

**PHILOSOPHICAL PAPERS: JOURNAL OF THE
DEPARTMENT OF PHILOSOPHY**

ISSN: - 0976 - 4496

Volume - XV

March - 2019

(SPECIAL ISSUE ON EPISTEMOLOGY)



ENLIGHTENMENT TO PERFECTION

DEPARTMENT OF PHILOSOPHY

SAP (DRS-III) OF UGC

UNIVERSITY OF NORTH BENGAL

(ACCREDITED 'A' GRADE BY NAAC)

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EDITORIAL NOTE

The question ‘What is Knowledge?’ has been pondered from ancient Greece and still continues to be formulated in many areas in philosophy, Psychology, Sociology, etc. There is no agreed definition of what is knowledge. Although people intuitively know what is knowledge, and recognize its presence, the opinions on this topic vary according to the different areas and are not consensual. One way to understand the question is to observe the use of the term knowledge in our daily life.

From time immemorial knowledge occupies a central place over belief or opinion. This issue remains the same in Indian epistemology too where cognition demands association with precision to be recognised as valid knowledge. Within the purview of knowledge, there arises the issue of emotion and reason. In fact, in all spheres of our cognitive exercises and interpretive practices-be it the issues of ethics, epistemic enquiries or even in our dreams the duel between reason and emotions form a very important aspect. The rationalist traditions in philosophy have throughout proclaimed and asserted their supremacy over other forms of cognition and decision making. In a sense, emotion takes us on a voyage of desires while reason delimits those to the realm of ought.

Current debates in epistemology don't just concern rival theories, like foundationalists vs. coherentists, or internalists vs. externalists. They often concern with the methodologies, which present divergent ways of solving epistemological problems. On the one hand, there have been numerous recent defences of the methods of traditional epistemology: philosophical intuitions and the use of thought experiments. On the other hand, there are many philosophers who view arm-chair theorizing with skepticism, and embrace empirical results from philosophy itself like, experimental philosophy or cognitive science. These two rival methodological camps are often pitted against each other, but they exist in harmony. For example, a theory from traditional epistemology that has won much interest is virtue epistemology. The results from virtue epistemology are consistent with and actually complement the leading cognitive paradigm from cognitive science and the dual-process theory.

The present volume is the outcome of some of the deliberations presented in the national seminar on *Epistemology*, organized by the Department of Philosophy, North

Bengal University sponsored by UGC. The contributors of the present issue engage in their own scholarly way to unravel the above from diverse perspectives in epistemology and psychology. We plenteously express our deep sense of happiness to publish this special edition as *Philosophical Papers: Journal of the Department of Philosophy* Volume-15, before the philosophical community. We thank the esteemed members of the editorial board, all colleagues for valuable suggestion, support to take extra mile for the accomplishment of the publication of this special issue. We are also grateful to our Honorable Vice-Chancellor for the encouragement and support, the Finance Officer (Officiating), the University Grants Commission and the University Press, without which the publication of the journal would not have been possible.

Epistemology, metaphysics and theology have been in serious trouble in Western philosophy for at least the past two hundred years. This crisis has thrown up what Lyotard calls “the post-modern condition”. However, the recent “turn to religion” has opened up a range of surprising alternative vistas to Lyotard’s diagnosis. Amongst other developments, Radical Orthodox theologians have challenged the very notion of “the secular” and are seeking to re-establish orthodox Christian theology as the only viable grounds for a meaningful Western philosophy and culture. Tushar Kanti Sarkar in *Knowledge: Limits and Transcendence* tries to show that there is a ‘limit’ as to *what* we can know and *how far* can the range of human knowledge be extended and that we need to also probe into the possible ways of ‘going beyond’/‘transcending’ such a limit.

Language is a much misunderstood common term used by us. But most of us do not agree about the correct meaning of this term. Different people have different ideas about it, which has give rise to a variety of concepts. Different concepts of language give rise to different problems and to different theories of language. These problems about the nature of language have not only bothered the modern scholars, but the ancients too. Raghunath Ghosh in *‘Na vāg gacchati: A Discourse on the Limit of Language’* talks about the status of Nirvikalpaka awareness and limit of language to express it. Generally ‘knowledge’ means ‘knowledge of something’ in the epistemic sense. But in the Advaita Vedānta system of philosophy there is ‘pure knowledge’ having no content which is called ‘contentless cognition’ *aviṣayaka-jñāna*. Thus, according to Ghosh, there is a limit of cognition incapable of being revealed in

language. Perhaps this type of cognition which is called *asābda* has got some role of its own, which has been hinted in the Upanisadic *mantra - na vāg gacchati*.

Pushpa Mishra in 'Emotion, Reason and Dreams' explains three apparently opposed topics together. Her attempt mainly tries to present an overall view of the predominance and relation of these three topics and tries to show how in spite of their apparent opposition the three are inter-related. She begins by tracing the predominance of reason in western philosophical tradition starting from Plato and shows that the predominance continued in epistemology, moral philosophy and even influenced psychological theories and research. This hegemony of reason, the paper claims, has been broken by the influence of Freud, by neuro-physiological findings of Damasio and by the influence of feminism. Freud's discovery of the unconscious lessened the importance of conscious cognition in decision making and other areas of psychic functioning. Damasio's discovery brought about incontrovertible proof that rational decision making is physiologically impossible without emotion and the feminist philosophers effectively challenged the reason centred approach to morality and epistemology.

Roma Chakraborty in 'Understanding Dreams from an Evolutionary Perspective: A Critical Study' deals with how people have always been interested in the how and why of dreams and theories of dream function have ranged accordingly. In her paper she considers, though briefly, the debate on the function, namely, what purpose if any does dreaming serve, what is it designed for - from the evolutionary perspective. She concludes with this remark that the study of dream calls for a multi-level explanation which would proceed with a holistic approach accommodating the different interdisciplinary approaches to the development of a theory of dreaming.

Nirmalya Narayan Chakraborty basically focuses on what might be called 'epistemology of emotion'. He begins with a brief presentation of how emotion could be understood. And this leads to a discourse on the role of emotion in human epistemic life. Does emotion form an integral part of man's cognitive repertoire? Can emotive experience be understood in terms of the normal epistemic model like that of perception? If emotive experience could be explained in terms of perceptual knowledge then emotion could very well be treated as another form of knowledge,

which in its turn would have serious repercussion on the 'inner-outer' distinction, a distinction that philosophy of mind makes a great deal out of. Moreover, the realism-anti-realism debate in theory of knowledge looms large over the background once emotion is accounted for in terms of the generally accepted perceptual knowledge, a model that I call 'externalist model'.

Researchers who are working on the intersection of language, society, and history would benefit from an approach that more fully integrates the insights of both lines of inquiry. The linguistic view of intentionality embraces theories that attempt to single out the class of intentional states by appealing to factors that are supposedly criterial for intentional sentences. Ranjan Mukhopadhyay in 'Knowledge, Intentionality and Language' analyses the nature of knowledge. He shows through diagrams how a notion of knowledge can be applied to others. He analyses two important notions of knowledge—one extensional and the other intentional. He concludes by saying that if we are not cautious about the above two distinctions then confusions may occur in the field of knowledge.

When we enquire into the relation between belief and knowledge, we are mainly concerned with the relation between belief that and knowledge that. In Russell's later terminology we are comparing two 'propositional attitudes'; and they may be attitudes to the same proposition. If we contrast belief with knowledge and think of it as an inferior substitute for knowledge, the contrast is primarily between 'knowledge that' and 'belief that'. Again, if we define knowledge in terms of belief, we are defining 'knowledge that' in terms of 'belief that'; and the contrast which remains is one between 'knowledge that' and *mere* 'belief that', or between the sort of 'belief that' which amounts to 'knowledge that' and the sort which does not. Manidipa Sanyal in her deliberations discusses how closeness of knowledge and belief is viewed in different forms, sometimes even as mutually exclusive. What is interesting in her paper is that the apparent innocence of knowledge-belief relation often unexpectedly leads us to view knowledge as "subject to critique", something which sounds weird in the ordinary usage of the notion of knowledge. It needs a little deeper analysis to reveal the truth of the content. In fact, these two claims are not absolutely different; rather they may be showed to be clubbed together. She has made an attempt

to explore the possibility of knowledge-revision which is an apparently counter-intuitive area in epistemology.

Nyaya-Vaiśeṣika argument about the problem of empty terms is interesting to say the least and it has far reaching significance in ontology, metaphysics and semantics. 'God is' is interpreted by the Naiyāyikas as: there is God, for denying His existence is to affirm Him as God. We cannot negate any non-entity. If we negate God, we are bound to accept His 'entitative existence'. Nataraju Adarasupally and Basanta Jyoti Bhuyan in The Problem of 'Empty Terms' in the Navya Nyaya philosophy aim to suggest a distinction between '*illusory-possibles*' and '*un-actualized possibles*' and go on to conclude that the Navya Nyāya being a realist school, has no place for singular or general empty terms. Gāṅgeśa endorses such a view. All sentences that contain 'empty terms' equally find no place in classical Nyāya. However, Buddhist and Mimāṃsā philosophies do have a place for 'un actualised-possibles'. Thus, Nataraju and Basantajyoti enquire in to the issues concerning the problem of empty terms in the Navya Nyāya philosophy. However, in their contribution they do not indulge in comparing this notion, though there is some reference, with that of the works of some of the leading western thinkers of modern times who also contributed on this problem. In fact they discuss the problem within the frame work of the Nyāya school.

Despite his monastic background, Nagarjuna's philosophical texts were sometimes directed against logicians of non-Buddhist schools, but most often they offered critiques of the doctrines and assumptions of the non-Mahayana Buddhist schools, especially *Sarvastivada*. Nagarjuna's overriding theme, however, is the bodhisattva's path to buddhahood and the merit and wisdom that the bodhisattva must accumulate in order to achieve enlightenment. By wisdom, Nagarjuna meant the perfection of wisdom, declared in the *sutras* to be the knowledge of emptiness. Nagarjuna is credited with transforming the *sutras*' poetic and sometimes paradoxical declarations on emptiness into a philosophical system. Shakuntala Bora deals with Nagarjuna's Epistemology and tries to explain how Nagarjuna denies things having *svabhava*. Such a denial, however, has epistemological implication as pointed out by his opponents: all knowledge-claims are devoid of intrinsic nature. In *Vyagrahavivartani* Nagarjuna tries to prove that means of knowledge are empty. By

doing so according to Bora, he actually tries to tell that it is wrong to look for a way of knowing emptiness. Emptiness is not a 'thing' to be known and as such there is no 'way' of knowing emptiness.

The questions, 'Why do we dream'? or 'What is the function of dreaming'? are easy to ask but very difficult to answer. The most honest answer is that we do not yet know the function or functions of dreaming. It's long been known that our brains actually do a lot of work while we sleep. The brain is especially active during a phase of sleep called REM, which has been linked to learning and memory. Jitendra Ramprakash in 'Reason, Emotion, Dream and Creativity' attempts to explain the duel between reason and emotion and that between dream and reality. By stringing together - reason, emotion and dream as a theme, we have before us a fascinating matrix, in which many a philosophical question can be considered. The question that he deliberates upon is the one of dreams and creativity, with a focus on the similarity between some tools of dream-formation and the creative process. He concludes that the question of creativity has to be answered and Philosophy must undertake a fresh approach in this regard. Just like Flanagan appealed for a holistic approach to philosophising dreams, we need to undertake a multi-disciplinary approach in the philosophy of creativity too.

Epistemology deals with the nature and possibility of knowledge. A central problem in epistemology consists in the sceptical challenge which in a generalized manner flows doubt on our justifications for knowledge claims thus threatens the very possibility of knowledge. In order to defend the possibility of justification, and knowledge, against that challenge, Himansu Sekhar Samal in his endeavour has made an attempt focus on two main possibilities. The first possibility is foundationalism, where he emphasises upon some of the main claims of foundationalism and examines the concept of justified basic belief by considering 'the regress argument'. He also examines the two different versions of foundationalism and critically discusses some answers to the question: 'What makes justified basic beliefs justified? The second possibility is coherentism in which there is no ultimately privileged belief, but justification is still possible because it is provided by coherence within a set of beliefs. But the central issue in modern epistemology is to account for a more reliable theory in the epistemological process.

LAXMIKANTA PADHI

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AND

SWAGATA GHOSH

KNOWLEDGE: LIMITS AND TRANSCENDENCE

TUSHAR KANTI SARKAR

The very title of this contribution Knowledge: Limits & Transcendence deftly suggests two things, i) that there is a ‘limit’ as to *what* we can know and *how far* can the range of human knowledge be extended; and ii) that we should also probe into the possible ways of ‘going beyond’/‘transcending’ such a limit. This can be achieved (a) either by invention of new and powerful instruments like, microscope, binoculars, X-ray machines etc., [which extend the range of our experience - the main source of our knowledge]; or, (b) by adopting a *radically different* way of looking at, what may be called, our ‘method of knowledge acquisition’ [henceforth, ‘**K-acquisition**’, for

short]. I think, of these two, the first one i.e., (i) above, betrays the spirit of *cautious conservatism*, while (ii) betrays the spirit of *forward-looking optimism*. Personally, I have always aspired to inculcate the attitude of *forward-looking optimism* in me, with what amount of success (if any), I don't know. I propose to focus mainly on (ii) above. [It may be incidentally be noted here that apart from (a) and (b) above, there is also a *third* logically possible way of 'going beyond'/ 'transcending' the currently stipulated, pre-assigned limits of 'knowability', e.g., (c), by developing the power of extra-sensory / *alaukika* perception [=ESP] or, *yogaja pratyakṣa*. The questions of *yogaja pratyakṣa* will be briefly, and only very cursorily, touched upon in my talk.

Before going into the heart of the paper, let me start by asking a few, very straightforward, questions:

1. The limits of 'knowability': Is it absolute and in principle unchangeable or, is it not?
2. The dividing-line between 'Realism' and 'Idealism': Is it clear and sharp so that there is *no grey area* of confusion?
3. Is the World, as it is *given* in experience, a true copy/picture of the 'external' World, as it really is? The 'Realists' claim that it *is* so.
4. Does our mind [i.e., our *brain* and the sense organs] *just happen to mirror* the World that we see, or, do they [our *brain* and the sense organs *together*] somehow *create* it, i.e., the World that we happen to 'see' through our sense-experience, (i.e., our 'world-view', for short)? According to 'Idealism', it (i.e., our 'world-view') is a mind-dependent creative construction.

My concern in this contribution centers round these *four* questions; and my answers [like anyone else's] to them would depend on the *assumptions* that are made [by me, or anyone else] in course of giving an answer to any/all of the four questions above. Now, let us go into the topic itself. It should be clear by now that for anyone who maintains, [in response to the first question (=Q: 1)], that the limit of 'knowability' is absolute and is unchangeable in principle, the very idea of 'going beyond' or, of 'transcendence', in our required sense, would be an impossibility. On the other hand, to take the logical possibility of such 'transcendence' seriously, would be tantamount to admitting that the so-called limit of 'knowability' is *not* absolute i.e., the agreed limits of 'knowability' is likely to change over time. I consider this one to be a more reasonable option to accept. Let me explain why.

First, think of a hypothetical scenario where a person **X**, is asked to give an ‘Yes’ or, ‘No’ answer to the following questions:

- a. Is it possible to ‘see’ what his friend is doing now at a place 1000 miles away?
- b. Is it possible for you to ‘see’ or, to ‘photograph’ [in total darkness of course] what is going on around you?
- c. Is it possible to look *inside* your head and to ‘see’ the lobes of your *own* brain, without opening your skull?
- d. Is it possible for one to ‘know’ what *thoughts* are presently going on in someone else’s mind?

Assuming that **X** is a man belonging to the 19th Century, before the invention of TV, Night-vision glasses, X-ray etc., the answers given by him to (a), (b), (c) and (d) would definitely be ‘No’. However, for a man **Y** , of this 21st Century, the answers to (a), (b) and (c) would be a definite ‘Yes’, although about (d), he may *not* be so sure. With regard to (d), however, it is still quite plausible to think that in future the techniques of EEG and ‘brain-imaging’ would reach such an advanced level that by hooking up one’s brain to a machine we would be able to ‘read’ his thoughts - ‘know’ what is there in his mind.

What can we learn from the examples in the above scenario? It is this: The stipulated and commonly accepted ‘limits’ of ‘*knowability*’ at any given point of time, is conditioned by our *own* collective ignorance at that time. In fact, such a limit is actually defined by our collective ignorance at any given span of time. It follows that since pursuit of knowledge keeps the boundary of knowledge expanding, in course of time, the so-called limits of ‘*knowability*’ must change with time too. In short, the so-called ‘limits’ of ‘*knowability*’ *cannot be* something unchangeable and fixed for ever.

As to the second question [i.e., Q2] about the dividing-line between ‘Realism’ and ‘Idealism’, I maintain that there is no, and cannot be any, sharp dividing-line between ‘Realism’ and ‘Idealism’. To put it very briefly and rather bluntly, the difference between ‘Realism’ and ‘Idealism’ boils down to this: according to the realists the function of a knowing mind is to faithfully ‘copy’/‘mirror’ a given ‘*datum*’ - a segment of an *objective* reality. Whereas, according to the idealists, the notion of *pure datum* is an untenable myth. Every

object of our knowledge is inextricably inter-woven with human creativity. It is not always easy to tell where ‘copying’ ends and ‘creativity’ takes over. Think of two master painters and two great poets who are asked respectively to capture the glowing beauty of the western sky during a spectacular Sunset. Although the two poems as well as the two paintings are all try to depict the same event [beauty of a spectacular Sunset] yet no one would expect the two poems or the two paintings to be exactly the same. Is there any way to exactly apportion the relative contributions of ‘copying’ and ‘creativity’ in the finished end-products viz., the two paintings and the two poems. I doubt that there is or, can be any such way. Nevertheless, since the poems and the paintings are about capturing the beauty of a given Sunset sky, they do share an unmistakable common theme. A type of mutual affinity which, for obvious reasons, I call ‘*thematic affinity*’.

It is clear now that if the position outlined above regarding the first two questions [Q:1, Q:2] is plausible then it follows as a corollary that (i) the notion of so-called ‘limit of *knowability*’ is *non*-absolute, fluid and changes with time, accordingly, (ii) transcendence of such a limit which is prevalent at any given time, is *not* to be considered at all as an impossibility, (iii) the so-called *real* World, is like a creative symphony in which raw experiential data is harmoniously blended by the knowing mind in order to *construct* the objective world of *our* experience. The world [supposedly, lying out there independently of any knowing mind] that we claim to *see*, is as much ‘given’ as it is a *free creation* of a knowing [human] mind. It follows that to a knowing mind of *non*-human kind, if there is any, the same set of epistemic data would possibly result in a world-view completely different from that of ours. Consequently, (iv) the *ideal* of ‘pure objectivity’, as held by some realists, turns out to be a *myth* which needs to be debunked [preferably on *experimental* grounds].

The reasoning I have used in response to the first two questions [Q: 1, Q: 2] has been mainly abstract and philosophical in tone. We need something more to give it a convincingly concrete shape. Otherwise, it would hang in the air, the way in which Berkeley’s argument did when a critic pointed out that ‘Berkeley’s argument, though irrefutable, is hardly convincing.’ To be ‘irrefutable’ is quite different from being ‘convincing’ or, ‘acceptable’. This point can be made clear with the help of a nice story. It runs thus: Once there was a philosopher Mr. X, who was a brilliant debater too. He was so good that he would be able to *logically* refute any of his

opponent's view and to establish his own position with impeccable logical cogency. Unfortunately, at a certain age, he lost his mind, turned out to be a 'mad' philosopher and became logically convinced that he himself was no longer a living person but one who is *dead*. However, despite this set back, he still retained his brilliance as a philosophical debater. Various attempts were made by Physicians, Psychiatrists, Counsellors etc., to *cure* him of the insane belief that he was a dead man. Nothing worked. All the arguments to convince him that he [i.e., Mr. X] was *not* dead, was *logically* refuted by Mr. X. After making Mr. X to agree on the point that 'Dead men do *not* bleed', a daring young Doctor wanted to take shot. He lightly stabbed Mr. X with a small scissors. As blood dripped from the scissors-cut, the young Doctor said to Mr. X, 'You see, you *are* bleeding. So, you cannot be dead, after all.' When the Doctor was still basking in the warmth of his conviction that *this* was an absolutely knock-down argument; Mr. X retorted with a smile, and politely said, 'Thank you Doctor for pointing out that *even dead men may bleed*.' Mr. X's response is logically *irrefutable*, for sure, but no one needs to be told that it is *hardly convincing*.

Even if we assume that so far our position has been irrefutable, we still would need a set of *corroborating* evidence, in order to show that our two claims viz., a) notion of *pure objectivity* is an untenable *myth*, and b) the *external world* itself [which, we so strongly believe to be mind-independent], is somehow shaped by *our* own creativity, are factually convincing as well. In order to fulfill this requirement I will first list a few recent experimental results from the area of neurophysiology. This will highlight the role played by *creative imagination* in the construction of our view of the external reality, and thereby, will also debunk the myth of *pure objectivity* on the one hand; and will, on the other hand, pave the way for showing that there is no sharp line of demarcation between what is *given/a pure datum*, and what is a created *mental construct*.

Our minds play a creative-constructive role in *representing* the world that is given in experience, such role-playing is not haphazard—it is highly *constrained* by a given set of rules. In short, knowledge-representation of the world [by a knowing mind] is a *rule-bound* activity. The set of in-built rules the knowledge-representation game [=KR-game] is played is called 'knowledge representation mechanism' [=KRM]. Nature of any object of knowledge [*jñeya*, say, **y**] is invariably represented/constructed by the KRM of for a knower [*jñātā*, say, **x**] by the set of in-

built KRM [call it **z**] of **x** [i.e., a *jñātā*]. This entails that the *only way* the nature of **y** [a *jñeya*] can be known by an **x** [a *jñātā*] is through the mediation by **z** [a set of KRM]. Hence, in so far as the *yathārtha-jñāna* of **x** [a *jñātā*] about the nature of **y** [a *jñeya*] is concerned, there is a sort of *nirūpya-nirūpaka/janya-janakatva* relationship between *yathārtha-jñāna* about a *jñeya*, **y** and the set of in-built KRM, **z** [of a *jñātā* **x**]. It follows that the very idea of a *jñātā anapekṣa vastusvarūpa jñāna* has to be a logical impossibility for any *actual* knower [i.e., a *concrete, real and embodied* knowing subject (*deha-nirūpita jñātācāitanya*)]. This, if true, would be the last nail in the coffin of ‘*pure objectivity*’ of knowledge before we bury it, forever.

It is now time to take a closer look at the way the set **z** [i.e., the in-built KRM of a knower **x**], works on the sensory inputs **w** [sensory data] of the knower **x** [a *jñātā*], *creatively* giving shape to his [**x**’s] knowledge **K**, *about* the nature of **y** [the *jñeya* concerned]. This amounts to saying that it is imperative that instead of looking at the instances of human knowledge **K**, simply as *binary* relation between **x** and **y**, [symbolizing it simply as ‘**Kxy**’, (as is done in most of the modern writings on the topic of ‘Epistemic Logic’)] we should look at the real-life cases of human knowledge as instances of a more complex type of *tetradic* [4-termed] relation [in symbols, ‘**Kwxyz**’], so that the interplay of each one of the four key-factors involved in our knowledge-construction is properly highlighted. Keeping this background in mind, let us look at some of the experimental evidences coming from Neuro-physiology and related fields. Some relevant experimental evidences are cited below.

- I. Neuroscientists do not fully understand how the brain manages to extract meaningful information. How the brain can efficiently *synchronize the timing* of spikes to encode information and rapidly solve difficult computational problems. This is because a group of spikes that fire almost at the same moment can carry much more information than can a comparably sized group that acts in an *un*-synchronized fashion. This research could lead to entirely new kinds of computers. “Neuro-morphic” electronic circuits that mimic these aspects of the brain’s signaling network have been designed. [See: ‘Neuromorphic Microchips’ by Kwabena Boahen. [**Scientific American: October (2005): p-56**]
- II. *Timing* of signals being a key part of the code that the brain uses to decide whether information passing through the network is *meaningful*.

- III. Bricks to building timing of spikes: When multiple ganglion cells fire *almost at the same instant*, the brain suspects that *they* (i.e., the spikes, of having a sort of '*suspicious coincidence*' [SC]) are responding to various aspects of the *same* physical object. The brain takes such synchrony due to SC, to mean that the signals are worth noting. [See: (xi) below]
- IV. Neuronal basis of *context sensitivity*: John Allman [1980] of CIT showed that visual stimulation from *outside* the neuron's receptive field [NRF] can alter its firing rate *in reaction to* inputs from *within* the NRF. This "surround" input puts a neuron's response into the context of the broader visual environment. [Ibid: p-59t]
- V. A neuron's *surround receptive field* [SRF] has a dramatic effect on the precision of spike timing. David McCormic, James Mazer of Yale, showed that when neurons triggered only by inputs from the NRF (*no input* coming from SRF), timing of the signals from the neurons (that are triggered by the inputs from the respective NRF *alone*) have a *random & imprecise* pattern. As more & more inputs from SRF are allowed in, the firing rate of each neuron decreases, but its spikes gradually get more precisely timed.
- VI. Synchronized timing with *each spike* representing *one aspect* of an object [colour, orientation etc.] functions as means of *assembling* an image from component parts. A spike for "pinkish red" fires in synchrony with one for "round contour" and another for "perpendicular upright [non-slant] orientation ↑", enable the VC to *merge* these signals into the recognizable image of a "pinkish upright flower pot".
- VII. Spontaneous rhythmic firing of a large number of widely separated cortical neurons at frequencies below 100Hz, is responsible for *coordinating* the many neurons responsible for forming a visual perception of an object [p-59m].
- VIII. Patients with schizophrenia/autism show *decreased* levels of gamma band signalling. David Lewis & Margarita Behrens traced its cause to a type of cortical neuron, called 'basket cell', which is involved in *synchronizing* spikes in *nearby circuits*. An *inhibitory/excitatory imbalance* of the basket cells seems to *reduce* synchronized activity in the gamma band.

- IX. Schizophrenia patients do not perceive some visual illusions, such as, the tilt illusion, in which a normal person typically misjudges the tilt of a line because of the tilt of nearby lines. [It may be viewed as a sort of insensitivity to a *wider context*.] Similar *abnormalities* in the *pre-frontal cortex* are considered to be responsible for the *thought disorders* that accompany schizophrenia. [**Scientific American: October (2012): p-59**]. From: '*The Language of the Brain*'. Also, *Wisdom of the Psychopaths*'. [**Scientific American: October (2012)**]

Brain-rhythms and states of consciousness:

- I. β -waves: Have highest frequency-15-40cps[=cycles per second], but lowest amplitude. In our *ordinary waking state*, we primarily experience **beta** brain waves [15-40 cps] which are characteristic of a *strongly engaged* mind. A debater would be in high beta state.
- II. α -waves: Have a lower frequency[8-14 cps], but greater amplitude. During a state of *deep relaxation*, we move to **alpha** waves (8-14 Hz). A person who has **completed** a task and sits down to **rest** is often in an **alpha** state.
- III. θ -waves: Have a still lower frequency[4-7cps], but much greater amplitude. Ordinarily, we only experience **theta** waves (4-7 Hz) in the brief moments *between waking and sleeping*. Theta waves may occur when the task becomes *automatic* due to practice or long habit and mind gets a chance to take it easy, and stays *disengaged* from the task being performed. The *ideation* that can take place during the **theta** state is often a *free* flow, and occurs without a feeling of *ensorship* or of guilt. It is typically a state of very *positive* mental attitude.
- IV. δ -waves: Have *ultra* slow (0.5-4 cps) frequency, but *highest* amplitude. The **ultra slow delta** waves (0.5-4 Hz) occur during a state of *very deep* sleep [*susupti*]. Here the brainwaves are of the greatest amplitude and slowest frequency. They typically center around a range of 1.5 to 4 cycles per second. However, they *never* go down to zero, because, that would mean that you were brain dead. But, *deep dreamless* sleep would take you down to the *lowest* frequency band of delta wave. Typically, **2 to 3** cycles a second.[Cp. samādhi maraṇa]. Yogins who can so control the frequency of the δ -waves as

to bring it down *arbitrarily close* to ‘zero’, [i.e., ≈ 0), but \neq zero] can choose the time of his death. [Cp. The widely reported case of Sri Aurobindo.]

- V. Elmer Green of the Menninger Clinic in Kansas City reported out that certain **yogins could control** their internal states merely through meditation and thought.
- VI. Maurice "Barry" Sterman, a Professor Emeritus in the department of Neurobiology, discovered a specific EEG rhythm-state during which the experimental cat, waiting for a reward of food, became absolutely *still*, though it stayed extremely *alert*.
- VII. Scientists have found that *when* people adept in **meditation** reach a state of *deep* awareness and internal mental **serenity**, the *two hemispheres* of their brain—which ordinarily generate brain waves of *different* frequencies and amplitudes—*become synchronized*, both hemispheres generating the *same* type of brain waves.

Henceforth, I propose to call an approach (like ours) to ‘Epistemology’, a ‘Neo-Epistemological Approach’ or, just ‘N-E approach’. It needs to be pointed out here that *three* of the basic features that make our N-E approach stand out, apart from the rest of the standard traditional approaches, are as follows:

- First, it starts with the assumption that any knowing-subject is *essentially embodied*. The postulation of a disembodied, abstract and / or transcendent knower-consciousness [as Descartes hypothesized] is inadmissible here.
- Second, ‘N-E approach’ *stipulates* that for any *embodied* actual knower, all possible ways of *epistemological access* to the real world *must* be mediated, through and through, by his / her [i.e., an *embodied* actual knower’s] in-built KRM.
- Third, the N-E approach also stands out, in so far as it requires that any serious brand of *epistemic logic* need to treat ‘**K**’ [knowledge-relation] as a **four**-termed relation [rather than as a simple *binary* relation].

Further, within the framework of N-E approach, *two* of the more important consequences of the assumption [viz., that *every* knower, without exception, is *essentially embodied* (*deha-adhiṣṭhita jñātā*)] are (xvii) and (xviii) below:

- i) The question of the respective reality-status of the ‘*objects*’ of experience, that are said to be out there, in the external world, and consequently, the

significance and tenability of the standard idealism-realism *divide* need to be critically re-assessed.

- ii) One of the requirements, as pointed out earlier, is that ‘**K**’ [a knowledge-relation] has to be a *four*-termed relation ‘**Kwxyz**’, rather than a simple *binary* relation ‘**Kxy**’. [Supposedly, ‘**Kxy**’ *directly* relates **x** (a *jñātā*) to **y** (its *jñeya*). Had there been such a direct, and *un-mediated* relationship between an **x** (a *jñātā*) and **y** (its *jñeya*), then that would have to leave completely out of consideration, the *essential* role played by the *intervening* factors, such as **w** (viz., the given sensory data) and **z** (viz., the knower’s in-built KMR), etc., in the very process of our knowledge-construction. This consideration alone clearly suggests that we need to *critically re-assess* the nature, definition and criterion of acceptability of any ‘*true knowledge-claim*’ [TKC], in a different way - a way which would be significantly different from that of other traditional approaches. Unless, one grants the *possibility* of a direct or *un-mediated* epistemic relationship holding between an **x** (a *jñātā*) and **y** (its *jñeya*), the notion of *pure* objectivity must be considered a pure *myth*. Kant was keenly aware of it but was *not willing* to give up the notion of a world consisting of purely objective ‘reals’. Therefore, he *had to* postulate the notion of a *thing-in-itself* [‘Ding-an-sich’]. In a very significant sense, it is *this* problem that led to the controversy between Einstein and Quantum Mathematics [QM], regarding the nature of ‘Reality’. [See: Sarkar (2010) in P. Ghose [Ed.] for a discussion of this point.]

Now, *If* my re-construction of epistemology, [i.e., Neo-epistemology = **NE**] is *acceptable*, *then* the very idea of so-called ‘objective reality’ becomes primarily an act of ‘subjective re-creation’ [by the ‘knower’] out of whatever we experientially encounter in the world. However, it is to be examined that, is NE an acceptable thesis at all? Supposing that an object cognized is a queer *hybridization* of ‘objective’ and ‘subjective’ elements, but still the question remains ‘what is the nature of that *objective* element *per se*?’ This question makes sense neither *within* the conceptual framework of NE [= **CFNE**], nor *within* the conceptual framework of QM [= **CFQM**]. In both contexts, it turns out to be an improper/ill-formed question. Such a question can make sense *only* in the context of conceptual framework of classical epistemology (CFCE) or, that of classical physics. (CFCP)

The conceptual framework of the classical physics [= CFCP] *assumes* that (i) the system [of objects] around us, that we can observe and measure has to have a *definite* value for any of its measured property, [e.g., its momentum ‘*p*’ or, its coordinates ‘*q*’ (position)] even *before* the measurement is *actually* made; and (ii) measurement-process does **not** affect the system at all [e.g., a thing would weigh the *same* even when it is *not* being weighed at all]. This is an *assumption* shared in common by both Einstein, and also by classical physics. Such a view is called ‘local realist theory’ [= **LRT**].

Einstein [as well as the advocates for **LRT**] maintained that our *ordinary* experience-bound consciousness [which happens to be the very foundation of **CFCP**] is (i) *normal* in a clear-cut sense and (ii) it is the *ultimate basis* of our world-view. However, ordinary consciousness is "normal" only in the very specific sense of being "statistically most frequent", **not** in the sense of being something which is inherently “dependable” [as the term “normal”, is sometimes taken to mean]. Accordingly, when *contrasted* with some *non-normal* consciousness that many people experience in specific circumstances, our current belief about a *rigid, intellect-based* awareness/consciousness turns out to be highly *non-normal, non-standard* and also *dubious*, which cannot be simply assumed to be the *ultimate basis* of our world-view.

This last claim can be illustrated with an example from real life: As already pointed out [in (viii) above], the incidence of schizophrenia is traced back to an *inhibitory/excitatory imbalance* of the cortical basket cells, resulting in *reduced synchronized* activity in the gamma band. Now, it is interesting to note that schizophrenia patients *do not* perceive some visual illusions, such as, the *tilt* illusion or, the illusion of *spirals*, etc. In cases of *tilt* illusion, a *normal* person typically misjudges the tilt of a line because of the tilts of nearby lines. In cases of illusion of *spirals*, a *normal* person typically ‘*sees*’ spirals [but the schizophrenic patients *do not*] in a cleverly drawn group of concentric circles. This failure to see what normal people do ‘see’, may be viewed as a sort of inability or failure to place visual data in a *wider context*.] Similar other *abnormalities* in the *pre-frontal cortex* area are considered to be responsible for the *thought disorders* that accompany schizophrenia. [T. Sejnowski and Tobi Delbruck, ‘The Language of the Brain’, **Scientific American**, (October, 2012), pp. 54-59. Also see, Kevin Dutton, ‘*Wisdom of the Psychopaths*’, reviewed in **Scientific American**, (October, 2012), pp. 76-79.] We can

quite pertinently ask here: Is the ‘abnormality’ of schizophrenic patients [which enables them to *avoid* falling for illusory perceptions] is an ‘*aberration of normalcy*’ or, is it the other way around? May be, the so-called ‘*normalcy*’ of an ordinary man [which causes him to see illusions] is to be considered an ‘*aberration of normalcy*’, instead. So, who is normal, after all—are ‘we’ normal or, are ‘they’ [the schizophrenia patients]? Clearly, the only way out of this bind, is to opt for the view that the notion of ‘*normalcy*’ must be viewed as context-dependent, **not** something context-invariantly fixed, once and for all.

On the basis of the above discussion, we may also conclude that the **CFCP** notion of *ordinary* consciousness *must* fail to stand up to the requirement that it should be able to act as the *ultimate basis* of our world-view.

In contrast to the conceptual framework of Classical Physics [**CFCP**] as outlined above, the conceptual framework of QM [= **CFQM**], *rejects* both of the two assumptions of **CFCP**, and maintains instead, that—

- a. *Without* an observation, assigning a ‘value’ to a dynamical variable makes no sense in CFQM.
- b. Initially, when a QM system is in a state $|\Psi_1\rangle$, it is a *mixture* of *potentialities*. There *is no* [objective] quantum world. [This is Bohr’s Copenhagen Interpretation]. According to Einstein, there *has to be* such an objective quantum world, in order for QM to be true.
- c. About *potentialities* Heisenberg says, “Atoms or elementary particles are *not real*; they form a world of potentialities, rather than one of things or facts.” Until measured, an electron is neither here nor there; until then we cannot even *think* that the electron has a definite momentum [p] and a definite coordinate [q]; till that instant it does **not** make any sense to talk of a *reality*.
- d. In CFCP on the other hand, one has, what is called, ‘*objective reality*’ [independently of the process of measurement], whereas in QM, the *actual* state of **existence depends**, in part, on how *we* observe and what *we* choose to observe [e.g., ‘single slit’ or, ‘double slit’ experiment]. In contrast to Einstein’s LRT, the QM-characterization of so-called ‘*objective*’ reality may be called ‘*non-local anti-realist theory* [= **NLAT**]. [Here, ‘anti-realism’ must **not** be taken to mean (or, to entail) ‘*idealism*’, in any of its forms.]

Thus, the Bohr-Einstein controversy boils down to the question: ‘What is *objective* reality?’ In other words, the controversy boils down to the question whether LRT or NLAT offers a better model of ‘objective reality’. By our commonsense criterion—locality [L], Independence [I], and experimental accessibility [E], are the marks of objective reality. LRT seems to fulfill *all three* of these conditions, and as such, LRT looks more plausible, at least to our ‘*raw intuition*’. But how reliable is it, after all? Not unquestionably reliable, for sure. We have already shown it in the context of the fact that schizophrenia patients [unlike ordinary ‘normals’] are, so to say, ‘*immune*’ to certain types of visual illusions. It may be argued by some that simply because ordinary perceptual experience [and knowledge-claims based on it] are subject to contextual vicissitude of the kind mentioned, scientific theories need *not* be so. Hence, NE theory can have only a limited applicability. In response, it needs to be pointed out that every scientific theory consists of *two* components: (i) a data based experiential component, and (ii) an interpretive creative component. Of these two, (i) is exactly at par with ordinary experience, and so, subject to the same set of constraints as are imposed by the NE theory on ordinary perceptual experience. So far as (ii) is concerned, it aims at constructing a pragmatic-cum-formally elegant system. Pragmatism requires that a formally elegant theory is not good at all, unless it *coheres* with or fits in with the existing corpus of knowledge. Usually, pragmatism gets priority over formal elegance, but not always; in particular, when ‘tinkering’ with the existing corpus of knowledge ensures a better *pragmatic* outcome. In the context of Einstein’s objection against QM, and the impasse caused by EPR paradox, Bell’s famous *inequality theorem* is a case in point. Bell’s theorem indicates (a) a way to experimentally determine the acceptability of one of the two theories over the other; and (b) it also indicates the possibility of dropping out the *locality requirement* [= L] of LRT. So, it supports the postulate of ‘*non-locality*’. This postulate [together with some subsequent experiments] lead to the idea of a queer phenomenon called quantum entanglement’ [=QE]. As the hypothesized phenomenon of ‘quantum entanglement’ violates requirement of ‘Locality’, it is clearly *incompatible* with **CFCP**. Prior to the advent of QE, non-locality [i.e., possibility of non-causal, instantaneous connectedness of two phenomena] was *not* a part of the existing corpus of scientific knowledge. QE is a clear instance where theoretical necessity brought in a change in the existing corpus of scientific knowledge.

Indispensability of a data-based experiential component [in any scientific theory], Bohr-Einstein controversy regarding the nature of ‘reality’, and changeability of the existing corpus of scientific knowledge itself, all these go to show that scientific theories are no less context-dependent and no less subject to the constraints [as imposed by our in-built KRM, as per NE theory], than an ordinary perceptual experience.

So far, I have highlighted the so-called ‘*limits*’ of standard models of epistemology. Now, it is time to focus on the possibility of going beyond or transcending the *conservative* framework of our proposed model of Neo-epistemology [=NE-model, for short] itself. Earlier in course of my talk, I claimed that according to the NE-model, the notion of ‘pure objectivity’, free of all KRM constraints, is just a *myth*. But, is this claim un-falsifiable, even in principle? I doubt that it is. I will cite some of my highly speculative [and yet, technologically quite plausible] conjectures regarding the logical possibility of transcending limits imposed by currently standard models of epistemology.

I suppose, most epistemologists would agree with Husserl’s view that ‘all consciousness must *invariably* be an instance of “consciousness *of* something.” This entails that the notion of an *object-free/ object-less* consciousness is a vacuous idea—a veritable *impossibility*. In contrast, in Indian philosophy we often find notions like *nirviṣayaka caitanya*’ [of the Vedāntins], ‘*kalpanāpoḍham jñānam*’ [of the Buddhists], ‘*kevala- jñana*’ [of the Jainas] etc. Each one of these is a close analog of an *object-free/ objects-less* consciousness. They are considered not only non-vacuous, but are considered paradigms of epistemic ‘*infallibility*’. Clearly, an epistemic model that can accommodate such a possibility should be considered a ‘*model*’ [a ‘*model*’ in its technical sense, *not* in the sense of an ‘ideal’] for going beyond / transcending the *conservative* frameworks of epistemology. Does NE-theory fit the bill? In a way, it does. Under the ‘Heading’: Brain-rhythms and states of consciousness, I pointed out the following: First, in our *ordinary waking state*, we primarily experience brain waves [15-40 cps] which are characteristic of a *strongly engaged* mind. A debater would be in high beta. Secondly, waves occur when a task becomes *automatic* and the knower stays *disengaged* from the task being performed [*viz.*, the act of knowing]. In fact, in such a *disengaged* state, the brain waves would subside to a minimal level. Thirdly, the ultra *slow* waves (0.5-4 Hz) occur during a state of *very deep* sleep

[*susupti*]. Elmer Green of the Menninger Clinic in Kansas City reported that some **yogis** could **control** their internal states merely through *meditation*. They can control the *frequency* of the δ -waves so as to bring them down *arbitrarily close* to ‘zero’. Fourthly, *when* people, adept in *meditation* techniques, reach a state of *deep* awareness, a state of internal *mental serenity* is attained. During such states, the *two hemispheres* of the **yogi**’s brain (which ordinarily generate brain waves of *different* frequencies and of *different* amplitudes) *become synchronized* and start generating the *same* type of brain waves. Fifth, neurobiologists discovered a specific EEG rhythm-state during which the cat, waiting for a prey/food as a reward, became absolutely *still*, though extremely *alert* [like the cat, in our example]. In view of these findings it would not be unreasonable at all to surmise that a yogi may be able to acquire, through meditation, such an intense power of ‘*disengaged* focusing’, which enables him to stay *acutely alert* [of an object], without thereby ‘being *engaged*’ in any way, to it. Such a state of *disengaged* awareness [presumably, free of the trammels of KRM] would possibly be a close analog of, what is called, ‘*nirviṣayaka caitanya*’. The NE-model keeps this possibility *logically* open. Let us consider another *theoretical* scenario of ‘mind-reading’ or, ‘telepathy’. It is **not** logically impossible that a yogi who can control the frequencies of his brain rhythms, may also control them [i.e., the brain rhythm frequencies] so as to *tune-in with* the specific brain rhythm frequencies of someone else [in about the same way in which the ‘*tuner*’ in a radio receiver *tunes-in with* a specific broadcast frequency]. This *tuner*-model can be easily allotted a slot within the framework of NE-theory, without any hitch. It is easy to see that a suitably augmented NE-model, along the line suggested above, would be able to accommodate such **paranormal** phenomena as telepathy, *antaryāmitva* etc., within its framework, and thus would *transcend* the boundary of standard epistemological models. It is interesting to note that some well-reputed research institutes over the world are actively pursuing serious research in many such *non-traditional* areas.

I sincerely expect that this paper would be able to act like an outline-plan, drawn on a clean grid-paper. Many of the contributions to be published in this volume, would address one or the other of the issues that I have indicated, giving thereby, a concrete shape to it. Finally, we move on to **alpha** waves (8-14 Hz). A person who has **completed** a task and sits down to **rest** is often in an **alpha** state. Theta waves

may occur when the task becomes *automatic* due to practice or long habit and mind gets a chance to take it easy, and stays *disengaged* from the task being performed. The ultra **slow delta** waves (0.5-4 Hz) occur during a state of *very deep* sleep [*susupti*]. Yogis who can so control the frequency of the δ -waves as to bring it down *arbitrarily close* to 'zero', [(i.e., ≈ 0), but \neq zero] can choose the time of his death. Elmer Green of the Menninger Clinic in Kansas City reported out that certain **yogis could control** their internal states merely through meditation and thought. When people adept in **meditation** reach a state of *deep* awareness and internal mental **serenity**, the *two hemispheres* of their brain, which ordinarily generate brain waves of *different* frequencies and amplitudes, *become synchronized* both hemispheres generating the *same* type of brain waves. [Seeing '*the Moon*' vs. seeing *two* 'Moons' ← (non-independence); 'mirage' ← (non-encounterability, Cp. 'arthakriyākāritvam sat'), 'identical twins' ← (non-locality) analogy.]

Modus Tollens, EPR paradox and Einstein's objection against QM, Non-locality & Q Entanglement [**QE**], Bell's inequality, Einstein's final position: he stopped arguing that QM was wrong, instead, he decided to attack QM's **rejection** of **objective** reality. [Bell's famous *inequality theorem* (i) indicates a way to experimentally determine the acceptability of one of the two theories over the other; and (ii) indicates the possibility of dropping out the **locality requirement** [= L] of LRT. So, it supports '*non-locality*'. This and some subsequent experiments lead to postulate a queer phenomenon called 'quantum entanglement' [= **QE**] which is clearly *incompatible* with CFCP and thus also with LRT which stands on it.

The state of ordinary consciousness, [and it *is* the very foundation stone of CFCP] wherein we *assume* the physical world is the only reality and have no interest in deeper aspects of reality, is the *norm* in the world today. So we now assume that our narrow, tightly-bound consciousness is normal and natural. "Ordinary consciousness" is "normal" only in the strict sense of "statistically most frequent," **not** inherently "good" or "natural" as the term is sometimes misconstrued to mean. When *contrasted* with *non-normal* consciousness experienced by some people in specific instances, our current belief about *rigid, intellect-based* awareness/consciousness turns out to be highly *non-normal, non-standard* and also *dubious*.

NA VĀG GACCHATI: A DISCOURSE ON THE LIMIT OF LANGUAGE

RAGHUNATH GHOSH

There are some grey areas in the field of knowledge that can never be expressed through language. One of such areas is awareness of indeterminate cognition (*nirvikalpakaanubhūti*), which is admitted by the Nyāya-Vaiśeṣika, Buddhist and Advaita Vedānta traditions. As per the nature of the sense-object-contact (*indriyārtha-sannikarṣa*), which is instrumental to all perceptions, perception has been divided by the Naiyāyikas into two broad classes' viz., *laukika* or normal and *alaukika* or supernormal perception. Again, normal (*laukika*) perception has been divided into six classes i.e., olfactory, gustatory, visual, tactual, auditory and mental perception due to six kinds of sense-organ. There is another classification of normal

perception viz. *nirvikalpaka* or the indeterminate perception and *savikalpaka* or the determinate perception.

Though the distinction between *nirvikalpaka* and *savikalpaka* perceptions is generally recognized in Indian philosophy, there is difference of opinion among the different systems as to their exact nature and validity. To some thinkers, *nirvikalpaka* is not at all a case of perception; and hence all perceptions are *savikalpaka*. But, according to the Naiyāyikas, *nirvikalpaka* is as much a case of perception as *savikalpaka*.

Literally *nirvikalpaka* means that in which there is no 'vikalpa' ('substitute' i.e., name, universal, language etc.) and *savikalpaka* means that in which there is *vikalpa*. Now what is to be understood by the term *vikalpa*? The term 'vikalpa' means name, universal, a quality or a relation of 'characteriser-characterised' (*viśeṣya-viśeṣaṇa-bhāva*). So, *nirvikalpaka* perception is a perception which is not endowed with name, universal, quality or relation of characteriser-characterised, i.e., any form of linguistic expression.

In other words, *nirvikalpaka* cognition means *niṣprakāra*, which has no *prakāra* or qualifier. *Prakāra* denotes 'something having some character' (i.e., *viśeṣaṇa*). *Nirvikalpaka* cognition is thus a cognition whose object is not endowed with some character. That is to say, indeterminate or *nirvikalpaka* cognition is thus a cognition whose object is not associated with some character. That is to say, an indeterminate or *nirvikalpaka* perception is a cognition which does not apprehend the relation between the qualifier and the qualificand.¹ But in the case of determinate perception there is the apprehension of the relation between the qualifier and the qualificand. When a jar is known, there is apprehension of qualifier (i.e. jariness), qualificand (jar) and their relation (i.e., inherence)². But *nirvikalpaka* cognition of objects like jar etc., for example, would be the cognition of something which is not characterised by the specific features of the jar. The object of *nirvikalpaka*-cognition would be a simple or bare entity and not anything complex. How can the reality of the *nirvikalpaka* perception be proved?

The reality of such perception is proved with the help of an inference in the following way:

The cognition of a qualified entity (*viśiṣṭa*) is due to the cognition of the qualifier (*viśeṣana*).

The cognition of 'cow' is the cognition of a qualified entity.

Therefore, the cognition of 'cow' is due to the cognition of a qualifier.

From the cognition - 'a person possessing a stick' (*dandīpuruṣah*) we have the cognition of something having the character 'with a stick'. But without the cognition of 'stick' (*danda*) one cannot have the cognition of 'one with a stick' (*dandī*). The cognition of stick is the cognition of qualifier. Here the cognition of 'one with a stick' (*dandī*) is followed from the cognition of 'stick' which is again followed from the cognition of its qualifier, i.e., 'stickness' if stick is taken as a qualified object. And the cognition of 'stickness' is here the *nirvikalpaka* cognition. To claim that it establishes the reality of *nirvikalpaka* is to claim that the cognition of a qualifier is the cognition of something that is not itself qualified. Because if the cognition of a qualifier were taken to be determinate or *savikalpaka*, the defect of *infinite regress* would crop up. For example, the cognition of a qualified entity 'cow' is due to the cognition of its qualifier. Again, the cognition of 'cowness' is due to the cognition of its qualifier 'cowness' which again is due to the cognition of its qualifier 'cownessness'. In this way it will lead to the defect called *infinite regress*. So in order to avoid this difficulty the Naiyāyikas accept the qualifier of a qualified entity as *nirvikalpaka* or indeterminate. So here the cognition of 'cowness' is cognised in itself, that is, without any further qualifier. And the existence of *nirvikalpaka* perception is proved in this way³. Such indeterminate awareness is accommodated in the definition of perception as formulated by Goutama by the term '*avyapadeśya*' ('that which is not expressed through language')⁴

Let us consider the purpose of the inclusion of the term '*avyapadeśya*' which means 'unnameable' or 'non-expressible' through words. According to Vātsyāyana, every individual manifestation of knowledge of an object which is produced out of the contact of the sense-organ with the object is expressed by words like colour, taste etc. The cognition which is expressed through words would be taken as produced from verbal testimony. In order to exclude this possibility the term *avyapadeśya* has been inserted in the definition. It has further been stated that the name of the perceived object is necessary when this knowledge is being communicated to others.

The main purpose of the use of the terms is to point out the knowledge produced from the sense-object-contact can never be considered as verbal comprehension.⁵

Some scholars think that the term '*avyapadeśya*' has been inserted in the definition in order to include indeterminate perception (which is not expressed through words) under perception. When our sense-organ has got contact with a particular object, the knowledge of that object cannot be expressed at first. Moreover, it has been said by the Naiyāyikas that an object remains attributeless and actionless for a moment just after its origination. If substance (*dravya*) and attribute (*guṇa*) are produced simultaneously, substance cannot be an antecedent and hence it cannot be an inherent cause (*samavāyīkāraṇa*) of the attribute (*guṇa*). For this reason attribute and action are taken to be produced just after a moment of its origination of the substance⁶. But the existence of such knowledge cannot be ignored, as it becomes the cause of the later knowledge endowed with name, universal etc. Hence the term '*avyapadeśya*' indicates that the indeterminate awareness of an object is also a kind of perception.

So far as this theory is concerned, one might think that the definition of perception unduly extends to the verbal cognition leading to the defect of impossibility, as each and every individual manifestation of knowledge is expressed through words. Through the insertion of the above-mentioned term Gautama wants to indicate that there is at least the existence of a state, which is not endowed with a word, its denotation and their relation. Though the judgements like 'this is a cow' are verbalised knowledge, there is the initial sense-perception which is capable of being defined and this has become possible through insertion of the adjunct '*avyapadeśya*'.

One problem has been raised in the *Siddhāntamuktāvalī* as to how an object can exist without being endowed with its characteristic features. As indeterminate cognition is cognition, it must have some object, for there can be no knowledge without any object (*aviśayaka*). The Naiyāyikas are of the view that if there is any contentness (*viśayatā*) in the indeterminate cognition, it should be in the form of *viśeṣyatā* (qualificandness), *viśeṣanatā* (qualifieriness) and *samsargatā* (relationness). As an indeterminate cognition does not possess any of these forms of contentness,

there is no *viṣayatā* at all. For this reason Viśvanātha has emphatically denied the perceptuality of such cognition (*jñānamyannirvikalpākhyamtadatīndriyamīṣyate*).

However, the above mentioned contention of Viśvanātha to some extent goes against the Nyāya position which at first has accepted two forms of perception- *savikalpaka* (determinate) and *nirvikalpaka* (indeterminate). Now if it is said that the *nirvikalpa* is not at all perceptual, because it is beyond the reach of the sense organ (*aīndriya*), it will go against the previously accepted division of perception leading to the contradiction of the Nyāya position. Considering this aspect Pundit Pañcānan Bhaṭṭācārya has tried to give some solution by admitting that the indeterminate cognition is not free from contentness (*viṣayatā*). Though the said three types of accepted contentness are not present in it, there is a fourth type of contentness called *turīyaviṣayatā* which cannot be explained due to its peculiarity in nature.⁷ Hence, the status of *nirvikalpaka* as a perception remains as it is. Whether this position of Bhaṭṭācārya is acceptable or not is a different issue, but his philosophical endeavour to defend a tradition is noteworthy. One may raise question about the status of the fourth *viṣayatā* (*turīyaviṣayatā*)⁸. Even if there is such contentness, it remains non-comprehensible due to not having the said relation between qualifier and qualificand (*tadevavaiśiṣṭyānavagāhvevajñānam*). If it is so, what is the use of accepting a kind of *viṣayatā* which one may think as utopian or imaginary? In this context one can take the privilege of describing this fourth type of *viṣaya* as non-linguistic. In spite of this it is a noble and novel attempt to justify *nirvikalpaka* as a perception.

Such indeterminate awareness has been admitted as non-linguistic by the Buddhists also when they formulate that an object free from linguistic ascriptions (*kalpanā*) is called perceptual one. To them the ‘unique character’ (*svalakṣaṇa*) of an object is absolutely real (*paramārthasatya*) due to having its ‘causal efficacy’ (*arthakriyākāritva*). Hence this is a prominent area in Indian epistemology which is not illumined by language and herein lies the limit of language.

For Dharmakīrti, the relation aRb does not obtain at an ultimate level, but only at the empirical level (*samvṛtisatya*) as called by the Buddhists i.e., a level where a real is covered up by language. In order to situate Dharmakīrti’s polemic one should understand two Buddhist key-terms- *svalakṣaṇa* and *sāmānyalakṣaṇa*. The former

means ‘that which is characterized by itself’ and the later means ‘that which characterized by general features’. The first is open to a form perception what the Naiyāyikas call ‘*nirvikalpakapratyakṣa*’ which means ‘perception without being transformed by a concept’. Any description, on the other hand, involves of predicates to this singular (*svalakṣaṇa*) which is neither an act nor an object of perception, rather it is the *experiential singular*. But the general features (*sāmānyalakṣaṇa*) by their nature are constructions in language. An object in its own nature has got its causal efficacy as it can serve the purpose of an individual but not quality, name etc., associated with the object. Grasping something in terms of general features involves using predicate, which are nothing but linguistic construction (*kalpanā*). The ‘*real*’ escapes the net of language. All descriptions including relation are brought about by linguistic mapping. What is due to linguistic mapping cannot be causally efficacious, the characteristic of being *sat* or real. Hence the Buddhists do not admit relation as real. Hence this is a prominent area in Indian epistemology which is not illumined by language and herein lies the limit of language.⁹

In this context an attempt is made to show whether there is cognition without any content (‘*aviśayaka-jñāna*’). Generally ‘knowledge’ means ‘knowledge of something’ in the epistemic sense. But in the Advaita Vedānta system of philosophy there is ‘pure knowledge’ having no content which is called ‘contentless cognition’ (‘*aviśayaka-jñāna*’) leading to certain philosophical problems. An effort will be made to address the same.

It is true that objects are very much there, but there is the lack of awareness of their existence. A particular object at this stage is not seen as such, but as the manifestation of Brahman or Self. Such type of experience, being purely subjective or private is not communicable to others. Before the attainment of this stage an individual takes refuge of duality in order to express his emotion and thought. When a man attains seerhood, there is no room for such duality and hence, no room for descriptions of the external objects like jar, cloth etc., conceptualizing the contents. In other words, when Brahman is realized, all objects bearing different names, designations, etc., become ‘*bādhita*’ or ‘contradicted’ or ‘falsified’, which will find support in the *Vedāntaparibhāṣā*.¹⁰ In connection with the definition of ‘*pramā*’ (‘valid cognition’), Dharmarāja Adhvarīndra has pointed out that all objects become

‘*bādhita*’, or contradicted or illusory after the self-realization. In the transmigratory state there is no question of ‘falsification’ (‘*bādhitatva*’) due to the non-realization of Brahman, and hence the objects are capable of being described due to having the notion of duality. After the self-realization the notion of duality ceases leading to falsity of objects as having different designations.¹⁰ It is also true that conceptual designations are usually denied of the Supreme Reality, still they are necessary means and aids to the human intellect and help in preparing the ground for the later realization. So, conceptual designations are means through which the goal i.e., the realization of Self can be achieved. Though these designations cannot give us a full picture of the reality, the rough idea received through them is highly essential, as it serves as an index and pointer to the Truth. That is why, the epistemic ‘knowledge having some content’ (‘*saviṣayaka-jñāna*’) is essential. Just after the attainment of Brahman, all these descriptions become illusory (‘*māyā*’). That is why, Sankara has pointed out clearly that all the scriptures, which give injunctions and prohibitions and regulate moral and social life, are taken as ‘superimposed’ (*adhyasta*) after the realization of Brahman, not to speak of ordinary languages.¹¹

This knowledge which is Brahman has been accepted by the Advaitins as the only knowledge; the rest is described as non-knowledge. Hence, the knowledge in the form of Brahman alone can be said to have the property of *jñānatva* (‘cognitionhood’). But this knowledge is without an object owing to the annulment of epistemological duality at this stage. The definition of *pramā* given by Dharmarāja Adhvarīndra covers the empirical cognition only, the truth of which is determinable. In order to point out this the adjunct ‘*arthaviṣayaka*’ (i.e. ‘having some object as content’) is inserted to *jñānatva* (‘cognitionhood’). That is to say, *pramātvā* (‘the property of being a valid cognition’) is *jñānatva* (cognitionhood) having some object at its content (‘*arthaviṣayaka*’). As a result of inserting this term, the knowledge in the form of Brahman, which has no object at all (*aviṣayaka*), would not come under the purview of the definition of valid cognition.⁶ At this stage of awareness the subject and the object become identical, and hence, there is no epistemic duality. Thus, empirical cognition alone, having an object, should come under the definition of *pramā*. If it is said that *jñāna* or cognition having no content (‘*aviṣayaka*’) is ‘the knowledge of Brahman’, it would be treated as wrong as the

term indicates genitive which is not compatible in the Advaita Vedānta as it presupposes duality. Hence, the ‘*aviśayaka-jñāna*’ (‘cognition without content’) would be the pure knowledge which is equivalent to Brahman as per the essential characteristics - ‘*Satyam jñānamanantam Brahma*’, i.e., Brahman is Truth, Knowledge and Infinitude.

From above it is evidenced that there is a limit of cognition incapable of being revealed in language. Perhaps this type of cognition which is called *aśābda* has got some role of its own. In Nyāya such cognition of *aśābda* nature has got some logical necessity. But in Buddhism and Advaita Vedānta such *aśābda* cognition belongs to the ultimate domain of reality (*paramārthasatya*). Behind admitting such limitation of language there is some metaphysical scheme admitted by them. Unlike grammarians they might say that reality is not confined within the four walls of language, but it can take us to the world where language cannot go or has got some limitations which is endorsed in Kenopaniṣad-
“*natatracakṣurgacchatinavāggachhati*”.

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EMOTION, REASON AND DREAMS

PUSHPA MISHRA

The title: “Emotion, Reason and Dreams” has brought together concepts that are difficult to reconcile and it is exactly this fact that makes the topic both interesting and important. The dichotomy of reason and emotion is well-established in philosophical literature though this is being challenged now by new neurophysiological findings. The inclusion of dreams in this dichotomous relation has made the topic more interesting. The so-called bizarre and irrational nature of dreams made me think whether the topic could be a kind of debate between rationality and irrationality.

Aristotle defined human beings as rational animals and gave us the three fundamental laws of thought: The law of identity (P is P), the law of Contradiction or sometimes called the law of non-contradiction (P cannot be both P and not-P at the same time) and the law of Excluded Middle (P or not-P). Human thinking is supposed to be guided by these fundamental laws. This indicates the uniform and universal nature of human thinking process or reasoning process. It also provided human reasoning with an objectivity so essential in philosophical and scientific investigation.

Emotion is as universal a component of human psyche as reason, but its role has traditionally been considered as disruptive and divisive. It is uncontrolled, unable to guide humans in their pursuance of good life and is generally considered to have a disruptive effect. It is not that the philosophers have denied the existence of emotions, but have denied that it could play any role in the acquisition of knowledge or in guiding our actions towards a morally acceptable goal.

The story begins much earlier. The division and opposition between reason and emotion have been pointed out by Plato in his various dialogues. We are familiar with his theory of Forms, and how the knowledge of Forms can be obtained by reason alone. In his Republic he argues that the only persons fit to rule are philosophers because they alone have the knowledge of Forms and hence possess the wisdom required to bring about a just society. In his famous analogy of charioteer in *Phaedrus* he says:

... we divided each soul in the three parts, two being like steeds, and the third like a charioteer. .. Now of the steeds... one is good and the other is not...He that is on the more honorable side is upright and clean-limbed...in color he is white... the other is crooked of frame, a massive jumble of creature...hot-blooded, consorting with wantonness and vainglory; shaggy of ear, deaf, and hard to control with whip and goad.
(*Phaedrus*, P. 500,253 d, e)

The wicked steed is the passion or emotion which is difficult to control and which drives human beings away from the path of knowledge. In *Symposium* where he deals with the nature of love which is accepted as a primary emotion in modern psychology, he identifies it with the Form of Beauty and the only way to attain this Form is through reason. Those who embark on this journey have to ascend a ladder

step by step – a journey in which all their passions and emotions are transformed to intellect and reason. It is only then that one can attain the ‘Beauty’ or Love. As he says in symposium:

Starting from individual beauties, the quest for the universal beauty must find him ever mounting the heavenly ladder, stepping from rung to rung – that is, from one to two, and from two to every lovely body, from bodily beauty to the beauty of institutions, from institution to learning, and from learning in general to the special lore that pertains to nothing but the beautiful itself until at last he comes to know what beauty is. (211c)

However, all the commentators on Plato have asserted that love, in its upward journey is transformed. The transformation proceeds from bodily pleasures to intellectual pleasure. In the gradual process of progression, can we say, that love has changed into reason? Or it was reason from the beginning, warped or disguised? A difficult question to answer. Among the modern philosophers it was Descartes who established the supremacy of reason with his ‘Cogito ergo sum’ – the identity of humans as a thinking being. His cogito also resulted in a separation of body and mind with mind or soul reigning supreme.

We have a long list of philosophers who belong to the rationalist tradition of epistemology. But it was not merely in the area of epistemology, but in the area of ethics and moral philosophy also that reason reigned supreme. Kant’s deontologic ethic, his concept of good will which is identical with rational will, needs no special mention. Even Mill’s utilitarianism, in contemporary parlance, took the form of rational choice. Though utilitarianism and deontologic ethics differ in spirit regarding what constitutes a moral action, one cannot deny the element of reason and its superior position in utilitarianism. Even when Mill asserts “It is better to be Socrates dissatisfied than to be a pig satisfied”, he is upholding the supremacy of reason in pursuits of pleasures worthy of human beings.

In the contemporary formulation of utilitarianism, the theory of rational choice, utility values are assigned to various choices which decide the course the right course of action. The alternative with highest score of utility value is the rational choice and people ought to act accordingly. It is true that in providing utility values one takes into account the emotional satisfaction factor also as one of the components, but the

fact remains that a rational choice, a choice governed by reason is considered the right choice leading to the greatest good of the greatest number.

The impact of this supremacy of reason in philosophical discourse did not leave psychology untouched. During its early period psychology was almost exclusively concerned with cognition. This primacy of cognition was inherited from its philosophical roots, namely, Descartes' contention that reason is the distinctive faculty of human beings. In its initial stages psychology was primarily concerned with sensations, perception, psychophysical experiments of Weber and Fechner etc. It hardly gave any importance to emotions with the exception of Cannon and Bard. It was the experiment of Cannon and Bard that brought the study of emotion to focus. Their experiments gave us the idea of 'flight or fight' in case of strong emotion of fear. But the cognitivist emphasis continued. Experiments on learning, memory, attention and language remained of primary importance.

The essence of this cognitivist approach is that people's behavior, their response to the representation of the stimulus, is mediated through the cognitive state of knowledge and belief. These are acquired through perception, stored in memory and retrieved at the appropriate moment for appropriate responses. This last stage involves decision making and judgement. The culmination of this approach is in the theory of rational choice which we have mentioned earlier.

It is of interest to note that the cognitive approach considered emotions as cognitive constructs. Emotions depend on the cognitive value of a situation; i. e. emotions depend on how we perceive a situation. We can teach ourselves to perceive a situation differently and thus can teach ourselves to control emotions. The cognitive revolution gave rise to numerous experimental studies in memory - short and long-term, nature of attention, learning etc. The trend is continuing. Even in the area of psychopathology, CBT or Cognitive-Behaviour Therapy is the treatment of choice in most hospitals.

The spontaneous and autonomic nature of emotion over which consciousness has no control was gradually relegated to background. Yet it is this autonomic nature of emotion which is important for the survival of human beings. You do not think or what course of action you should take, when suddenly you confront a snake or a tiger,

or a car coming fast towards you. Your survival depends on how quickly you react. Nature has not left these decisions to the cerebral cortex - the area of brain related to thinking and deliberation. It is the autonomic nervous system that reacts spontaneously even before one has fully cognized the situation. Even the excesses, the uncontrolled nature of emotion which is so decried by the philosophers aim towards maintaining the homeostatis of the organism without which the integrity of the organism will be lost.

The cognitivist approach also influenced moral psychology. Piaget and Kohlberg clearly were on the side of Kant and Rawls. Kohlberg's classification of moral stages was based on Piaget's theory of moral development which was essentially rational. The ability to reason and establish one's moral judgment on reasoning was the touchstone that decided the hierarchy in his stages of moral development. Kohlberg gave us a theory of moral development which he developed based on the responses of moral dilemmas presented to children - only boys.

The first two stages of this moral development are pre-conventional. These two stages are based on physical consequences of an action, i.e., people decide to base their actions on reward or punishment. The third and fourth stages are called conventional. They emphasize the rule of law. The third stage emphasizes complying with the rule and other people's expectation while the fourth stage emphasizes the importance of maintaining the rules. Last two stages are called post conventional. These involve developing one's own standards, different from the standards of society.

These stages of development are clearly based on development of reasoning faculty. The child's moral development is dependent on the development of his reasoning faculty. The last stage particularly brings out the importance of reasoning in moral development. To develop one's own moral standards requires a critical application of one's reasoning to the existing moral code and then accept or reject them. Also, reason is required to justify the standard one has developed for oneself. The methodology employed by Kohlberg in arriving at these stages is also a cognitive methodology, based on reasoning. He would provide moral dilemmas to boys and they were required to come up with a solution to the moral dilemma. The ability of

the child to bring deductive logic to solve the moral problem, his ability to distinguish between law and morality and his ability to conceive justice as a principle – are features that decided the progress of the stages of moral development. This methodology consistently showed girls to be inferior to boys in moral development. They could reach only stage three, namely pleasing others, whereas boys reached stage 4 which emphasizes rules of law, duty or stage 5 which emphasizes principled sense of justice. This hegemony of reason was challenged in the 1980s. Kohlstrom points out:

Beginning 1980s, the hegemony of cognition was challenged by what I have come to think of as an *affective counterrevolution*, exemplified by the Zajonc-Lazarus debate...The general thrust of this affective counterrevolution was that emotion was at least independent of cognition, if not actually primary. Thus, Zajonc himself argued that “preferences need no inferences” because they could be shaped by “subliminal” stimuli processed outside of conscious awareness. Paul Ekman proposed a set of reflex-like *basic emotions* that were part of our phylogenetic heritage. (*Reason and Emotion in Moral Judgment*, P.3)

Paul Ekman’s work on basic emotions gave a major boost to the study of emotions. Based upon the works of Cannon and Bard, Paul Ekman showed that there are six basic emotions – happiness, anger, disgust, surprise, sadness and fear. These basic emotions are universal and experienced by men and women in the same way. Three factors called into question this supremacy of reason in the area of cognition: the work of Sigmund Freud in psychology, the feminist movement and the work of Antonio Damasio in the recent times.

Sigmund Freud extended the boundaries of the mind from conscious to unconscious thus challenging Descartes’ equation of mind with consciousness. This discovery was to have a far-reaching effect in every sphere of human life – be it epistemology or moral psychology/philosophy. Modern technology has helped us to know that we make generous use of information in our decision making that is not even consciously accessible to us. Thus, utilization of rational deliberation for many of our judgments is effectively curtailed. This was a revolutionary change and helped in weakening the grip of rationalist framing on our decision making process as well as our learning process.

However, Freud's contribution paved one more important path. His work with psychopathology was essentially a work related to emotions, affects, feelings – the so-called irrational. Freud's case-studies, especially the case-studies of his female patients, brought out the importance of emotions (the irrational) in mental health. Feminists were not slow in voicing their grievance against reason which they interpreted as the stronghold of males and reflection of a patriarchal attitude of mind strongly prevalent in philosophical tradition.

Virginia Held in her *Feminist Transformation of Moral Theory* points out that the grip of reason over moral theory has mainly taken two forms: (i) Kantian general, abstract, deontological universal moral principle, like Kant's Categorical imperative, which suggests that all the moral problems can be solved by applying an abstract, impartial pure, rational principle to particular cases; (ii) the Utilitarian form which recognizes that people have desires and interests but recommends rules of rational choice for satisfying those desires. It also applies the same technique as the Kantian Rationalism, namely, applying a general abstract principle of maximizing utility to solve moral problems in individual cases. As she says:

And it holds that although emotion is, in fact, the source of our desires for certain objectives, the task of morality should be to instruct us on how to pursue those objectives most rationally. Emotional attitudes towards moral issues themselves interfere with rationality and should be disregarded. (*Feminist Transformation of Moral Theory*, Virginia Held, p. 687).

She emphasizes that in a genuinely gender-neutral moral theory the experience and concerns of women would be as much taken into account as the concerns of men. Hence, ethics should take into account the relational concerns of women, especially the caring aspect of relations as comprising moral problems of women. The final blow to the supremacy of reason came from the experimental studies of Antonio Damasio.

Descartes' cogito had made a sharp division between body and mind, between mind and matter, between thought and extension. In the second meditation Descartes says that he exists as a thinking being only. And that is the indubitable truth about him. The existence of body and external world was established much later in the sixth meditation. Damasio's experimental findings disproved that one could think without the body, especially without emotions which Descartes had neglected. The story

begins with a number of case studies that alerted Damasio regarding the importance of emotion in human decision making process.

The Case of Phineas Gage:

In 1848, Phineas Gage, a 24 year old construction foreman, considered to be a ‘very efficient and capable man’ by his bosses met with a horrifying accident while trying to put explosive in the hole of a rock which also needed to be pounded by an iron rod. Something went wrong and when Gage put fire in the rock, the charge blew upward in his face. I quote from Damasio:

The iron enters Gage’s left cheek, pierces the base of the skull, traverses the front of his brain, and exists at high speed through the top of the head. The iron had landed more than hundred feet away, covered in blood and brain. Phineas Gage had been thrown on the ground. He is stunned, in the afternoon glow, silent but awake. (*Descartes’ Error, Damasio, . 4*)

Gage survived but he no longer was Gage. His bodily capacities remained intact except loss of vision in his left eye, but his personality changed completely. He was

‘... fitful, irreverent, indulging at times in the grossest profanity which was not previously his custom, manifesting but little deference for his fellows, impatient of restraints and advice when it conflicts with his desires, at times pertinaciously obstinate, yet capricious and vacillating, A child in his intellectual capacity and manifestations, He has the animal passions of a strong man.”

The foul language he used was so gross that women were advised to stay away from him. Gage could not hold onto a job. At the age of 38, he died of epileptic seizures.

Gage’s case was studied thoroughly by his doctors and later on by Hanna Damasio. The changes in his character were not subtle. It was clear that he could not make choices and the choices he made were not simply neutral. It seemed that his old value system either was annihilated or they could not influence his decision making process. Yet several of his intellectual faculties were in tact – like attention, memory, language, intelligence. This kind of discrepancy in neurophysiology is known as dissociation. Much later Hanna Damasio’s work, with the help of most modern technology was able to specify that it was the selective damage to the prefrontal cortices of the brain that were responsible for his inability to plan for the future, to make good choices, to observe the social rules he had previously learned, and to decide on the course of actions that would be most beneficial for his survival.

Damatio studied similar other cases one of which he fictitiously called the case of Elliot. A similar area in his brain also was damaged because a tumor had to be removed. He too manifested changes similar to the changes in Gage's personality except that he never used any foul language or was never abusive to anyone. Elliot passed all intellectual tests. His cognitive and reasoning abilities were intact. Yet he was always undecided – didn't know what course of action to take. Once after elucidating a number of valid options for action in a given situation, his poignant comment was, "And after all this, I still wouldn't know what to do."

An intense investigation revealed that all his cognitive faculties were intact, but he was unable to experience any emotions. This was the most important change that Damatio noticed in his demeanor was a total absence of emotions. After studying many more cases of the same kind, Damatio came to the conclusion that though we are aware that emotion disrupts the process of rational decision making, but "reduction in emotion may constitute an equally important source of irrational behavior." (Damatio, P. 52).

These neurophysiological findings were confirmed by rigorous laboratory procedure and were supported by various similar case-studies. The circle seems to be complete. Emotion which was always derided in comparison to reason turned out to be a *sine qua non* for rational decisions, for making good choices, for the utilization of past knowledge so that a good life can be led. The evidence is too significant to ignore.

We can now come to dreams. What is the philosophical significance of dreams and how can we relate dreams to the first two subjects, namely, to emotion and reason? It was again Descartes who made dreams important in philosophical parlance. In his *Meditations*, he starts with the question, how could he be sure at any given moment that he was not dreaming. This was the gateway to Descartes' methodological skepticism. We know how Descartes finally arrived at the solution, namely, by invoking the existence of a benevolent and good God who cannot deceive us.

So the problem, in essence, is: how can one distinguish waking states from dreaming states? Are there features by which one can distinguish between waking and

dreaming states? To stave off skepticism, it was important to answer this question that Descartes had raised. A number of attempts have been made to answer Descartes. Hobbes says that absence of absurd in dreams pointed to an absence of a sense of absurdity while Locke indicated the absence of physical pain by which dreams can be distinguished from waking. He asks Descartes to consider the difference between dreaming being in the fire and actually being in the fire.

Neither Hobbes, nor Locke's attempt is successful. Recent empirical studies have indicated that one can feel localized sharp pain in dreams, though such cases are rare. Malcolm suggests a principle of coherence as the distinguishing mark between dreams and waking. However, we do have dreams where we wake up to realize that the dreams connect to our waking life, sometimes they are related to our overall course of life. It is generally accepted that there is no acceptable distinguishing feature between dreams and waking life, but whether that should lead to general skepticism is controversial.

The question that first comes to our mind in this connection is what are dreams? What is their nature? Folk psychology, scientific psychology and philosophers are of the opinion that dreams are experiences during sleep. Freud has said, dreams are the life of mind during sleep. The dreamer can recall his experience after waking up. Hence, there is a relation between dreams and consciousness. Malcolm challenges this received view. He raises three objections:

1. Dream reports are not verifiable. The dreamer wakes up from sleep and reports a dream. This is his impression. Waking with this impression does not entail that such a conscious experience during sleep actually corresponds to his report. There is no criterion by which we can know the duration of a dream, the time of the occurrence of a dream. In this sense, dream is not an occurrence and do not refer to anything over and above the dream report.
2. The definition of "sleep" and "dream" are contradictory. Sleep is a state lacking in experience and dreams are supposed to be conscious experiences. Experience requires being conscious whereas sleep is a state lacking consciousness. Thus, to say that we have consciousness when we are unconscious leads to contradiction.

3. It is not possible to make judgments and communication in the state of sleep. Malcolm's famous example is that a person cannot be aware and assert "I am asleep". This will be a false statement. If he is aware then he is not asleep and if he is asleep, he cannot be aware that he is asleep. So, this leads to a contradiction and goes to support his first objection that dreams are unverifiable.

There is a lack of possibility of communication in dreams. One cannot judge what one cannot communicate. Hence, one is unable to judge that one is asleep; one is also unable to have any experience in sleep. Thus, Malcolm denies that one can assert, deny, communicate, judge, think or argue in dreams. Hence, it follows that dreams are not experiences, imaginations, hallucinations or any kind of mental acts. So, Malcolm's argument in a way answers Descartes' skeptic argument. The main point of Descartes argument was that there is no way to distinguish between dream and waking experiences. This argument can be totally undermined if dreams are not experiences at all.

However, Malcolm's view that dream states cannot be verified is no longer tenable. With the help of REM sleep, scientists can now predict when the person is dreaming and how long the dream lasted. His objection that this is a new concept of dreaming is also not tenable because, as Putnam points out, scientific advancement updates our concept, it does not replace them. So, scientists are working on the same concept of dreams, not on a new concept.

Dennett also denies that dreams are conscious experiences, though he agrees that the dreamer's report of the dream is a conscious experience. Dennett thinks that dreams are not conscious experiences. Different memories are uploaded and woven together to make a new content unconsciously. Upon waking these memories will be recalled as if they have been experienced, though it never was. Only when dreams are recalled, the person experiences the content for the first time.

But the lived experience of the person who is dreaming demands an explanation. The impact dreams have on our life requires an understanding of the dreaming process. In quite a few cases, psychotic symptoms have started after the

patient had dreamt particular dreams. Hence, we need to move to the psychology of dreaming in order to understand what dreams are about.

There are about ten psychological theories of dreaming. We shall take only three of the most influential theories. The first one is the psychoanalytic theory of dreams which claims that dreams are meaningful, purposive but hallucinatory experiences. They are the medium of expression of our repressed childhood wishes in a distorted form. The distortion is necessary to evade the censorship operating in the mind. This censorship is nothing but the social and moral sense of the individual. It will not allow any wish contrary to its moral standard even to be fulfilled in the form of hallucination. So, in contrast to Malcolm, Freud believes that dreams are both hallucinations and experiences.

The major forms of distortion in dreams are condensation, displacement, plastic word imagery (dramatization) and secondary elaboration. Dream symbolism is not done for the sake of distortion, but it does create a sort of unfamiliarity in the dream. The use of symbols and imagery in the dreams also point to a primitive process of thinking that is used to produce the dreams. Thus, the mind is active during the production of dreams. It creates distortions, retrieves symbols and images in order to present thoughts in the dreams. Thus, it also involves a primitive thinking process.

So, according to psychoanalytic theory, dreams have both meaning and a purpose. Through the hallucinatory experience the satisfaction of repressed desires helps in maintaining the homeostasis of the mind. Thus, they are not only experiences, but important and significant experiences for the dreamer. The psychoanalytic theory of dreams remained one of the most popular theories of dreams for a long time till the discovery of REM sleep in 1953. But it was not till 1990s that the full significance of this theory for the psychoanalytic theory was understood. Drs. Allen Hobson and Robert Macarley propounded a new theory of dreams that challenged almost every aspect of psycho analytic theory of dreams.

Activation Synthesis Theory

It was found that there are REM and NREM sleep patterns which each one of us, including lower animals, passes through within a night. It is during REM sleep that most dreams occur and the period of REM sleep is very precisely determined. It

lasts for 90 minutes. During a night we pass through 4/5 periods of REM. They suggested that the dream sleep is determined by a 'dream state generator' located in the brain stem. This brain stem triggers the dream state with periodic regularity. The regularity was so precise that Hobson and McCarley could mathematically process the model with a high degree of accuracy. During REM period when the "dream generator system is switched on, the following sequential development occur.

- Sensory inputs and motor outputs are blocked
- Forebrain (the cerebral cortex) is also activated;
- It is bombarded with partially random impulses generating sensory information within the system.
- The activated forebrain then synthesizes the dream out of these internally generated information;
- It tries its best to make sense out of the non-sense it is presented with."
- Dream is a mechanical process and occurs automatically at regular and constant intervals.
- It is preprogrammed and neutrally determined.
- There is no question of any psychological determination of dream phenomenon. Dreams are completely physiological.
- This is in contradiction to Freud's assertion that dreams are products of conflict and are compromise formation.
- What determines the specific stimuli for the dream imagery?
- The dream imagery is simply the product of the firing of the brain-stem. No higher brain centres and hence no cognitive processes are involved in the formation of these dream imageries.

Hence, the incoherence and the bizarre nature of dreams could simply be the product of the random firing of the brain stem and no complicated dream work is needed to explain this feature of dreams.

Condensation, displacement etc. may just be the reflection of the dreaming brain." In other words, the forebrain may be making the best of a bad job in producing even partially coherent dream imagery from the relatively noisy signals sent up to it from the brain stem. The dream process is thus seen as having its origin in sensori-motor system, with little or no primary ideational, volitional, or emotional content. This concept is markedly different from that of the 'dream thoughts or wishes seen by Freud as the primary stimulus for the dream.'" The forebrain performs a primarily constructive function. It's goal is not to distort but to construct and synthesize.

It tries to synthesize the random data in the best possible manner and tries to create as best an order in the chaos as possible. Hence, the name of the theory - Activation synthesis theory. Dreams, therefore, are epiphenomena of REM sleep. It was Mark Solms, a neuro-psychologist and a psychoanalyst who came up with an answer by a chance observation of patients who had lost pontine experience due to surgery and yet they were able to dream. He also came up with neurological evidence where there was cessation of dreaming though Pons was intact, but forebrain was damaged. There were also reports of dreams occurring in NREM state which were essentially same in nature as those occurring during REM sleep. So, Freudian theory was back.

Mark Solms also interviewed and tested hundreds of Schizophrenics who had undergone frontal leucotomies or pre-lobotomies. This has resulted in complete loss of dreaming in their cases. This also resulted in the cessation of psychotic symptoms as well as a massive reduction of motivational behaviour. REM triggers dreaming. It is a cholinergic state (energised by the neurotransmitter acetylcholine) and is a neutral state as far as motivations are concerned, but dream state is a dopaminergic state which is driven by our wishes. This is an evidence in favour of psychoanalytic theory.

However, nightmares, anxiety dreams were cited as counter evidence to Freud's theory of dreams. We all know that Freud did revised his theory of dreams. From claiming that all dreams are wish-fulfillment, he scaled down to all dreams are attempts at wish-fulfillment. Dreams still remain a mysterious area. We cannot do away with them. We find them intricately and intimately related to our emotional even our cognitive state. Yet, we have not yet been able to understand them fully in a scientific way. We are still grappling with the fundamental question: Are dreams meaningful or not? If they are meaningful, how come they don't appear to be so? Is Freudian theory correct? Are dreams merely mechanical neural phenomena? If so, why are we bothered so much with them?

With these theories it will be easy for us to connect dreams with emotion and reason. As the psychoanalytic theory emphasizes dreams are expressions of wishes. There is a reason behind the formation of dreams. Though the language of dreams is the primitive language of symbolism, it is still a language. If so, we can assign

cognitive elements to dreams also. Dreams are also the vehicle through which often intense emotions are expressed. When we talk about wishes, we also talk about affects associated with the wishes though in many cases the affect may not be experienced by the dreamer. However, many intense emotions are experienced by the dreamer through dreams. These emotions largely are negative emotions and dreams containing such emotions are called anxiety dreams. Thus, through Freudian theory of dreams we can connect dreams to emotions and reason.

So, the circle is now complete. From the predominance of reason in epistemology, ethics and decision making we are seeing a reversal of emphasis. It is emotion that predominating in these areas now. And this predominance is based on very solid grounds – namely, on physiological evidence – evidence that we cannot deny. What impact this could have on our philosophical and scientific discourses, in our attempt to understand the fundamental problems of life and living? Will it significantly change our epistemology, process of making moral judgment and of decision making?

The question that comes first to my mind is: how do the results of Damasio affect the various moral theories? I specifically have Kant's theory in my mind. If rational emotions cannot be taken in the absence of emotions what would become of his maxims of 'Duty for duty's sake', that our moral actions should not become affected by emotions. We know there are cogent reasons for what he says. If moral decisions are based on unreflective emotions how can we judge what is right and what wrong. My moral judgment will differ from the moral judgment of my neighbor and who is to decide which one is right and which one is wrong. Expressing such worry, Kohlstrom says that this independence of affect from cognition and the dominance of affect over cognition 'constitutes a threat to the role of reason in moral psychology' and thus a threat to losing objectivity in moral decisions.

Yet can we deny the role of emotions in moral judgment? I hope this seminar will focus on this problem. What should be the role of emotions in moral judgment? How to take into account the affective factors and bring about a balance between affect and emotion? Can we accept Hume's assertion that reason is a slave to passion?

A related problem comes up with Gillian's criticism of Kohlberg's theory of moral development. Does the difference of moral orientation in males and females call for a revision of our moral theories? We know that feminists advocate care ethics and severely criticize Kantian emphasis on reason. Contextual ethics, situational ethics and care ethics – have they been able to avoid ethical relativism? Another question this seminar may try to find an answer to.

I would like to make it clear that it is not my intention to decry the present turn of emotional predominance. What I am trying to emphasize that unless we are careful this predominance may lead us to make similar mistakes which is being corrected by the present change of scenario. Just as emotions provide us with motivations, play a very important role in our day to day life, in preserving/destroying our mental health, and accepted or not, in most of our decisions, similarly they need to be regulated by reason. In our psychopathological practices also we do not ask our patients to proceed unreflectively. The difference is that we encourage them to recognize their emotions, experience them and them to reflect on them. A similar approach may be required in our other academic endeavours also - to bring about a balance between reason and emotion.

UNDERSTANDING DREAMS FROM AN EVOLUTIONARY PERSPECTIVE: A CRITICAL STUDY

ROMA CHAKRABORTY

Dreams have fascinated mankind for all of recorded history and probably long before. People have always been interested in the how and why of dreams and theories of dream functions have ranged from the esoteric to the mundane. Many contemporary dream theorists suggest that dreaming is functionally significant, but some others argue that, dreams are epiphenomenal and have no value in and of themselves. **Antti Revonsuo**¹, among others, upholds the former view, proposing a well-articulated theory of dreams that, for him, can be empirically tested. **Owen Flanagan**², on the other hand, argues persuasively for the latter view. In this contribution an attempt has been made to consider, though briefly, the debate on the

function, namely, what purpose if any does dreaming serve, what it is designed for - from the evolutionary perspective. Further, I would also question whether the concept of applying an evolutionary perspective to the issue of the function of dreaming is at all plausible.

Evolution and Functionality

First, let us turn to the preliminaries, namely, what is meant by dream function from an evolutionary perspective. From an evolutionary perspective, the function of dreaming is explained in evolutionary terms of natural selection. Living creatures within a species vary from one another in their traits which are passed on to their offspring, and there is competition for survival and reproduction amongst all of these creatures. Resultantly, those creatures that have traits better suited for survival and reproduction will precisely be the creatures to survive and reproduce and pass on the successful traits. Dreaming is a universal phenomenon, and the brain's capability to produce subjective, hallucinatory experiences during sleep seems to be a part of our biological machinery. Dreaming, then, from the evolutionary perspective, is a biological phenomenon residing in the brain and can thus be explained in a similar fashion as any other biological phenomenon.

The Debate: Flanagan vs. Revonsuo

Flanagan's Spandrel Thesis

Let us now turn to the debate centring round the function of dreaming as mentioned above. Flanagan, an evolutionary pluralist³, in his book "Dreaming Souls" argues that even though dreaming is a type of consciousness, it serves no fitness-enhancing function whatever. Following Gould and Lewontin⁴, the two well-known evolutionary pluralists, Flanagan divides biological traits into three non-mutually exclusive types- adaptations, exaptations and spandrels. Evolutionary biologists use the term "**adaptation**" in a restricted sense to mean that a trait is an adaptation if and only if the trait arose due to selection pressures for it, i.e. if it is fitness-enhancing-- if it contributes to reproductive success, to genetic fitness, to human flourishing and so on. "**Exaptations**", on the other hand, are neutral traits or non-adaptations that serve no purpose, but may be co-opted by natural selection to serve the function they

eventually serve. So an exaptation becomes an adaptation relative to that new function. For example, feathers of birds are believed to have been initially selected for to serve some thermo-regularity function (i.e. keeping the birds warm). Later wings eventually gave rise to flight. So we have birds that can stay warm as well as can fly. A “**spandrel**”, the third type of biological trait, is an architectural term that refers to the triangular space left over when arches are placed next to each other at right angles, so as to begin mounting a dome—as we find in many great churches. Spandrels are the inevitable by-products of arch and column design. Thus, both exaptations and spandrels arise as non-adaptations, but while exaptations are co-opted by natural selection to serve a fitness-enhancing function, spandrels are neither selected and maintained nor co-opted.

Flanagan argues that there is no fitness-enhancing effect for which dream consciousness was selected and maintained when it first came on the scene, nor is there any fitness-enhancing effect for which dreaming was co-opted. He agrees that dreams are a result of the cortex processing noise, but denies them any biological function and also denies that the phenomenal aspect of dreaming was selected for. Hence, dreams, for him, are not worth remembering and they have no correlate, but since dreams are not maladaptive, they have survived. To put it in Flanagan’s words, “Mother Nature caused us to dream because dreaming is what you get as a non-adaptive side effect of putting in place certain adaptations, especially ones involving selection for sleep and sleep-cycling.”⁵

Dreams, therefore, on Flanagan’s view, are evolutionary epiphenomena, just/mere side effects to the general architecture of mind, or spandrels of sleep. Sleep and sleep-cycling, NREM and REM sleep, have proper evolutionary functions (i.e. they restore, conserve and build) and thus are adaptations. Dreams do not have proper evolutionary functions, and thus, are not adaptations with a primary function. Neither are dreams exaptations with a secondary function. Dreams, which sit in between the functioning of the mind and sleep are, at best, spandrels or by-products of sleep, mere epiphenomenal, serendipitous accompaniments of what sleep is for.

Flanagan clearly distinguishes his view on dreaming from that of the neuro-cognitivists, like Hobson and Crick and Michison⁶ - -according to whom, dreams

serve important cognitive functions - such as firmly fixing, filing and consolidating memories worth keeping or forgetting things worth forgetting. These cognitive functions, according to Flanagan, however, are served by sleeping rather than by dreaming, for he argues, “there is no evidence that what we dream about is relevant to what the mind-brain should be trying to remember or trying to forget for efficient cognitive functioning by daylight.”⁷

Flanagan here presents a nuanced position when he argues that, though dreaming has no fitness-enhancing effects on the dreamer (i.e. the organism that dreams); yet dreaming does not detract from fitness. In his words, “so long as a spandrel does not come to detract fitness, it can sit there forever as a side effect or free rider without acquiring any use whatsoever.”⁸ To clarify, Flanagan cites an example. The colour of blood or heart sounds, for instance, are biological spandrels for redness of blood comes as an inevitable side effect of all the important features of blood; similarly the noise that heart makes has not played any role in the evolution of the heart by natural selection. But this feature, Flanagan argues, does not detract from their usefulness in medical diagnosis. Flanagan further points out that, to argue that dreams are “spandrels of sleep” does not imply that they are meaningless garbage. Dreams, for him, serve a derivative psychological function, for the contents of dreams are not totally meaningless. Just as spandrels in architecture add to the architectural beauty, so also “Dreams”, says Flanagan, “can be used to shed light on mental life, on well-being and on identity”⁹, and are, therefore, of great importance to a good life. But do dreams matter more than we think they do, as Freud thought? According to Flanagan, although dreams are not meaningless noise, neither are they privileged mode of thought beneath which lies something like our true or essential self. In fact, Flanagan stands in opposition to both Freud¹⁰ and Jung¹¹ in that the function of dreams is not to deliver wish-fulfilment whilst keeping the individual asleep, nor is it to perform some homeostatic or self-regularity function towards maintaining the psychological well-being and development of individuals. To be sure, wish-fulfilment and apparent psychological compensation do sometimes occur in dreams, but this is because, Flanagan contends, we think during sleep and hence some human cognition does take place. The spandrel thesis about dreaming, Flanagan concludes, is more plausible because to argue that dreams have functions end up in nothing more than a

“just so” story, the result of speculation and guess work that cannot meet the standards of the ideal adaptation explanation.

Revonsuo’s Threat Simulation Theory

Antti Revonsuo, an evolutionary psychologist, stands in opposition to Flanagan by arguing that dreaming is not a non-functional epiphenomenon of other sleep-related mechanisms, but an adaptation with a specific function. He strives to deliver an account that meets the stringent criteria of a scientific explanation of the adaptation of dreaming. His Threat Simulation Theory or TST, in short, is clearly distinct from the functional theories proposed by the neurocognitive scientists, noted earlier, which, according to him, cannot clearly distinguish the function of dreams from that of sleeping. Flanagan’s Spandrel thesis, Revonsuo argues, neglects the vast literature on the phenomenal content of dreaming as well as its evolutionary context. Revonsuo’s proposal to explain dreaming as an adaptation, he believes, comes close to the ideal adaptation explanation.

Now functionality, from the evolutionary perspective, is determined by whether or not something serves as beneficial to an organism or increases the likelihood of survival and reproduction. So if dreams are functional, this is what is expected of them i.e. if we dream we survive. According to Revonsuo, the biological function of dreaming is to simulate threatening events and to rehearse threat perception and threat avoidance. To show this he considers the original evolutionary context of dreaming and the possible traces it left in the dream content of the present population. Now, in the ancestral environment human life was short and full of threats. Any behavioural advantage then in dealing with these different kinds of dangers would have increased the probability of survival and reproduction. The dream production mechanism, by selecting threatening waking events and simulating them over and over again in various combinations would have provided early humans, our ancestors, with an adaptive advantage - threat - perception and avoidance skill - and this was selected into our genetic make-up. Revonsuo’s TST, therefore, presents dreams as specialising in the re-creation of life-like threatening scenarios with the intent of improving the subject’s capability to perceive or recognise and avoid diverse threats in waking life. The Threat Simulation system, then, can be seen

as an ancestral defense mechanism comparable to any biological defense mechanisms; it is activated in the presence of real threats in waking life.

To conceptualize his theory, Revonsuo, based on data from psychology, biology and neuroscience, puts forth his six claims thus:

1. Dreams are too organized and reminiscent of reality to be considered random noise;
2. dreaming is specialized in the simulation of threatening events;
3. genuine threats experienced in waking life have a profound effect on subsequent dreaming;
4. threat simulations produced are perceptually and behaviourally realistic rehearsals of threatening events;
5. the realistic rehearsals lead to enhanced performance regardless of whether or not the training episodes (i.e. learning) are explicitly remembered;
6. and finally, dreaming provided early humans with an adaptive advantage and was thus evolutionarily selected into our genetic make-up.

The TST, as a whole, Revonsuo admits, cannot be tested directly, for the presence or absence of dream threats cannot be controlled and, further, one's level of waking adaptations depends on factors that go beyond the context of dream content. However, he claims that his theory can be tested indirectly. The question arises, how could one test the dreams of the ancestral humans and analyze the relation between the dream content and survival rates across hundreds of generation. Revonsuo argues that, it is possible to test whether a biological system performs a specified function (e.g. whether the function of the heart is to pump blood) even if we have no access to data on the evolutionary history of the system. We simply study the behaviour and the mechanisms of the system to determine its biological functional role in the organism. In the same vein it is also possible to test whether the function of dreaming is threat simulation by simply testing whether dream content and mechanisms behave in a way that realizes this function.

Now the two chief strands of evidence that Revonsuo puts forth to support his Threat Simulation Theory are - first, he points to the marked impact of traumatic or threatening events on dream content. For him, the threat simulation mechanism is

uniquely activated when real threats are experienced. Secondly, he argues that empirical research on dream content indicates that “ancestral threat scripts” predominate even in everyday dreams. In support of this contention Revonsuo cites the predominance of negative emotions (anxiety, fear, panic) in our everyday dreams. Before going into the details of Revonsuo’s claims, let us first consider the question of plausibility of using dreaming as a model system.

Some thinkers like Windt and Noreika¹² have voiced certain concerns about the adequacy and practical feasibility of using dreaming as a model system. First, they point out that there are certain theoretical concerns about the concept of modelling. A model is a system that adequately represents a particular explanatory target or certain of its properties and their relations, thereby contributing to its better understanding. But the problem is how to determine the relevant degree of similarity between a model and its explanatory target since there is no precise answer. Secondly, questions may arise concerning the adequacy of applicability of the concept of modelling to dreaming. Now Revonsuo argues for an identity between the qualities of dream experience and those of waking experience which leads him to contend that, “the dreaming brain could be viewed as a ‘model system’ for consciousness studies”¹³. Yet, there are, no doubt, certain dissimilarities between dreaming and standard wake states which raise concerns about the adequacy of dreaming as a model system. For example, for Churchland¹⁴, there are distinctive differences, both in phenomenological and neurophysiological terms, between dreaming and wake experiences. Even Revonsuo,¹⁵ who claims that the qualities of dream experiences and waking experiences are identical, admits that dreaming and waking consciousness differ with respect to the causal paths of production.

Windt and Noreika, therefore, conclude that it would be premature to identify dreaming as a model for standard waking consciousness. Leaving these preliminary queries aside, we would like to make a couple of observations that would put Revonsuo’s position on dream content into question.

Now, TST revolves round two propositions based on natural selection--- 1) the operation of “ancestral threat scripts” in dream and 2) the bestowal of waking adaptive advantage from dream simulations. Both these propositions have been contested. For first, the preponderance of threat themes in everyday dreams is questionable, especially, where the definition of “threat” is restricted to “realistic

threats to physical survival". To clarify, Revonsuo's claim—"the operation of ancestral threat scripts in dreams" tends to show that TST works under the constraint that only severe threats to physical survival activate the TS mechanism and, therefore, the only threats which this evolved mechanism is able to deal with are realistic threats to physical survival. However, recent dream research indicates that current dream content shows more balance in the emotions reported.¹⁶ In other words, the majority of dream content does not feature relevant threats of TST system; thus threatening events are overrepresented in Revonsuo's dream theory. Again, in the full panoply of threatening scenarios that dreams specialize, the obvious avoidance example is the fight/flight response. This, however, is an involuntary, unconsciously initiated process and not one involving the dreamer's repetitive rehearsal as Revonsuo argues. Why should behavior that is instinctual be repetitively rehearsed?

However, the definition of threat can be broadened to include social and psychological threats which abound in every society and are relevant in dreams as well as in waking life. But if this be included in dream analysis, this would entirely change Revonsuo's original contention that, "dreaming is concerned with our physical survival to fulfill its biologically adaptive task, regardless of the effects on our psychological well-being".¹⁷ However, Revonsuo's reluctance to consider psychological adaptation to play a role in survival seems questionable. Science no longer entirely dissociates mental from bodily processes; hence the overall chances of survival and reproduction are compromised in individuals whose mental/psychological health is weakened.

We now turn to Revonsuo's second claim about the adaptive function of dreams. Threat avoidance is the pivotal feature of Revonsuo's proposed function for dreams. On this view dreams are specialized in simulating threats and better preparing humans for real threats in waking life. The crucial factor seems to be that responses to particular threats are remembered and thus future function is improved in the face of similar threats. Hence those with this system in place had increased chances of surviving and reproducing under selection pressures.

But some types of dreams, it has been suggested, reflect a breakdown in this dream function. For instance, Kramer¹⁸ argues that nightmares represent a failure in the mood regularity function of dreams since the psychological experience of dreaming is unable to contain the emotional surge which accompanies REM sleep.

Similarly, it has been argued that recurrent dreams (i.e. dreams that recur over time while maintaining the same theme and content) constitute a partial failure in the Threat Simulation system. This is especially so, when highly dangerous threats are present in recurrent dreams (i.e. events that would be considered threatening to the physical or mental well-being of an individual if they occurred in waking state), these generally do not allow the dreamer to improve his or her ability to perceive realistic and probable threatening events nor to successfully avoid them. As a critic points out, “how do recurrent dreams about one’s teeth falling out, having bathroom walls disappear when one goes to the washroom, being visited by a deceased person--- contribute to the individual’s adaptation and to the maintenance of his or her reproductive abilities”?¹⁹ Revonsuo’s²⁰ suggestion that such dreams may be linked to the dreamer’s actual physical state (such as full bladder, fever or any other illness) implies the role of somatic or sensory stimuli upon dream content. But surely the role of bodily states in recurrent or even in everyday dreams remains to be empirically investigated. Where, then, is the mechanism that could bestow adaptive advantage on dreams!

TST is an evolutionary theory and applying an evolutionary perspective to the question of the function of dreaming seems, no doubt, valuable. If dream consciousness has an adaptive function then it follows that dreaming has, evolutionarily speaking, causal powers in enhancing survival and reproductive abilities. But in the light of the above arguments, Revonsuo’s claim does not seem plausible. Probably a broader consideration of other testable evolutionary theories is called for. That being said, should we denounce the evolutionary perspective in the understanding of the function of dreams?

Concluding Remarks

Scientists over the past two centuries have proposed set of theories about the causal process responsible for the design of humans and other life forms. Indeed, only one theory of origins that has held sway among scientists is the Darwinian theory of evolution by natural selection. Natural selection is generally regarded as the most important known causal process that is capable of producing complex functional design that characterizes each species. What insights into human nature or, rather the human mind can be provided by examining our evolutionary nature? Evolutionary psychology provides an analysis of human mind as a collection of evolved

mechanisms with certain specific features/properties that historically contributed to the survival and reproduction of the early humans, our ancestors. A central premise of evolutionary psychology is that the main non-arbitrary way to identify, describe and understand evolved psychological mechanisms is to articulate their function. Turning to dreaming as an evolved psychological mechanism the question naturally arises, does dreaming show a clear design for a specific function? Is it specifically engineered to solve a specific adaptive problem?

But dreaming also relates to or affects other psychological or conscious/ non-conscious phenomena. So dreaming needs to be tied to other subjective and psychological phenomena which figure in the etiological level explanation for behaviour.²¹

These implications render the study of dream a difficult and daunting task - which calls for a multi-level explanation. Such a multi-level frame-work, which proceeds with a holistic approach, is likely to provide a promising basis for dream research, for this would also accommodate interdisciplinary approaches to the development of an overarching theory of dreaming.

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2. O. Flanagan, (1995) Deconstructing Dreams: The spandrels of sleep, *The Journal of Philosophy*, 92, 5-27
3. Evolutionary pluralists claim that traits in the natural world are not always the result of natural selection but may be for a plurality of other factors such as genetic drift and structural constraints on development. The debate between adaptationists and pluralists centers on the pervasiveness of natural selection in shaping traits.
4. S.J. Gould & R.C. Lewontin, the two evolutionary pluralists, admit the primary importance of natural selection, but insist that there are other principles and processes that can give rise to the traits, characteristics and capacities of living things.
5. O. Flanagan, (2000) *Dreaming Souls*, 112
6. A. Hobson, F. Crick and G. Michison all agree that a brain-based explanation of sleep and dreams is necessary. They are in different ways functionalists about dreams.
7. O. Flanagan, *Dreaming Souls*, 122
8. *Ibid.*, 108
9. *Ibid.*, 123
10. Questions may arise as to whether we can club Freud and Jung under evolutionary pattern. Freud was not an evolutionary biologist; but his theory of dreams can be easily recast in evolutionary terms of natural selection. Freud thought that we dream in the way we do because it aids individuals in

surviving and so is passed on and therefore positively selected. But how does dreaming help individuals to survive? Freud postulates that dreaming simultaneously serves two functions—at the psychological level, the primary function is wish-fulfillment and since this mechanism could keep human desires in check, it would be selected for. At the physiological level, the primary function of dreaming is to keep an individual asleep while satisfying his unconscious desires. This may be considered as beneficial for the individual's survival. Jung's evolutionary story of dreaming differs from Freud's. His collective unconscious is where the ancestral memories are stored and are common to all. For Jung, dreaming serves multiple functions in keeping the individuals appropriately adapted to their social setting. Jung's theory is more often interpreted in Lamarckian than in Darwinian terms. According to Lamarck's conception of evolution, traits developed during lifetime can be subsequently passed on to the next generation. For Jung symbols that are learned during an individual's historical period can be genetically coded and passed on.

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EMOTION, KNOWLEDGE AND THE EXTERNALIST MODEL

NIRMALYA NARAYAN CHAKRABORTY

Emotion forms a very important part of human mind. Emotion is said to give meaning to human existence. People find their lives worth living or even worth dying for the sake of emotions that they entertain. It is said to motivate people into action. Emotion is most intimately associated with the person who has the emotion and it also leaves the room open for self-deception. Philosophers often find it difficult to have a neat theory of emotion for the vagaries of emotive responses that people make and the blurred character of the boundaries of different types of emotions. Nevertheless, a complete account of the mental demands a serious treatment of emotion. Emotion often acts as a bridge between the cognitive and the agentive self. In this way, emotion forms the continuity in the ownership of cognitive evaluative and the agentive aspects. In the present paper I shall mainly focus on what might be called 'epistemology of emotion'. I shall start with a brief presentation of how

emotion could be understood. And this leads to a discourse on the role of emotion in human epistemic life. Does emotion form an integral part of man's cognitive repertoire? Can emotive experience be understood in terms of the normal epistemic model like that of perception? If emotive experience could be explained in terms of perceptual knowledge, then emotion could very well be treated as another form of knowledge, which in its turn, would have serious repercussion on the 'inner-outer' distinction, a distinction that philosophy of mind makes a great deal out of. Moreover, the realism-anti-realism debate in theory of knowledge looms large over the background once emotion is accounted for in terms of the generally accepted perceptual knowledge, a model that I call 'externalist model'.

Some philosophers hold that emotions are special feelings brought into existence by changes in physiological conditions relating to the autonomic and motor functions. When we see that we are in danger, for example, this perception brings in a whole set of bodily responses, and our awareness of these responses is what constitutes fear. William James thus maintains that "we feel sorry because we cry, angry because we strike, afraid because we tremble, and [it is] not that we cry, strike, or tremble, because we are sorry, angry, or fearful, as the case may be"¹. This theory has been severely criticized for being not sensitive to the nuanced differences that exists between different kinds of emotions and also due to the fact that emotions can very well claim to have rational scaffolding in the sense that emotions do have a rational backup. Attempts however have been made to construct a revised theory of emotion as feeling where feelings in general are said to have intentional objects and emotion as a feeling also has its intentional object. This needs to be understood with a bit of caution, to which I shall come back soon.

A minimalist definition of emotion could be given as proposing that an emotion has 1. an appraisal, 2. an inclination to action and 3. a capacity to be felt as its elements². Pleasure, for example, is born out of evaluating something to be likeable, a proneness to continue a relationship with the object and the presence of the feeling of agreeable or gratifying. This definition clearly takes into account all the

¹ William James, "What is an Emotion?" *Mind*, 9, pp. 188–205.

²Jonardon Ganeri, *The Self*, Oxford University Press, Oxford, 2012, p. 269

three aspects of emotion, viz. evaluative, action oriented and feeling. Since early times, emotions have been classified into four kinds: pleasure, pain, desire and dread. This is true of early Indians and Stoics as well. The affective nature of each of these emotions is different: Pleasure has favouring as its accompaniment, pain has hurting, desire has yearning and dread has its burning. Pleasure and pain arise out of a sense-object contact or even from memory or things anticipated. Desire and dread can follow from pleasure or pain; they can arise out of memory also.

According to some philosophers, emotions do not have an intentional object and so they are not knowledge (belief, judgement). Emotion does involve an appraisal and appraisal is directed to an object, but this object is not the intentional object of the emotion. The emotion is not 'about' the object. The emotion might have a cause or it might be directed at something or some person, but the cause or the target is not the intentional object of the emotion. The changes that are born out of emotion take place in the subject and not necessarily in the target of the emotion. It is sometimes difficult even to identify the cause of emotion. A general state of depression or euphoria might not have any specific cause or a set of causes, whereas a state of annoyance could have a specific cause. In the case of annoyance, the cause need not be the object of the emotional state. A might be annoyed by B's drunkenness, may be because of some indecent remark that B made while he is drunk. Is A's annoyance directed at B's drunkenness? Even if A's annoyance is caused by B's indecent remark made while he was drunk, simply because B made this remark in his state of drunkenness and so does not really believe in it, the cause is quite a spurious one.

One could decipher a distinct sense of the term 'object' in this context. When knowledge is said to have an object in the sense of a proposition or a judgement, then 'object' means content and according to the theory mentioned above, emotions do not have a content (*arthapravāṇa*) in this sense. But since emotions are directed to something in its different modalities, emotions do have target (*aprāpta*). Of course one could feel an emotion and also one could notice it. One could feel the emotion when one is directed toward the target of the emotion and when one is directed to oneself one notices that one is under the grip of the emotion. One notices that one is scared only when one feels scared and so self-knowledge, in the case of emotion, is a

matter of how the world presents itself to the person. As mentioned earlier, since every emotion is a goal-seeking activity, emotions evolve round the seeker, the sought and the path to be followed to attain the goal sought after.

From the above mentioned minimalist definition of emotion it is clear that in every emotion there is a core affective state, there is a range of arousal conditions and also there is a set of symptomatic effects including behavioural and physiological manifestations. Praśastapāda defines the emotion of pleasure as a condition of favourableness (*anugraha*)³. Pleasure is associated with embracing (*abhiṣvanga*). If pleasure is the result of attending to the thing liked (*iṣṭa-upalabdhi*), then what causes the pleasure is the thing reached out (*abhipreta*), and not the inner state itself. This explains why pleasure is not generated in a person if she does not attend to the thing that is pleasant in spite of the thing being present before her. There is a sense of favourableness in pleasure and also there is a sense of favourableness in one's knowledge of pleasure. 'Embracing' signifies that the flow of pleasure be uninterrupted and it be repeated again and again. Pleasures of different kinds have been talked about in Vaiśeṣika philosophy like sensual pleasure (*vaiśayika*), pleasures of mind (*manorathika*), pleasures arising out of repeated practice or training (*abhyāsika*), those associated with self-respect like special achievement (*abhimānika*). There is also pleasure of the wise person, who does not have any desire, anticipation etc. and this pleasure arises out of her wisdom, peace of mind and contentment.

That pleasures are non-cognitive mental states, that they are neither perception nor judgement, is implicit in Praśastapāda. This actually comes out in a big way later on in the debate between the Buddhists and the Nyāya philosophers. If the core issue in the debate between realism and its opponent is whether one can accept the independent existence of the object, independent of the corresponding experience of it making room for a genuine distinction between the object and its experience, then such a view does not seem to pose any problem with regard to our experience with the ordinary external objects. My knowledge of the table and the

³ *Praśastapādabhāṣya*, Part II, Trans. By Damodar Asram, Adyapith Blakasram, Kolkata, 2000, p. 431

table that lies out there in the world seems to be distinct. Many other people can be aware of the same table. But my knowledge of the table is exclusively mine. Most of us seem to be comfortable with this. But things get really murky when we turn our attention from external objects to our inner realm, the so-called internal mental states like pleasure etc. If pleasure is explained as an external object, then there seems to be a distinction between pleasure and our knowledge of it. If at all there is such a distinction, then could it be that I have pleasure but I don't have knowledge of it? Could I have unfelt pleasure? The problem with these inner episodes is that unlike external objects, these inner episodes could not exist if the owner of these episodes did not exist. Also these inner episodes cannot be directly perceived by any other person except the owner herself. Even if pleasure and awareness of pleasure are inseparable, does it imply that pleasure is of the nature of awareness itself? If you are a realist and prefer the model of external knowledge, then you will argue for the independence of pleasure from the knowledge of it. In other words, a realist would keep pleasure out of the realm of knowledge. And if you are an idealist, if you are keen to fuse the object with the knowledge of it, then you will argue for treating pleasure as a form of knowledge, a kind of cognitive episode of inner perceptual awareness kind. If awareness of pleasure becomes identical with pleasure, then pleasure turns out to be of the nature of knowledge. But if, a realist insists, the external model of knowledge is applied to the case of knowledge of pleasure, then the object and its knowledge should be kept apart and so, the realist concludes, pleasure cannot be of the nature of knowledge. A thoroughgoing idealist would end up in questioning the 'inner'-'outer' distinction, The so-called privacy of the inner world and the public nature of the outer world does not cut much ice with the idealists, for they would question any attempt to erect a boundary between the outer sensations and the inner feelings of pleasure etc. The realist, on the other hand, is in favor of making a distinction between the inner and the outer and getting swayed by the externalist model denies pleasure etc. of the stature of knowledge⁴.

⁴ B.K. Matilal, *Perception*, Clarendon Press, Oxford, p. 295

Historically this debate starts following an examination of the definition of perception⁵. If ‘arising out of sense-object contact’ is all that is there in the definition of perception, then pleasure too would be considered a kind of perceptual knowledge, for pleasure also arises out of sense-object contact. Then elements that produce pleasure would also be regarded as *pratyakṣa pramāṇa*. To block this possibility, to assert that only those elements that produce *pratyakṣa* would be considered *pratyakṣa pramāṇa*, the word ‘*jñāna*’ has been inserted in the definition. In other words, pleasure and the elements that produce pleasure cannot be treated as perceptual knowledge.

The cognitivists assert that pleasure, pain, desire, dread and will are all forms of cognitions. They allude to a principle of similarity: the effects can be dissimilar only if their causes are dissimilar. But if effects have similar causes, effects have to be treated as similar. Or else the principle will be violated and the attempt to distinguish the effects from one another would be an ad hoc one, lacking any reason. X and non-X can be produced from causes that are of different nature. Pleasure and its knowledge are produced from the same cause and so they cannot be different.

The realist rebuts by arguing that in our perceptual experience we find that the causes of knowledge (of pleasure) and pleasure are not identical. The feeling of pleasure is felt as of the nature of being pleasant in one’s inner realisation. Knowledge (perceptual), on the other hand, is realised as knowledge of object. We all accept this difference. Thus pleasure and its knowledge can never be identical. The nature of the knowledge of pleasure evolves into different forms of pleasant and painful experiences. This is what we find in our experiences. One could, of course, define this knowledge of pleasure the way one likes. We all experience knowledge as of the nature of revolving round its object and we do not experience pleasure to be of such nature, i.e. to be revolving round an object. Knowledge always comes to us as revolving round object. Knowledge is never bereft of object. Pleasure and pain are never felt to be revolving round object.

⁵ Jayanta Bhatta, *Nyāyamañjarī*, ed. & transl. by Pancanan Tarkavagisa, Calcutta University, Kolkata, 1941, pp. 40-55

It must be accepted, however, that we do experience the difference between the knowledge of pleasure and knowledge of pain and this difference is due to the nature of knowledge being different in two cases. But it is to be noted that this difference in the nature of the two cases of knowledge is due to the difference in their objects, one having pleasure and the other having pain as its object. Knowledge itself is neither of the nature of pleasure or pain. To illustrate this with the help of an example, the difference in the form of doubt (*samśaya*) and false knowledge (*viparyaya*) are due to the difference in the nature of these two. As knowledge both are similar. But they have different objects and so they are of different nature and hence they have different forms. The object of doubt involves uncertainty (swinging between two possibilities). The object of false knowledge is negated. But pleasure and pain do not come to us as having their objects. Pleasure etc. are different from knowledge; they are internal properties. Knowledge of pot has got its object and so pleasure and pain are different from it. Similarly all knowledge has got its object and so pleasure etc., are different from knowledge.

It cannot be argued that pleasure is self-revealing and so it is of the nature of knowledge. It cannot be proposed that pleasure is not only apprehended, it is also the apprehender. The realists, of course, do not accept the self-revealing nature of knowledge. So this analogy is not acceptable to them. Nobody experiences pleasure as apprehender (*grāhaka*). But if pleasure etc., are not self-revealing, then how could one account for the production or nonproduction of pleasure? Surely presence of pleasure and its absence must make some difference. Or else a person could be in a pleasant state for ever or she could be in a non-pleasant state forever. This cannot be accepted. Whenever pleasure is produced, it is felt. There has to be a difference between pleasure that is produced and pleasure that is not produced. Moreover, if pleasure is self-revealing like light, light being accessible to all, pleasure should also be accessible to all and then a person where pleasure is not produced would also have pleasure. Surely this is absurd.

If the cognitivists are keen to treat pleasure etc as of the nature of knowledge, then they have to accept either one of the following alternatives: 1. One particular piece of knowledge is of the nature of pleasure, pain etc. or 2. Some knowledge is of

the nature of pleasure and some other knowledge is of the nature of pain etc. If one accepts the first alternative, then, since one and the same knowledge is of the nature of both pleasure and pain, opposite experiences like pleasure and pain will be felt at the same time in one person. If one accepts the second alternative, then, some knowledge being of the nature of pleasure and some other knowledge being of the nature of pain, there has to be another knowledge that is unrelated to pleasure or pain but has as its object a knowledge that is of the nature of pleasure or pain. Notice, this second level knowledge has got its object. And so the nature of this meta-level knowledge and the nature of pleasure are different. As in the indirect knowledge of an object, in the absence of the object, the object can still be predicated to knowledge, similarly even in the absence of pleasure, pleasure could be predicated to knowledge as an object. This again reinforces the conclusion that pleasure and its knowledge are different.

The cognitivists argue that since the same set of causal factors are in play in the production of pleasure as well as the knowledge of pleasure, there is no harm in treating pleasure as of the nature of knowledge. Same set of causal conditions cannot produce effects that are of different kinds. The caveat in this stance is that the causal conditions are not homogeneous. There are varieties of causes. There are certain causes that are common to different kinds of effects. Water and sufficient sun light are the common causal conditions for the production of varieties of rice. But for the production of specific kinds of rice like *āman* etc. specific kinds of seeds are required. These special varieties of seed are the *nimitta kāraṇa* of the relevant kind of rice. So we have to accept two sets of causal conditions viz. general causal conditions and specific causal conditions. It cannot be denied that the *samavāyi kāraṇa* and the *asamavāyi kāraṇa* of both pleasure and knowledge of pleasure are identical, *samavāyi kāraṇa* being the self and the *asamavāyi kāraṇa* being the self-mind contact. These causal conditions are general causal conditions. But we need to tell the specific causal conditions responsible for the production of pleasure and also the knowledge of pleasure. And here the specific causal conditions diverge; knowledge hood being the specific cause of knowledge and pleasantness being the specific cause of pleasure. Of course, the general causal conditions and specific causal conditions are not unrelated. They have a relation called *yogyatā* meaning that both the two sets of causal

conditions are conducive to the production of a single effect (*ekakāryānukūlatva*). Needless to say, in the absence of this relation the set of general causal conditions and the set of specific causal conditions will fail to produce any effect.

Moreover not all knowledge arises out of previous knowledge (this is a thesis the realists have defended elsewhere). But all pleasure arises out of knowledge. Pleasure, pain etc. arise out of knowledge of objects that are either sometimes welcome (*upādeya*) or to be gotten rid of (*heya*).

One last attempt could be made on behalf of the idealists to show the similarity between pleasure and the knowledge of pleasure. Remember, the whole debate started with a defense of the insertion of the word *jñāna* in the definition of perception. One could argue that the word *jñāna* is redundant, for only knowledge can be either legitimate (*avyabhicārī*) or illicit (*vyabhicārī*) and the word ‘legitimate’ has already been there in the definition. But the counter to this point is that pleasure also could be illicit, as in being in touch with or having a relation with another lady. The pleasure arising out of this relation is illicit pleasure. But in what sense is this pleasure illicit? We can compare this with illicit knowledge. In illicit knowledge the real object appears as something else. Similarly, it could be argued that presence of pleasure in a situation where there is no pleasure is an example of illicit pleasure. In illicit pleasure, presence of pleasure is only imagined. But isn't there any pleasure in embracing another lady? As knowledge of silver in the presence of conch shell is a false knowledge, so is this pleasure a false pleasure. But how can this pleasure be false, for this is of the nature of happiness? But then how can the knowledge of silver in case of conch shell be a false knowledge for here also knowledge has got its object. It is true that though this is of the nature of knowledge, this is illicit in so far as its object is concerned. Similarly though the pleasure in the above mentioned case is of the nature of happiness, this pleasure is illicit in so far as the method (*sādhana*) is concerned. The false knowledge though produced in and through the cognitive mechanism, is false because it is negated by perception. Similarly the illicit pleasure is produced following the mechanism of pleasure, but it is negated (forbidden) by the moral injunctions (*śāstra*). As perception blocks the false knowledge, the moral injunction blocks the quasi pleasure arising out of the relation with another lady. This

is illicit pleasure for here the pleasure is produced out of something that is not the real cause of pleasure. So the statement that only knowledge is capable of being either legitimate or illicit falls flat. This only strengthens the suggestion that the word *jñāna* is necessary to be included in the definition of perception and the presence of this word implies that knowledge is different from pleasure etc.

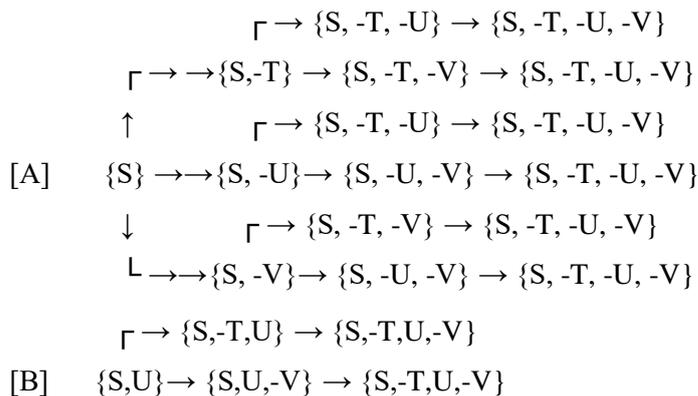
KNOWLEDGE, INTENTIONALITY AND LANGUAGE

RANJAN MUKHOPADHYAY

We take it that we possess knowledge of states of affairs. It is difficult to say what constitutes, for someone, to have such knowledge. It would, then, be worthwhile to investigate what we expect to happen when it is thought that someone, say, G (Gobordhan, the brother of Harshabardhan of the Sibram-stories), possesses such a piece of knowledge. First of all, what could be this, so-called *piece* of which G is having knowledge? For various reasons, especially of a practical kind, it is best to start with saying that the *piece* is a sentence describing a state of affairs of which G is supposed to have knowledge. Further, it would be again practical to say that for G to know the particular state of affairs, say *s*, is to hold a particular kind of attitude about a sentence describing the state of affairs *s*, say *S*.

Let us try to unravel what goes on when G holds this (knowledge-kind) attitude about a sentence S. Suppose, there are three other sentences T, U, V about which G does not have this kn-attitude which he has for S, and further, on the contrary, that G believes them to be false. Now, we can have various possibilities with respect to these four sentences where S is common in each possibility: {S}, {S,T}, {S,U}, {S,V}, {S,T,U}, {S,T,V}, {S,U,V}, {S,T,U,V}. We can think of extending the possibilities by considering negations of sentences as well. Let us take the symbol ‘-’ to stand for negation of sentences, i.e., for example, taking ‘-T’ to mean negation of T. We then have a further series of possibilities: {S,-T}, {S,-U}, {S,-V}, {S,-T,U}, {S,T,-U}, {S,-T,-U}, {S,-T,V}, {S,T,-V}, {S,-T,-V}, {S,U,-V}, {S,-U,V}, {S,-U,-V}, {S,-T,U,V}, {S,-T,U,-V}, {S,-T,-U,V}, {S,T,-U,V}, {S,T,U,-V}, {S,T,-U,-V}, {S,-T,-U,-V}. Let us allot consecutive numbers to these separate possibilities for future references. We can now say that G is related by his kn-attitude to the 1st, 9th, 10th, 11th, 14th, 17th, 20th, and 27th possibility, and not related to the rest of the possibilities.

If it is also the case that G is said to have knowledge of the state of affairs u which is described by the sentence U, then it can be said that G is similarly related to the 3rd, 12th, 18th and 22nd possibility, and not related to the rest of the possibilities. These two cases can be represented in the following two diagrams respectively.



What the diagrams involve is just this: (1) The relational directed edges which express an attitude (of believing) which G has, (2) the nodes which represent the objects (sets of sentences describing states of affairs) about which G has such an attitude, and (3) the specific members of the sets at the nodes which are the sentences

which are either true (when lacking the symbol for negation) or false (when having the symbol for negation). What (3) represents is really nothing but the states of affairs which exist (--by sentences lacking the negation sign) and those which do not exist (--by sentences having the negation sign). In other words, (3) represents the true and the false sentences.

The nodes are the various possible combinations of true and false sentences. And the directed edges are the belief relation/attitude which G has towards the combinations of true/false sentences. In the first diagram the sentence S is present in every possibility. This reflects the fact that every combination that is possible for G to be related with (in the belief-attitude) is a combination where the sentence S happens to be true. The sentences T, U and V are not so in this regard. The diagram really says that with whatever possibilities G is related by the belief attitude, S happens to be true in that possibility. If we take the belief attitude to be also a *justified* one, then the diagram, really, is a case of justified belief in a true sentence S. Hence, by the traditional definition of knowledge, the diagram represents the case that G knows S.

In a similar way, the second diagram represents the cases that G knows S, and that G knows U. If we allow the standard truth-functional logic to be included in the sets of sentences at each node, then this diagram also represents the case that G knows S&U, where ‘&’ is the symbol for logical conjunction of sentences.

Let us, now, consider our sentence S and another sentence S' which happen to be equivalent (in a sense) to each other. Let us take “Narendra Modi is a gujrati” to be our sentence S, and “The young man of age x who visited Belur wanting to be a sadhu of the Ramakrishna Mission on date y is a gujrati” to be S'. Now, the name ‘Narendra Modi’ and the definite descriptive phrase ‘the young man of age x who visited Belur wanting to be a sadhu of the Ramakrishna Mission on date y’ are taken to be intersubstitutable, because of some actual events in history. S' can be seen to be obtained from S by substituting the co-denotational/co-extensional descriptive phrase in place of the name occurring in S. Then, S and S' are equivalent. That is, saying that the young man of age x who visited Belur wanting to be a sadhu of the Ramakrishna Mission on date y is a gujrati, is the same as saying that Narendra Modi is a gujrati. The two sentences say the same thing extensionally. In case we need to revise or sharpen our understanding of extensionality, let us pause for a while to do that for a restricted (--but adequate for our purposes--) use of the term ‘extensionality’. We

shall say that a linguistic context – generally, sentences – is treated extensionally, if it is allowed to substitute one for the other, from names or definite descriptive phrases having the same denotation without any consequent changes in the truth-value. Our obtaining S' from S was a case of treating S extensionally. For, we allowed a substitution in a true sentence S to obtain S', on the strength of an identity, viz.,

Narendra Modi = the young man of age x who visited Belur wanting to be a sadhu of the Ramakrishna Mission on date y without consequently effecting any change in the truth-value of the sentence obtained. We could have obtained S from S' in a similar manner as well. In that case too, S' would have been said to have been treated extensionally. The cases where such extensional treatments are not allowed, i.e., where such substitutions are not allowed without also changing the truth-values are cases which are said to be having *intensional* treatments. We can, now, get back to our trail of discussion.

Let us now suppose, in case of the first diagram, that the rules of identity are included in the sets of sentences occurring as the nodes. Then, to say that G knows S is to say that G knows S'. That is, the first diagram not only represents 'G knows S', but also represents 'G knows S'

[We can again, digress a little to remind ourselves of the crucial rule for identity. It says: If $a = b$, for some term 'a' and for some term 'b', and if a is F, then *it is derivable* that b is F.

Hence, in our case, since,

(1) Narendra Modi = the young man of age x who visited Belur wanting to be a sadhu of the

Ramakrishna Mission on date y

And

(2) Narendra Modi is a gujrati. (S)

It is derivable that

(3) The young man of age x who visited Belur wanting to be a sadhu of the Ramakrishna Mission on date y is a gujrati. (S')

So, for G, to know S is also to know S'.]

Is there any problem here? If we keep following the bearings we have set so far, then there should not be any problem. But if we want to shift to a different set of

bearings then we would start seeing problems from this point onwards. Let us shift to one such new set of bearings.

Let us consider asking G himself whether he is ready to concede that he knows S' as well, when he knows S. It is very unlikely that G will answer in the affirmative. G will answer in the affirmative only when G *knows* the identity:

Narendra Modi = the young man of age x who visited Belur wanting to be a sadhu of the Ramakrishna Mission on date y. If G does not know this identity – which is very likely for G (Gobordhan) – G will not concede that he knows S' as well, apart from knowing S. So, in this latter case, for G, the first diagram represents only 'G knows S', and does not represent 'G knows S'. But, for us, the first diagram represents both 'G knows S' and 'G knows S'. This discrepancy is occurring only because of the possibility that G may not be knowing the identity mentioned above.

We can further note the following. If it is also a possibility that G may not be knowing the rules of standard truth-functional logic, then G, again, may not concede that G knows S&U as well, when he knows separately both S and U.

But we are ready to concede that the first diagram represents that G knows S', and the second diagram represents that G knows S&U. That G, however, is not ready to concede, as in the above two cases, that he knows S', and that he knows S&U, are consequences of our setting a different set of bearings after proceeding with an earlier set of bearings up to a point. Let us try to be clear about this shift in bearings.

The analysis of knowledge that we have done, through the diagrams above, is that of a notion of knowledge which can be said to be a notion which we apply in case of *others*. That is, the analysis is that of a case where we (or I) identify that somebody else – in our example, G – knows a state of affairs. Even, it can be said that this analysis is the analysis of a third person ascribing knowledge of a state of affairs to someone else. Or, even more simply, that it is an analysis of an ascription of knowledge on someone from nowhere, i.e., from no particular point of view (ours, mine, or even the third person's). A typical impersonal exercise claiming to be hallowedly objective was undertaken in the above analysis.

On the contrary, there can be, and there indeed is, a different notion of knowledge which is ascribed from the first person's point of view to one's own self: G identifies what G knows or does not know, and not we/no-particular-one identifies what G knows or does not know. The notion of knowledge that is used in such a case

will definitely deviate from the earlier notion. For example, G will track what he knows by focusing on the *means* that he has used to know some particular state of affairs. G will not be (*re-*)*identifying* his piece of knowledge by means of something which he has *not used* in knowing it. That is why, when G has known S by using the name 'Narendra Modi', it will not be possible for G himself to claim also that G has known S', where an extensionally co-denotational definite descriptive phrase ('the young man of age x who visited Belur wanting to be a sadhu of the Ramakrishna Mission on date y') is used in place of the name in the sentence S to obtain S'. The extensional co-denotation of expressions makes contexts transparent, whereas the use of a particular expression in knowing a piece of knowledge blocks such transparency. And so, replacement by *unused* means of knowing a state of affairs in one's actual way of knowing it will result in one's denial about knowing that state of affairs. This feature of this alternative notion of knowledge – that *knowledge is characterized by, among other things, which expressions are used in knowing a state of affairs* makes this notion an *intensional* one, rather than an extensional one – which, incidentally, we have found in the analysis through the diagrams.

Given that these two are different notions of knowledge – one extensional and the other intensional, it would definitely be a case of shifting our set of bearings if we start with an extensional analysis of knowledge, and then expect that everything will remain fine when we search for the understanding of the intensional notion of knowledge within such an analysis. Inattention to the differences between the two different notions of knowledge will surely give rise to various kinds of confusion.

KNOWLEDGE AND BELIEF - THE EPISTEMIC BAND

MANIDIPA SANYAL

Epistemic notions may be viewed in this era as band-members of an instrumental group. Knowledge enjoys the most prestigious position and has always been believed as its close cognate by its side. Questions may arise about the type of knowledge spoken about in the survey of its relation to belief and vice versa. Let us be less ambitious and restrict our discussion of such epistemic notions in the ordinary empirical world. Such notions are viewed as being embedded in a specific context in a social atmosphere, where they are essentially indispensable in all kinds of communicative practices. To be specific, it is the sphere where knowledge and belief are treated as bases for action and judgment.

The closeness of knowledge and belief is viewed in different forms, sometimes even as mutually exclusive. It depends on the perspective to view knowledge either as a form of belief or as that to which belief is subordinate, and each has its own interpretation. How to counter such incompatible alternatives is a separate question

that appears presently as less promising. But what is interesting is that the apparent innocence of knowledge-belief relation often unexpectedly leads us to view knowledge as “subject to critique”, something which sounds weird in the ordinary usage of the notion of knowledge. It needs a little deeper analysis to reveal the truth of the content. For such revelation it is necessary to counter two views:

- (i) knowledge does not entail belief, and
- (ii) knowledge gives us certainty.

In fact, these two claims (entailment and knowledge producing certainty) are not totally different ones; rather they may be shown to be clubbed together. The present paper is an attempt to explore the possibility of knowledge-revision which is an apparently counter-intuitive area in epistemology.

I

It is pertinent to start the discussion with a glimpse of historical development of the study of epistemology. Starting with Plato’s *Theaetetus* one may notice the revolutionary change in the prominence of subjectivity in knowledge situation. The next major event is Quine’s theory of naturalized epistemology where psychology is not simply a part, but where “epistemology simply falls into place as a chapter of psychology and hence of natural science.”¹ Development of epistemology also records the theories of Virtue Epistemology, Care Epistemology and Evolutionary Epistemology. There was a return from Quine’s theory to normativity of knowledge and intellectual virtues. Some others gave importance to socio-cultural framework in defining knowledge.

History reveals that thinkers often say that knowledge does not require belief of any sort. But defenders of such a view are few in number. The traditional JTB thesis as well as Warrant theory considered belief to be one condition of knowledge. Quine denied the question of justification to be a pertinent question in epistemology. But though he denied the criterion of indubitability of basic beliefs as important, still he never doubted the relation between belief and knowledge, the latter being a process that - in his opinion - should involve a descriptive natural process of providing evidence. Philosophers like Robert Nozick who viewed knowledge as a capacity to reach the truth also accepted the close tie between knowledge and belief:

¹W. V. O. Quine, “Epistemology naturalized.” W. V. O. Quine (Ed.), *Ontological Relativity and other essays* (1986): 75.

“S’s belief that p can be considered knowledge if and only if, if p were false, s would not believe that p.”²We may also refer to Virtue Epistemology which considered knowledge proper as a product of the relation between a cognitive agent and acquisition of true belief.³

Acknowledging the category sameness of knowledge and belief defended by majority of thinkers, let us go into a detailed analysis of the proximity of these two notions in order to counter the first view (1) mentioned before. To begin with, let us note one important point mentioned by Sibajiban Bhattacharya⁴. Time has passed a long way after our general awareness of the fake similarity between knowledge and belief which says that the sentences ‘I know that p’ and ‘I believe that p’ have accidental occurrences of the terms ‘know’ and ‘believe’. The real similarity lies in distinguishing them from doubt in the following way: doubt about the truth of p is the same as doubt about the falsity of p, but knowledge or belief about the truth of p is quite different from the knowledge or belief about the falsity of p.

The relation between knowledge and belief may be conceived as any of the following:

- (i) $Kap \rightarrow Bap$ (entailment)
- (ii) $\sim(Kap \& Bap)$, i.e., $(Kap \rightarrow \sim Bap)$ (incompatibility)
- (iii) $\sim(Kap \rightarrow Bap)$ (denial of entailment)

(i) and (iii) are sharply opposite, (ii) and (iii) stand in a one-way relationship, i.e., $(iii) \rightarrow (ii)$, but not vice versa. D. M. Armstrong distinguishes⁵ between the theory of entailment and its denial in the following way:

- A. $Kap \rightarrow Bap$ (entailment)
- A.1 $Kap \rightarrow Cap$ (entailment—strong sense)
- A.2 $\sim(kap \rightarrow Cap)$ (entailment—weak sense)
- B. $\sim(kap \rightarrow Bap)$ (denial of entailment)
- B.1 $Kap \rightarrow \sim Bap$ (denial of entailment—strong sense)

² Robert Nozick, *Philosophical Explanations*, Cambridge, MA: Harvard University Press, 1981.

³John Turri, "Virtue Epistemology & Intellectual Character", *Character Project Lecture*, 2013.

⁴ Bhattacharya, Sibajiban, "Doubt, Belief and Knowledge", *Indian Council of Philosophical Research*, New Delhi & Allied Publishers, 1987.

⁵ Armstrong D.M., *Belief, Truth and Knowledge*, p.139.

B.2 $\sim(\text{Kap} \rightarrow \sim\text{Bap})$ (denial of entailment—weak sense)

The strong sense of entailment asserts certainty in knowledge context while weak sense shows reservation. The strong sense of entailment-denial emphasises absence of belief in knowledge context while weak sense does not so commit. In order to serve the purpose of this paper, it is necessary to show the unacceptability of both the strong and weak sense of entailment-denial. What is even more important is to show the weakness of the strong version of entailment that denies the very possibility of knowledge-revision.

Armstrong's analysis⁶ of the weak-denial theory sounds weird because it needs few steps to prove that it dangerously welcomes its opponent camp, i.e., $\text{Kap} \rightarrow \text{Bap}$:

- | | |
|--|--|
| 1. $\sim(\text{Kap} \rightarrow \sim\text{Bap})$ | / Therefore, $\text{Kap} \rightarrow \text{Bap}$ |
| 2. $\sim(\sim\text{Kap} \vee \sim\text{Bap})$ | 1.impl. |
| 3. $\sim\sim\text{Kap} \& \sim\sim\text{Bap}$ | 2.DeM. |
| 4. $\text{Kap} \& \text{Bap}$ | 3. DN |
| 5. $\text{Bap} \& \text{Kap}$ | 4.Com. |
| 6. Bap | 5.Simp. |
| 7. $\text{Bap} \vee \sim\text{Kap}$ | 6.add |
| 8. $\sim\text{Kap} \vee \text{Bap}$ | 7.Com. |
| 9. $\text{Kap} \rightarrow \text{Bap}$ | 8. Impl. |

In fact, this symbolic form B.2 i.e., $\sim(\text{Kap} \rightarrow \sim\text{Bap})$ is not the proper intended form of Armstrong's statement of weak-denial theory. It may be stated as follows: although it is possible to know something but not believe it, knowledge does not "entail" absence of belief. Symbolically expressed it amounts to:

B.2* $M(\text{Kap} \& \sim\text{Bap}) \& \sim(\text{Kap} \rightarrow \sim\text{Bap})$.

Such form is similarly vulnerable as B.2, because the use of the rule of simplification equally provokes B.2* to fall in the same error of embracing the

⁶ *Ibid*, p-143.

opponent. We may therefore be more cautious about the formalisation of the weak-denial theory as this: although it is possible to know something but not believe it, it is not necessary that knowledge entails the absence of belief. Symbolically it amounts to: $M(Kap \& \sim Bap) \& \sim L(Kap \rightarrow \sim Bap)$. It is now time to consider the varieties of knowledge-belief relation one after the other.

II

Rejection of Knowledge-Belief Incompatibility

The incompatibility between knowledge and belief may be interpreted in terms of mental states (as found in Cook-Wilson, Price, Prichard)⁶, or in relation to objects (as found in Plato), or in respect of statements (as in the early-Austin version⁷ which is found rejected in later Austin). There are strong arguments against incompatibility-relation, but it may better be postponed because the present survey can hardly digest such category-difference between knowledge and belief.

Rejection of Entailment-denial Theory

The principle that ‘if one knows that p, then he believes that p’ is called the ‘entailment thesis’. The general claim of entailment-denial therefore is $\sim(Kap \rightarrow Bap)$. The strong version of entailment-denial appears to be akin to incompatibility theory. The reason is, the strong version gives stress on a rigid relation of entailment between knowledge and absence of belief. As has been said earlier, this sort of rigid opponent cannot be unquestionably accepted. The weak-denial theory as

$M(Kap \& \sim Bap) \& \sim L(Kap \rightarrow \sim Bap)$ which can be ultimately shown to be a conjunctive statement as follows:

$M(Kap \& \sim Bap) \& M(Kap \& Bap)$. Now there is no rule of replacement to show the equivalence of the first conjunct with the whole statement, but the rule of inference, i.e., that of simplification allows the first conjunct to be deduced as consequent of the

⁶Cook-Wilson, J., “The Relation of Knowing to Thinking” in A Phillips Griffiths, *Knowledge and Belief*, p-18. Price, H.H., “Some considerations about Belief” in *Proceedings of the Aristotelian Society*, Vol-35 (1934-35), pp-229-252. To quote Prichard, “We must recognize that whenever we know something we either do, or at least can, by reflecting, directly know that we are knowing it, and that, whenever we believe something, we similarly either do, or can directly know that we are believing it and not knowing it.” Prichard H.A., *knowledge and Perception*, p-86.

⁷ Austin, J. L., “Other minds” in *Philosophical Papers*, p-67.

whole statement. As the first conjunct is concerned with the possibility of knowledge and absence of belief, which the basic demand of the entailment-denial, we can concentrate on examining that general claim only.

Such a case of knowledge without belief has been cited by Armstrong. A woman, who has strong evidential support for her knowledge that her explorer husband is dead, admits that she cannot believe it, and accordingly behaves strongly as a woman whose husband is alive.

Similar lines of thought are found in Colin Radford⁸ and Lemmon⁶also. Radford's example is that of a Canadian who believes himself to be ignorant of English History, but his answer to the question about the date of death of Queen Elizabeth came out right that it was 1603. When he was reminded by his friend, he became aware that he eventually knew the answer, though he was uncertain of his knowledge and therefore could not believe the answer. So it is a case of $Kp \ \& \ \sim Bp$. A similar example in Lemmon also speaks of the possibility of knowledge without the possibility of knowledge of knowledge thereby forbidding the possibility of belief.

Contemporary debates in epistemology show several trends supporting denial of entailment. There is a gradual uprise of contextualist scheme of defining knowledge as sensitive to specific context. There is also the trace of invariantism upholding subject-sensitivity of knowledge. Apart from these non-sceptic attitudes, there is also seen some alignment to scepticism. Views of F. Dretske and R. Nozick tend to show covertly that epistemic closure principle may be denied⁷. According to them, we do not know that we are not a brain in a vat. Though countering entailment-denial is a necessity for the present paper, individual assessment of such attempts may be spared as they depend primarily on definition of knowledge which is not the main concern here. For brevity therefore, it may sound to center round those counter-

⁸ Radford, C., "Knowledge—By Examples" in *Analysis* ((1966), 27.1, pp--1-11.

⁶ Lemmon E.J., "If I Know, Do I know That I Know?" In *Epistemology: New Essays in the Theory of Knowledge* (1967), ed. By A. Stroll, New York, Harper and Row, pp-54-83.

⁷ The closure principle that Dretske discusses is; If S knows that p and S knows that $p \vdash q$, then S has all that it takes, evidentially speaking, to know that q.

examples that do not go against the familiar age-old conjunctive-analysis-definition of knowledge.

There are two approaches: one of admitting both knowledge and belief in such cases, the other of withdrawing the same. Harman's answer⁸ is the first one when he says that the person in Radford's example does know and believe, but he does not know that he knows. So it is the lack of certainty that accounts for lack of belief though he has both knowledge and belief. The same answer is applicable in Lemmon's example. Their belief is to be understood, not as avowal-account, but as dispositional account.

The second approach is found in Lehrer's answer⁹. According to him, the person in Radford's example does not know the answer because he does not accept it. In Lehrer's term it is the (i) acceptance is a special kind of belief, and (ii) non-acceptance leads to absence of knowledge.

But Lehrer's view is not unquestionably accepted. Hence though Lehrer may be right to "claim" that the person in fact does not know in the true sense of the term, still it is less convincing to reject Radford's counter-example. The reason is, the person appears to possess some kind of knowledge since he retains memory of the relevant matter. It is not irrational to say that, to have propositional knowledge that p is to have

- (i) the ability to retain the proposition,
- (ii) the ability to recall it,
- (iii) the ability to use it.

Under such conditions Radford's subject may be said to know. The second condition is essential because failure to recollect what is learnt while retaining the same will imply that the subject possesses physiological memory but lacks propositional knowledge. In fact, knowledge may be understood in the sense of knowing that, and entailment may be viewed to hold or not to hold between knowing-that and believing-that, though there may be discussion whether instances of

⁸ Harman, G., *Thought* (1973) Princeton N.J., Princeton University Press.

⁹ Lehrer, K., *Theory of Knowledge*(1990), Routledge, London.

knowing-how could be undertaken, and more excitingly whether there may be at all, cases of believing-how.

This factor may undeniably rouse a fresh issue of knowledge-belief relation through the intervention of memory¹⁰. But it needs elaborate discussion in future survey. As the present discussion aims at the failure of the alleged counter-examples to the weak-entailment theory we may turn to a fare account in defence of weak-entailment in Armstrong's theory.

Armstrong denies the case of a lady whose husband is dead as an example of 'Kap& ~Bap' because of the ambiguity of the phrase "she does not believe it". The phrase may mean

- (i) it is not the case that she believes it, i.e., '~Bap', or,
- (ii) she believes that it is not the case, i.e., 'Ba~p'.

Though some episodes witness both events together, still there is no relation of entailment between the two. In this present case, both hold together and it slacks the claim of entailment-denial, because 'Ba~p' is consistent with 'Bap' also. There are sufficient reasons for a situation where a person believes both p and ~p on the basis of more or less equal empirical evidences in their favour. But we must be cautious enough not to confuse between such a case and a case of doubt. When we doubt p, we withdraw the truth-claim of p, whereas in believing p we entertain the truth-claim of p.

Now coming to the said case, while entailment-denial theory interprets the situation as "Kap& ~Bap", Armstrong calls it a case of "Kap&Ba~p& Bap". One may object that these two interpretations are based on two different presuppositions, i.e., denial of entailment or entailment itself respectively. To make the situation clear, let us set aside the claim of knowledge, and let us also imagine that though the evidence for her husband's death seems satisfactory to the woman, they are not really

¹⁰Intervention of memory in knowledge-belief context has been discussed by Masaharu Mizumoto in the doctoral Dissertation (Hitotsubashi University) *A Theory of Knowledge and Belief Change—Epistemology Psychologised based on Naturalized AGM* (2003). There also the entailment between knowledge and belief (knowledge in the sense of propositional knowledge) has been defended and established.

satisfactory. It means that she believes that her husband is dead, i.e., “Bap”. At the same time we cannot say that her other unusual behaviour implies that it is not the case that she believes that her husband is dead, i.e., “~Bap”. Hence it is a case of “Bap & Ba~p”. The previous case therefore, in its full interpretation amounts to “Kap & Ba~p & Bap”.

It is not so easy to settle the case of Radford as one of “Ba~p” or “~Bap”. Armstrong here cites two cases and later on a third one:

- A. A man who was previously rightly taught about the date of Queen Elizabeth’s death, but who is now ignorant of English History.
- B. A man who was wrongly taught about the aforesaid date, and who is now ignorant of English History.
- C. A man who was wrongly taught about the aforesaid date, and who is now ignorant of English History.

All of them are asked about the date. A gives a correct guess which is the result of memory of correct teaching. B gives an incorrect guess as a result of his correct memory of incorrect teaching and C gives correct guess due to his incorrect memory of incorrect teaching. Everybody will accept that B is a case of unconscious false belief. But A, which is the case of Radford’s example, is not unanimously accepted as a case of knowledge, not even as a case of unconscious knowledge. It is due to the person’s failure to recognize his own utterance to be the manifestation of knowledge¹¹. So the case of A cannot be settled merely with reference to B. C is a case of unconscious true belief. Here C believes that Elizabeth died in 1603 (Bap), and at the same time, he repudiates his guess at conscious level. So in a sense, the person believes that it is not the case that Elizabeth died in 1603 (Ba~p). Hence Radford’s example may be represented as “Bap & Ba~p”. And this completes the rejection of the weak-denial theory.

III

¹¹ In order to call a case, a case of knowledge, importance is given on the fact of recognizing the case as a case of knowledge. It is a common assumption that if A knows that p, then it entails that he knows that he knows that p, i.e., ‘Kap → KaKap’.

It is time to focus on the stronger enemy of knowledge-revision, i.e., the strong-assertion theory of entailment. The theory says that knowledge entails being sure. The Ayer-Malcolm legacy points out that absence of surety leads to inevitable absence of knowledge. Ayer¹² proceeds a few steps further to hold that knowledge implies both being sure and having the right to be sure.

Now the apparently paradoxical possibility of knowledge with the absence of surety may be surprisingly found to be factually corroborated. It can very well happen that one is not sure of what one knows. Philosophical analysis reveals ambiguity of the phrase 'right to be sure'. As Chisholm points out¹³, 'right to be sure' cannot be identified as 'right to terminate inquiry' because of its unreasonableness. No account of knowledge can approve of closing the mind in respect of further information. This hint is enough to uphold that there is nothing called complete knowledge, meaning thereby that the phrase "knowledge-revision" is not a misnomer. The phrase has also significance in the context of probability.

There is much controversy among thinkers whether "being confident"/"being sure" is a necessary condition of knowing. It is a fact that feeling of confidence plays an important role in knowledge-ascription to oneself. But, as Wozzley rightly points out¹⁴ that "being sure" is a necessary condition not of knowledge, but of justified knowledge-claim. It is a fact that one may be rationally justified in denying knowledge of p without feeling sure of p, but ascription of knowledge of p to that person is quite compatible with the person's feeling of absence of surety. Examples of such ascription is well evidenced in the case of viva-voce examinations, where candidates are recorded to know such and such things only on the basis of materially correct answers they give though they may not be sure of the answers. It reveals that the commonly accepted relation between knowledge and feeling of certainty is backed merely by the dogmatic presupposition that knowledge is normally accompanied by apparent confidence. But the picture is just the reverse. We may recall analogically that, in logic where we try to make a valid inference of q from p, it is not sufficient to know that 'if p then q' and 'p', but that both of them are true.

¹² Ayer, A.J., *The Problem of Knowledge* (1956), Macmillan & Co. Ltd., London.

¹³ Chisholm, R.M., *Theory of Knowledge* (1977), Prentice hall of India Limited, New Delhi.

¹⁴ Wozzley, A.D., "Knowing and Not Knowing" in Phillips Griffiths *Knowledge and Belief* (1968).

Max Black rejects Wozzley's exposition by considering the duo, i.e., knowledge and absence of surety as inconsistent and thereby a dishonest one. But it is hard to consider it to be successfully aiming at Wozzley's view, because, according to Wozzley, this inconsistency is merely "epistemological absurdity". This "epistemological absurdity" can be defended in the same way as Hintikka¹⁵ has responded to Moore's paradox "p, but I do not believe that p" as "doxastically defensible". Hence we can safely conclude that there is no inevitable tie between knowledge and feeling of surety.

IV

We may still nurture the tendency to dissociate knowledge from belief by following the Rylean distinction between capacity verb and tendency verb. Ryle rejected the claim that knowledge is a species of belief because he rejected the theory of entailment altogether. But even Ryle cannot deny the fact that though in some cases of belief where evidence is inconclusive, we withdraw the claim of knowledge, still belief, in a wider sense, is close to knowledge. In case of rational belief, we can easily say that when I know that p, I entertain p and I am disposed to assert that p. The thing now is to decide whether we can accept both of the following:

- (a) knowledge entails belief (weak sense),
- (b) knowledge is a species of belief.

A well-knit compromise is available in Chisholm's theory where he accepts the former and rejects the latter. According to him, the adverbs 'firmly', 'reluctantly' 'hesitatingly' are applicable in cases of belief but not in cases of knowledge. Like Ryle, Chisholm also accepts Austin's distinction between how-questions and why-questions - the former relevant in knowledge-context and the latter in belief-context. All these imply that knowledge is not a species of belief. But it remains a fact that knowledge entails belief though not in Chisholmean sense.¹⁶

¹⁵ Hintikka, J., *Knowledge and Belief*(1962), Cornell University Press, New York.

¹⁶ To quote Chisholm, "the relation of knowing to believing ...is not that of falcon to bird or of airedale to dog; it is more that of arriving to travelling. Arriving entails travelling – a man cannot arrive unless he has travelled – but arriving is not a species of travelling." Chisholm, R.M., *Perceiving: A Philosophical Study*pp-16-18. Chisholm's analogy however is severely rejected as a bad analogy.

I have tried to argue that the epistemic band of knowledge and belief performs well if coupled with another member, i.e., contingent relation between knowledge and certainty. The presence of doubtfulness in knowledge is supported by the twentieth-century philosopher B. Russell also, "...all knowledge is in some degree doubtful, and we cannot say what degree of doubtfulness makes it cease to be knowledge, any more than we can say how much loss of hair makes a man bald."¹⁷ One may say that it is just diverting the question of admittance of knowledge proper. It is a fact that science starts with hypotheses and the conclusions reached there are often amenable to further criticisms. But to question the authenticity of knowledge only on the basis of this fact is virtually to question the validity of inductive knowledge as a whole. And this is counter-intuitive.

So, in knowledge-context, we can say two things. We can say either that what is known cannot be falsified, or that if it is falsified, it is not knowledge proper. The present survey favours the latter. Though knowledge is the best thing we can achieve, we have to entertain in Russellean manner that there is an element of doubt in knowledge. To accept the contingent relation between knowledge and certainty is however not to give concession to contextualism or to invariantism. The reason is simple. Contextualism may approve of a particular piece of knowledge acquired by different individuals in similar contexts as final, or invariantism may mark a piece of knowledge acquired by a person as complete and beyond revision as another acquired by the same person in similar context. But the possibility of belief-revision together with knowledge-belief knot tends to extend the possibility of knowledge-revision to the "relative finality thesis" of context-sensitive and subject-sensitive cases of knowledge. It is to be noted that possibility of revision does not equate the status of knowledge and that of belief as epistemic notions, because there is no point in identifying them unless one tries to spoil the show. And undoubtedly, such identification would have been something least imagined by a responsible thinker even in dreams.

The inevitable question that arises here is: Is it possible for the defenders of knowledge-belief category-sameness to accommodate the challenging notion of

¹⁷ Russell, B., *Human Knowledge*, p-516.

knowledge-revision? Any positive answer to this question compels the theory-maker to construct a model of such notion. Any negative answer will bring the charge of contradiction. The task remains for future survey to find out whether and how to accommodate the issue of knowledge-revision if knowledge and belief are to be treated as performers of the same band.

This charge can be met in the following way. Knowledge under normal usage has a pragmatic sense. It can be said: X can know p until further revision. Even when I am in pain, what I claim is my being in pain, not the knowledge of the pain. Contextually we may refer to Austin's view that the phrase 'I know' speaks of the highest possible cognitive claim and it functions as the phrase 'I promise'.¹⁸

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¹⁸ Austin J.L., "Other Minds", *Proceedings of the Aristotelian Society*, Suppl. (1946), vol-20.

- AGM (2003). There also the entailment between knowledge and belief (knowledge in the sense of propositional knowledge) has been defended and established.
17. In order to call a case, a case of knowledge, importance is given on the fact of recognizing the case as a case of knowledge. It is a common assumption that if A knows that p, then it entails that he knows that he knows that p, i.e., 'Kap→KaKap'.
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THE PROBLEM OF 'EMPTY TERMS' IN NAVYA NYĀYA PHILOSOPHY

NATARAJU ADARASUPALLY
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It seems that we can talk meaningfully about non-existing things but interestingly there is nothing that we can refer to. As understood, a sentence can only be meaningful if the subject term refers to something existing out there. The problematic discussed by the Navya Nyāya in its philosophical logic related to the empty terms has far reaching significance. Some examples of the empty terms that are often found in the Nyāya literature are 'the rabbits horn', 'golden mountain', 'the son of a barren woman', 'the sky flower', 'the winged horse' etc.,. An empty term is a term that lacks a referent. The Buddhists and the Mimāṃsakas are considerate to some extent in accepting a weak form of the empty terms, but the Naiyāyikas are vehemently opposed to any such place for the empty terms.

When empty terms like ‘the rabbit’s horn’, ‘the sky-flower’, ‘the son of a barren woman’, ‘golden mountain’, ‘the winged horse’, etc. are present as a subject term in a judgment then things turn problematic and this problem is found in both logic and epistemology. The term ‘sky flower’ is empty because there is nothing that it refers to. The sentence ‘sky flower is fragrant’ has meaning though there is no sky flower. There is no denying the fact that we can understand the sentence ‘There is no such thing as sky flower’. Now, the question is: why are we justified in calling such type of expressions meaningful, although they do not denote anything real? The fact is that the understanding of substantive expressions does not imply that it has a reference, to quote Matilal, “understanding of its meaning precedes the knowledge of whether or not the expression actually refers to any real entity.¹” So, we are justified in calling empty terms as meaningful, even though they do not denote anything real.

Conditions to Determine Meaningfulness of the Empty Terms

Let us now discuss conditions which determine the meaningfulness of an empty term. According to the Nyāya, there are at least three conditions which determine the meaningfulness of an expression which contains an empty term. These conditions dictate when the occurrence of an empty term in a sequence of words prohibits the sequence from constituting a meaningful sentence, they specify the circumstances in which a given sequence of morphemes do not have a mutual syntactical expectancy and therefore has no meaning.

To understand these three conditions, the Nyāya concept of cognition needs to be explained briefly. The Nyāya draws a distinction between qualificative (determinate) and non-qualificative (indeterminate) cognitions. A non-qualificative cognition is often referred to as non-relational or indeterminate cognition. In non-qualificative cognition an object is cognized distinctly, that means, non-qualificative cognition is not presented under a certain mode of presentation or in a certain relation. The Nyāya concept of qualificative cognition can be stated by a compound expression of the form ‘xRy’. If we analyse the form then we see that there are

¹Matilal, B. K. (1985). *Logic, Language and Reality: An introduction to Indian Philosophical Studies*. Delhi: Motilal Banarsidass Pvt. Ltd. p. 86.

certainly at least three elements in a qualificative cognition. These are a qualificand, a relationship between qualificand and qualifier and a qualifier.

The second element could be called the ‘qualification relationship’ at the cognitive level, the relationship between qualificand and qualifier. Perszyk explains, “in a certain relationship, the simplest qualificative cognition has as its object a pot along with potness. This complex is stated by the expression ‘a pot’, and explained by the more complex expression ‘potness inheres in a particular pot-individual’.”² It should be stated that the expression ‘a pot’ is a linguistic expression of cognition and an analysis of the similar cognition in Nyāya language is the expression ‘potness inheres in a particular pot-individual.’

In a determinate cognition, the qualifier is provided by the mode of presentation of the qualificand. An object is recognized under a certain mode of presentation in a qualificative cognition; something is recognized as having a certain features. But the main components of a qualificative cognition are recognized by themselves in a non-qualificative cognition. For the cognition xRy , R is the qualification relation (*viśesya-visesana- sambandha*) and y is a qualifier, x is the qualificand. The expression ‘ xRy ’ may be used as a kind of description. It should be mentioned in the above sense that ‘ R ’ is not a constant. Here, R is nothing more than a known relationship between x and y . For example, to prove a qualificative cognition, the expression ‘a pot’ can be used. Here, the qualificand is an individual pot, the qualifier is potness in this cognition, the way a pot is presented, and also the qualification relationship is inherent. In this cognition, we find that an individual pot in the relationship of inherence is recognized under the mode of potness.

According to the Nyāya, relations are dyadic and have a direction, the direction being from the second term to the first term, and triadic, tetradic, pentadic and so forth relations are reducible to a series of dyadic relations. It is also important to mention that while x is recognized under some mode of presentation, which is limited by a property (x -ness), y is limited by a property (y -ness) and the relationship

² Perszyk, K. J. (1984). The Nyaya and Russell on Empty Terms. *Philosophy East and West*, Vol. 34, No. 2, p. 144.

R, i.e. y is recognized as the second term of R. The limiting concept or mode of presentation is similar to the sense of Frege. Just as sense determines a reference for Frege, so the mode of presentation of an object determines its referent for the Nyāya, “the limiters of the qualificand and the qualifier need not be generic properties or universals; rather, they can be what the Nyāya calls analysable or unanalysable imposed properties. An imposed property is a property whose existence is indistinguishable from the individual which possesses it; that is, unlike a generic property, an imposed property has no separate ontological status over and above the individual by which it is instantiated. The property of being John is an example of an unanalysable imposed property; the property of being the eldest son of John is an example of an analysable imposed property. It is an analysable property in the sense that it is compound or complex, its constituents being the terms ‘eldest’, ‘son’, ‘eldest son’ and ‘John’.”³

If in an expression a logical proper name occurs and no objection has been seen or known by anyone in the world corresponding to this name, the expression is meaningless and the question of its truth or falsehood is nonsensical. There are no meaningful atomic empty terms, according to the Nyāya. If the expression ‘ xRy ’ is a representation of an atomic qualificative cognition, then to be meaningful, the terms ‘ x ’ and ‘ y ’ of that relationship must be non-empty. This does not mean that all empty terms can be analysed in ‘ xRy ’ form; instead, only those that can be analysed in ‘ xRy ’ form are meaningful.

If a logical proper name is empty, there is no possible qualificand corresponding to it. If there is no possible qualificand, there is no qualifier corresponding to that qualificand and if there is no qualificand and no qualifier, there is no qualification relation. That is to say, there is a vacuous meaning-complex corresponding to unanalysable empty terms. That means there is no ‘ xRy ’ form corresponding to unanalysable empty terms. But it does not follow from this that all empty terms which are not logical proper names, but which are meaningful; generate unified cognition of the form ‘ xRy ’. What follows is that it is impossible to distinguish the meanings of unanalysable terms, for they are meaningless. If ‘sky-

³Shaw, J.L. (1974). Empty Terms: The Nyāya and the Buddhists. *Journal of Indian Philosophy* 2: p. 332.

flower' and 'winged-horse' are unanalysable terms which signify different unexemplified properties, it must be the case that we can distinguish the meanings of these terms. However, if they have no corresponding ' xRy ' forms, they are meaningless; and if there is no ground to differentiate their meanings, there is no justification for the claim that they signify different properties.

If 'Gautama' is a logical proper name such that nobody has ever seen or known the person called 'Gautama', the verbal expressions 'Gautama is fat', 'Gautama is not fat', 'Gautama exists', and 'Gautama does not exist' are non-significant, and the question of their truth or falsity is spurious. Jagadīśa thinks that if there is no Gautama, there is no mutual syntactical expectancy between the nominal root 'Gautama' and the nominative case ending 'ḥ'. A combination of two morphemes has mutual syntactical expectancy if and only if there is the possibility of a relation between them such that this relation is connected with some cognition. At the cognitive level, the referent of a morpheme is either a qualificand or a qualifier. However, if there is no Gautama, there is no possible qualificand corresponding to the nominal root 'Gautama'. If there is no possible qualificand, there is no qualifier; and if there is no qualificand and no qualifier, there is no qualification relation. Consequently, since 'Gautamaḥ' is excluded from the class of names, the above expression in which 'Gautamaḥ' occurs is also excluded from the class of sentences.

According to the Nyāya, those empty terms which are not logically proper names are non-atomic. However, it does not follow from this that an expression which contains an analysable empty term is meaningful. An empty term is said to be 'analysable' when it can be replaced by at least two atomic terms which have exemplification in the world. There are two rules governing the formation of a significant negative expression which directly affect the meaning of a sequence of words containing empty terms. If a term signifies a property present in every entity, its negation is not well-formed. According to the Nyāya, 'existence', 'knowability', and 'nameability' refer to universal properties. All objects are characterized by the property denoted by these words or can be located in any object. The negative expression would be meaningless if we were to form a negative expression from a word signifying a universal property. This reveals that the Nyāya does not agree with

the idea that if an expression is meaningful then it will also mean its negation. If this idea is called ‘the significant criterion for negative’, then this criterion is not accepted by the Nyāya as a universally applicable criterion. “The term ‘nameability’ refers to the nameability of a property. But the term ‘unnameability’ is an empty term, because it has nothing to do with anything. Therefore, sentences such as ‘no existent object is unnameable’ or ‘all unnameable objects are non-existent’ do not deal with the principles for the formation of negative expressions, whereas sentences such as ‘all existent objects are nameable’ are true.”⁴

Matilal thinks that like ‘unnameable’, the terms ‘non-existent’ and ‘unknowable’ are non-significant empty terms. There is no mutual expectation of a sequence of words containing one or more of these. The Nyāya does not permit a pure absence; an absence in some locus is always the absence of something.

A second rule is that if ‘not-x’ is meaningful, then ‘x’ cannot be an empty term. The negation must have ontological status in order to be well-formed, because if it were unreal, we would negate that which is nothing. “Since negation depends on the Nyāya affirmation, the cognition expressed by the term ‘absence of x’ depends on the cognition expressed by ‘x’; the cognition of the absence of x presupposes the cognition of x.”⁵In other words, one cannot have the thought of the absence of x without the thought of x and one cannot have the absence of x as the content of cognition unless one can have x as the content. “The ‘absence of x’ is meaningful if we can recognize what it is for x to be present by some relationship somewhere else and what it is to be present somewhere else for the absence of x.”⁶ To speak of an absence of x as present somewhere sounds confusing. In order to understand Nyāya’s thesis, we should keep the following points in mind. According to the Nyāya, x is property if and only if there exists a y such that y is the locus of x. If the absence of x characterizes a locus, the absence of x is given equal status with x itself, that is, the

⁴ Matilal, B. K. (2005). *Epistemology, Logic and Grammar in Indian Philosophical Analysis*. Edited by Jonardon Ganeri, New Delhi: Oxford University Press. p. 98.

⁵ Shaw, J.L. (1974). Empty Terms: The Nyāya and the Buddhists. *Journal of Indian Philosophy* 2: p. 332.

⁶ Matilal, B. K. (1970). Reference and Existence in Nyaya and Buddhist Logic. *Journal of Indian Philosophy* no. 1: pp. 89-90.

absence of x is also a property. When it is said that an absence of x is present somewhere, what is meant is that the absence of x characterizes a locus y. B. K. Matilal has summarized the Nyāya thesis in the following way “Thus if red-colour characterizes things that are red, absence of red-colour characterizes things that are not red. But if there were nothing that was not red, our talk of absence of red-colour would have been declared an empty or unexampled property, i.e., an unreal property, which is not usable in logical or philosophical discourse.”⁷ When Nyāya says that “the ‘absence of x’ is meaningful if we can recognize what it is for x to be present by some relationship somewhere else and what it is to be present somewhere else for the absence of x”⁸. This amounts to saying that the ‘absence of x’ is meaningful if and only if x exists in reality and the absence of x exists in reality somewhere else. Accordingly, if ‘x’ is an empty term, the ‘absence of x’ is a nonsignificant expression, and the expression in which the ‘absence of x’ occurs is meaningless.

Let us see the sentence ‘Pegasus does not exist’. If ‘Pegasus does not exist’ means ‘There is an absence of a winged horse’, the Nyāya will say that this is nonsignificant. However, if it means ‘There is an absence of wings in a horse’, then it is meaningful and true. The sentence ‘There is a hare’s horn on the table’ is meaningful, but ‘There is no hare’s horn on the table’ is meaningless because the expression ‘absence of a hare’s horn’ is nonsignificant. This expression becomes meaningful if it is transformed into either ‘A hare which is not on the table has an absence of a horn’ or ‘A hare which is on the table has an absence of a horn’.

Conditions for a Meaningful Sentence

According to the theory of *śābdabodha*, in order to understand the meaning of a sentence the hearer must understand the meanings of the words of the sentence recognize their syntactical and semantical appropriateness, be able to synthesize the word-meanings into a single related meaning, and be able to understand by reference to the speaker’s intention. The knowledge of the meaning of a sentence or a combination of words arises under the four conditions- *ākāṅkṣā*, *yogyatā* and *āsatti* and *tātparya*. In his article, Indian Theorists on the Nature of the Sentence B. K.

⁷ Ibid. p. 90.

⁸ Matilal, B. K. (2005). *Epistemology, Logic and Grammar in Indian Philosophical Analysis*. Edited by Jonardon Ganeri, New Delhi: Oxford University Press. p. 102.

Matilal mentions that *Ākāṅkṣā* could well mean the expectation or desire on the part of the audience roused by the incompleteness of an utterance.

Mutual expectancy or *ākāṅkṣā* occurs when a word is unable to convey a complete sense in the absence of another word and the hearer's desire to know the other words that will complete the sense of the speaker's utterance. In this regard, let us look at Annambhaṭṭa's statement on *ākāṅkṣā*. Annambhaṭṭa's says that if a linguistic item x cannot generate an integrated meaning-cognition due to the absence of a linguistic item y, then x is said to have mutual expectancy with respect to y.

“A word is said to bear the relation of expectancy to another word if it cannot without the latter produce awareness of its interconnection in speech.”⁹For example, *Gautamaḥ vanam gacchati* (Gautama goes to the village) is a statement in which the word *Gautamaḥ* bears expectancy to the word *gacchati* (*verb*), and then the word *gacchati* bears expectancy for *vanam*. Similarly, the stem *Gautama* bears expectancy for *h*, the stem *vana* for *am* (the second case-ending) and *gam* (the root) for *ti*. A stem (*nāma*) and a case-ending (*vibhakti*), a root (*dhātu*) and a verbal suffix (*ākhyāta*), and a verb (*kriyā*) and a case (*karaka*) bear expectancy for each other.

Regarding the condition of *ākāṅkṣā* or mutual expectancy, Navya Nyāya philosophers come up with the following explanation. “Expectancy is a syntactical relation based on semantical fitness. Words that occur in a sentence must be ordered or concatenated in such a way that the whole sentence can mean a relational complex. Therefore, we have the following four words in the sentence ‘*ghaṭamānaya*’-(a) *ghaṭa*, (b) *am*, (c) *ā+ni*, (d) *hi*. According to the philosophers of Navya Nyāya, expectancy is the concatenation in that order of the four words.”¹⁰Hence, the ‘word-order’ is just the last word as qualified by the former word and so on. But the words ‘*ghaṭa*’ preceded by ‘*karmatva*’ etc. do not generate any cognition of the meaning of the sentence. Because in that order, no cognition of a relational structure is generated by these words.

⁹ Potter, K. H. & Bhattacharyya, S. (edit.) (1993). *Indian Philosophical Analysis Nyāya-Vaiśeṣikas from Gaṅgeśa to Raghunātha Śīromaṇi*. Delhi: Motilal Banarsidass. Vol.VI, p. 262.

¹⁰Bhattacharyya, S. (edit.) (1996). *Gaṅgeśa's Theory of Indeterminate Perception Nirvikalpavāda*. New Delhi: ICPR. p. 138.

This view of expectation as a syntactic relationship is based on the principle that the cognition of a relationship between objects meant by words has been defined by the order of words only, because no word can mean a relationship at all. Because of this, what is meant by a word must be recognized in a presentation mode. Therefore, “expectancy is not just any and every order between words, but only that order between words that produces the cognition of a relational structure as the meaning of the sentence.”¹¹

The explanation continues, “a cognition of the relationship between objects defined by verbs and objects is not due to the cognition of expectation. This relationship is generated by contiguity between the meaning of a verb and the nominative in a sentence, according to these philosophers.”¹² The cognition of expectancy generates the cognition of a relational structure only in the case of objects meant by either a nominative or a verbal root and objects meant by their suffixes.

Yogyatā is the second condition which is considered to be one of the factors involved in the understanding of the meaning of the sentence uttered. Every word can raise expectancy and a desire for the completion of a thought, so that the meaning of a word requires something else in combination with which it may become more complete to thought. The desire for completion exhibited by the meaning of a word is not blind. When two meanings are combined then their combination is not a mere external relation, but it is internally determined by both. This is *Yogyatā* which must obtain between the two meanings that are to be combined. *Yogyatā* has been reduced more as semantical compatibility, competency, acceptability, consistency, congruity etc. In a common way, “*yogyatā* can be defined as the mutual congruity or fitness of one word-meaning or significant-content with another word-meaning or significant-content in accordance with the syntactical-grammatical connections of the respective words expressing those meanings.”¹³

“*Yogyatā* is the logical compatibility of the words consistency in a sentence for mutual association. Really it involves a judgement on a sentence’s sense or

¹¹ *Ibid.* p. 138.

¹² *Ibid.* p. 138.

¹³ Bilimoria, P. (1988). *Śabdapramāṇa*. New Delhi: D.K. Printworld (P) Ltd. p.195.

nonsense. The meaning of a sentence should not be contradicted by experience.”¹⁴It is non-contradiction of the relation between one thing and another signified by two words that are intended. In simple word, *yogyatā* is the congruity of the words in a sentence for mutual association. A standard Indian example contrasts the sentence ‘He wets it with water’ with the sentence ‘He wets it with fire’. The sentence ‘He wets it with water’, which has *yogyatā* because wetting is usually done with a liquid like water. But the sentence ‘He wets it with fire’, which lacks *yogyatā* because wetting cannot be done with fire. Since a sentence implies a relational complex, words that take place in the sentences must indicate objects that can be related through the relationships that are implied in the sentence. This is a fitness relationship between the meanings of the word and hence it is semantic in nature. But the objects will never be willing to hang together rather than fitness to form a relational structure.

“Fitness characterizes a word’s not bearing a meaning which is incompatible with the meanings of other words in an utterance. For instance, no verbal awareness is derived from such an utterance as *anginā ṣ iñ cā* (sprinkle with fire) because fire cannot be an instrument in the act of sprinkling. Fitness may be certain or doubtful, but in either case, there will be verbal awareness.”¹⁵

We do not find any agreement of opinion regarding the exact role of *yogyatā* in the understanding of meaning from a sentence. Some Naiyāyikas give their own opinions. According to them, a conclusive knowledge of *yogyatā* is a prerequisite for verbal cognition. On the other hand, according to some other philosophers, regarding *yogyatā* what is required is only the absence of a knowledge of incompatibility. In this regard, Kumārila Bhāṭṭa says that incompatibility with the real facts does not prevent verbal comprehension, nothing but only the validity of the knowledge. Perhaps it is the inconceivability of the mutual association of the word meanings that renders the whole sentence nonsensical; it is not the lack of correlation with the actual facts but the impossibility of connecting the word meaning that stands in the way of verbal comprehension.

¹⁴ Coward, H. G. & Raja K. K. (1990). *The Philosophy of the Grammarians*. Delhi: Motilal Banarsidass. p.86.

¹⁵ Potter, K. H. & Bhattacharyya, S. (eds.) (1993). *Indian Philosophical Analysis Nyāya-Vaiśeṣikas from Gaṅgeśa to Raghunātha Śiromani*. Delhi: Motilal Banarsidass. Vol. VI, pp. 262-263.

The third condition for understanding sentence-meaning is *āsatti*. “The word ‘*āsatti*’ means a spatio-temporal contiguity between the words of a sentence.”¹⁶ Contiguity or *āsatti* is also referred to as *samnidhi*. It is more of a formal property than *ākāṅkṣā*. It is normally rendered as ‘proximity’, but we prefer ‘contiguity’ to ‘proximity’ as the former means a sense of continuity which the latter does not essentially convey. Contiguity means that there is no gap between the words a sentence or no gap in an expression. It is not acceptable for gaps that are not helpful to understanding the sense of a sentence. “Contiguity consists in the enunciation of words, which are connected with each other, without a long pause between them. For example- the utterance “bring water” will convey no meaning if one utters the word “bring” now and the word “water” after an hour.”¹⁷

Āsatti is contiguity between the two words presented for a combination. It is not adequate that the meanings of two words should be individually incomplete and should possess also the effectiveness for filling their mutual wants, but they should also be offered in close proximity, it is these two meanings that are also meant to be taken together. Non-fulfilment of this condition may give rise to doubt as to which words are meant to be taken together. It is a great syntactical mistake that often avoids the true knowledge of the meaning of a sentence.

“Words that occur in a sentence must have a proper contiguity relationship without which it is impossible to recognize the original meaning of the speaker. An ambiguity can result from this absence of contiguity in non-inflectional language as well as in an inflectional language.”¹⁸ *Āsatti* or *Sannidhi* is generally explained as the condition that the words in a sentence should be temporally contiguous. It is the uninterrupted utterance or the unbroken comprehension of words when they are in juxtaposition. “It is the apprehension, without an interval, of the meanings of words that are produced by those words. The clause, ‘that is produced by those words’, is inserted since the meanings of words apprehended by other means of knowledge do not lead to any (verbal) comprehension of their mutual connection.”¹⁹

¹⁶ Shaw, J. L. (2000). Condition for Understanding the meaning of a sentence: the Nyāya and the Vedānta. *Journal of Indian Philosophy*, Vol. 28, p. 282.

¹⁷ Potter, K. H. & Bhattacharyya, S. (eds.) (1993). *Indian Philosophical Analysis Nyāya-Vaiśeṣikas from Gaṅgeśa to Raghunātha Śīromaṇi*. Delhi: Motilal Banarsidass. Vol. VI, p. 263.

¹⁸ Bhattacharyya, S. (edit.) (1996). *Gaṅgeśa’s Theory of Indeterminate Perception Nirvikalpakavāda*. New Delhi: ICPR. p. 138.

¹⁹ Dharmaraja Adhvarindra (2015). *Vedānta Paribhāṣā*. Advaita Ashrama, Kolkata. p.92

According to Bilimoria, “In early Nyāya understanding *āsatti* referred to the absence of any unnecessary intervention or interval between the strings of words in the utterance of a sentence.”²⁰ If there is to be a meaningful understanding of a sentence utterance then its constituent words must be continuous with one another in temporal and spatial sequence.

Again Kumāriḷa Bhaṭṭa says that it is the continuous moving of the words in the listener’s mind. The Prābhākaras also explain it in the same way. Lack of *āsatti* or *sannidhi* can occur in two ways - not being uttered together and not being signified by words. The Bhaṭṭa Mimāṃsakas hold that verbal cognition is possible only when the necessary words are together in the mind. Thus in the case of elliptical sentences, the Bhaṭṭa Mimāṃsakas want the missing words to be actually supplied.

The Navya Nyāya School defines *āsatti* or *sannidhi* as an immediate recollection of the meanings of words through their expressive power or secondary meanings, though the words are separated, there is *āsatti* if the meanings of the words are recollected without any interruption. This recognition happens in the case of verses. Early Naiyāyikas thought that the knowledge of *āsatti* is the cause of verbal comprehension. The Navya Nyāya School considers that *āsatti* itself is the cause.

In the case of elliptical sentences, in which the intended meaning is understood from the context even though some of the words necessary for syntactic completeness are lacking, the Bhatta Mimāṃsakas believe that it is necessary to supply the missing words in order to have verbal comprehension of the sentence meaning. The Prābhākaras hold that it is easier to supply the meaning than to presume the missing words as implied.

When above mentioned these three conditions are fulfilled then the meaning of a sentence can be known. But to know the meaning of a sentence this is not all. So long as a sentence is measured by itself, these three conditions are certainly adequate. But a sentence is not actually an isolated, non-concrete thing. A sentence is organically connected to a speaker which determines out of the several possible meanings of a sentence, the particular meaning related to a particular case. Therefore,

²⁰Bilimoria, P. (1988). *Śabdapramāṇa*. New Delhi: D.K. Printworld (P) Ltd. p.181.

it is also essential to know the intention of the speaker. So, in this regard another condition must be taken into consideration and this condition is known as intention or *tātparya*. “Intention or *tātparya* refers to the meaning intended to be conveyed by an utterance, and it can be viewed as the meaning intended by the speaker or as the purport of the utterance.”²¹ When the ordinary or primary meaning does not suit and a secondary figurative meaning has to be found then this condition is mainly active. “If a word is ambiguous or homonymous then the sentence in which it is used would give rise to different cognitions even if it fulfils all other conditions for understanding its meaning. Consider the sentence ‘bring *saindhava*’. Since the *saindhava* in Sanskrit means both salt and horse, the sentence would generate the cognition of ‘bring salt’ or ‘bring a horse’”.²²

It is necessary to recognize the speaker's intention so that ambiguity is removed. The speaker's intention can be recognized from the context in which it is uttered. Moreover, “there are contexts where the intention of the speaker is necessary for understanding the meaning of a sentence.”²³ For example, ‘Protect the yoghurt from the crows’. “Here the speaker intends to use the word ‘crow’ to refer to any animal or bird which spoils the yoghurt.”²⁴ Therefore, to understand the meaning of a sentence that holds a metaphorical expression, the cognition of the speaker’s intention is necessary is the opinion of logicians. The term *tātparya* refers to the meaning intended to be conveyed by an utterance, and it can be viewed as the meaning intended by the speaker or as the purport of the utterance. The role of contextual factors in deciding this *tātparya* is also generally accepted by all.

We find that Modern logicians have given increasing attention to the problem of ‘empty terms’. ‘Empty Term’ is a meaningful expression, but it does not refer to anything real. An empty term is a term that is lacking in reference. There are so many meaningful and syntactically sufficient descriptions of language that mean some entities, but they really do not refer to anything in our everyday experience. We know

²¹Perrett, R. W. (2016). *An Introduction to Indian Philosophy*. Cambridge University Press. p.123.

²²Shaw, J. L. (2000). Conditions for Understanding the meaning of a sentence: the Nyāya and the Vedānta. *Journal of Indian Philosophy*, Vol. 28, p. 283.

²³*Ibid.* p. 283.

²⁴*Ibid.* p. 283.

that the term 'sky-flower' is empty because the world has nothing to do with it. But although there is no sky-flower, the sentence 'sky-flower has good smell' has meaning. Even the sentence 'There is no such thing as sky-flower' can be understood. In this case, the term 'sky-flower' is meaningful. But why are we justified in calling sky-flower as meaningful, even though it denotes nothing real? The answer to the question is that it does not mean that it has a reference to understand a substantival expression. In simple words, understanding its meaning precedes knowing whether or not the expression certainly refers to any real entity. So, we are justified in calling empty terms like 'sky-flower' as meaningful, even though they do not denote anything real.

Nyāya-Vaiśeṣika theism has put forward one interesting argument about the problem of empty terms. Their argument is, 'God is' can be interpreted as follows: there is God, for denying His existence is nothing but affirming Him as God. So, we cannot negate any non-entity, and if we negate God significantly, we are bound to accept His 'entitative existence'. According to Naiyāyikas, the negatum cannot be a non-entity in all negations that we can speak of. But if we remove "God" from the subject position of the above statement and replace it with some such words like the hare's horn, the winged horse, etc. then regarding the non-existence of these entities both the theists and the atheists have common understanding. The principle that negation, if it is not to be absurd, must have an entity as its negatum and not a fiction will logically claim the 'entitative existence' of 'the hare's horn', or 'the winged horse' as well. Otherwise, saying that there is no hare's horn, etc., would be absurd.

Some Buddhist logicians claimed that in a certain mode of cognition, fictitious objects do appear. They said that "we tell fictitious stories and also we can conceive of unreal entities like the rabbit's horn or the hair of a turtle. It is not always the case that we have to know an object before we may make statements about it or attribute some property to it. A simple cognition, an error, a conceptual construction, or even a deliberate attempt at fiction, will be enough to justify our speech-acts about fictitious entities. And statements about fictitious entities like the rabbit's horn, sky-

flower may also serve some useful purpose in a logical discourse”²⁵But this view of the Buddhist logician is criticized by the Naiyāyikas. According to the Naiyāyikas, “if we allow statements about fictitious entities in a logical discourse- statements by which we purport to attribute some property to the fictitious entity- we will have no way of deciding whether they are true or false, for it will never be possible to experience the fictitious entity through any accredited means of knowledge.”²⁶They even said that mistaken cognitions do not reveal any object that is completely fictitious, but is produced in mistaken attributions of the qualifier. Additionally, they believe that both negatum and the locus of negation are real objects. Therefore, one cannot negate things like ‘the hare’s horn’ or ‘the round square’ significantly. But we find that neither the Nyāya nor the Buddhist want to countenance the world with strange entities such as the golden mountain or the rabbit’s horn.

Some philosophers say that entities like ‘the hare’s horn’ or ‘the winged horse’ are unactualized possibles. According to them, we do nothing more than deny their actuality when we negate them. The actuality is nothing more than a predictable attribute such as redness or roundness and can be compared with what we call ‘existence’. Therefore, negation or denial of existence to ‘the hare’s horn’, or ‘the winged horse’ is as meaningful as it is, entities that belong to the world of possibilities. But, Matilal thinks that if these philosophers are faced with a question, “What does your possibility consist in?” then perhaps there will be no direct and strong reply to this question. If they would choose the “round square” as an example instead of the “rabbit horn’s”, then the same argument will be thrust into that world of possibles? As the answer to these questions “extremists would want to ascribe subsistence to such self-contradictory things as the round square, and they would not object to such over-population of their strange universes of the possible-‘possible’, of course, to be understood in a special sense of their own.”²⁷

Sondada or Sondala attempts to demonstrate that in any loci, the negation of a self-contradictory term as an entity is actually felt. According to him, negation of one

²⁵Matilal, B. K. (2005). *Epistemology, Logic and Grammar in Indian Philosophical Analysis*. edit. Jonardon Ganeri, New Delhi: Oxford University Press, p. 102.

²⁶*Ibid.* p. 101-102.

²⁷Matilal, B. K. (1985). *Logic, Language and Reality: An introduction to Indian Philosophical Studies*. Delhi: Motilal Banarsidass Pvt. Ltd. p. 80.

entity is real and universally present as-qualified-by-a-non-resident-property. Gaṅgeśa rejects this view on the ground that a property that is non-resident in the negated entity, the absentee, cannot delimit the absentee-hood tagged to it. According to him, “our cognition of a negation of any entity is a cognition in which a qualified entity is also cognized to qualify another”.²⁸ Naiyāyikas, however, are forced to admit such negation where the absentee-hood is de-limited or conditioned as real by a non-compatible relationship.

There are two kinds of empty terms- singular and general. Either singular terms are logically proper names or singular terms are descriptions. Both logically proper names and descriptions are either empty or non-empty. We find that those expressions which contain empty logically proper names are non-significant. ‘sky-flower’ is an example of an empty singular term. It is a disguised description because the term ‘sky-flower’ can be replaced by ‘the sky-flower obtained by Devadatta’. When we were not able to divide the term ‘sky-flower’ into a combination of atomic constituents which have exemplification then the term ‘sky-flower’ would be nonsignificant. Similarly, general terms are either empty or non-empty. Empty general terms would be meaningful if they are analysable into a combination of at least two non-empty general terms. ‘Unicorn’ is an example of general empty terms. The term ‘unicorn’ is replaced by the meaning-complex ‘a horse with a horn’.

According to the Nyāya, there are no significant atomic empty terms. If no object corresponding to a name exists anywhere in the world, that which was supposed to be a name is not a name but a meaningless noise then the expression in which it arises is meaningless. The classical Nyāya wants to show that the meaning of a proper name is the referent itself, the individual apart from its qualities. But Navya Nyāya is opposed the classical Nyāya’s views and according to them the meaning of a proper name or term can never be the object designated by the name or term itself. They said that an object is always presented under some mode of presentation, and we always refer to an object by a property.

We would like to conclude by saying that there are two kinds of empty terms - unactualized empty terms and illusory empty terms. The school of Mīmāṃsā agrees

²⁸*Ibid.* p. 84.

with possible empty terms. According to them, even entities that are totally non-existent can generate cognition by word or speech. It is rather contradictory to say that we refer to non-existent entities by such expressions as ‘the rabbit’s horn’, ‘the sky-flower’ or ‘the son of a barren woman’. These examples are found everywhere in Nyāya literature. These are meaningful expressions and share the same substantial structure in common. This expression can be used positively in the sense where a proper name might have been used. Understanding its meaning precedes knowing whether or not the expression certainly refers to any real entity. But expressions like ‘round square’, ‘circular triangle’ etc. are impossible empty terms. These are impossible objects and we will never perceive these empty terms in future also. We know that the term ‘square’ cannot be defined by the term ‘circle’. Likewise, the term ‘circle’ cannot be defined by the term ‘triangle’.

Nyāya tries to show that “if we allow statements about fictitious entities in a logical discourse- statements by which we purport to attribute some property to the fictitious entity- we will have no way of deciding whether they are true or false, for it will never be possible to experience the fictitious entity through any accredited means of knowledge.”²⁹ But the Buddhists claim that we do utter statements about fictitious entities. They say,

“we tell fictitious stories and also we can conceive of unreal entities like the rabbit’s horn or the hair of a turtle. It is not always the case that we have to know an object before we may make statements about it or attribute some property to it. A simple cognition, an error, a conceptual construction, or even a deliberate attempt at fiction, will be enough to justify our speech-acts about fictitious entities. And statements about fictitious entities like the rabbit’s horn, winged-horse may also serve some useful purpose in a logical discourse.”³⁰

There is some space for ‘unactualized-possibles’ in Buddhist and the Mīmāṃsā Schools. However, the Nyāya does not leave space for the empty terms such as “sky-flower” or “winged-horse” because of its position as a school

²⁹Matilal, B. K. (2005). *Epistemology, Logic and Grammar in Indian Philosophical Analysis*. edit. Jonardon Ganeri, New Delhi: Oxford University Press. p. 101-102.

³⁰Matilal, B. K. (2005). *Epistemology, Logic and Grammar in Indian Philosophical Analysis*. edit. Jonardon Ganeri, New Delhi: Oxford University Press, p. 102.

representing realism. Unless there is a referent object, a term is non-significant for the Naiyāyikas.

While negating expressions such as ‘sky-flower’, ‘winged-horse’ etc., we are, in fact, denying their actuality is the position held by some of the Indian thinkers. These terms may have some usefulness any logical discourse. But, this is not the stated position of the Navya Nyāya. Matilal has put forward a strong argument against all those who argue for some space for such empty terms. However, in the case of the term ‘sky-flower’ being replaced with “round-square”, all the schools in one voice decline the possibility of such expressions even in distant future. I call them ‘illusory possibles’. The Navya Nyāya following Gāṅgeśa vehemently criticizes any role or significance for singular or general empty terms. And sentences which contain empty terms (empty expressions) equally find no place in either classical or the Navya Nyāya school.

NAGARJUNA'S EPISTEMOLOGY: ON EPISTEMOLOGY AND ITS LIMITS

SHAKUNTALA BORAH

When we try to discuss epistemology of Nagarjuna,¹ we do not really come across a 'position'. Typically of Nagarjuna, his epistemology comes out in refutation to what others affirm.² But in whatever way it is discussed, it is expected that Nagarjuna's epistemology should come up with a way of knowing emptiness. But given his ontological position, it should also turn out that knowledge, even if of emptiness, itself should be empty. Nagarjuna, it would seem, tries to say exactly that. And this he tries to say by trying to show that 'means of knowledge' themselves are empty to provide for knowledge. We find a list of four *pramana* in Nagarjuna's discussion of epistemology, but he is not found interested in discussing their nature. He rather enquires into whether the so called means of knowledge can be established. For if he can show that they cannot be established, he proves that they are empty.

Discussion of Nagarjuna's epistemology begins with opponent saying that problem arises if Nagarjuna is considered as right regarding everything being empty or lacking intrinsic nature. The opponent suggests the epistemological implications of Nagarjuna's ontological position: that all knowledge-claims are devoid of intrinsic nature which would include his own knowledge-claim 'all things are empty'. The argument is apparently valid. But Nagarjuna's knowledge-claim needs to be understood not only against the background of emptiness of all entities but also requires that we keep in mind how and why he made this claim. In the famous 29th verse of *Vyagrahavyavartani* (VV) Nagarjuna says that he does not have any thesis (*pratijna*). He has no thesis to prove. In fact it seems to be the case. 'All things are empty' is not a thesis that Nagarjuna is trying to prove but it is something he has come upon by refutation of other theses. Nagarjuna's knowledge-claim has to be understood against this backdrop.

The first twenty verses of *Vyagrahavyavartani* (VV) consist of attacks on Nagarjuna's views by his opponent. Nagarjuna's replies and counter attacks begin from verse 21. Nagarjuna's epistemological view is also an outcome of his counter attack. In VV.5-6 the opponent points out certain difficulties involved in Nagarjuna's knowledge claim 'all things are empty'. The claim suggests that Nagarjuna has

acquired knowledge about entities as empty. But perception and other means of knowledge do not exist as claimed by Nagarjuna. However, he could have acquired this knowledge about entities only if he has used means of knowledge for its acquisition. As means of knowledge do not exist, in their absence how could Nagarjuna have gained knowledge about objects of knowledge? One cannot make any assertion if one has not apprehended it. On the philosophy of Nagarjuna, there being no entities known, he could not have apprehended them as empty. Thus he should not be making any assertion about entities. His knowledge claim about things or entities 'all things are empty', therefore, does not hold. Again, Nagarjuna himself being empty does not exist. In other words, non-existent Nagarjuna used non-existent means of knowledge to come to certain knowledge about entities.

Nagarjuna replies in VV.30 that he would have made claim about objects only if he had perceived. But as objects with *svabhava* are not there he cannot be criticised for making any assertion or denial about them. Nagarjuna can be interpreted as saying that his knowledge claim is not about an object as understood from opponent's point of view. He does not make claims about any distinct intrinsically existing object. But he is being criticised by the opponent from the standpoint which makes the presupposition that there are intrinsically existing objects.

In this verse Nagarjuna is trying to make clear once again that criticism when made with the presupposition of things existing intrinsically or with *svabhava*, as is done by the opponent, cannot actually be applied to him. The opponent is criticising Nagarjuna under the assumption that there is an object to be known and there are means to know them. Nagarjuna is questioned as how he could have come to know about object of knowledge without means of knowledge. But the fact is that, in Nagarjuna's philosophy, there is no object of knowledge to gain knowledge about which one will have to use means of knowledge. Objects of knowledge, for Nagarjuna, are empty and so are means of knowledge. They are not distinct entities in his philosophy; there is no clear cut division between them for Nagarjuna. Then where is the question of using one for the other?

Nagarjuna's counter attacks begin with VV.31. With these counter attacks Nagarjuna tries to show that there are difficulties that arise when one considers

epistemic tools as absolutely distinct and independent of one another. Nagarjuna tries to achieve this end by showing the problems one faces in establishing validity of means of knowledge.

In verse 51 of *Vyagrahavyavartani*, we come across the summarisation by Nagarjuna himself of the possible ways of establishing means of knowledge which are rejected by him. The summarisation reveals three possible ways for establishing means of knowledge. They can be put as follows: 1. A certain means of knowledge is established by another means. Let us say, perception can be established by inference or comparison or testimony. For example if I have doubts about the tree I am seeing I can ask someone whether I am correct or not. Or in fact perception can be established by another perception. If I have doubt about the tree I can go near it and check. 2. Means of knowledge establish themselves. Means of knowledge do not require anything to establish them but themselves. That is, they are self-validating. 3. The object of knowledge establishes the means of knowledge. Or while means of knowledge establishes the object, the object establishes the means. For example, I see a table and know it as such which in turn tells me that I must have perceived it.

In VV.31, Nagarjuna questions his opponent how the means of knowledge, which establish the objects, themselves get established. Nagarjuna points out that for the opponent any object is established by means of knowledge. Now, means of knowledge by virtue of this claim need to be established. And as the claim goes, they need to be established by means of knowledge. This is the first alternative suggested of establishing means of knowledge. But, if this alternative is accepted, there would arise the problem of infinite regress. A means of knowledge is established by another means of knowledge; this second means of knowledge now needs to be established by a third one which will require a fourth and so on ad infinitum (VV.32). The Nayayikas do have a way to stop the regress. The Nayayikas do not deny the possibility of the regress in theory. But in practice, they claim, what happens is that when someone has doubt about something perceived, he or she would test it out by a second means. For example, if I doubt that what I see is a glass of water I can test whether it is so or not by drinking the stuff in the glass and when find it quenching my thirst I say that it is a glass of water. Or if I have doubt that I am seeing a tree, I can ask someone and remove my doubt. However, such ending of the regress does

not serve the purpose set out to be achieved with regard to validation of means of knowledge. The means that establishes the previous one remains invalidated.

It can be however claimed that instruments though establish other objects being instruments do not require themselves to be established. In that case, they cannot be claimed as epistemic objects. One can, however, say that they are epistemic objects but still they do not need to be established. In that case the opponent would be actually saying that while some objects need to be established others do not need to be. In other words, it would be false that all objects are established by means of knowledge. Further, it would make the opponent guilty of ascribing special status to epistemic instruments (VV.33). The opponent here suggests the second alternative—means of knowledge are self-validated: “As fire illuminates itself and others, the epistemic instruments illumine both itself and others”. If this claims that means of knowledge are self-validated is proved, then it would solve the problem of infinite regress. Moreover, it also would reply to Nagarjuna’s criticism that means of knowledge are treated especially by the opponent without giving good reason why they are treated so if they say that means do not require establishment. If self-validation is accepted, then one need not hold that they do not need to be proved. They will get established themselves just the way they establish objects.³

Nagarjuna does not straightaway attack self-validation of means of knowledge. He rather begins by attacking the metaphor of fire the opponent is using to illustrate the self-illuminative character of means of knowledge. Nagarjuna seems to have taken refutation of fire example seriously. The reason can be attributed to the fact that this example was prevalent in ancient India to demonstrate the self-illuminative capacity of knowledge. Nagarjuna has probably in mind that by refuting the example of fire as self-illuminating, he can have a strong case against self-illumination of knowledge.⁴

Nagarjuna starts by saying that fire does not illumine itself (VV.34). His proceeds in his argument in the following way: For anything to be illuminated, first that thing has to be in darkness. For example, the pot first is in darkness to be illuminated later. Now if we say that fire illumines itself, it would follow that fire is in darkness to be illuminated later. But one cannot find a fire hidden in darkness

waiting to be illumined. Thus, the argument of opponent falls. For Nayayikas, just as for Nagarjuna, darkness is absence of light. Where there is light, there is no darkness and where there is darkness there is no light. Understood this way, fire cannot be hidden by darkness to be illumined later. Any talk of darkness hiding the light can arise only if darkness is thought as an entity.

Nagarjuna now gives a second argument against fire illuminating itself (VV.35). The argument is: Fire in illumining other things also consumes them. Similarly, fire if illumines itself should consume itself. But fire is not found to be consuming itself. Therefore, the argument that fire illumines itself does not hold. This verse has been taken by Bhattacharya⁵, following Sankaracharya, as meaning that just as subject cannot become an object of its own act, fire cannot act on itself, i.e., illumine itself. Wasterhoff⁶ takes it to mean that as illumination entails consumption of fuel, self-illumination entails self-consumption. And as fire does not consume itself, it does not illumine itself. But I feel it goes more with Nagarjuna's philosophy if we render the following understanding of the verse: It can be understood as meaning that fire consumes or burns that which it illumines. Thus it being self-illuminating also burns or consumes itself. But empirically that is observed as not being so- fire does not burn itself. Therefore, fire does not illumine itself.

In VV.36 Nagarjuna gives the third argument against fire as self-illuminating. He argues: If fire is thought to illumine itself and others, darkness which is its opposite should be considered as something which conceals itself and others. But darkness does not conceal itself. Therefore, light also does not illumine itself. Nagarjuna seems to face some problems here. First, it has been pointed out, and aptly so, by Wasterhoff⁷ and Burton⁸ that it is difficult to understand what is actually meant by 'opposite'. And second, as a corollary to this assumption, Nagarjuna is ascribing opposite qualities of light to darkness. Burton argues that Nagarjuna should not have done it, because darkness is not a substance while light is. Wasterhoff tries to overcome such a criticism, in his commentary to the verse, by saying that he sees no difficulty in ascribing opposite qualities to absence of light though it is an *abhava* and not a substance. This probably would not solve the problem, as for the Nayayikas, *abhava* by definition is the state where attributes cannot be predicated. One can, however, try arguing in the following way: *bhava* is that which is capable of being

predicated and *abhava* is that which cannot be predicated of. Now as *bhava* can be apprehended, *abhava* should be such that it cannot be apprehended. But *abhava* can be apprehended as admitted by the Nayayikas themselves. In other words, *abhava* cannot remain incapable of being apprehended/cannot remain obscure by virtue of being an *abhava*. The *abhava* of fire, that is darkness, also cannot remain obscure as it can be apprehended. And as the *abhava* of light cannot remain hidden/obscure, similarly light, which is its opposite cannot be such that it reveals itself.

The fourth argument against fire being self-illuminating is put as such: The case is such that there is no darkness in fire and no darkness where there is fire. Further, illuminating is nothing but prevention of darkness. If this is the case and which is the case, there arises the question of which darkness fire prevents when it illumines itself (VV.37). The opponent here replies that it is precisely because fire illumines itself and other objects when it arises that one cannot find darkness in fire and where fire is. Nagarjuna shows the problem of holding this position- that fire illumines things and itself at the moment of arising- in the next verse (VV.38). Fire, in order to prevent darkness, has to come in contact with darkness at the moment of arising. But fire cannot come in contact with darkness at the moment of arising.⁹The reason is that such a position implies that there is a moment when fire and darkness co-exist for fire to come in contact with darkness in the next moment. The question that arises on such an assumption is that what keeps them from staying like that for next moment as well.

There is no answer to that. So it cannot be held that fire comes in contact with darkness at the moment of its arising. Nagarjuna advances by saying that as fire does not come in contact with darkness at the moment it arises it cannot dispel darkness. And as darkness is not dispelled or destroyed, there is no illumination.

The opponent can be thought now to reply by saying that fire dispels darkness without coming into contact with it. There is a problem to such a consideration. If it is admitted that fire can dispel without being connected, then why fire/light in one room does not illumine the entire world (VV.39)? There does not really seem to be an answer to that.

Nagarjuna actually disproves the self-illumination of light in two ways: first by disproving that light can illumine itself and second by proving that it can

illumine darkness. By proving both he thinks he proves that light cannot be considered as self-illuminating. Argued from Nagarjuna's empty-position, the question of lamp/fire dispelling darkness may not arise. Nor will arise problem regarding self-illumination. Because, for Nagarjuna fire and darkness are not distinct entities; similarly, self and other are empty to talk about self-illuminated and other-illuminated. However, if fire or light and darkness are regarded as two distinct things problem arises. And this is what Nagarjuna has been trying to show. Light and darkness are not to be treated as distinct.

Nagarjuna's refutation of the example of fire and illumination as an example of knowledge and its illumination can be understood as serving dual purposes. First, it is used to show that the example Nayayikas are using to prove self-illumination of knowledge is defective. And second, though Nagarjuna has not said it explicitly, it can be considered as proving the insufficiency of Comparison or *upamana* as a source of knowledge. Metaphors have their limit. And without putting conditions to qualify metaphors, which may not practically be possible, Comparison actually cannot help one to get knowledge.

After showing the defective character of the example chosen by the opponent to prove the self-validating nature of means of knowledge, Nagarjuna tries to show that means of knowledge by themselves cannot be considered as self-establishing. The problem Nagarjuna points out is this: If the means of knowledge are self-validating then it is implicative of the fact that they do not depend on anything else for their establishment, that is, they are independent, independent particularly of objects of knowledge (VV.40). Opponents argue here that they do not find any problem in regarding means of knowledge as independent of objects of knowledge.

Nagarjuna replies now that if means of knowledge are independent of objects of knowledge, then they cannot remain means of knowledge. And in fact they are considered as means of knowledge precisely because they make the object of knowledge known (VV.41). First part of the argument is aimed at the opponent but the second part of Nagarjuna's argument establishes his own thesis. In his criticism of opponent's view Nagarjuna points out the absurdity of considering the means of knowledge as independent. A means of knowledge if is considered independent, it

would mean that it does not need an object of knowledge. That is, means of knowledge can be there even if object of knowledge is not there. But can there be a means of knowledge without object of knowledge? Can there be perception without a perceived object? Again, can we understand the meaning of means of knowledge without understanding it in relation to object of knowledge? Neither existentially nor conceptually means of knowledge and object of knowledge can be there. This is exactly what Nagarjuna says in the second part of the verse- means of knowledge being dependent on object of knowledge do not have *svabhava*- they are empty.

So far, regarding the question of validation of means of knowledge, Nagarjuna has considered two options: that means of knowledge are mutually validated and that means of knowledge are self-validated. Nagarjuna proves that none of the options are satisfactory. He now takes into consideration the third option: means of knowledge is established by object and/or means and object of knowledge are mutually established. Considered from Nagarjuna's point of view, such dependence of means on object or their mutual dependence is not unacceptable. But, standing on the platform of the opponent it gives rise to problems. Let us see now what the problems are:

First, if it is agreed that means of knowledge are established by objects of knowledge, it commits the fallacy of establishing what is established (VV.42). Explicitly put, the argument may be considered as such: the means of knowledge have established the objects of knowledge. Now these objects which have been established by the means which hence can be assumed as established, are established again by the objects. But that which is already established stands in no need of further establishment.

Second, the means of knowledge which are considered as establishing the objects of knowledge cannot do so if this (objects of knowledge establish means of knowledge) is accepted. If the means of knowledge are in need of being established by the objects, the objects of knowledge cannot be established by means of knowledge. This is for the reason that what needs to be proved, cannot itself prove the one used for proving it (VV.43).

A third problem arises when means and objects are considered as mutually interdependent for validation. But before one comes to this option of mutual validation of means and object Nagarjuna points out another option. It is the alternative of regarding objects of knowledge as independent of means of knowledge. But this alternative has its own problem. If epistemic objects are independent of means of knowledge then one would not need means of knowledge to establish them. The objects being already established are not in need of being established again (VV.44). If objects are viewed as independent, the means of knowledge become vacuous.

Now, if means of knowledge are viewed as establishing objects of knowledge and objects of knowledge as establishing means of knowledge, then means of knowledge become objects of knowledge and objects of knowledge become means of knowledge by reverting their roles (VV.45). But in that case neither can be established by the other (VV.46). This is so because objects are in need of being established by means of knowledge which was to be established by the objects. These objects now not being established cannot establish the means. These unestablished means now definitely cannot establish the objects (VV.47). Again, if means are to be established by objects which are to be established by the means, the objects cannot establish the means (VV.48).

This problem of validation, arising out of considering means and objects as mutually dependent, is brought out by Nagarjuna with the help of an analogy. He says that it is like telling people that son is to be produced by the father and the father is to be produced by the son (VV.49). Both bear the mark of father by being producers and both bear the mark of sons being produced. Similarly, the means and object both bear the mark of being an instrument by establishing the other and also bear the mark of being object by being established by the other (VV.50).

Nagarjuna's epistemology serves the purpose of establishing his ontology that things are without *svabhava*. Nagarjuna by proving that the means of knowledge cannot be established also proves by implication that objects of knowledge cannot be established. There are no means of knowledge and objects of knowledge as understood by the opponent. However, it is not to be taken that there are no ways of

knowing and nothing can be known. Rather what Nagarjuna wants to say is that the means of knowledge and objects of knowledge are empty. Each cannot be understood without the other. The example of father and son, which he uses in *Vyagrahavivartani* to refute the applicability of mutual dependence, is in fact used in *Sunyatasaptati*¹⁰ to say that things are mutually dependent. He says that “The father is not the son, a son is not the father. Neither exists without being correlative.” It is true a father is not the son just as a son is not the father, that we understand two different beings when we talk about father and son. But it is not to be taken to imply that they are independent beings, existing independently of each other. The second sentence says just that- The son cannot come into being without the father and the father cannot have his being as a father without the son. Someone to be a son has to have parent, which in this example is a father; likewise someone has to have progeny, which in this example is a son, to be father. Both are dependent and thus are empty. Similarly, the means of knowledge and object of knowledge are ‘correlative’ - one cannot be there without the other.

At the acceptance that means of knowledge are empty, the question that arises is how one is to know anything at all. Nagarjuna, certainly cannot be taken to mean that perception etc. do not give us knowledge; that we can know nothing whatsoever. There is perception and we do perceive. But there is not distinct line dividing the source from the perceived object. No distinct line that would divide each source from the other. Mark Siderits has argued that so far as our everyday knowledge is concerned, Nagarjuna should not be taken as denying means of knowledge as giving us knowledge.

Question is raised as how to, however, know that all things are empty. But can such a question be raised at the background of Nagarjuna’s philosophy? First, for Nagarjuna, emptiness- the ultimate state of reality is not such that it exists. He is against the very dichotomy of existence and non-existence.¹¹ Nothing can be picked out by ‘emptiness’. It is a non-denoting term.¹² Second, everything being empty, ‘know’ too in his philosophy cannot be understood as something specific, as something that picks out a specific state of cognition. The problem of knowing emptiness arises because the very question is occurring at the background of considering emptiness as the object to be known by a means. According to Siderits,

considering Nagarjuna's arguments as being successful, they manage to show that theory of *pramanas* cannot be employed to defend any metaphysical thesis if it is not constructed without the presuppositions it comes with. Further, it shows that common-sense intuitions regarding means of knowledge do not help in establishing any metaphysical thesis.¹³

Nagarjuna's epistemological discussion, by showing that ways of knowledge are empty, shows in a way that it is wrong to ask for ways of knowing emptiness. To talk of emptiness and in the same breath to ask for means of knowing it does not really make sense. For one who believes in object of knowledge it is acceptable that he asks for a means of knowledge. But one who sees that things are empty, it is not appropriate. There is no 'ways' of knowing the ultimate nature of reality, for emptiness is not 'object' of knowledge. One can know emptiness in knowing phenomenon and one can know phenomenon by means of knowledge. Just that one is not supposed to look for a distinct object and a distinct means. In seeing that a thing is dependent and thus empty one sees emptiness. One does not need specific way of knowing to see that things are empty. It is the failure to come out of seeing things with *svabhava*-presupposition that gives rise to problems even in epistemological field. To understand emptiness we want a way – we still stick to *svabhava* laden way of thinking. Epistemological concepts are empty and should be treated as such. And it is precisely this that is often forgotten. As Nagarjuna says: "If the adherents of being (*astitavadin*) who keep on clinging to being, go on in the same way, there is nothing strange (*adbhuta*) about that. But it is strange indeed that the exponents of impermanence of everything [who] rely on Buddha's method (*marga*) keep on adhering (*paramars-*) to things (*bhava*) with strife (*vivada*)."¹⁴

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DREAM AND CREATIVITY: A HYPOTHESIS ABOUT THE PROCESS

JITENDRA RAMPRAKASH

Two classic duels have been debated for centuries, one between reason and emotion and the other between dream and reality. By linking the two and by stringing together reason, emotion and dream as a context, we have before us an entirely new space for both, philosophical excavations and theoretical explorations; an inviting matrix, in which many a philosophical question can be re-considered. The question I will be contemplating upon in this paper, is that of creativity.

Let me at the very outset, spell out the ‘why, what and how’ of the attempted hypothesis. I believe that there are many topics of multi-disciplinary enquiry, whose core theoretical questions can be answered best in philosophy or through philosophical methods. Many such topics demand a broadening of, rather than an exclusion from, the traditional or current themes of Philosophy. Creativity is one such fascinating topic. Flanagan, calling for a holistic approach to philosophizing dreams, argued, “A robust theory of the nature and function of dreams will need to bring into equilibrium insights from philosophy, phenomenology, neuroscience, psychology, psychiatry, evolutionary biology, sociology, and anthropology”.¹ Some contemporary philosophers have made similar appeals for a holistic approach to creativity.² Philosophy, I hold, must step out of the traditional confines of aesthetics, recognize creativity as an important domain of enquiry in itself and undertake a fresh, broad-based exploration of the multi-disciplinary knowledge, to help arrive at a comprehensive and satisfactory understanding of the subject.

What follows is one such attempt at cross-pollination of knowledge and theoretical growth, drawing upon the science of dreaming and psychology and hypothesizing about the process of creativity during wakefulness. With the premise that there is a deep similarity between the processes and tools of dreams and creativity, there are three stages of the theoretical exploration:

- What do we know of creativity based on recent research, especially in psychology?
- What do we know about the seemingly creative process of dreams and of the

role of reason and emotion from the standpoints of science and psychology?

- How can the thinking and knowledge about dreams be applied to the theoretical problems of creativity, specifically in this case, its process?

The creative process is yet to be fully understood and the hypothesis presented here, deals with only a few of its elements in brief, as a detailed exposition would demand a series of papers.

The Question of Creativity

Creativity: the Psychological Theories

Creativity has been the subject of much multi-disciplinary thinking, from ancient texts and aesthetics to research in fields like arts, psychology, neuroscience and artificial intelligence. There are, at least, five main areas of enquiry into creativity: (a) biographical work on and notes of highly creative people like artists, inventors and scientists, (b) psychological studies conducted on such people, (c) scientific inquiry and neuro-biological studies of the brain, (d) literature and arts, and (e) philosophical insights provided by thinkers on a range of related subjects like insight, intuition, revelation and aesthetics.³ Of these, I turn to psychology here, to set-up the context of creativity. Modern psychological research has come to an understanding of creativity, centred around three things – 4 ‘C’s, 6 ‘P’s and ten types of theories.⁴ The four ‘C’s of creativity refer to the four types or magnitudes of creativity:

- (1) Big C: The creativity of the recognized geniuses like Einstein, Beethoven and Shakespeare.
- (2) Pro C: The creativity of the professionals, who though recognized as creative, could perhaps never measure up to the geniuses.
- (3) Mini C: The creativity of the hobbyists or professionals, who create for fun or for a living, but essentially replicate the work of those thought to be truly creative. (This would include musicians, who play out the symphony of Beethoven or road-side sketch artists, who make realistic portraits of tourists for a living).
- (4) Small C: The creativity in everyday acts of life by one and all. (For example, the creativity of a child who draws a painting for a school assignment.)

The Six 'P's of refer to the areas of research and theory:

- (1) Person: Elements related to the psychological profiles of creative people.
- (2) Place: The historical, geographical and sociological factors and how they affect creativity.
- (3) Product: The creative output.
- (4) Process: The exact mental dynamics, processes and tools involved in the act of creativity.
- (5) Persuasion, also called the Press: The motivations of creativity.
- (6) Potential: The potential impact of a creative product on the society and the times.

Researchers, especially after the 1950s, have painstakingly collected a wealth of information about these factors from vast textual, empirical and historical research. The information is invaluable, but the theories are woefully inadequate and are at best the pieces of a larger puzzle. There are at least ten major 'types' of creativity theories in modern psychology alone, categorized as: (1) Developmental (2) Psychometric (3) Economic (4) Stage & Componential Process (5) Cognitive (6) Problem Solving & Experience Based (7) Problem Finding (8) Evolutionary or Darwinian (9) Typological, and (10) Systems Theory.⁵

Such is the confusion that some experts have even suggested that there is no need for a new over-arching theory that may eliminate some of the competing ones. Given that the data is rich and vast, the multiplicity of theories and the self-confessed inability of the theorists to arrive at a comprehensive understanding, indicate a core problem. Perhaps, there is something amiss, philosophically. Perhaps, there is a need for re-philosophizing the problem and not just re-analyzing the research.⁶

The Core Problem of Creativity Theories

In all questions related to creativity that await a satisfactory answer, one is especially baffling – the question of the exact process of creativity. How do we create? What are the specifics of the process? What happens in the mind and how? I believe that a satisfactory theory of the creative process would be the central piece,

around which other pieces of the puzzle would form a coherent picture. For now, it remains a mystery even more perplexing perhaps, than the process of dream-formation.

The creative process remains largely in the domain of enigma, mystery and revelation – an almost divine act played out in the fragile realm of mortality. Fascinating and enigmatic, it is the quintessential magic of the universe, enacted in the microcosm of human existence.

...The artist rearranges the material and the experiential to “create”, but he often does not know how; mostly, nor does the scientist. Ask the artist how he came up with a certain image, the poet about a verse, the scientist about his moment of eureka. He or she can rarely explain the mental dynamics of the process. A flash, a miracle, a sudden vision, or a long journey of insights and creative blocks! But how? He or she will perhaps provide you with some hints, sketchy descriptions of the stage, the setting, the situation, the engagement, the thought. But how exactly did the notations of a 'new' sonnet appear on a white page? The artist does not know, and often perhaps, does not even want to. Yet, the philosopher in me, wants to understand precisely that.⁷

How can we use philosophical wisdom and methods coupled with a holistic interdisciplinary approach to come up with the answers? What can we learn or apply for example, from our understanding of reason, emotion and dream, to creativity?

Dream: Plot, Drivers and Processes Traditional and Philosophical Notions and Questions

Over centuries, so much has been written on the subject of reason and emotion that it is neither possible nor required to encapsulate it here. Suffice it to remind ourselves that reason and emotion are mostly perceived as conflicting forces that Plato described as two horses pulling a chariot in different directions, while the charioteer struggles to make them work as a team.⁸ It has been suggested that the two, do sometimes work in tandem with each other, but the common belief and experience seems to be in agreement with Hume’s assertion, “Reason is a slave to the passions”.⁹ Most people would assign the same status and conflicting properties to reason and emotion in the domain of creativity too.

The subject of dreams has also been discussed extensively across disciplines. The question asked most often, is: (1) Do dreams have a meaning, a message, a divine signal or omen? Additionally, Flanagan summarised some of the traditional philosophical questions about dreaming: (2) of dream versus reality, (3) remembering or experiences versus fabrication, (4) of morality, (5) of self, and (6) of the function,

if any, of dreaming.¹⁰ Many of these questions find a resonance with those about creativity, especially the ones related to meaning, reality, self and function. But the question I am asking here, is about (7) the processes of dreams and the role of emotion and logic.

Let us look at some relevant information from a variety of sources, from the accounts of dreams of philosophers and others to scientific studies and psychological theories; and then see what can be applied to hypothesise about the process of wakeful creativity, and how.

How Dreams inspire Thinkers, Creative Individuals and Scientists

Most of us realize intuitively that dreams indeed have some sort of a link with creativity. The idea that the processes of dreams and wakeful creativity could be similar, though not identical, finds ready support in the accounts of the dreams of philosophers, creative individuals, scientists and others. These famous dreams demonstrate that dreams can be contemplative, philosophical, creative and even do scientific problem solving through images and ideas.

We know about some dreams of important philosophers and the profound significance that they had in relation to their life and work. Plato described a dream of Socrates that related to the day of his death. In Confessions, St. Augustine spoke to God of his dreams and the moral problems they seem to present. At a critical juncture of his life, Descartes saw three powerful dreams one night that impacted his life and philosophical work. Leibniz had a sort of a philosophical dream of a vast and deep underground cave in which men rushed into the darkness in pursuit of glittering little flies they called 'riches' or 'honours'. Similarly, there are records of dreams of Spinoza, Kant, Wittgenstein and others.¹¹

In literature, a famous dream is that of Coleridge. He dreamt of the poem, Kubla Khan, word by word, and upon waking up, immediately sat down to write it. After a few stanzas, the doorbell rang and a reluctant Coleridge got up to answer it, but when he returned to his desk, he had forgotten the remaining poem. The published poem remains the incomplete version of the one 'created' in the dream. Barrett and Van de Castle described many such phenomena. For example, artist

Salvador Dali claimed that dreams stimulated his work; film-makers such as Ingmar Bergmann, Carlos Saura, and Federico Fellini directly transformed their own dream images into film sequences; and Paul McCartney heard the melody of the song “Yesterday” within a dream.

Dreams have also been known to contribute to problem solving in science. Kekule reported that he discovered the ring structure of the benzene molecule, by contemplating a dream in which a snake seized hold of its own tail. Other dream-solutions have been reported for Mendeleev's categorization of chemical elements, Howe's invention of the sewing machine, and Hilprecht's deciphering of the ancient Babylonian hieroglyphs.¹²

The Science of Dreaming: Dream Plot and Drivers

Though dreams are obviously creative in their nature, yet before extrapolating insights from the science of dreaming to creativity, one must understand the role of role and control of will and consciousness, emotions and logician dreams. One's will is absent or diminished, but not always. There can be some short-term and limited control of the will in ‘lucid dreams’.¹³ The state of consciousness in dreams is different from that in waking life.¹⁴ Dreams represent a sleeping state of consciousness. Centres that arouse consciousness become active. The centres in the brain that process and perceive much of our waking space are active as well. But it seems that the brain is activating itself purely from within. Foulkes argues that dreams are little more than waking consciousness stripped of most sensory input and freed from the obligation of making coherent connections to the external world.¹⁵

That emotions are the drivers of the dream plot, hardly needs to be argued. Hobson suggests:¹⁶

- Dreams contain increased, intensified emotion, especially fear-anxiety that can integrate bizarre dream features and shape the dream story.
- There is an increased incorporation of instinctive emotions (especially fight-flight), which also may act as powerful organisers of dream cognition.
- The emotion, once triggered, is the driving force of the dream plot, and that the forebrain responds by surfacing associations, in the form of dream

imagery and actions.¹⁷

Others like Seligman & Yeller also hold that emotion is the primary shaper of the dream plot, and not a reaction to it.¹⁸

For the dream plot to unfold however, the driving force needs a counter force. It has for long been suggested that there is some kind of reasoning or logic at play in dreams. The neural network for dreaming contains enough cognitive processing areas to produce coherent dramatisations that often reflect the dreamer's conceptions and concerns in waking life. Even though the logical 'filters' are not applied, meaningful processing may still be taking place within the dreaming brain.¹⁹ Dream imagery, and its hidden meaning, may be a result of what Berne and Savary call 'limbic logic',²⁰ explaining that the brain operates on at least three different types of logic:

- (1) Linear Logic: The system for gaining knowledge, problem-solving, making choices, decisions and reasoning. It principally resides in the left hemisphere of the cerebral cortex, and is off-line during dreaming.
- (2) Kinaesthetic Logic: It responds to immediate physical sensations with the goal of finding pleasure and avoiding pain. The seat of this kind of logic is the brain stem.
- (3) Limbic Logic: Residing in the Amygdala and other limbic centres, it is active during dreaming. It has a goal of safety and survival in times of danger, and therefore associates an emotion to the sensory data it encounters.

However, some researchers suggest that a more 'refined logic' and the higher centres of the brain are also involved in dream thought. Hobson and McCartney contend that dreams are the result of higher brain centres attempting to make sense of the activity in the lower centres. From this viewpoint, dreams could be simply be an attempt to make a rational story out of random neural activity. Others like Antrobus also argue that higher brain centres, and some cognitive processes, are indeed involved in the creation of dreams at the onset.²¹

Psychological Processes of Dream Formation

To compensate for the lack of definitive knowledge about the 'refined' logic' in dreams, let us add to the mix, an insight about the dream processes, from the

theoretical work of someone, for whom the otherwise overused adjective 'great' is, in my opinion, quite befitting.

Freud's theories have been debated, loved and hated, but can never be ignored. He covered vast ground on the subject of dreams, theorizing about the motivation, symbols, processes, tools and much else. While Freud's controversial, yet thought-provoking theory focuses on the interpretation of dreams, I am going to draw upon something he said about the processes. Freud suggested that there were four tools of dream-formation: 'condensation, displacement, substitution and dream-censorship'.²² There is some neuro-biological evidence for condensation, and the other processes seem quite logical too. Most of us have had dreams that we seem to understand, at least partially, and the four processes are not hard to detect in the formation of the dream plot.

The Creative Process: a Hypothesis

Given that there is indeed some role of the will and consciousness in dreams, it would be reasonable to draw upon our knowledge of dreams to hypothesize about the process of creativity during wakefulness, provided we assign greater control of the will and consciousness in case of the latter. Just as in dreams, in the case of creativity too, the role of emotions is obvious. But perhaps, we need to account for more complex rather than primal emotions at play.

The Dialectics between Emotion and Logic

The conflict between emotion and logic is complementary in its nature and not merely adversarial. A dream is disrupted only when a strong or persistent external stimulus or a negative emotion becomes too much to contain and overrides the logical structures and tools of dream formation. As long as the processes and the dream-reasoning continue to successfully contend with the drivers, they help sustain the dream, and make it plastic.

The complementary nature of reason and emotion in dream-formation, I suggest, could be a key to developing a satisfactory theory of the creative process. Both in dreams and creativity - the conflict between reason and emotion, works as a dialectics that creates the form, like two complimentary notes that help create a

melody or two colours that mix and create a third one. Unlike the case of two horses pulling the chariot in different directions, the conflict is rather like two forces pulling a rope in opposite directions providing the necessary tension to hold it in place for the rope-dance of creativity to take place.

Dream Logic and Beyond

Just like dreams contain some sort of a narrative, most, if not all, artistic work, even if highly abstract, has the element of a statement or a narrative, obvious or otherwise. Of the three types of logic that science confirms to be at play in the brain, the role of two can be easily hypothesized in the case of wakeful creativity. While ‘limbic logic’ may not exactly be at work in wakeful creativity as it is in dreams, for it deals with rather primal forms of emotion, ‘linear logic’, though off-line in dreaming, is obvious in wakeful creativity. This is easily evident in the case of fiction. It serves as the threading device and along with other elements of thinking, sustains and moves the narrative of a fictional piece. The most obvious examples are the simple childhood stories that follow a linear chronological pattern, beginning often with, ‘Once upon a time...’. A more complex play is evident in pieces with narrative devices like flashbacks and parallel time-frames. Here again, the sanctity of linear progression is accepted, though played with.

I must point out here that I do not wish to suggest that the creative process in its totality is itself linear. On the contrary, the overall process, I believe, is recursive, with linear logic being just one of its many tools working along with other processes and types of logic.

‘Kinaesthetic logic’ or similar processes help assimilate some of the immediate sensory data into the details of the piece at work, if found useful to its nature and content. The sensory inputs could trigger elements of the piece or its mood, especially in poetry or poetic work, due to their more fluid nature as compared to prose. In either case, the sensory input has to be suitable and malleable enough to facilitate assimilation, failing which, it could serve as a mere distraction or disruption.

In addition to the types of logic mentioned above, I would suggest there is another set of logic processes involved, at least in creativity - something that I call, a ‘structural logic’. It is responsible for connections between sub-parts of a narrative or

an image and makes connections outside with other narrative elements and images to develop expressions like metaphors. This may even be termed ‘structural-metaphoric logic’. I divide it into two similar logics, that help connection within and outside a structure: intra-structural and inter-structural logic.

For the sake of brevity, it will be easier to explain it here by focusing on the development of metaphors, rather than a complex narrative. Let us take the example of a commonly used symbol in poetry - a tree. Once the tree is used as an initial metaphor in a creative piece, for let’s say, one’s life, structural logic makes connections within and outside the metaphor. Intra-structural logic can develop the creative piece by assigning values and expressions to parts of the tree - for example, the fresh tender leaves may be regarded as a symbol for new life, fruit as joy, and nest as one’s home, and so on. Inter-structural logic will similarly make meaningful connections outside, with elements like the soil, wind, and sun to take the narrative further. Summarily, one can hypothesize that the ‘linear logic’ holds the thread, the ‘structural’, develops and the ‘kinaesthetic’, assimilates in the processing of wakeful creativity.

Applying the ‘Freudian Four’:

Let us see how the four Freudian processes of dream formation - condensation, displacement, substitution and censorship - can be used in hypothesizing about wakeful creativity.

I feel that the first three process suggested by Freud operate much the same way in dream as well as creativity, while the fourth works somewhat differently. ‘Condensation’ in wakeful creativity operates, both at the level of ideas and metaphors. It can be easily understood in the context of fiction and films, wherein for example, the traits of two or more persons may be combined to create a new character suitable for the plot. At the level of ideas, condensation could act as a part of the processes like ‘conceptual blending’ that involves combining two concepts to create a third. Similarly, ‘displacement’ and ‘substitution’ also work at the conceptual as well as the metaphoric level. Both are evident in poetic metaphor-making, where often a simple and direct substitution takes place - the eyes of the beloved may be compared

to those of a dove, the walk compared to gait of a swan, or the voice to the music of a cuckoo, and so on, creating images that make for so much of our popular songs.

Beyond Dreams and their Processes

It is the role of ‘censorship’ in wakeful creativity however, that is the most interesting. The censoring forces are quite different from those active in dream-formation. To understand them, one needs to consider another set of dialectics - between emotion on the one hand and ‘aesthetic and moral censorship’ on the other.

Dream is the most plastic, forceful, fluid and to my mind, the most awe-inspiring of all creativity. The act of creativity during wakefulness may be inferior to the creativity of dreams in terms of its plasticity, brevity, movement, force and fluidity; but it is significantly different, if not superior in an important, and in fact crucial, aspect. The wakeful artistic creativity is tempered with a conscious exercise of aesthetics - the sense and sensibility of a *rasa*.

Besides the types of logic that science confirms and the structural logic that I have suggested, there is certainly another kind of reasoning at work in creativity. It is the process of aesthetic and moral ‘censorship’, not akin to the one that Freud suggested. While morality is easily recognized as a check, its success obviously depends on the freedom that an artist allows himself or herself in the act of creating. Interestingly, the role of aesthetics may not be seen as typical of censoring, but that is how it acts indeed, working a sort of ‘refined’ logic, gently checking and rejecting the creative formations that are not in sync with one’s taste. Acting as yet another counter-force to emotion, it is vital, not only in developing the piece, but also in sustaining the dialectics of the creative process.

The conclusions may be encapsulated as follows... the creative process is dialectical and recursive. Just like in dream, in wakeful creativity too, emotion is the primary driver, while multiple operations of various types of logic and censoring act as the counter-forces. Many of these forces, including some types of logic and some of the resultant tools of processing, are similar to those of dreams, while some others are significantly different.

This of course, is just one component of the complex process of creativity. We must, as I had suggested at the very outset, undertake a multi-disciplinary approach to the questions of creativity. Despite years of research and multiple theories, a comprehensive and satisfactory theory of creativity is, a dream far from reality, a philosophical journey that beckons afresh. And, we have just begun.

So, in knowledge-context, we can say two things. We can say either that what is known cannot be falsified, or that if it is falsified, it is not knowledge proper²³. The present survey favours the latter. Though knowledge is the best thing we can achieve, we have to entertain in Russellean manner that there is an element of doubt in knowledge²⁴. To accept the contingent relation between knowledge and certainty is however not to give concession to contextualism or to invariantism. The reason is simple. Contextualism may approve of a particular piece of knowledge acquired by different individuals in similar contexts as final, or invariantism may mark a piece of knowledge acquired by a person as complete and beyond revision as another acquired by the same person in similar context. But the possibility of belief-revision together with knowledge-belief knot tends to extend the possibility of knowledge-revision to the “relative finality thesis” of context-sensitive and subject-sensitive cases of knowledge. It is to be noted that possibility of revision does not equate the status of knowledge and that of belief as epistemic notions, because there is no point in identifying them unless one tries to spoil the show. And undoubtedly, such identification would have been something least imagined by a responsible thinker even in dreams.

The inevitable question that arises here is: Is it possible for the defenders of knowledge-belief category-sameness to accommodate the challenging notion of knowledge-revision? Any positive answer to this question compels the theory-maker to construct a model of such notion. Any negative answer will bring the charge of contradiction. The task remains for future survey to find out whether and how to accommodate the issue of knowledge-revision if knowledge and belief are to be treated as performers of the same band.

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AN UNDERSTANDING OF EPISTEMIC JUSTIFICATION THROUGH FOUNDATIONALISM AND COHERENTISM

HIMANSU SEKHAR SAMAL

The justification of beliefs about epistemic principle is the pivotal problem in epistemology. That is, principles stating which kinds of beliefs are justified and which are not. It is in general regarded as circular to justify such beliefs empirically. However, there are two reasons for considering about epistemic justification. First, even if a satisfactory and widely accepted solution to the E. Gettier's problem remain elusive¹, many philosophers hold that there is some important connection between knowledge and justification. Hence many hold that knowledge requires justification. It can be said that **S** knows that **P** *iff* **P** is epistemically justified for **S**. Similarly, many holds that if **S** is epistemically justified in believing **not-P**, then **S** does not know that **P**. Since it is reasonable to think that there is some connection between knowledge and justification, a better understanding of knowledge and justification will help us to understand better the nature of knowledge. Second, what makes a belief justified or reasonable? Some beliefs are justified or reasonable and others are not, but what makes them so. Now we shall focus on foundationalism. Where we shall lay out some of the main claims of foundationalism and examine the concept of justified basic beliefs by considering the regress argument. And we shall critically discuss some answers to the question of what we ask 'What makes justified basic belief justified? Similarly, coherentism suggests that empirical beliefs are rationally constrained only by other, further empirical beliefs. And beliefs are caused by sensations and worldly events. The debated over the structure of knowledge and justification is fundamental among those who hold that knowledge requires justification. Hence the structure of knowledge is solely derives from the structure of justification.

Foundationalist Epistemology:

As we know that rationalists believe that reasoning is the best source of knowledge. And in the most rigorous sort of something namely, mathematical proof- we start with axioms, as our foundation and proceed by logical steps to our

¹ Edmund Gettier, 'Is Justified True Belief Knowledge?' *Analysis*, 23 (1963), pp.121-23

conclusions. The axioms are certain: they are the foundations. And they support the consequences we draw in the strongest possible, i.e., indefeasibly. However, Descartes is rationalist in this sense. For him, the foundational class was just the class of thoughts that could not be doubted. Because, you have indefeasible evidence for them. So to know something, for Descartes,

- I. You must believe it,
- II. It must be true, and
- III. You must have indefeasible evidence for the belief.

The famous slogan ‘I think therefore I am’ is one thing he thought that you could not doubt. You could not doubt it because you could not be fooled about it. There are arguments of the form of the ‘Cogito’ that are equally valid². For example, ‘I laugh therefore I am’. It is true that you cannot laugh unless you exist either. What is special about the ‘cogito’ is that the premise- ‘I think’- is something that it is not true whenever I think it but also indubitable or certain. According to Descartes, whenever I think it. The reason Descartes wanted a premise that was indubitable which was used the foundational strategy. He wanted a premise that was certain ‘I think’ from which to deduce his conclusion ‘I exist’ because he thought that a valid argument that has premises that are certain can transmit the certainty to the conclusion. Therefore, rationalists contend that all true and certain knowledge comes from our reason. Rationalists take mathematics as the model of knowledge and hold that certain knowledge is apriori³. Apriori means knowledge which is justified or known to be true independent of experience.

Some of our beliefs are justified on the basis of other beliefs. In such cases, our belief is justified in virtue of certain other things. For example, a detective is justified in believing that Smith is thief. His belief is justified on the basis of certain other things. Detective believes that Smith’s fingerprints were found at the crime scene, that witness saw Smith in the area at the time of crime, that stolen objects was found in Smith’s room. Hence by taking all these evidences which we can say chain

²*Meditations on First Philosophy* (Rene Descartes), 1641. Copyright: 1996, *Internet Encyclopaedia of Philosophy*. This is of the 1911 edition of *The Philosophical Works of Descartes* (Cambridge University Press), translated by Elizabeth S. Haldane.1

³A. C. Ewing, *The Fundamental Questions of Philosophy*, Routledge and Kegan Paul, London and New York, 1989, p. 65.

of evidences we might say that detective is justified in believing that Smith is a thief. Oversimplifying that, we might say that our detective is justified in one belief, **B**₁ on the basis of other beliefs, **B**₂ and **B**₃ and **B**₂ and **B**₃ are in turn justified on the basis of yet further beliefs and so on⁴.

Now the question may arise that, Does every justified belief derive its justification from some other beliefs? Some philosopher would say ‘no’. They hold that some beliefs are justified basic beliefs.

B is justified basic belief = Df. **B** has some degree of justification that is independent of the justification, if any, it gets from other beliefs⁵.

So, justified basic beliefs we sometimes referred to as ‘immediately justified beliefs’ or ‘non-inferentially justified beliefs’. However, justified non-basic beliefs do depend entirely for their justification on other beliefs. Justified non-basic beliefs are sometimes referred to as ‘mediately justified beliefs’ or ‘inferentially justified beliefs’. Justified basic beliefs include beliefs about simple logical or mathematical truths and about our own mental states. Consider the proposition that ‘all tables are tables’. So the proposition for believing it does not need some other proposition or on inferring it from some other proposition. Such proposition is immediately justified. Similarly some beliefs about our own mental states would seem to be immediately justified or justified basic beliefs. Our beliefs that we doubt or believe some propositions are often immediately justified for us. For example, I believe that ‘Delhi is the capital of India’. If I consider whether I have this belief, I need not refer that I do from my other beliefs. I simply consider whether I believe that ‘Delhi is the capital of India’ and I find that I do. I am immediately justified in believing that I have this belief. Similarly, suppose that I doubt that it will rain today. If I consider whether I do doubt this, I need not infer from some other propositions that I do. I simply consider whether I doubt it and find that I do. My belief that I doubt that it will rain today is immediately justified for me. Again some beliefs about other mental attitudes would seem to be

⁴ Noah Lemos, *An Introduction to the Theory of Knowledge*, Cambridge University Press, 2007, p.46-47.

⁵ Noah Lemos, *An Introduction to the Theory of Knowledge*, Cambridge University Press, 2007, p.45.

immediately justified. My beliefs about whether I am happy, sad, hopeful or fearful are often immediately justified for me.

There are two main theses of foundationalism. First, foundationalism holds that there are some justified basic beliefs which are immediately justified and second, foundationalism holds that all justified non-basic beliefs depend ultimately for their justification on justified basic beliefs. According to foundationalism, our justified basic beliefs are kind of ‘foundation’ upon which the superstructure of non-basic beliefs rests.

The Regress Argument:

An important argument for the existence of justified basic belief is ‘the regress argument’⁶. The regress argument is an argument by elimination. It holds that there are only four conceivable ways in which evidential chains must either:

- I. Terminate in a belief that is not justified.
- II. Be infinitely long
- III. Be circular or
- IV. Terminate in a justified basic belief.

If we analyze these options very closely we will find first three options are impossible and the fourth option which implies that there are justified basic beliefs, must be correct.

Option one, tells us that the evidential chain can terminate in a belief that is not justified. For example, it allows that **B**₁ may be supported by an evidential chain of the following sort:

$$\mathbf{B}_1 \leftarrow \mathbf{B}_2 \leftarrow \mathbf{B}_3 \leftarrow \mathbf{B}_4,$$

where **B**₄ is itself an unjustified belief. Now the questions are, how can a belief which is not itself justified confer justification on other beliefs? And how can an unjustified belief be a source of justification for other beliefs?

Option two tells us that evidential chains can be infinitely long so they need not terminate. This option is with the difficulty that it seems psychologically impossible

⁶ Noah Lemos, *An Introduction to the Theory of Knowledge*, Cambridge University Press, 2007, p.48-49.

for us to have an infinite number of beliefs. If it is psychologically impossible for us to have an infinite number of beliefs then none of our beliefs can be supported by an infinite evidential chain. It allows that B_1 can be supported by an evidential chain that has an infinite number of supporting links such as $B_1 \leftarrow B_2 \leftarrow B_3 \leftarrow \dots$ and so on. Such infinite chain has no final or terminating link.

Option three tells us that an evidential or justificational chain can be circular. It would permit justification chains such as $B_1 \leftarrow B_2 \leftarrow B_3 \leftarrow B_1$. However it would be impossible for a belief to confer justification on itself, if only through the other links of the chain which is impossible.

Proponents of the regress argument claim that option four, that is, terminate in a justified basic belief is the only acceptable and therefore, they are justified basic beliefs.

Classical Foundationalism:

The foundations of knowledge have been seen as infallible (which cannot be wrong), incorrigible (which cannot be refuted), and indubitable (which cannot be doubted). For empiricists these foundations consist in our beliefs about our own experience. Our beliefs are basic and non-basic. Our basic beliefs comprise such belief as that we are now seeing a blue shape in our visual field. In order to justify our non-basic belief we must be able to infer it from other beliefs. The claim of the classical foundationalists is that inferential justifications are not required for our basic beliefs. There may not actually be a blue object in the world because we may be hallucinating, but, on the other hand, we cannot be wrong about the fact that we now believe that we are seeing something blue. Justifications for such beliefs is provided by experiential status that are not themselves beliefs, that is, by our immediate apprehension of the content of our sensory, perceptual experience, or what is sometimes termed 'the Given'. We may call it traditional foundationalism. Classical foundationalism holds that the only way justification can be transmitted from one belief to another is through deduction⁷. If S 's belief that q is a nonbasic belief, then the only way for S to be justified in believing that q is by S 's deducing q from some

⁷ Laurence Bonjour, *Epistemology: Classic Problems and Contemporary Responses* (Second Edition), Rowman and Little Field Publisher, U.K. 2010, p.179.

other proposition that **S** is justified in believing. Ultimately, if **S** is justified in believing that **q**, then **q** must follow from, or be implied by, one or more propositions for which **S** has basic justification. According to classical foundationalism, epistemic justification requires either infallible belief or deduction from what is infallibly believed.

Modest Foundationalism:

Some foundationalists hold that ‘the Given’ is in some ways problematic. Yet they maintain a ‘moderate’ foundationalism. Our perceptual beliefs about the world and our experience are not seen as infallible. We can believe that we see blue or we seem to see blue, yet either belief can turn out to be unjustified. Non-conceptual perceptual experience does not play a justificatory role. Perceptual beliefs are simply self-justified. Such a view of perception remains foundationalist in nature because we still have basic beliefs, beliefs that are non-inferentially justified. Modest foundationalism avoids the dilemma that faces traditional foundationalism. It does not have to be infallible for a perceptual belief to be justified. We may call this a modest view of foundationalism or modest foundationalism.

Modest foundationalism⁸ accepts the two central claims of foundationalism. First, there are justified basic beliefs and second, that all nonbasic justified beliefs depend ultimately for their justification on justified basic beliefs. In contrast to classical foundationalism, however, modest foundationalism has a more relaxed view about the nature of basic beliefs and about the connections between justified basic beliefs and nonbasic justified beliefs. Modest foundationalism does not insist that justified basic beliefs must be infallible. Moreover, modest foundationalism does not hold that the only way for justification to be transmitted to nonbasic beliefs is through deduction. Modest foundationalism allows that nonbasic beliefs can be justified through various kinds of inductive reasoning, such as enumerative induction and inference to the best explanation.

Justification of Basic Beliefs:

Even if we think that modest foundationalism is more plausible view than classical foundationalism: We may still quest what makes basic beliefs justified?

⁸ Laurence Bonjour, *Epistemology: Classic Problems and Contemporary Responses* (Second Edition), Rowman and Little Field Publisher, U.K. 2010, p.181-82.

- First, Epistemic justification either to be evaluative or normative concept or property.⁹ When we say a belief is epistemically justified or reasonable, that is, a positive or favourable evaluation of that belief. If not then a negativity of that belief. Similarly, the same might be said of the concept of knowledge. When we say that someone knows something, we are making a positive favourable evaluation of his belief. Along with knowledge and justification, other evaluative or normative concepts include good, bad, right, wrong, beautiful and ugly.
- Second, the evaluative and normative properties supervene or depend on descriptive properties. In other words, a thing has its evaluative or normative properties in virtue of its having certain descriptive properties. Suppose, for example, If **B** is a beautiful painting then it is so in virtue of its having a certain composition and arrangement of colour. If we assume that justification is a normative or evaluative property, then we should assume that if someone's belief is justified, then it is justified in virtue of certain descriptive features or properties of the person or his belief.
- Third, many philosophers endorse the view about supervene and evaluative properties¹⁰. That means if two things differ in their evaluative properties then these must be some difference in their descriptive properties. Justified basic beliefs have a non-doxastic source of justification. The source of justification is not a belief or set of beliefs. Since justified basic beliefs have some source of justification other than one's beliefs, justified basic beliefs must have a nondoxastic source of justification¹¹. A nondoxastic experience is an experience or mental state that is not a belief. Nondoxastic experiences include such things as our sensations and perceptual experiences. Sensations and perceptual experiences differ from beliefs have truth values. Beliefs are true or false. In contrast sensations and perceptual experiences do not have truth values. The belief that I have a sensation of red is either true or false. In contrast, the sensation of red is either true or false. Similarly, the perceptual

⁹ Noah Lemos, *An Introduction to the Theory of Knowledge*, Cambridge University Press, 2007, p.57.

¹⁰ Noah Lemos, *An Introduction to the Theory of Knowledge*, Cambridge University Press, 2007, p.58.

¹¹ *Ibid.*, p.59

experience of seeming to hear a bell is neither true nor false. In contrast, the belief that I hear a bell have and the belief that I seem to hear a bell have truth values. According to many classical and modest foundationalists, our nondoxastic experiences are source of justification for our introspective beliefs. That means our introspective beliefs about our own sensations. Suppose I have the introspective belief that I am in pain. What justifies such belief? According to this view, it would be the fact that I am in pain. My introspective belief that I am in pain is justified in virtue of my having the sensation of pain.

Coherentism:

The coherence theory of justification is also known as coherentism. This theory of justification is an alternative to foundationalism. Proponents of the coherence theory hold that a belief is justified in virtue of belonging to a sufficiently comprehensive coherent body of beliefs. The coherence theory of justification should be distinguished from the coherence theory of truth. The former is a theory of what it means for a belief or set of beliefs to be justified, or for a subject to be justified in holding the belief or set of beliefs. The latter is a theory of what it means for a belief or proposition to be true. Hence the sole basis for epistemic justification is relations among beliefs rather than propositions. Coherentism denies the linear conception of justification which the regress argument presupposes¹². A linear conception of justification assumes that justified nonbasic beliefs owe their justification to other beliefs and these beliefs owe their justification to still others and so on. A linear conception of justification assumes that justification is transmitted to nonbasic beliefs through the links of an evidential chain. In contrast, a proponent of the coherence theory might hold a holistic conception of justification. A holistic conception of justification sees the justification of a belief as a matter of its relation to one's whole body of belief. On this view, if one's beliefs, $B_1, B_2, B_3, \dots, B_n$, form a (sufficiently comprehensive) coherent body of beliefs, then B_1 is justified. Coherentists might reject the view of nonbasic justification where that justification must be transmitted to nonbasic beliefs through an evidential chain.

¹² Donald Davidson, 'A Coherence Theory of Truth and Knowledge', in *Kant order Hegel*, ed. Dieter Henrich (Stuttgart: Klett-Cotta, 1983), p.423–38.

The issue we are concerned here is whether sensory experience can justify *beliefs*. But if sensory experience is in this way nonconceptual, and given that beliefs are formulated in propositional and conceptual terms, it becomes hard to see how there can be an intelligible justificatory relation between the two. How can something that is not even formulated in conceptual terms be a reason for thinking that something that is thus formulated is true? The present line of argument concludes that there can be no such justificatory relation - and hence, as the only apparent alternative, that the relation between sensory experience and beliefs must be merely *causal*. D. Davidson puts it:

The relation between a sensation and a belief cannot be logical, since sensations are not beliefs or other propositional attitudes [that is, are not formulated in conceptual terms]. What then is the relation? The answer is, I think, obvious: the relation is causal. Sensations cause some beliefs and in *this* sense are the basis or ground of those beliefs. But a causal explanation of a belief does not show how or why the belief is justified¹³.

Coherence theories of justification differ from foundationalist theories insofar as they place a much greater emphasis on the role of coherence. Coherentists hold that whether a belief is justified depend entirely on how well it fits or coheres with one's other beliefs¹⁴. Coherentists hold that the justification of belief is entirely a matter of its relations to one's other beliefs. That is of its belonging to coherent web of mutually supporting beliefs. For this reason, the coherence theory of justification is sometimes called a 'doxastic' theory of justification. Such a theory holds that the only things that can serve as reasons or grounds for a belief are other beliefs. The strongest form of coherentism says that belonging to a coherent system of beliefs is:

- I. necessary for a belief to be justified and
- II. *by itself* sufficient for a belief to be justified

This view is called *Strong Coherentism*. This view can be differentiated with two weaker varieties of coherentism. *Necessity Coherentism* just makes the necessity claim at (I). It imposes coherence as what is often called "a structural condition" on justification. Structural conditions tell us how beliefs must be related to one another if they are to be justified. However, since there might be additional non-structural

¹³ D. Davidson, *A Coherence Theory of Truth and Knowledge*, p.428.

¹⁴ Laurence BonJour, *Epistemology: Classic Problems and Contemporary Responses* (Second Edition), Rowman and Little Field Publisher, U.K. 2010, p.189-90.

conditions on justified belief, being related to one another in the required way may not be sufficient for justification. The other view is called non-coherentist view which holds that coherence can boost the justification of a belief as long as that belief is already independently justified in some way that is not due to coherence. According to this view coherence is sufficient to boost beliefs that are independently justified. This, however, is not thought to be strong enough to be called a coherentist view. To make coherence sufficient for justification we must claim that coherence is sufficient, by itself, to generate justification. In other words, coherence must generate justification *from scratch*. This view is called *Sufficiency Coherentism*.

The significant idea is to notice that the distinction between subjective and objective approaches. The most popular objective approach is explanatory coherentism, which defines coherence in terms of that which makes for a good explanation. On such a view, hypotheses are justified by explaining the data, and the data are justified by being explained by our hypotheses. The central task for such a theory is to state conditions under which such explanation occurs. A different objective account of the coherence relation has been presented by L. BonJour. He has mentioned the following five features in his account. 1) logical consistency, 2) the extent to which the system in question is probabilistically consistent, 3) the extent to which inferential connections exist between beliefs, both in terms of the number of such connections and their strength, 4) the inverse of the degree to which the system is divided into unrelated, unconnected subsystems of belief, and 5) the inverse of the degree to which the system of belief contains unexplained anomalies. These factors are a good beginning towards an account of objective coherence, but by themselves they are not enough¹⁵. We need to be informed what function on these five factors is the correct one by which to define coherence. That is, we need to know how to weigh each of these factors to provide an assessment of the overall coherence of the system. Coherentism insists that it is always reasonable to ask for a justification for any statement. Coherentism challenges that foundationalism provides an arbitrary spot to stop asking for justification so that it does not provide reasons to think that certain beliefs do not need justification. Coherentism typically holds that justification is

¹⁵ Robert Ammerman and Marcus G. Singer, *Belief, Knowledge and Truth: Reading in the Theory of Knowledge*, Charles Scribner's Sons, USA, 1970, p. 423-24.

solely a function of some relationship between beliefs. They attack foundationalism by arguing that no plausible version of the view will be able to supply enough in the way of foundational beliefs to support the entire structure of belief.¹⁶ Coherentists have gone beyond negative philosophy to provide a positive characterization of their view. Moreover, coherentists typically adopt a subjective viewpoint regarding the items that need to cohere. And it helps maintaining that the system on which coherence is defined is the person's system of beliefs.

The argument of foundationalism is very simple. If knowledge is to be reasonable and our beliefs are justified, then those justified beliefs must be based on some other beliefs which are reasonable and they on further beliefs and so on. But ultimately this process of justification must end up in some beliefs that require no justification or are self-justified or self-evident. Foundationalists insist that there must be some beliefs that are directly or immediately justified, as opposed to being justified by inferences from other beliefs.¹⁷ They maintain that these special non-inferentially justified beliefs form the foundation of all knowledge and that all the rest of our beliefs are ultimately justified in relation to the foundational beliefs. To establish this understanding we have analyzed various kinds of foundationalism. Then we moved on to explore coherentism, the rival of foundationalism.¹⁸ It is obvious that logical coherence is important in any system of beliefs if it is to be accepted as true; otherwise we would lapse into meaninglessness. Coherentism clearly showed us that the better a belief system hanging together the more coherent it is. Here it stressed the importance of logical consistency in the justification of knowledge.

¹⁶ Robert Ammerman and Marcus G. Singer, *Belief, Knowledge and Truth: Reading in the Theory of Knowledge*, Charles Scribner's Sons, USA, 1970, p. 430.

¹⁷ Robert Audi, 'Belief, Justification and Knowledge': *An Introduction to Epistemology*, Wadsworth Publishing Company, 1988, p.86-88.

¹⁸ *Ibid.* p. 89.

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NOTES TO THE CONTRIBUTORS

This journal is a yearly philosophical journal published by the Dept. of Philosophy, University of North Bengal. Philosophical Papers: Journal of the Department of Philosophy, welcomes contributions from all fields of philosophy. The editorial policy of the journal is to promote the study of philosophy, Eastern and Western in all its branches: Epistemology, Metaphysics, Logic, Ethics, Social and Political Philosophy, and the Philosophy of Science, Mind, Religion and Language. However, it would like its contributors to focus on what they consider to be significantly new and important. The contributions should, as far as possible, avoid jargon and the author's contention should be stated in as simple a language as possible.

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27/C, CREEK ROW, M G ROAD,
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Printed at:
THE UNIVERSITY PRESS, UNIVERSITY OF NORTH BENGAL
RAJA RAMMOHUNPUR, DIST.- DARJEELING- 734013, WEST BENGAL, INDIA
WWW.NBU.AC.IN