of observation, the social factors of the observational basis can never be ignored.

But these factors are often not the concern of philosophers or scientists. Again it is possible to ask a set of questions related to the nature of the relations of these factors. It is possible to have three categories of answers. The primary question is whether these factors are independent or interdependent. The second important question is whether these factors are unique in their structure and function. The first set of answers is that all these factors are independent and unique so that they are different from one another. If the physical, psychological and social factors are independent and unique in nature, then how these

factors are related in an act of observation is a vital question to be answered. If the psychophysical factors are different, the observer who is supposed to be a harmonious psychophysical organism can no longer be existing as a single unit. That is to say, we have to face the old Cartesian problem of body mind bifurcation at this stage. And we have to involve ourselves in inexplicable psychophysical inter-actionalism or occassionalism. Even the almighty God of Descartes cannot save his philosophy from the riddles of illogicity created by the body mind dualism. Moreover, if the social factors are different from the psychosomatic factors of the observer, then the relation between the observer and the context in which he/she lives cannot be explained properly.

If such a relation is inexplicable then the act of observation also will be inexplicable because of two reasons. (1) The act of observation occurs only in a context and a contextual observation can never be even imagined in a scientific activity. (2) The act of observation is completed only when it is expressed in a language system and no science can function properly without a language system.

The second view is that these factors are unique, different and independent at some time, and non-unique, non-different and interdependent at some other times. It looks so convenient but it falls in the same web of illogicity of the first one because it is not possible to explain exactly when these factors act differently and when they act non-differently. It creates more confusion than the first one because the first one makes it clear that these factors are different and they cannot mingle together. But the second theory accepts difference and non-difference, independence and interdependence and uniqueness and non-uniqueness at the same time. In such a setup logically or practically it is not possible to know exactly when these factors act differently and non-differently. Consequently one cannot be sure of the nature of observation at this stage, that is, it is not logically possible to say whether the observation is the result of the independent function or interdependent function, or these factors are unique or not in the act of observation. For example, if the psychophysical and social factors of an observer are interdependent, then such an act of observation can never be separated either from psychophysical factors or from social factors. In other words, if the interdependence is limited to psychophysical factors alone, such

an observation cannot be expressed in a language that is totally different from the act of observation. It means that some sort of distinction between psychophysical and social factors is essential to have observation and to verify the observation facts with statements.

But the first two views are incapable of providing such a condition for a meaningful verification to get the so-called authentic knowledge. Usually the inductive jump or the inductive leap that connects verified statements with a generalization or a theory is treated as the problem that can never be solved logically. The LPM tries to solve this problem by means of verification of facts and statements in principle and practice. The LPM solution is unacceptable to the PFM due to its inherent illogicity. In order to solve this problem PFM virtually bifurcates science into two watertight compartments as theory and practice. But PFM virtually failed to justify logically such an act of bifurcation. The Kuhnian Paradigm theory and Feyerabend's anarchist approach have also failed to solve the problem in a logically consistent manner. But all these schools unanimously accept the possibility of independent existence of facts and statements and the consequent verifiability of the same. But this paper would like to contest this point because as it has already been made clear, the very act of observation depends on three sets of factors and a isomorphism between these factors is a necessary precondition to get an authentic verification of the observed facts and the statements. The above-mentioned schools of philosophy of science seldom give attention to this problem. They have taken the isomorphism of these factors for granted.

It is in this context that the third view becomes significant. According to this view, psychophysical as well as physical factors are non-unique, non-different and interdependent. As it has already been discussed, if we consider these three factors in accordance with the first two views, then they end up in irreconcilable logical riddles. Hence there is no logical necessity in treating them as independent factors. Any effort to treat them as different and independent is against our empirical experience, because the act of observation occurs always in a social context and the observer acts as an indivisible psychosomatic unit in the context in which the act of observation occurs. The social, physical and psychological factors together can be termed as the context. In this

sense, the act of observation is a central activity. It is not empirically or logically possible to conceive an observer who is totally different from the context in which he/she acts and it is equally not possible to imagine a context that is totally different from the observer and the act of observation. Therefore, it can be concluded that an act of observation always occurs in a context. Empirically or logically it is not possible to present any evidence or justification against this view. Hence the third view that psychophysical and social factors are non-different, interdependent and indivisible is more acceptable than the first two.

The Superior Status of Scientific Knowledge Questioned

The act of observation is not the specific gift of scientists alone. It is the common property of all who are in a context. Every entity, both biological and non-biological, engages in an act of observation in one sense or other in every context. In this sense the act of observation is universal, that is, everyone has the ability to observe. But all must not be having equal ability to observe everything. The difference in the range and quality of observation is a fact to be admitted by all in the act of observation. But a layman and a scientist can observe the same thing and their observation differs only in degree not in kind. For example, let a layperson and a physicist observe the phenomenon of light that occurs in a context. Both of them certainly observe certain common properties of light, but the scientist goes still further by extending his/her power of observation and reveals more facts than the layperson. Just because of this revelation alone it is not logically proper to claim that what the scientist observes is entirely different from what the layperson observes. It is not correct to claim that the layperson's observation is less useful than the observation of a scientist. As far as the practical utility of the acts of observation is concerned, the layperson's observation has a wider range of usefulness than that of a scientist. It is equally a fact that the scientist's observation may be having more subtlety than that of the layman.

Therefore scientists cannot make a logical claim that their knowledge is superior to the knowledge claims of others. They have to be more humble to admit that theirs is not the only one authentic form of knowledge but only one among the many claims to know of the one and the same context in which they live with others. But this should never

provoke one to admit that there is no difference between science and mystic experience, and one should not jump into an unrealistic and impractical conclusion that mysticism and science are identical. Fritjof Capra, for example, has seen parallels between modern Physics and Eastern mysticism and he immediately jumped to the conclusion that "whenever the eastern mystics express their knowledge in words – be it with the help of myths, symbols, poetic images or paradoxical statements – they are well aware of their limitation imposed by language and linear thinking. Modern Physics has come to take exactly the same attitude with regard to its verbal models and theories. They too are approximate and necessarily inaccurate. They are the counterparts of Eastern myths, symbols and poetic images and it is at this level that I shall draw the parallels. The same idea about matter is conveyed, for example, to the Hindus by the cosmic dance of the God Siva as to the physicists by certain aspects of the quantum field theory. Both the dancing God and the physical theory are the creation of the mind; models to describe their authors' intuitions of reality."[15]

It is necessary to make a distinction between mystic expression and other forms of expression in a language system. Mystics claim that they experience the truth that is rarely accessible to humans in general by means of their special intuitive gift. They again claim that they express the same in a unique language system, which they think to be the best one available to express the experience. Again they think that due to the inherent limitation of language, it is not possible to express their intuitive experience in a public language system. Hence they are forced to express their mystic experiences in a private language system that practically communicates nothing. Such a language is inappropriate to express not only specific skills of the experts but also the general experiences of the laypersons. Such a system of language is incommunicable or it fails to communicate anything properly. Uncommunicated or not properly communicated knowledge is a useless luxury which humankind cannot afford to. The dancing God – the reference is to the dance of Siva of the Hindu Mythology - has got a specific meaning to the persons who know the hermeneutics of the Hindu Mythology. As Capra wrongly thinks, it is not an expression of the inexpressible experience, or the images, symbols and metaphors are not meant to mystify ones intense experience of the cosmic reality. On the contrary, such language devices are used to express

the intense experience in a more communicable manner. Moreover, expression is the very nature of experience. Hence language cannot but communicate something that can be experienced and expressed. But the only thing is that one must know the language of the expression, that is, the language of the Hindu Mythology. Another point to be noted is that the very concept of the mystic theory of expression by an intuitive mind itself accepts the body-mind bifurcation and makes the communication an impossible task. The use of mystic tools to express scientific experiences makes both science and religion false; it makes the linguistic activity a sort of bewitchment of human intelligence by means of a language which communicates neither science nor religion but creates only confusion.

Feyerabend's anarchist model and Capra's mystic model are the unsuccessful speculative rebellions against the logically and empirically unjustifiable claims of authenticity of knowledge formulated by science. The aim of the rebellion is liberation from bondage. But if it is unsuccessful, it increases the intensity of bondage. The mystic claims and the anarchists revolutions cannot make any impact on science in particular and epistemology in general because both of them failed miserably to present an alternative epistemology.

It is in this context that a re-understanding of science and its methodology gets relevance. The process of free understanding of science is related to the understanding of our experience in general. A proper understanding of our experience is essential to understand science properly. By experience here we mean human experience by means of the sense organs and the mind. But this does not mean that humans alone have got experience. The non-human as well as the non-bios must have their own experience. They must be getting their own knowledge. Such knowledge may be valuable to them as well as to humans. But for the sake of our study, this paper intends to confine itself to human experience. At the same time, this paper prefers to keep a safe distance from the traditional Eurocentric views of experience. According to this view, humans alone have the exclusive power to have experience to make knowledge. Again it believes that human knowledge is superior to the knowledge of the non-humans. Among the humans Euro-centrism believes that Europeans are able to possess better knowledge than the

non-Europeans because they are better equipped than others. Among the better-equipped Europeans the best ones are the scientists. Eurocenterism considers religion, philosophy, literature, social science, etc., as inferior when compared to the sciences because the sciences have got a unique and well-equipped methodology and chosen persons to use such a methodology. This argument was accepted by scientists as well as philosophers of science of the last three centuries. That is why Eurocentrism identifies knowledge with science.

But this illogical belief of both scientists and philosophers of science cannot go uncontested, because their belief is not in conformity with human experience. Human experience is always contextual and it is not possible either to separate humans from the context or context from humans. The logic of identity in difference or the logic of difference accepts that such a separation is possible. But the position accepted by these schools of logic is the position accepted by the traditional Aristotelian logic and the modern symbolic logic is illogical and impractical. What is logically and practically possible is the logic of identity.[16] The logic of identity treats experience as an indivisible unit where the subject of experience, the object of experience and the act of experience are inseparably fused together since experience is contextual and since a human being is always in a context. Then experience and context can never be separated from the one who experiences it. The contextual experience is dynamic where the physical, psychological and social factors are inseparably fused. Consequently it is not possible to separate any one of the factors from the other. Since every experience is the fusion of these three factors, it is logically incorrect to think that one form of experience and its expression are superior to other forms of experience and its expression. As a logical corollary it can be derived that either every experience is intrinsically valuable and hence superior or it is intrinsically valueless and inferior. That is, every experience has equal status and value. Hence it is not logically correct to place one form of knowledge as superior to the other. Naturally philosophy, religion, literature, science, etc., are only the different forms of one and the same experience. All such forms of knowledge are either good or bad, meaningful or meaningless, useful or useless. Hence there is no justification to make a claim that one form is superior to the other. In this sense, it is possible to say that every form of knowledge justifies the

diversities of experience and diversified experience is justified by the diversities of nature.

The experience that is no doubt contextual can be expressed in many ways. It can be expressed in many forms of language. Language is nothing but the expression of experience and to express itself in one form or other is the inborn nature of every experience.[17] The treatment of language either as an apriori empty vehicle to carry abstract ideas or concrete experiences, or as an aposteriori formulation to express ideas extracted from experience and the experience itself is illogical. Here language is treated not as an apriori product of experience but as the experience itself. So every experience has got its own language and every language is the expression of a non-different and interdependent experience of psychophysical and social factors.

Dialogue and Its Importance

It is this factor of commonality of experience and expression that paves the way for the necessity of a dialogue of one claim with other claims. Since separation is impractical and illogical what is logically and practically possible is a dialogue of one claim with other claims and one group with other groups. It is a fact that the same person appears divergently in divergent contexts classified as religious, social, political, academic, etc. But it is not possible to separate the person from the context in which all these divergent activities have taken place. Moreover whatever be the divergent activities, the person who engages is one and the same. So what happens is that the person who engages in all these divergent contexts engages himself/herself in a dialogue with these contexts. In this sense every experience is the result of a dialogue between the person and the context. Hence the social, religious, political, scientific, academic, etc., are only the divergent forms of dialogue that a person makes in his context. Hence it can be concluded that the various claims made by humans in the form of religion, philosophy, science, etc., are only the expression of various dialogues.

Another factor to be noted is that none of the participants can make absolute authenticity of infallibility in a dialogue because a dialogue is a give and take relationship where every participant has to give the share and take the due. Any claim of absolute authenticity and infallibility

amounts to dictatorship where only a monologue is possible. And in a monologue what is impossible is communication. Where there is no communication there is no knowledge also. No system of knowledge can be made without a dialogue. And no science is a creation of a single person. Knowledge really progresses through dialogue. The larger the area of dialogue the higher the growth of knowledge. At the time of the growth of a particular knowledge it is possible to see the active participation of the members of a group in the process of dialogue. A dialogue among the members of a community of a particular discipline cannot be negated even by the towering personalities of such disciplines. It is an acceptable fact that the contribution of a towering personality in a particular discipline may be remarkable when compared to the contributions of the other members of that group. But even the meager contribution made by the least significant member of a community cannot be ignored in the development of a particular discipline.[18] This shows that where there is dialogue there is progress and where there is no dialogue there is regress.

The theory of dialogue can be applied to understanding in general. The dialogue between various communities, groups and claims can make progress not only for a particular claim but for all claims. The term dialogue can be defined as a contextual activity. Any act such as reading, writing, praying, sleeping, etc., is a dialogue because all such actions are contextual. When a contemporary physicist reads a particular text written by his predecessor, he actually enters into a dialogue with the text as well as his predecessors. Since the reader himself is a context as well as the product and context of a context and since a contextual action is a dialogue, every reading, every observation, and every experiment is a dialogue.

Since every action is contextual it is not logically possible to make a monological process to attain the progress of knowledge. That is every discipline has to enter into a dialogue with the other to get more health and vigour. So if science wants to attain progress it has to dialogue with religion, philosophy, art, literature, etc. A dialogue never entertains competition, because a give and take relation cannot entertain competition and rivalry. So a dialogue atmosphere really creates an atmosphere that is suitable for the growth and development of various claims of knowledge.

A dialogue is a decentralized and dynamic activity rather than a centralized and static activity. A decentralized activity never takes the claim that the centre of something is external to it. The decentralized dialogue approach to human claims is the essence of eco-centric epistemology where the centre of every unit of experience is in itself and not external to it. A dialogue process never excludes anything from its sphere of activity but its very nature is inclusiveness. The all-inclusive epistemology that excludes nothing and includes everything in a dialogic process liberates knowledge from the grip of centralized and separatist attitudes of methodological monism. Only the liberated knowledge can liberate humans and their claims.

Notes

1. Dr. K. S. Radhakrishnan is Vice Chancellor of Sree Sankaracharya University of Sanskrit, Kalady, Kerala.
2. A. J. Ayer, *Language, Truth and Logic* (London: Penguin books, 1978), p.48.
3. Ibid., pp. 48-49. Ayer illustrates the difference between the two and concludes: "And therefore I say that the proposition is verifiable in principle not in practice is accordingly significant."
4. Karl Popper, *The Logic of Scientific Discovery* (London: Hutchinson, 1965), p.15.
5. Ibid., p.30. "I must first make clear the distinction between the psychology of knowledge which deals with empirical facts and the logic of knowledge which is concerned only with logical relation."
6. Ibid., p.43.
7. A. J. Ayer, *The Central Questions of Philosophy* (London: Penguin Books, 1978), pp. 27-28.
8. Thomas Kuhn, *The Structure of Scientific Revolution, International Encyclopedia of Unified science,* Vol. 11, No. 2 (Chicago: The University of Chicago Press , 1970), p. 10.
9. Ibid., p.52.
10. Ibid., p. 176.

11. Ibid., p. 177.

12. Paul K. Feyerabend is an epistemological anarchist. His major work, *Against Method: Outline of an Anarchist Theory of Knowledge* (London: New Left Books, 1975), is a revolt against the law and order methodology of science in general to make infallible and authentic knowledge. By rejecting the methodological monistic attitude of science he argues for methodological pluralism. He believes that methodological pluralism is the only way to get authentic knowledge. He is even ready to admit witchcraft as a form of knowledge and for him time alone is the criterion to declare whether a particular knowledge is authentic or not.

13. Richard Rorty, *Philosophy and the Mirror of Nature* (Oxford: Basil Blackwell Publishers, 1980), pp. 17-127. The first part of the book 'Our Glassy Essence' is devoted to expose the illogicity of the acceptance of the mind as a foundational glassy essence. He formulates a new concept – the antipodean, that is, the human without a mind. He asks a very basic question – where are the foundations? He answers that he has not seen it or it is not possible to conceive it. Hence he rejects the very concept of mind. But scientists and philosophers are not ready to forfeit their right to stick on to the concept of mind.

14. The traditional logicians like Criton and Smart elaborate the relation between psychology and logic and they argue that sensation, perception, observation, experiment, judgment and reasoning are purely a psychological activity. For more details see. J. E Criton and H. R. Smart, *Introductory Logic* (New York: The Macmillan Company, 1961), pp. 7-36. The contemporary logicians also give equal importance to psychological factors at the level of observation and the expressions of the observation in a language form. For details see, Robert Paul Churchil, *Logic - An Introduction* (Belmont: Wordsworth Publishing Company, 1998), pp. 49-56. Churchill depsychologisizes logic and treats it as a linguistic activity. But he also recognizes the role of the mindset of the arguer and the interpreter in the activity of an argument.

15. Fritjof Capra, *The Tao of Physics* (New York: Banton New Age Books, 1984), pp. 30-31.

16. For more details see, K. S. Radhakrishnan, "The Logic of Identity," *The living Word- Journal of Philosophy and Theology,* 106 (2001), pp. 197-204.

17. It is possible to enumerate a number of theories of languages. But it is not essentially required to fulfill the mission of this paper. Hence the paper

defines language in the expression of experience and it accepts that these definitions are more viable than the other ones.

18. This can be illustrated by the example that in the growth of Physics the contribution of Albert Einstien is remarkable. But that contribution gets its relevance only in the context of a dialogue with Newton, Max Planck, Paul Dirac, etc. For more details see, Banesh Hoffman, *Einstein - Creator and Rebel* (London: Macmillan Ltd., 1972), p. 60.