ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24NOV757

Implementing "Epistemic Coherentism" in Twenty-First Century Science: "Epistemic Coherentism" as an Essential Pre-Requisite of Interdisciplinary and Transdisciplinary Research

Sujay Rao Mandavilli

Abstract:- We begin this paper by providing the reason for the authorship of this paper. We need to articulate the concepts of this paper because although the concept of epistemic coherentism indeed exists, it is not always rigorously and assiduously followed in the real world particularly in this day and age of interdisciplinary and transdisciplinary research. We therefore commence our work by reviewing concepts pertaining to coherentism both in general daily usage, and as it pertains to scientific epistemology. We must also add a cautionary note at the very outset, and it is that we may not agree in whole part, or may beg to differ partially with the concepts of epistemic coherentism as they exist today, though the foundation and the fundamentals may remain the same. We also seek to bring to the table, an altogether new value proposition by drawing on our previous proposals pertaining to institutional coherentism, methodological inductivism, foundationalism and intergrationism. Our paper on advocating output criteria based scientific and research methodologies is also suitably referenced for this purpose, along with some other random concepts we have been proposing off and on, though they are admittedly less important from the point of view of this paper. Our proposals therefore represent a common sense based approach to modern, contemporary interdisciplinary and transdisciplinary science, and it is for this very reason that we review the latter concepts briefly as well. In this paper, we endeavour to eschew all forms of nerdism and put forth an all-encompassing pragmatic approach that will serve the needs of science and society very well. Readers can gauge for themselves how far we have achieved and accomplished these objectives.

I. INTRODUCTION

"We are approaching a new age of synthesis. Knowledge cannot be merely a degree or a skill... it demands a broader vision, capabilities in critical thinking and logical deduction without which we cannot have constructive progress".- Li Ka-shin

"Mankind, the spirit of the earth, the synthesis of individuals and peoples, the paradoxical conciliation of the element with the whole, and of unity with multitude - all these are called Utopian, and yet they are biologically necessary". - Pierre Teilhard de Chardin

We will begin this paper by providing the core, central and underlying reason for the authorship and existence of this paper. To recapitulate and summarize, we need to articulate the concepts of this paper because although the concept of epistemic coherentism indeed exists with exactly the same nomenclature and handy moniker, and is in fairly widespread usage, it is not always rigorously and assiduously followed in the real world particularly in this day and age of highly interdisciplinary, cross-cultural and transdisciplinary research. We therefore commence and begin our work by reviewing already pre-existing concepts pertaining to coherentism both in general daily usage, and as it pertains to the field of scientific epistemology. We must also add a cautionary note at the very outset, and it is that we may not agree in whole part, or may beg to differ partially with the essential concepts and prerequisites of epistemic coherentism as they exist today, though the foundation and the fundamentals may more or less remain the same. We also seek to bring to the table, an altogether new value proposition by drawing on our previous proposals pertaining to institutional coherentism, methodological inductivism, foundationalism and intergrationism, besides a couple more. The concepts of neo-centrism, aeterntism, and omnimodism as we proposed and discussed them also add meat to this paper.

Our paper on "Advocating output criteria based scientific and research methodologies" is also suitably referenced from our point of view, as it is very much on the cards for this purpose, along with some other random concepts we have been proposing off and on, though they are admittedly less important from the point of view of this paper. Our proposals therefore represent a common sense based approach to modern, contemporary and robust interdisciplinary and transdisciplinary science, and it is for this very reason that we review the latter few concepts briefly as well. In this paper, we also endeavour to eschew all forms of nerdism and isolationist

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24NOV757

thinking and put forth an all-encompassing pragmatic approach that will serve the needs of science and society remarkably and admirably well. All the steps of our proposed approach have also been laid out threadbare, and the merits of our approach can hold up to rigorous scrutiny. Readers can gauge and assess for themselves and adjudge how far we have achieved and accomplished these objectives, by going through this paper and digesting its core objectives. This approach when fully implemented by other researchers and scholars, and in true letter and in spirit, will also we believe and argue, will lead to faster and better scientific progress, and scientific progress at the speed of light. [1] [2] [3] [4] [5] [6] [7]

II. WHAT IS COHERENTISM?

The coherence theory of justification, (which is also sometimes known as coherentism), states that a belief or set of beliefs is justified, only in instances where such a belief coheres or elides perfectly with a complete set of beliefs, thereby forming a complete and a coherent system of beliefs. Therefore, there is a mutual support or agreement among propositions and beliefs. Every belief in a system therefore tallies with, or may be derived from a larger and a more complete set of beliefs. The coherence theory of justification must be distinguished from the coherence theory of truth which is a somewhat different concept. The coherence theory of justification represents a theory which states how a belief or a set of beliefs can be justified. The coherence theory of truth on the other hand, is a theory which defines and which describes what it means for a belief or proposition to be true. A third concept is the coherence theory of knowledge. The coherence theory of knowledge is a model of human knowledge according to which knowledge results from a higher-order evaluation of information. Coherence theory of knowledge always requires justification, evidence, coherence and information. (Ewing 1934)(Blanshard 1939) The correspondence theory of truth is another concept and a principle that must also be borne in mind at all times. According to the correspondence theory of truth the truth or falsity of a statement is determined solely by how it relates to the world and corresponds with it.. Belief congruence states that we value beliefs on the basis of how coherent they are with other beliefs and our own belies. This concept is extremely important in psychology, but it may be used in several other fields as well.

Other variations have been proposed, most notably CI Lewis's idea of congruence which investigates the congruence between different elements in a proposition, and also evaluates it probabilistically. Laurence Bon Jour and others (Bon Jour 1985) have argued for internal consistency, probabilistic consistency, logical consistency, and inferential connections as well. H H Joachim also argues for truth requiring not only logical consistency, but also complete coherentism. His book, "the nature of truth" was published in the year 1906, and puts forth his views. Some other researchers such as Bertrand Russell have objected to the theory of coherence, pointing out its pitfalls. Other approaches have been proposed by Nicolas Rescher, Keith Lehrer and Paul Thagard. Rescher is known for his book, "A Coherence Theory of Truth" which was published in the year 1973. Rescher is known to have developed the concepts of truth candidates, system-theoretic views and truth criterion which have also proven to be somewhat influential. According to Lehrer, an individual may be justified in accepting a proposition if that proposition coheres with his cognitive system. This may also be defined as the "acceptance system" of an individual. We cannot of course, concur with this approach. Paul Thagard's theory is more traditional and talks about explanatory relations between beliefs. According to him, truths may either fit together (coherence) or resist fitting together (incoherence). This may lead to positive constraints or negative constraints respectively. Other concepts have also been proposed from time to time in this context. Conditional independence refers to the notion that testimonies are independent of one another and do not influence each other to any degree. Coherence

[1] Operationalizing cross-cultural research design: Practical, cost-effective, and a minimalistic application of cross-cultural research design to minimize cultural bias in research and reconcile diverse viewpoints IJISRT, April 2023 Sujay Rao Mandavilli

[2] Articulating comprehensive frameworks on socio-cultural change: Perceptions of social and cultural change in contemporary Twenty-first century Anthropology from a 'Neo-centrist' perspective Published in ELK Asia Pacific Journal of Social Sciences Volume 3, Number 4 (July 2017 – September 2017) Sujay Rao Mandavilli

[3] Forging "Methodological inductivism" in the interests of better science: Encouraging Methodological inductivism as a harbinger of meaningful change in different kinds of scientific endeavour, Sujay Rao Mandavilli, IJISRT, February 2024

[4] Emphasizing "integrationism" in twenty-first century science: Another useful tool to generate better scientific paradigms better quality science Sujay Rao Mandavilli IJISRT October 2024

[5] Hypothesis, paradigm, framework and concept evaluation and testing across space and time: A revalidation of our concepts of "aeternitism" and "omnimodism" Sujay Rao Mandavilli IJISRT, October 2024

[6] Building upon "Foundationalism" to achieve the objectives of contemporary science: How this can lead to faster scientific progress and inclusive science Sujay Rao Mandavilli IJISRT, October 2024

[7] Paradox identification and paradox resolution in scientific endeavour: Reconciliation of contradictory rulesets in the interests of better theorization and hypothesis-building Sujay Rao Mandavilli IJISRT, January 2024

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24NOV757

justification means that internal and external coherence is necessary to justify a proposition or a truth set. [8] [9]

A. Epistemology

Epistemology as a distinct discipline of science, or the philosophy of science, encompasses the philosophical study of knowledge which is justified true belief, including what knowledge is, how knowledge is created, and the limits of what can be reliably known along with what cannot be known. The term originates from the ancient Greek term "epistemos" meaning knowledge. It also investigates and studies propositional knowledge and factual knowledge. It also seeks to examine how beliefs can be acquired. It also stands for the theory of knowledge, and how knowledge is created and generated. There are many different and distinct schools in epistemology including fallibilism (this school of thought says knowledge is never certain), empiricism (knowledge comes chiefly and primarily from sense experience), skepticism (questions humans ability to acquire knowledge), foundationalism (justification of basic beliefs does not depend on other related or unrelated beliefs), etc. We also then have internalists and externalists – the former argue that knowledge is dependant on mental states while the latter argue that it is primarily and chiefly dependant on external circumstances. Epistemology has many moral, philosophical and religious uses, and is used in many different branches and fields of study and knowledge. Epistemology is extremely important in all facets and all aspects of scientific activity, yet many researchers are not even aware of its concepts in their entirety, leave alone follow them assiduously.

B. Holism

Holism refers to the theory which states that parts of a entire whole are in deep and in tight interconnection with each other, in such a way that they cannot exist independently of the whole, or cannot be grasped or understood without a reference to the whole, which is therefore greater than the sum of its individual parts. This idea dates back to the time of the ancient Greeks particularly Aristotle, though it has been greatly developed ever since by Jan Smuts who is known for his work "holism and evolution", and many others. Smuts was accused for lacking epistemic coherentism, but most other researchers may also be accused of the same. It is now one of the guiding principles of modern and contemporary science and modern epistemology, and is extremely important in fields such as cybernetics which involves the study of systems. Epistemic holism or Confirmation holism refers to the general idea that a single statement cannot be confirmed or disproven in isolation, and only a complete set of statements can be. This idea is usually attributed to the researchers Pierre Duhem and Willard Van Orman Quine, though undoubtedly and unquestionably, many other researchers were involved though not in equal measure.

C. Institutional Coherentism

We had proposed the idea of institutional coherentism in a paper we had published several months ago. As per the principles of this approach, all works and endeavours in a given field of study or science must gel or tally with each other to the maximum extent possible, and careerism must be kept to the barest possible minimum. Wherever and whenever careerism is indeed pursued, it must be a positive force, and must at least not be detrimental to the cause of science. This is not a quixotic or an idealistic wish list, but can indeed and must be practically implemented. Theories and concepts must not be developed just for the sake of developing theories and concepts, and all research work must be executed or carried out for the greater good of science and for humanity. Therefore, new work and new endeavours must be vetted and ratified against old or already existing work, and an absolutely high quality reconciliation performed. This must be carried out assiduously and rigorously, and on a continuous basis. Also read our paper which dealt with social responsibility over academic freedom. We had published this way back in the year 2022. While right wing groups are outside the realm of bonafide and legitimate science, Marxist historians in India have no concept of service to science, society or the education system. They have no concept of objectivity either. All this obviously needs to change within a generation or two. Similarly, the whole gamut of Marxist historiography of which there are indeed many different strands, must be ratified against the principles espoused in this paper. A lot would be found lacking. [10] [11] [12]

D. Output Criteria-Based Approaches

We had also authored a work called "Advocating output criteria based scientific and research methodologies: Why the reliability of scientific and research methods must be measured based on output criteria and attributes", and this was published by us way back in August 2023. In this paper, we had discussed various concepts such as reliabilism,

[8] Cowles, Henry M. (2020), *The Scientific Method: An Evolution of Thinking from Darwin to Dewey*, Cambridge, MA: Harvard University Press

[9] Dales, Richard C. (1973), *The Scientific Achievement of the Middle Ages (The Middle Ages Series)*, University of Pennsylvania Press

[10] Understanding the social and cultural dynamics of science and technology: A social sciences approach for understanding science and technology in relation to society and culture Sujay Rao Mandavilli IJISRT, July 2024

[11] Abstraction, conceptualization, disambiguation, ideation, innovation, objectivization, quantification, and theorization in the social sciences: New pillars for contemporary social sciences research Sujay Rao Mandavilli IJISRT, July 2024

[12] Social Responsibility over Academic freedom: Emphasizing Ethics and Codes of Conduct geared for a Scholar's duties towards science, society and the education system in Twenty-First Century Science Sujay Rao Mandavilli IJISRT September 2022

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24NOV757

coherentism, objectivity, reliability, validity, precision, accuracy, rigour, systematicity, verifiability, measurability, falsifiability, repeatability, reproducibility, credibility, comprehensiveness, holism ,transperancy, abstraction, predictability, and empiricism here. As per this approach, a highly structured, rigid, a predefined and a standard research methodology must be followed, wherever possible, with steps in the research methodology clearly and systematically defined There are standard steps in the scientific method that apply for the most part, and these are followed most part of the time with some exceptions. Of course, there is some degree of flexibility involved, but the principles of this paper, and all our previous publications on scientific method must be amply satisfied. We believe this would be a reasonable demand to make. A readership of this paper is also therefore highly recommended. This would amplify the quality and quantity of scientific output, and this as an important yardstick must be borne in mind at all times, and under all circumstances. This does not however preclude a common sense approach, and other concepts such as materialism and the relative importance of practical issues must also always be always borne in mind.

E. Integrationism

Integrating concepts, frameworks, paradigms, methods, etc must be performed continuously or on a continual basis. We also naturally need to Integrate concepts, paradigms, frameworks, methods, and methodologies at all times, and systematically too. A concept is an abstract idea that is conceived or conceptualized in the human mind, and is widely used in science and in the philosophy of science as well with large downstream uses, applications and benefits; a paradigm represents a set of robustly structured concepts or thought patterns, also including theories, research methods, standards, postulates, and techniques in science. A framework is a conceptual structure that is a support or guide for the construction of something bigger in science. A method on the other hand, is a process or a technique that explains how an activity in science needs to be performed or carried out. All these must naturally be integrated cogently and coherently as far as practically possible or necessary, with minimal outliers or foundational violations.

F. Inductivism

Inductive and deductive methods represent two completely different and contradictory ways by which a conclusion or proposition may be reached, and structured and well thought out research conducted or carried out. An inductive approach is a bottom-up approach that first begins with specific observations, and then arrives at a hypothesis or theory by identifying patterns or trends as the case may be. A deductive method is a top-down approach that begins with a theory or a hypothesis, and then tests them with additional data. We also have the concepts of hypothetico deductive approaches and deductive nomological approaches, and we had explored both these previously. Both inductive and deductive approaches must complement each other in research. However, inductive approaches, however time consuming, laborious, or expensive they may be, must be the gold standard and the long-term goal. This is a principle we have always stood by, and will stand by always. [13]

G. Methodological Inductivism

Methodological inductivism includes collating, comparing and aggregating methods in a similar fashion as inductivism in order to arrive at or derive an improved set of methods, techniques and methodologies. We had proposed a series of sequential and pre-arranged steps in this regard, a review of literature, a comparative analysis of past literature, eliciting methods, tools and techniques, aggregating them as possible, etc through mergers. Eventually, we believed and argued repositories could also be formed through method aggregation and method tweaking or modification. This can also naturally result in databases being created. For this, we had believed and argued, argued, core and peripheral methods, methodologies, tools and techniques must also be identified. Dubious or untested methods and methodologies may be left out, jettisoned or qualified through the use of disclaimers or even discarded if necessary if they do not serve the purpose of future research adequately. This approach can provide a heuristic tool to researchers, and can even expand scientific output greatly as future researchers may employ these inventories and repositories for their own research. One is reminded of software libraries here; as useful as they are or possibly can be, they are not widely used in science; hence, this proposition. Also read the paper "Forging "Methodological inductivism" in the interests of better science: Encouraging Methodological inductivism as a harbinger of meaningful change in different kinds of scientific endeavour" for this purpose. At the same time integrationism must also be promoted in science and in scientific activity. Read our paper "Emphasizing "integrationism" in twenty-first century science: Another useful tool to generate better scientific paradigms better quality science" for this purpose. The concepts proposed in this paper are related to the concepts proposed here, and all of them are tightly integrated in many respects.

H. Multidisciplinary Research

Multidisciplinary research is a collaborative effort for research that involves a liaison between experts belonging to different fields of study in order to solve complex problems and develop comprehensive and wide ranging solutions. Multidisciplinary a growing and a welcome trend in many fields, and may even involve researchers from fields as far apart as the natural sciences, social sciences, (including fields such as sociology, anthropology and linguistics) economics, among other disciplines. Experts from different

[13] Making the use of Inductive approaches, Nomothetic theorybuilding and the application of Grounded theory widespread in the social sciences: A guide to better research and theorization in the social sciences Sujay Rao Mandavilli IJISRT May 2023

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24NOV757

disciplines may often work jointly or independently on a common research problem and share common research goals as well. Different researchers may look at a problem or an issue from their own perspective, and may therefore provide fresh insights into the matter. One example of multidisciplinary research is climate change research, in which experts from different fields and areas of study such as environmental sciences, ecology, economics, and policy making talk to each other, and cooperate and collaborate with each others to develop new frameworks, paradigms, and workable solutions. Cross-disciplinary research or inter disciplinary research is much broader and wider in scope, and experts form often loosely interrelated areas of study talk to each other, and collaborate with each other. Multidisciplinary research can lead to faster scientific progress, potential breakthroughs, it is also the crying need of the hour and day.

I. Delineating the Components of Our Proposed Approach

The following are the key and the core tenets and postulates of our approach. Many of these seek out course-corrections for possible flaws in contemporary research. Therefore, they must not be construed as biases or limitations, rather as course-corrections. We also believe that all other aspects have been taken into account and consideration. However, limitations if any, may be pointed out to us. Readers may also read the section on neocentism in our paper on sociocultural change as reading all these concepts together would make eminent and logical sense.

➢ *Merge Local with Global Consideration:*

The term “local” is obvious to most people as it is widely used in daily or quotidian speech, and obviously needs no introduction. The term “local” means existing, residing in or belonging to the area where a given individual or an entity lives or resides. Local considerations refer to considerations or focus on issues that pertain to a given region, geography or territory, and sometimes even a nation. Local concerns or considerations may or may not pan out at a global level. Local considerations are often being obliterated or consigned to the background in an increasingly globalized and an interconnected world, as pan-global frameworks and paradigms rapidly emerge, and local thought processes obliterated. Globalization refers to the ongoing and contemporary process of an increasing level of cultural and economic interaction and integration between people, companies, and governments around the world with increasing cultural and economic dependencies (and free trade and free flow of capital) as well that pan out or manifest themselves at a global level. Globalization naturally leads to some form of a convergence with local issues and local considerations being relegated to the background. A region is much wider in scope than a given or a specific location. However, glocalization as opposed to globalization retains local flavours and local characteristics at the same time. A region may refer an area, especially part of a specific country or the larger world with some definite or definable characteristics. Boundaries are often fixed, but this is not always the case. Global on the other hand, means something which relates to the whole world, or a significant part of the whole world. We had introduced a term call omnimodism, and that is apt, relevant, and pertinent here. This would mean something that works always, in all contexts and situations. It doesn’t mean that local requirements should be ignored though. [14] [15] [16]

➢ *Merge Short Term with Long Term Consideration*

The term "Short term" means something that occurs or happens over a relatively short span of time. There is no standard definition for what short term means, and this may mean or imply different things in different contexts, and even to different people. In some cases, a short-term may imply something that only last a few days or weeks, while in some other cases, it may last several months. A typical definition of short term could mean six months to one year, though this may vary in several cases. We had discussed this concept extensively in a previous paper. Medium term may refer to a period of between one year to five years with variations in many cases, while long-term could mean a duration that is much longer than that. We had also introduced that concept of aeternitism or omnimodism which could also imply thinking or planning for the long term. Maybe the concepts of time and space may not matter so much for the non-social sciences, but they indeed do matter for most fields of the social sciences – this is what we are eminently focused on – that is why we have put them here. Short term, medium term and long term goals, objectives and considerations must always be counterbalanced against each other, and if possible, elide in a smooth fashion. The ability to project issues into the future will also provide researchers with a great deal of ammunition, and greatly improve the quality and efficacy of research.

Along with all this, the ability to distinguish major issues with minor issues, and those issues with a long-lasting impact is of paramount importance as well. Foundationalism is another concept of relevance here; therefore all our papers are interlinked with each other in a continuous chain. The concept of foundationalism must be carefully and meticulously researched, probed and investigated. For example, Marxists may claim that class struggle is at the heart of everything. This may only be partly true. There may be a large number of other issues that need to be taken into consideration, that are much more central to most practical issues. If such an analysis is carefully and meticulously performed it may be observed that there are a lot many issues that are more central to society than class struggle. Again, any researcher needs to be exposed to the diversity of human experience. The truth must always

[14] Chaudhuri, K.N. (1965\1999). *The English East India Company: The Study of an Early Joint-stock Company 1600–1640 (Vol. 4)*. London: Routledge/Thoemmes Press

[15] Hopkins, A.G., ed., 2003. Globalization in World History. New York City: Norton

[16] Rai. "The History of International Development: Concepts and Contexts". *Women, Gender and Development Reader*: 15

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24NOV757

prevail, and the larger good of humanity must always prevail. We had also discussed universality of issues in our paper on sociocultural change in the section on neocentism through the use of universality scales. A readership of the aforesaid section is a must before the concepts in this paper can be thoroughly grasped and understood. Anthropological economics is another useful topic of discussion that may be invoked here; we believe this would be more central to the human experience, and more important to human experience is than traditional or mainstream economics is. Again, dissent and criticism are invited, provided the epistemology is provided.

- *Synthesis*

We also need a new generation of synthesizers who will be able to synthesize research and data drawn from various disciplines of study, both related and unrelated ones in order to develop new and beneficial paradigms and frameworks. We had discussed and debated this at length in several of our previous papers as well. These synthesizers may form a part of the core team or may constitute a separate team that is set up for this purpose. We believe this will constitute a core and an integral component of twenty-first century interdisciplinary science. We also need to develop handshakes and points of transfer of knowledge among researchers specializing in separate and distinct fields of study. This is necessary for high end and better quality interdisciplinary and transdisciplinary research, and for the smooth operation of research frameworks. For this purpose, it may also be necessary that researchers possess some knowledge of other allied and related fields, and the ability to collaborate and synthesize concepts and large tomes and volumes of data as well. All these concepts form a core component and a part and parcel of the doctrine of neo-centrism. For further details, read our previously published paper, "Articulating comprehensive frameworks on socio-cultural change: Perceptions of social and cultural change in contemporary Twenty-first century Anthropology from a 'Neo-centrist' perspective" which was published in ELK Asia Pacific Journal of Social Sciences in 2017. We also need metascience which is the study of science itself, and the investigation and formulation of methods, tools and techniques that can boost the efficacy of science itself. Simply put, metascience is the science of science, but has not yet unfortunately the pride of place it undoubtedly deserves. In parallel, the impact of science on society needs to be thoroughly probed and investigated, and this includes not only one society or culture, but all societies and cultures from across the world, with variations and local considerations suitably probed, investigated, and analyzed. Scientometrics can also be put to proper use here. Scientometrics is a subfield within informetrics that studies both quantitative and qualitative aspects of science and scholarly literature.

A traceability matrix is a document that ensures that all requirements are met and tally or gel smoothly with one another, and helps the researcher or the scholar ensure that all loose ends are tied up. This concept and technique is widely put to use not only in the software industry, but it may also have several other important uses as well, in many other disciplines including core and abstract science. From the point of view of this paper, traceability matrices can be used for science, to compare and contrast concepts and align them with one another, and that there are no outliers or exceptions, though there may be no standard format for this. The actual patterns and mechanisms of use may be determined by researchers, on a case to case basis. We would look forward to more formats and techniques being developed in this crucial and critical aspect of research.

- *Resolution of Contradictions*

The term contradiction is widely used in daily life, but it applies to the study of systems as well, and in cybernetics. It is also used in the study of logic. Simply put, a contradiction results from a situation where propositions, concepts or ideas are in fundamental opposition to one another, or prove to be irreconcilable. Sometimes, the term "contradiction in terms" is also used to describe a situation where contradictions exist or persist. Contradictions also arise when a proposition contradicts either itself, or an established fact. A formal study of contradictions has also been attempted on many occasions. For example, TRIZ or the "Theory of Inventive Problem Solving," developed by Genrich S. Altshuller studies contradictions formally and officially through a matrix that is used specifically for this purpose. Most parameters are physical properties though, and may prove to be somewhat irrelevant for the purposes of the social sciences. As a part of this, researchers must decide which should override what? – based on their absolute or relative criticality, centrality, and importance. This aspect also naturally requires reconciliation and conflict resolution. Reconciliation is a process by which two seemingly irreconcilable views or propositions are made compatible with one another, and potential conflicts thereby eliminated. We must of course always have institutional coherentism as well. We would strongly request and urge readers to go through our paper on institutional coherentism; this would be as essential prerequisite for epistemic coherentism, and would provide a great deal of meat and substance to this paper. All new research must be tied to, and validated against older and earlier research in the same field, and other allied fields. [17] [18]

An attempt to resolve contradictions will always stand us in good stead as no ideology or doctrine is perfect or error-free. As Pandit Jawaharlal Nehru, the first Prime Minister of India, once put it, "There is much talk in communism of the contradictions of capitalist society and there is truth in that

[17] Royzen, Zinovy (2009), *Designing and Manufacturing Better Products Faster Using TRIZ*, TRIZ Consulting, Inc

[18] Karasik, Yevgeny B. (2021). *Duality revolution : discovery of new types and mechanisms of duality that are revolutionizing science and technology as well as our ability to solve problems*

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24NOV757

analysis. But we see the growing contradictions within the rigid framework of communism itself. Its suppression of individual freedom brings about powerful reactions. Its contempt for what might be called the moral and spiritual side of life not only ignores something that is basic in man, but also deprives human behaviour of standards and values. Its unfortunate association with violence encourages a certain evil tendency in human beings." This piece was written several decades ago when the world was a somewhat different place-communism is now virtually dead with more or less no chance of revival in the near term, at least in the eyes of most people. This kind of an observation and an analysis would spill over to religions too, as not all of them are similar in most respects. Capitalism too is not free from errors and suffers from its own set of inherent contradictions – not all of them are fundamental or foundational though and can be countered or overridden through proper policy making. However, workarounds are indeed possible, such as bottom up development models and Keynesian economics. Always, tradeoffs and a reconciliation of ideas can be gainfully employed, and put to proper use.

- *Dialectical Approaches*

A dialectical approach is an approach to research that involves the reconciliation and cross-examination of diverse, contradictory and opposing views which leads to the development of new insights on a given issue or topic and area of interest or concern. This approach may be used in a wide variety of contexts besides scientific method, including intercultural communication and philosophy. This approach originated with the Ancient Greeks particularly in Socratic dialogue, and the method of elenchus, though it further evolved and developed right through the Middle ages and into modern times. In the modern era, GWF Hegel developed it comprehensively, and Karl Marx gave it a materialist twist and a materialist orientation which rather unfortunately diminished its utility, practicality and importance. Dialectical approaches must be employed, as per our perspective in all forms of scientific method, and it will also help us fulfill the objectives of epistemic coherentism. Reconciling contradictory issues will also naturally take us to the next highest level of understanding and epistemological fulfillment. We had also proposed some templates in this regard and in this connection such as the table of contradictions in our section on neo-centrism in our papers on socio-cultural change. Readers may refer to them for greater clarity, as they could throw vital insights into the entire process. As always, all our papers must be read together in a cogent and a harmonious fashion. We had also proposed autodialectics, and this approach and technique can further stand us in good stead. [19] [20]

- *Cross-Cultural Research Design*

Cross-cultural studies are research designs that compare, contrast and attempt to reconcile in right earnest the breadth and diversity of human experience across two or more distinct cultures. This approach and technique involves the gathering and reconciliation of both emic and etic perspectives on a given topic or issue. Emic and etic perspectives as we saw them, include a wide variety of perspectives such as representative emic and etic, non-representative emic and etic, marginal emic and etic, etc. Cross-cultural research design is also accomplished by taking the views of a wide variety of subjects, both across and within cultures. Cross-cultural research design, we believe would play a major role in satisfying the requirements of epistemic coherentism. Cross-cultural research and cross-sharing of different and varied perspectives we believe, must become much more widely practiced through the mechanisms of debate, discussion, and the setting up of cross-cultural research teams all across the world. This kind of a research design may also be used in many different types of sociological research, and can be productively and beneficially extended to other fields of research too.

- *Tradeoffs*

A trade-off involves decision making that incorporates a reduction or compromise in quality, quantity, or any other property in exchange for gains in other aspects or properties. To word it differently, a tradeoff is a situation one aspect or property increases, and another resultantly decreases either proportionately or non-proportionately. This approach may also require tweaking of concepts and configurations. This concept has widespread use in the physical and natural sciences, though it can be used in other fields of study as well, including the social sciences. This approach is also widely used in decision making. For example, investors may be willing to lose returns for liquidity or safety of investment. They may also reduce expected or anticipated returns for safety and security. Such an approach and technique can also be used in the design of economic systems. For example, private sector employment may not guarantee job security, but it can lead to rapid growth. Marxists may loathe and frown upon private sector enterprise, but they are losing out on opportunity because of the limited employability of public sector firms. This approach can be used not only in the social sciences which we emphasize on, and specialize in, but in other fields of science as well. For example, automobile manufactures may increase weight of an automobile to ensure safety; however, improved technology may make this trade off irrelevant and redundant, as lighter automobiles can also be safe. Tradeoffs are also central to TRIZ methodology, and we have discussed this elsewhere.

[19] Hyman, A., & Walsh, J. J. (1983). Philosophy in the Middle Ages: the Christian, Islamic, and Jewish traditions. Indianapolis: Hackett Pub. Co. Page 164

[20] Popularizing auto-dialectics in scientific endeavour: A potentially productive tool in the interests of better and higher-quality science Sujay Rao Mandavilli IJISRT, June 2024

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24NOV757

➢ *Prioritisation*

Prioritization refers to a planned set of activities that arranges and rearranges items or activities in their order of criticality, importance or urgency. It helps decide the relative importance and urgency of things, and relegates less important issues to the background. Therefore, prioritization entails ordering and ranking of issues, and less important issues must be made subservient or compliant to the more important and crucial ones, or at least those that matter more. Prioritization is chiefly and primarily influenced by concerns and considerations such as time, money, and availability of suitably skilled and trained manpower. Prioritization may often be very simple – such as deciding who should stand in a queue first, while in many other cases, it may be much more complex and variegated with complex decision making required. This concept must be understood in tandem with all the other critical concepts espoused in this paper and elsewhere. Many prioritization techniques have been proposed over the years, such as a prioritization matrix, the Eisenhower matrix, Moscow prioritization method, (must do, should do, could do, won't do) the impact effort matrix, the cost value matrix and the ABCDE method. These tools and techniques can be readily referenced from the internet. Other sequencing techniques are also often used, and some are tied to the Agile and Scrum methodology, besides some others. We must also reiterate at this juncture, that urgency and importance of issues are two different things, though they may sometimes work in tandem, and can be reconciled across a time horizon. We had also discussed the concept of entities and the nesting of entities in the section on neocentrism in our paper on sociocultural change, and had also provided some templates there. Readers may read them for their own benefit.

➢ *Resolution of Paradoxes*

The term paradox is thought to have originated from the two ancient Greek words "para" which means "contrary to" (this is sometimes interpreted as "beyond") and "doxa", (this is sometimes represented as "doxus") which means "opinion" or "thought". This word also later appeared in Latin as "paradoxum" and in modern European languages. The term paradox is widely used in various subfields and subdivisions of science and daily quotidian activity, and this includes many different fields of study or inquiry such as commerce, arts, sociology, economics, anthropology and literature. Paradoxes do not necessary stall science or a train of critical and coherent thought, even though they may include incongruities and oddities or inherently incongruous elements coexisting uneasily, and lead to potentially unviable or untenable situations; as a matter of fact, they can be a springboard to creative and critical thinking. They may even help elevate paradigms to a higher level. We have had many notable examples of paradoxes in history, such as the noted Russell's paradox, the ship of Theseus paradox, Hilbert's paradox, Curry's paradox, the Barber paradox, the liar paradox, the Grandfather paradox or the time-traveller paradox, Newcomb's paradox, etc. These need no elucidation or elaboration here, as it would constitute a digression or a distraction. Readers of this papers can readily access information from the internet. Paradoxes may also chiefly and primarily categorized and classified into internal paradoxes – or paradoxes that reside within an entity or framework and external paradoxes – paradoxes that span across entities or frameworks. We had devoted an entire paper to the study of paradoxes. The name of the paper was "Paradox identification and paradox resolution in scientific endeavour: Reconciliation of contradictory rule sets in the interests of better theorization and hypothesis-building ", and it was published by us earlier this year, i.e. 2024. [21] [22]

➢ *Reviews, Course-Corrections and Decision Making*

A review may be defined as an evaluation or a critical examination of a product, service, publication, or company. Reviewers may also often assign rating for a scholarly piece of work. They may also then, most importantly provide suggestions for improvement. They may also follow up on these suggestions, and track them till they are completed or closed. Of course, reviews, very much like science itself, must be based on local contexts, situations, or ground realities. Course corrections must also then be made as required. Course correction refers to the act, process or procedures of changing course or direction after a certain and specific failure, or after mistakes are committed. This must then be followed by appropriate decision making. Decision making is nothing but the process of choosing the best option from a basket of potential choices. The process of decision making involves a series of sequential steps such as identifying possible courses of action, carefully considering and weighing the consequences of each and every action, assessing the likelihood or the probability of occurrence of each consequence, selecting the best possible option from a basket of choices, and finally implementing the decision. Decision making is aided by making choices by identifying a set of possible decisions, gathering information, and identifying the implications and outcomes of each decision. Social and psychological aspects of decision making including norms, values and preferences must also be factored in, and this is sometimes (and rather unfortunately so) ignored by researchers and planners. Reviews and course corrections must also be performed over time, as and when ground realities change with the passage of time. [23]

J. Examples to Bolster and Vindicate Our Case

We will now provide some robust and rock solid examples to bolster and vindicate our case, even though these

[21] Spade, Paul Vincent (Fall 2013). "Insolubles". In Zalta, Edward N. (ed.)

[22] Crossley, J.N.; Ash, C.J.; Brickhill, C.J.; Stillwell, J.C.; Williams, N.H. (1972). *What is mathematical logic?*. London-Oxford-New York

[23] Verma, Dem (2009). *DECISION MAKING STYLE: Social and Creative Dimensions*. New Delhi: Global India Publications Pvt Ltd

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24NOV757

could be self-evident to those who have read and assimilated the postulates of this paper. These examples are suitably drawn from a wide variety of disciplines so as to be cogent and self-explanatory. Needless to say, this does not purport to be a complete or a comprehensive list. Many other examples can naturally be found in a wide variety and a wide array of disciplines, and readers can unearth them and analyze them for their own benefit and pleasure.

K. Population Growth

In layman's language, population growth refers to the gradual or sudden increase in the number of people living in a given or a specific region or area. The global population has apparently and obviously increased very rapidly in recent centuries, due to falling death rates arising from falling birth rates (Refer to the theory of demographic transition, which is the standard and most widely accepted theory in this regard and connection) and is expected to continue to grow for some more time before gradually leveling off in due course. Birth rates may either stabilize or decline for some more time till they reach a floor level which may be variable and vary from context to context and from situation to situation. In some cases, they may experience a rebound whether or not driven by pronatalist policies. An extreme example is the birth rate in South Korea which has reached an abysmally low level of 0.68 children per woman. At the other end of the spectrum, Niger has the highest total fertility rate observed and recorded anywhere in the world, with around 7.2 children per woman. In some countries in sub-Saharan Africa, the total fertility rates are barely declining from alarmingly high levels, though some experts believe that the day is not far off when fertility levels will decline there as well. Causes for low fertility include several factors such as education, empowerment of women, improved health, longer lifespans, urbanization and migrations. However, it is a no-brainer that population growth can have significant impacts on the environment and global climate which include resource depletion and pollution. Some pronatalists argue that population growth is good for the economy, but dangerously ignore the environment.

Proantalism is also often seen as a western elitist concept (Some pronatalists include the likes of Elon Musk) and pronatalists often impose their dreaded ideas on the rest of the relatively undeveloped world where high birth rates still remain a concern. People in India and elsewhere also slavishly mimic and copy them regardless of whether they make sense or not. This is grossly erroneous and incorrect. This is also one of the requirements, cornerstones and hallmarks of the globalization of science movement. Local specific solutions must always be birthed and gestated while at the same time satisfying the principle of epistemic coherentism. India's problems and requirements are different from that of Japan, and even within India, Uttar Pradesh's problems are different from that of say Sikkim's or Assam's. Bangladesh's problems are also different stemming from its high population density. Different drivers may also operate in different countries; for example the USA, China and Japan may want to maintain their economic or industrial lead while countries in say Eastern Europe may be more willing to let their populations fall. Wherever epistemic coherentism is not possible, an adequate justification needs to be provided. Antinatalism is always a good idea, though extreme versions of it may not be. Climate change is indeed a serious concern as many of the world's rivers and India's rivers are already beginning to show signs of drying up, and smog clouds the air in many cities. This will remain one of humanity's biggest and greatest challenges for centuries to come.

Again, local specific solutions must always be adopted as the ground realities in India are different from other developed and developing countries. Many solutions to low birth rates can indeed be proposed and adopted including, but not limited to immigration, automation and outsourcing. There are of course, many, many more. The benefits of low fertility far outweigh those of high fertility, and we require tradeoffs and epistemic coherentism here. There has however been a semitragic pronatalist turn in some quarters of late, even in India; we must nip all such nefarious tendencies in the bud. All this also stems from the inability of different countries and Indian states to define ideal TFR's. As British Broadcaster and biologist David Attenborough once stated, "All our environmental problems become easier to solve with fewer people and harder — and ultimately impossible — to solve with ever more people." As English primatologist and anthropologist Jane Goodall echoed likewise, "Instead of controlling the environment for the benefit of the population, perhaps it's time we controlled the population to allow the survival of the environment." We will also argue that low fertility rates (moderately low fertility rates at least will lead to what we may call an "Evergreen demographic boon". [24] [25] [26]

L. Thirteen Keys to the White House

The thirteen keys to the White House system consists of thirteen true or false statements pertaining to different circumstances pertaining to any given presidential election in the United States, and is designed in such a way that an answer of "true" always favors the incumbent party. According to this system, if five or fewer keys are marked as false, political stability may result and the incumbent party may be slated to win the election. This system was first developed by the noted American historian Allan Lichtman and the Russian geophysicist Vladimir Keilis-Borok way back in the year 1981, by adapting, modifying and

[24] Armelagos, George J., Alan H. Goodman, and Kenneth H. Jacobs. "The origins of agriculture: Population growth during a period of declining health." Population and Environment 13.1 (1991): 9-22

[25] McKeown, Thomas (1976). *The Modern Rise of Population*. London, UK: Edward Arnold

[26] Deaton, Angus (2013). *The Great Escape. Health, wealth, and the origins of inequality*. Princeton and Oxford: Princeton University Press. pp. 91–93

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24NOV757

extending methods that Keilis-Borok had designed for earthquake prediction. This system had obviously worked remarkably well in most American elections, but not always. Again, a sound epistemology is required, and things must not be left to chance. Epistemology is a foundation of good science, which we don't see here. We don't see this in many modern and contemporary frameworks in science either, and rectifying and remediating this will up the ante a great deal. Lichtman notoriously failed in 2024, and his success rate dwindled to around 81%, down from the earlier 90% as a result of this erroneous prediction. He also publicly admitted he was wrong, denting the reputation of his model greatly. [27]

M. Dangers of Artificial Intelligence

Artificial intelligence (AI) is an emerging and a rapidly growing field of science that involves the building and operation of machines and computers that can replicate and mimic human intelligence, at least partially. The foundations for artificial intelligence were laid by Alan Turing and many others. Artificial Intelligence remains a very broad field of operation and study that brings together many different disciplines, most often computer science, linguistics, neuroscience, and philosophy. AI is being increasingly used in many fields such as language translation, education and pedagogy, machine learning, and even self-driving cars. AI can lead to reduced human error, better and more informed decision making, increased efficiency, better education, and better, and faster economic growth. However, Artificial intelligence (AI) can pose many dangers, including bias and discrimination, privacy violations, security and safety issues etc. However, the idea and the notion that AI can replace human intelligence is a bit outlandish and far-fetched. There are many fear mongers here, and most of their theories, ideas and assumptions are not based on sound epistemology. All said and done AI lacks emotion, empathy, and creative ability. Therefore, research, and theories derived there from must satisfy the principle of epistemic coherentism, and a balanced assessment of the impact of AI on society be made.[28]

N. Solar and Renewables Boom

Climate change has increasingly become a major issue in the recent past as the world grapples with the ever imminent threat of uncontrolled climate change. It is therefore heartening to learn and note that solar energy has increasingly begun to take centre stage in the ongoing global shift toward sustainable power. Countries have also begun to invest heavily in solar power and solar infrastructure, and solar power generation has begun to expand manifold. Solar power has exceeded 1500 GW in 2024, up from 1 GW in 2000. Solar power is expected to surpass 5000 GW by 2030 by a highly conservative estimate, if not attain much higher levels. The cost of solar has also dropped impressively in the last couple of years, and has not only achieved and accomplished cost parity with traditional sources of energy, but has also begun to undercut them in several cases. Clean energy has also begun to create a large number of jobs, and out of sixteen million jobs created in clean energy, solar alone accounts for a whopping and staggering seven million jobs. International and intergovernmental organizations such as the International Solar Alliance have also begun to play a major role in the promotion of solar energy. Solar PV monocrystalline modules have also of late hit a new high with 24.9 per cent efficiency, and new and promising technologies such as perovskites have also been developed.

One growing concern is solar waste arising from discarded solar panels and modules. Solar panels contain toxic pollutants such as lead and cadmium that can contaminate the ground soil. However, solar panels typically last for around 25-30 years, and 80% of solar panels can be recycled, and given that most solar farms are run and administered by companies and firms, this should not be too much of a problem. This kind of recycling will also of course reduce the need for mining and extracting new materials greatly. The problem lies however with roof top solar installations which are growing rapidly day by day. There are also many other solar technologies such as space based solar power, and concentrated solar power, and floating solar panels, and each of them have their own relative merits and demerits. Again, the pros and cons of all technologies must be taken into account and consideration always, and we must not think in bits and pieces or grope in the dark. All data however unpleasant and repugnant it may appear at the very outset, must be examined and probed. When new technologies emerge, ideas and concepts can be reexamined. The idea of windmills causing cancer is as absurd and dangerous as unbridled pronatalism. All said and done, renewables must be the way forward, and pending resolution of other issues, must be promoted aggressively. Absence of epistemic coherentism leads to dogma. Absence of epistemic coherentism leads to ideology; this is what we must eschew at all times. This is also what our movement is all about, at least in part. Dogmas and ideologies are of course being relegated to the background, and are being smothered – this is happening at an extremely slow pace due to globalization and the smooth and unbridled cross-cultural exchange and flow of productive and beneficial ideas. Another possible way to smother dogma is through fieldwork and ethnography- and the use of ethnographic data in analysis and decision making too- we believe the potential of fieldwork and ethnography has barely been realized, and its application is presently too narrow and too restricted. We are skimming on the surface yet, and have barely scratched on the surface. Marxists and left leaning intellectuals had however opposed globalization some twenty and odd years ago, even though this obviously benefitted many developing countries.

[27] Cuzan, Alfred G.; Armstrong, J. Scott (June 30, 2014). "Index Methods for Forecasting: An Application to the American Presidential Elections"

[28] Kaplan, Andreas; Haenlein, Michael (2019). "Siri, Siri, in my hand: Who's the fairest in the land? On the interpretations, illustrations, and implications of artificial intelligence". *Business Horizons*. **62**: 15–25

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24NOV757

Does this approach satisfy the principle of epistemic coherentism? Or is it just dogma? We leave it to readers to decide. [29] [30]

O. 9000 Year Old Buried Cities in Indian Ocean

According to the twenty third and thirty fourth stanzas in the great Indian epic Mahabharata, the city of Dwaraka was submerged in the ocean soon after Krishna departed the Earth, leading to the commencement of the Kali Yuga or the Kali age. Of course, this may only be a myth. However, archeological excavations have indeed discovered a city that existed of the coast of Gujarat in 1500 BC, and we have discussed this in depth in several of our previous papers. Some other press reports including one from India today, from around twenty years ago, and again one more recently, suggest the existence of a submerged city in the Indian ocean some 9000 years ago in the Gulf of Khambhat Cultural complex. This may be fake, given that it is based on scanty data. Data from different fields of study must be taken into account and consideration, and there must be an overall cohesion here. In other words, the principles of epistemic coherentism must always be taken into account and consideration. There must also be balance and rigorous research – the two may not always necessarily go hand in hand. For example, the late Marxist historian DN Jha wrote about the myth of the holy cow. It was rigorous, but was it objective and balanced? He may however, have had a point to make as he was fighting rampant misuse of history by the right wing that was occurring then. Some changes and developments also occur naturally such as the Neolithic revolution and the Industrial revolution. (of late, and more recently, the IT revolution and the AI revolution too) These cannot be naturally stopped. However, researchers must points out the negative impacts of such changes, and may even draw out a road map to mitigate them. We also have the theory of Hobson's choice here. Hobson's choice means making an imperfect decision due to the lack or want of a better alternative. The idea is said to have originated from Thomas Hobson who was once the owner of a large stable in London, and is quite important, relevant and pertinent from our perspective. Again the pros and cons of going down the capitalistic road or the socialist path must be weighed against each other, and an appropriate decision taken with adequate checks and balances put in place. This approach and technique will find many other uses as well in all walks of daily life.

P. Indology

Indology is the a niche area of academic study particularly of Ancient India, including its history, culture, languages, (Such as the ancient Sanskrit and Pali) mythology, literature, and people. Indology also encompasses the critical examination of historical sources to analyze and critically examine the religious, economic and cultural practices and beliefs of the people of the Indian subcontinent. Indology evolved at a time when anthropology and sociology were not evolved, not mature, and existed in a different and in an older and now highly obsolete format. This is probably one of the reasons why Indology continues to remain out of synch with the needs of the present and modern time, and is seen as being largely obsolete. Much of the ground work for Indology was created by the Germans. However, Megasthenes, the Greek historian, is known as the father of Indology. His book, Indica, has largely perished, and only fragmentary knowledge of it remains. However, it is now common knowledge that British and colonial Indologists had different ulterior motives that sometimes coincided, but never tallied completely. German Indologists often wanted to maintain a system of apartheid between the Harappan and the Indo-Aryans as pointed out by Douglas T. McGetchin and others. This would have led to theories such as the absurd and wholly untenable theories such as the Paramunda Indus myth obviously. Max Muller also often spoke of a great "Aryan brotherhood" based on the similarity of blood and genetic sameness, and encompassing both Europeans and Indians, to promote colonialism and the British Raj.

The ex-British Prime Minister Neville Chamberlain also endorsed Muller's views to some extent, but dropped Indians completely from the list. We also then have had Indological ghosts of the past some of which have been the so-called Indo-Iranian language split that is almost entirely fallacious, the BMAC hypothesis, the Rural post-Harappan India hypothesis, the notion of early second millennium migrations, the idea that the "Aryans" lived in the Punjab. This is clearly pre-common sense because Buddha was born in the Gangetic plains, and the illiterate post-Harappan India hypothesis. While the Vedic Indus theory is indeed untenable, researchers have argued against it using all the wrong reasons. Gregory Possehl too was utterly obsolete at the time of his death, and on the whole interdisciplinary has been lacking. Right wing groups have fared much worse as they lacked rigorous academic training and were mostly amateurs. PN Oak and other fared much worse, even claiming the Islam and Christianity evolved from Hinduism, and that the Kaaba was once a Hindu deity. Witzel and Asko Parpola have also succumbed to obsolete ideas, and have at times even practiced rampant careerism. Indian right-wing groups are also just as guilty, and we have examined

[29] Goldemberg, José; UNDP, eds. (2000). *World energy assessment: energy and the challenge of sustainability* (1. print ed.). New York, New York: United Nations Development Programme.

[30] Müller, Amelie; Friedrich, Lorenz; Reichel, Christian; Herceg, Sina; Mittag, Max; Neuhaus, Dirk Holger (15 September 2021). "A comparative life cycle assessment of silicon PV modules: Impact of module design, manufacturing location and inventory". *Solar Energy Materials and Solar Cells*. **230**: 111277.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24NOV757

their devious machinations in a previous paper. [31] [32] [33] [34] [35] [36] [37] [38] [39]

III. CONCLUSION

We had naturally and reasonably begun this paper by furnishing and providing the core and central objectives for the authorship of this paper, and by also providing a reasonable justification thereof. We had argued that although the concept of epistemic coherentism did indeed exist, it has not always been rigorously and assiduously followed in the real world particularly in today's age of interdisciplinary and transdisciplinary research. We therefore rightfully commenced our work by reviewing concepts pertaining to coherentism both in general daily usage, and as it pertained to scientific epistemology. We also stated how and why our approach differed partially with the concepts of epistemic coherentism as they exist today, though the foundation and the fundamentals may remain the same. We had therefore attempted to bring to the table, an altogether new value proposition by drawing on our previous proposals pertaining to institutional coherentism, methodological inductivism, foundationalism and intergrationism. Our paper on Advocating output criteria based scientific and research methodologies was also suitably referenced for this purpose, along with some other random concepts we have been proposing off and on, such as neo-centrism, aeternitism, and omnimodism, though they are admittedly less important from the point of view of this paper. Our proposals therefore represent a common sense based approach to modern, contemporary interdisciplinary and transdisciplinary science, and it is for this very reason that we had reviewed the latter concepts briefly as well for the benefit of our readers. In this paper, we endeavoured to eschew all forms of frog-in-the-well-approaches and put forth an all-encompassing pragmatic approach that we believed could serve the needs of science and society very well. All the steps of our proposed approach have also been laid out threadbare, and the merits of our approach can hold up to rigorous scrutiny. We believe this will naturally lead to faster scientific progress, and scientific progress at the speed of light. Readers can gauge for themselves how far we have achieved and accomplished these objectives.

[31] Guha, Sudeshna (2005). "Negotiating Evidence: History, Archaeology and the Indus Civilisation". *Modern Asian Studies*. **39** (2): 399–426

[32] Bhatt, Chetan (1 January 2000). "Dharmo rakshati rakshitah : Hindutva movements in the UK". *Ethnic and Racial Studies*. **23** (3): 559–593

[33] Syncretism and Acculturations in Ancient India: A New Nine Phase Acculturation Model explaining the process of transfer of power from the Harappans to the IndoAryans Part One Sujay Rao Mandavilli ICFAI, 2009

[34] Syncretism and Acculturations in Ancient India: A New Nine Phase Acculturation Model explaining the process of transfer of power from the Harappans to the IndoAryans Part Two Sujay Rao Mandavilli

[35] The Demise of the Dravidian, Vedic and Paramunda Indus Hypotheses: A brief explanation as to why these three Hypotheses are no longer tenable, Sujay Rao Mandavilli, 2013

[36] Why the Indus Script WAS true writing and why a larger corpus of texts existed in the Indus Valley civilization: Simple proof addressed to mainstream researchers & archaeologists Published in the International Journal of Philosophy and Social Sciences (IJPSS), Vol II, No 2, 2012 Sujay Rao Mandavilli

[37] The reconfirmation and reinforcement of the Indus script thesis: A logical assessment and inquiry as to the elusive and enigmatic nature of this script Sujay Rao Mandavilli Published in the ICFAI Journal of History and Culture, January 2011

[38] Alphabetic scripts and other forms of literacy in PostHarappan India: A logical assessment and inquiry as to the origin and extent of literacy in Post-Harappan India Sujay Rao Mandavilli, 2011

[39] Bringing Indology into the Twenty-first Century: Why rich rewards are in store for many fields ofscience with major implications reaching far beyond Indian shores Sujay Rao Mandavilli ELK Asia Pacific Journal of Social Sciences Vol 1, Issue 4