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CRITICAL RATIONALIST TRADITIONS: SOME REFLECTIONS

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Abstract:

Truth is difficult to get. It requires to be innovative to criticizing old theories and for inventing new theories. It is often so not only within sciences, but in all areas of knowledge. Genuine critical discussions are always difficult as irrational human interventions and private interferences will always be there. Any critical debate to be successful, it must be able to clarify even the slightest problem and even little contribution put forward for clear and precise understanding of the individual position as well of the opponent is very much essential. Rational and critical discussion may be occasional, while it may not aim at conversion but may cause further expectations.

Human states of mind are the results of encounters and uncertain discussions. The civilizations of the west where the outcomes of encounters of various cultures.In a sense, the Greco-Roman civilization paved the way for a rationalist civilization. Culture clash had a significant role in the rise of Greek sciences. The several clashes in the Greek period put forward the ideas of science, knowledge, rationality, freedom, tolerance, democracy, etc. These encounters and confrontations were the outcome of the traditional critical and rational discussions found in the early Greek periods.

The preliminary function of human rational skills is to make the universe understandable. It involves two major factors; one is creativity and the second is

explanation of the world. The basic and fundamental function of languages must be the creation of explanations and explanatory stories. It should be performed with the intention deliberately progressing upon them through criticism or the critical discussions of the different explanations. The Greek rationalism and the Greek critical traditions have produced many generations, where each could be considered be considered as innovative and creative in each new generation, a complete transformation or the revisions of the teachings of the preceding generations. Finally, a scientific tradition came into existence, a practice of criticism which survived for a minimum of five centuries and that had also resisted some serious onslaughts before they passed away. Greek philosophy and Greek science were reimported and rediscovered within the renaissance instead of reinvention. The Greek findings on astronomy and cosmology paved the way for all future sciences. Human science emerged as a bold expectation to critically understand the world. Humanity ever since Newton became more aware of its position within the universe. These were all the end result of culture clashes or clashes of framework that ultimately applied critical and rational discussions to explain world.

It is always difficult to reach the truth. It requires to be innovative to criticizing old theories and for an inventive creation of recent theories. It is often so not only within the sciences but also in all the areas of knowledge. Genuine critical discussions are always difficult as irrational human interventions and private interferences will always be there. Any critical debate to be successful, it must be able to clarify even the slightest problem and even little contribution put forward for clear and precise understanding of the individual position as well of the opponent is very much essential. Rational discussion may not be common, may not be thinking about complete transformation, but may cause further expectations. It is necessary to work out things in a different perspective that urges to progress more near towards the reality. A strong theory is required here. It is essential to stay away from being hooked into any particular theory and to be held up intellectually. Hence, it is important to develop beliefs that has got to be further subjected to criticism. Accordingly, these beliefs are returned by challenging theories and conjectures. Progress occurs through rational and critical discussions. Scientific attitude always involves an urge in arriving at objective scientific theories, and thereby approaching towards the reality. The attitude to be adopted must be a critical attitude and argumentative skill. It will be the end of science, if scientists uncritically accept a ruling dogma, or that of the tradition formulated by the initial Greek Philosophers and further rediscovered by Galileo. So, it is the critical and rational discussion of theory that is considered revolutionary that determines the stronger and the weaker theory and estimates whether a progress is made or not.

A rational discussion must be supported or justified by sufficient proof or demonstrations and must be logically derived from widely accepted reasons. But philosophers might have adopted the approach of natural sciences that the kind of rational discussion must be that of critical discussion that does not allow to justify or establish a theory that are derived from some higher premises. Any theory under discussion must be further tested by identifying whether it has acceptable logical consequences, or perhaps it may lead to undesirable consequences. Hence, logically it is possible to differentiate between correct and incorrect method of criticism. The incorrect method tries to support the theory and that ultimately leads to infinite regress and dogmatism. On the other hand, the correct one explores the theory and its implications and speculates sustainable one. It

will alert falsi fiability of various methods, and also attempts to interchange these theories by superior ones.

Critical rationalism is an epistemological approach 2596 abeled by Kar Popper.It was used as an epistemological position linked to the analysis of scientific knowledge. Indeed, there is no guarantee against error and fraud through this critical process. The scientific activity undergoes human interventions and no human interventions can be perfect. Critical rationalism provides an awareness of this limitations and to take necessary steps to overcome it. In fact, human interventions can cause predictable and unpredictable consequences. So progress cannot be ensured and for any reasonable progress, all ideas must be subjected to rigorous criticism, otherwise there are chance for the mistakes to flourish. Consequently, all the ideas and theories must be rigorously criticized by finding evidence to falsify them. Nobody should try to find counter examples for a good theory as their will many chances to discard them.These ideas must also be adventurous and creative. There is no harm in upholding any wild ideas, but they must be criticized rigorously. Also, unexpected consequences must be anticipated and must be ready for altering these ideas.

Critical rationalism method can be adopted as an approach that considers arguments of everybody without considering their status. It basically aims at providing equal opportunity to everyone and does not allow domination by any one particular group. It emphasizes on statements, experimentations, and refutations that are trustable. Moreover, it involveson an intellectual activity that applies reasoning and further compromise to arrive at a conclusion. For this, they adopt a method that evaluates and deduces the consequences. This method provides great significance for open discussions, freedom of expressions, criticisms of different possible thoughts, and acceptance of the fallibility of every area of knowledge. It also identifies the limitations and the problems of induction. It takes up unique events in an uncertain and complex world and admits the inability of being. And finally, it trusts on the notion of objectivity.

There are various fields of thought that adopts and can be identified with the philosophical tradition of critical rationalism. Even though this tradition often emphasizes criticism, it is worthwhile to note that it always motivates and inspires innovative approaches of creative thinking. It is necessary to put forward different innovative ideas to eliminate the weaker ones through criticism. Critical rationalism is traditional approach that considers that truth is always out there and a joint effort must be taken to achieve it. Nobody have a monopoly over truth and it is possible to get closer to the truth.Critical rationalism can be considered as a very optimistic philosophical tradition. Hence, it can be adopted as a practical guide for seeking knowledge and further actions. It usually contributes in getting new information and for evaluating the validity of information put forward by all sources and trying to solve any arising problems. The critical rationalist accepts the fact that solution cannot be found for everything and an infallible guide cannot be offered to different kinds of problems. The critical rationalists need to understand limits of knowledge that the whole and final truth can never be achieved and can never be definite and predict about the results of different actions. The field of science and technology usually understands their constraints and works accordingly and that is the reason why they have become more successful in search for knowledge.

It is worth noting that various thinkers in different fields have adopted methods that can be identified with critical rationalism. Richard. P. Feynman, the Nobel laureate theoretical physicists had stated that it is possible to prove any theory to be wrong rather that proving it to be right. That is, in principle any theory can be got rid of , if there is a specific theory or real hypothesis that can comfortably work out results and can be matched with experiments. Further, those theories cannot be considered to be right, if they are supposed to be put forward by a good hypothesis and compute the results and also to conclude that these results always confirm with experiments. Such kind of theories cannot be accepted as they are not proved to be wrong. Thus, it is possible in future to anticipate various consequences and experiments that can be discovered to be wrong.(Feynman, 1965, pp. 157) Feynman had drawn out themes that at par with the contributions of Newton, Einstein, and Maxwell.

The morphological method devised by Dr. Fritz Zwicky is like the critical rationalism approach that involves innovative problem solving. Dr. Fritz Zwicky, anAstrophysicist is regarded as the father of dark matter. The morphological method constitutes steps where the problem is precisely defined first; then the basic factors of the problem (elements)are listed out; further a secondary list is made for the different dimensions (attributes)it could assume; after which they tabulate the elements and their attributes in morphological box or multidimensional matrix as Zwicky calls it; and finally, the elements that are basic problems are fixed, but not the alternative attribute. All the possible combination of attributes are thoroughly examined consolidated before identifying as the problem's probable solution. Even some illogical combinations are taken into consideration, as there is a possibility of triggering feasible alternatives. According to Zwicky, there are two main virtues for problem solving, first, its comparatively comprehensive nature diminishes the hazard of noteworthy combinations being neglected, and second, since systematically and objectively all probable solutions are consolidated, the impact of traditional thinking and prejudices can be discarded.(Beveridge, 1980, p. 12)For Zwicky, there is an extra ordinary suggestive power in the morphological approach that can be successfully adopted in different social, scientific and technological fields.

Critical rationalist approach is usually adopted in the recreational game of chess, that enables one to increase their logical and problem-solving skills. Gary Kasparov, formerchess world champion, highlighted in autobiography about approach used in the game of chess like that of the critical rationalist. Kasparov a product of Botvinnik School shared his ideas to unravel the mysteries of chess, identifying it to ordinary life situations, identified problems of chess similar to problems that people regularly try to resolve in everyday life. Hence, it is necessary to contain problem by not getting implicated in it and thereby arriving at more accurate solutions. Thus, it is not appropriate to consider that chess cannot reflect objective reality. Thus, Botvinnik's approach wasto reduce the problem to a manageable size, whether it is problem solving related to chess or life. It reflects man's thinking. Kasparov had always admired problem solving from the inexhaustibility and unpredictability of chess. There is no formula or method that can guarantee victory in this game, even though many games are played and lot of books are available.And further, till date, no precise method sare there for a position oreven a single move. When three moves are made on either side, there are more than nine million possible moves and positions. (Kasparov, 1987, p. 19) Kasparov admits that complications cannot be avoided in chess or in life as there is nothing permanent under the sun. Hence it is necessary to confront risky venture to play creatively. Chess as a body of knowledge is not something that can be learned completely. As it is a dynamic game, Kasparov kepton updating

and reassessing many ideas, identifying the mistakes and analyzing them. (Kasparov, 1987, p. 20) Further, Kasparov does not regard his work to be final. Any book or a commentary on chess can be meritorious only as the time passes.So,it is necessary to find out the mistakes, and the revelation will be contribution in the game of chess.(Kasparov, 1986, p. 41)

Open model computer programming is another field where the critical rationalist approach is used. Open and closed models can be differentiated in many ways. One of the most famous open models is the Linux operating system. The philosophy behind Linux was more social than being technical, as it was developed in a new completely open social manner. Whereas, in the closed model, planning is done by a person or limited group before it is been released. Only the finished product will be visible and all the development takes place behind the closed doors. On the other hand, in the open model, in the early stage the ideas are open and disseminated to everyone. They allow these ideas to be criticized and benefits from external additions. In closed model, no changes can be made once it is finished. The open-source model begins with a problem or goal, various approaches are attempted, and if there is an excellent idea, that would be adopted and they will build upon it. The problem or goal itself is released along with some possible solutions. In this open model, the recipients are allowed to use it for free and test it and further develop this solution until this solution or the source has been passed. In the academy of the open-source model, scientists release their work for others to use, test and to develop it. Here research is mainly a self-correcting process that can be done openly. (Himanen, 2001, p. 67) This is model where they develop the theories collectively, identifies their flaws and are discarded by means of criticism put forward by everybody involved.

Post–modern Techno science is yet another area where a similarity with critical rationalist approach can be found. Francoise Lyotard and Stephen Toulmin used the term ‘technoscience’ to explain the interrelation and interdependence of technology and science. The main feature of postmodernism is to deny any privilege whatsoever exists in any theory. Their origin or the credibility are not taken into account butmust be rigorously tested in the intellectual courts. Moreover, it reiterates on adhering to any tradition, so that allenquiry methods should be discussed and then only must be integrated into the knowledge framework.(Docker, 1994, p. 112) That is not to contrast the romantic ideas the enlightenment rationalists but they must be interwoven. Moreover, it never allows to limit the ideas, observations, claims and theories, to a single principle. In this way, the postmodernists demand on inspecting all the judgements as well as the criteria through which it is arrived at. Postmodernisms are of various types. Hence, to be scientific postmodern means to adopt a rationalist and critical approach. Thus, an affinity of the ideas of the postmodernists like Lyotard can be identified with the critical rationalist approaches and how they value criticism through rational means.

Thus, it can be found that intellectual influence of critical rationalist tradition can be extended in almost all fields. It includes an eminent commonsense effect on individuals who are impacted by it, that is, it adopts alternative ways for accomplishing tasks and transforms their approach to lives. As this approach had influenced many distinguished personalities in their own respective fields, it can be considered as a philosophy of action. Critical rationalism cannot be just limited to criticism alone as pointed out by certain philosophers, but what is more important is that it paves the way to discover and develop many new problems, try to provide tentative solutions, and thereby try to solve it and hence advance the extend of knowledge. Thus, critical rationalism is not just about criticism. Critical rationalism can be considered as an innovative

and different attitude towards mistakes. In spite of the fact that mistakes are not something to be concealed, but must be found and examined, as this revelation of mistakes leads to more information and knowledge.

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