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Continued on back cover

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DISCUSSION AND COMMENTS

Quantum Mechanics: Do the Experimental Results Support A Realistic Epistemology?–II*

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1

It was argued, in an earlier article, that there was little basis for questioning the (objective) existence of the microparticles on any reasonable criteria. On the other hand since a theory emerged in the late nineteen-twenties to describe the dynamics of these particles, namely Quantum Mechanics, the problem of interpretation of the theoretical constructs in terms of objective results of experiments has become so difficult that there has been a continuing search for new formulations. In this article, we describe some of the basic problems besetting Quantum Mechanics in its conventional interpretation and some of the attempts to overcome them.

2. THE STRANGE QUANTUM WORLD: THE DOUBLE SLIT EXPERIMENTS

The basic problem of understanding the apparently curious behaviour of microparticles is best highlighted in terms of a 'thought' experiment, the double slit diffraction of particles such as electrons. The genesis of the double slit experiment was in its role in studying diffraction of light. The first such experiment was carried out by Thomas Young in 1802. Its subsequent evolution as a thought experiment was because of the great clarity it brings to the problem of understanding diffraction of microparticles like electrons.

Young's objective in performing this experiment can be understood from his own announcement:[1]

> Whenever two portions of the same light arrive at the eye by different routes, either exactly or very nearly in the same direction, the light becomes more intense when the difference in the routes is any multiple

*Part I appeared in *JICPR*, Vol. XVIII, No. 4.

of a certain length and less intense in the intermediate state of the interfering portions ...

The figure below is a sketch of Young's experiment. Think of a parallel beam of light falling on two slits. (I eschew technical details such as preparing a suitable coherent beam and the size and spacing of the slits.)

To the far right is a screen on which one can observe the pattern of light. One sees a series of 'fringes' alternately bright and dark. If only one slit is open, these fringes disappear. So it is essential that we must have light passing through both slits and it is the superposition of light from these two slits that produces the fringes. In particular, a dark line appears in those places where light from one slit apparently 'cancels' light from the other slit.

How can such cancellation occur? This is where the wave theory of light has an easy explanation. According to this, light propagates in waves and at each point in space the amplitude of light oscillates between a peak positive valve and a peak negative value. In some places on the screen light amplitude from one slit has exactly the same value as from the other except that one is positive and the other negative so that exact cancellation occurs. The essential difference between a corpuscle of light (now called a photon) and a small amount of wave incident on the slit is this: a photon is a unit and has to decide whether it will go through one slit or the other (so we would believe!) and cannot pass through both. It is this simple explanation that Young offered as conclusive evidence favouring the 'wave' as opposed to the 'corpuscular' model of light (due to Newton).

One possibility would be that one photon passes through one slit, the other through the second slit and they both arrive at the same point to 'destroy' (or influence) each other. To remove this possibility, experiments were performed with extremely weak intensity light beams so that in fact only one photon can possibly be incident on the slits at a time—i.e., a photon already reaches the screen before the next photon is incident

on the slits.[2] This difficult experiment showed that the results were identical and one still obtained the same fringe patterns on the screen. There was no conceptual difficulty in understanding this from the wave model because no matter how weak the light is, we can think of a part of the wave going through each slit. A free photon, on the other hand, cannot split into two photons sending one through each slit. (That would violate conservation laws and the phenomenon has never been observed.) Thus these experiments would seem irreconcilable with a photon model of light.

In fact, Quantum Mechanics supplies a strange solution. Indeed something does pass through both slits but it is not a physical part of one photon! To quote Dirac,[3] one of the founders of QM: 'Each photon then interferes only with itself. Interference between two photons never occurs'. By the same token, particles such as electrons can display interference and diffraction and Dirac's dictum may be rephrased: 'each particle interferes only with itself'!

Briefly, then we can summarize the results we can expect from these 'Young type' experiments according to Quantum Mechanics:

(i) Each particle (photon or electron) is a whole unit and always arrives on the screen at one place and only one place.

(ii) If we keep both slits open, the pattern of intensity of particles that one should observe on the screen is exactly the same as had been observed by Young with light. (Recall that Young's results were 'explained' by the wave theory of light.)

(iii) If we perform the experiment shooting one particle at a time, wait until it is detected on the screen before shooting another, then we again obtain the same pattern as above.

(iv) We now close slit #1, keep #2 open and observe the pattern on the screen for say N particles. We then open slit #1, close #2 and repeat with N more particles. We then check the intensity distribution of the 2N particles on the screen. This will be quite different from the pattern observed for 2N particles with both slits open.

(v) Instead of the above case (iv), we keep both slits open, but devise a method of observing each particle as it passes through the slits—to establish which slit it actually passed through before reaching the screen. In this case again, the intensity pattern would be exactly as in case (iv); i.e., the intensity distribution is the same as observed by keeping only one slit open at a time.

At this stage, we pause to consider a plausible explanation for the above case (v). No matter how we try, the ACT of observing the particle as it passes through the slits (to determine which slit it did pass through) physically disturbs the subsequent motion of the particles. Hence (we may argue) it is no wonder that the intensity pattern is quite different from the case in which we did NOT monitor the particles as they passed through the slits.

It is here that modern technology has provided the possibility of doing experiments in which it seems possible to make observations to determine which slit the particles passed through WITHOUT any apparent physical disturbance. (I give a brief description of these is an appendix.) These show:

(vi) MERE AWARENESS of which slit the particles passed through is enough to obtain results which are different from what are observed if we are ignorant of the path.

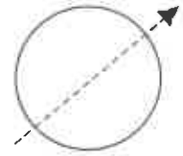
There are extraordinary variants of these experiments. In a set of these, the experimental arrangement first records which way the particles went. Then later, before the final detection is made to record intensities, the earlier information is 'erased'. (These are the 'quantum eraser' experiments.) The amazing result is that the results now obtained agree with what one expects if we were ignorant of which path the particles had chosen!

3. DOES THE ELECTRON 'OWN' PROPERTIES?

'Electron' in the title is generic; the question pertains to all micro entities. To be more precise, the question is if the particles possess properties before we measure them or (as it would seem from conventional interpretations of QM) do they acquire them (some properties any way) en passant while we measure?

One property of the electron (which we use as an example to discuss the above) is its so called 'spin'. Strictly, what this means is that the electron has an intrinsic angular momentum and also a magnetic moment. (An easy picture, though we shall soon see the pitfalls of it, is to think of the electron as a tiny bar magnet.) Angular momentum is a quantity that is important in classical physics also. Indeed, like energy, the total angular momentum of an isolated system does not change although the angular momenta of parts of the system may change during its evolution. Now

both these properties, spin and magnetic moment, evoke an image of each electron carrying with it an 'arrow' as it were which will give us the direction of angular momentum (and of the imagined magnet) as caricatured below:



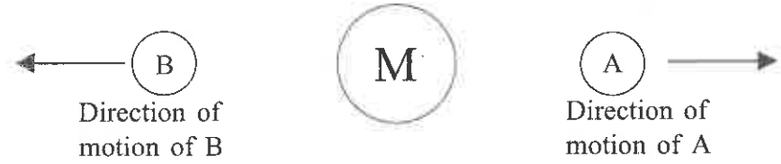
Do electrons 'carry' with them a spin angular momentum around a *definite direction*?
QM says *no*.

It turns out that if we measure a component of the spin (i.e., angular momentum) of the electron in any direction whatever, we shall always obtain either + 1/2 or – 1/2 (in convenient units, $\hbar$), never any other. The electron is thus said to possess a spin of 1/2. Indeed, from our image of the electron spin pointing along an arrow, we would expect that if we measure the spin along that arrow we shall only obtain one of the two answers. In all other directions, there would some chance of obtaining either of the two answers.

Now at first glance, we may be tempted to regard this as spooky but such behaviour may even occur in classical physics. For example if we toss a coin we shall only obtain either a head or a tail although there is a near infinity of ways of doing this. We can even change the 'direction' of the landing surface; we can imagine the coin landing in a slightly inclined plane and the result is still head or tail.

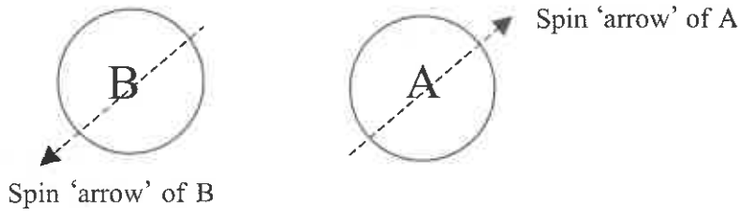
This discreteness in the results of spin measurements is true for all particles; however, some have spin 0, some spin 1/2, some spin 1 etc. (only integral or half integral spins are observed). The number of possible values for spin components in these other cases may then be other than two.

Consider now a molecule M whose spin is 0 and is made of two atoms A and B each of which has spin 1/2 (like the electron).[4] Assume that at a certain instant the molecule breaks up into its component atoms spontaneously and A and B fly off in opposite directions as below:



Since spin (i.e., angular momentum) is conserved the sum of the component values of spin of A and B, measured in any direction must add up to the spin component of the molecule M. But since the spin of M is 0, its component (this is a conventional result) in any direction must be 0. Recall also that the spin components of A and B (like the electron) must yield values of + 1/2 or – 1/2. So if we measure the spin components of A and of B in any chosen direction, we should obtain either A (+ 1/2) B (– 1/2) or A (– 1/2) B (+ 1/2) since these alone will ensure that the total spin component of A and B together add up to 0 as required by conservation of angular momentum.

Let us examine this result on the simple picture that each of the atoms A and B, when they fly off in opposite directions, has an 'arrow' associated with it that tells us in which direction its spin points. Clearly, we expect these arrows to be oppositely directed thus (though the particular direction may be arbitrary):



We now recall that we can measure the spin components of each atom, A and B in any direction we choose and we would obtain for each, + 1/2 or – 1/2. Moreover (and this is the crux of the argument) we can measure the component of each atom independently after they have gone far apart. There are then four possibilities: (i) A (+ 1/2) B (– 1/2), (ii) A (– 1/2) B (+ 1/2), (iii) A (+ 1/2) B (+ 1/2), and (iv) A (– 1/2) B (– 1/2). The four cases may have different probabilities but there is no reason why we should not obtain, sometimes, the last two results which are forbidden by conservation laws. To put the point forcefully, it seems that if one observer measures the spin component of A and obtains + 1/2, then somehow another observer measuring B independently must obtain – 1/2 although they are so far apart that they have no means of instant communication! This is spooky indeed.

Let us compare this to a corresponding 'classical' experiment. Consider a system S with zero angular momentum breaking up into two spinning

parts going off in opposite directions. Conservation of angular momentum (as before) demands that the angular momenta of the two parts are oppositely directed. If we now measure the component of either part in any direction we choose, we shall obtain a definite answer for each part quite independently of the answer we obtain for the other part. In other words once the two parts are far away from each other, each can be treated as an isolated system. Moreover, each part has associated with it, a definite angular momentum—magnitude and direction so that we can say that each part 'possesses' such and such angular momentum. This is quite in contrast to the QM case where the two atoms A and B seem to 'acquire' properties appropriate to the type of measurement we perform.[5]

Now it must not be assumed that quantum systems have no properties analogous to classical ones. Let us choose a slightly different classical example. Suppose we have a box with two detachable compartments A and B and one has a red ball and another a blue ball. Assume that we cannot see what is inside unless we choose to open the lid of either compartment. Suppose now the compartments A and B are detached and removed far away from each other and we are asked to guess what (say) A contains. Obviously, the probability that it has a red (or blue) ball is 1/2. Now if someone opens B and finds it has a blue ball, we know that A must have red. The probability that A has a red ball has then jumped—as it were—from 1/2 to 1 (certainty). This discontinuous jump in probability is really the result of our knowledge—we do not regard this as a sudden change in the property of the ball merely because of increased knowledge of the system. In other words, the 'redness' or 'blueness' of a ball it carries continuously with it and mere observation does not change colours. In particular, the observation of blue colour of the ball in B does not, we assume, suddenly physically fix the colour of A as red.

We can produce an analogous version for a quantum case. Assume that a neutral 'molecule' M (i.e., it is not electrically charged) breaks up into two charged ions A and B. Charge conservation demands that A and B must be oppositely charged. Now the rest of the argument can be made exactly paralleling the classical version of the red and blue balls and the quantum system here can be understood the same way as the classical one. In other words, there is nothing to stop us from assigning a property called 'charge' to each of the particles M, A and B that they can be said to 'possess'.

The difference between the angular momentum example and the charge example is that in Quantum Mechanics observables like charge are quite 'compatible' with other measurements whereas in the case of angular momentum, it turns out that different components (of angular momentum) of a particle are not simultaneously measurable. (In the language of QM, operators corresponding to these components do not commute with each other.)

4. REALITY AND SEPARABILITY

We have seen that a quantum system often has alternative 'channels' available for its dynamics. However, this is not entirely unlike some classical systems in which we can, in principle, attribute these alternatives to our 'ignorance' of all the properties of the system. Thus if we have a collection, an ensemble, of seemingly identical systems, we attribute the differences in their dynamics, if any, to our ignorance of all the properties of the systems; i.e., some that we have ignored are not quite the same. Such a claim is not easily tenable in quantum systems according to conventional Quantum Mechanics. For example, according to quantum mechanics we can assume that a particle has a particular value of s_z, the spin component in, say, the z direction. But the theory does not then permit an assignment of a precise value of s_x or s_y, the other two components. What this means is that an ensemble of seemingly identically prepared particles, say all with a well defined value of s_z, will still not behave identically. The question then arises if it is at all possible that there are 'hidden variables', whose values are presumably different for the different particles of the ensemble, which will reproduce all the quantum mechanical results.

It is here that a seminal work of J.S. Bell in 1964 brought a new dimension to this problem. Bell demonstrated that under fairly general conditions, quantum theory and 'hidden variable' theories predict different results for experiments using entangled particles (see footnote #5). Bell derived a set of inequalities which would hold for hidden variable theories.[6] Many experiments have since been performed to test these inequalities and they seem to be indeed violated, thus vindicating quantum theory. According to this orthodoxy certain properties of a quantum system are realized only when a specific determination or measurement is made. Moreover, until such a determination is made the system, in some sense,

is 'aware' of the various alternatives that a future measurement can yield. Further, a determination of a property of a system, which had earlier interacted with another system, seems to depend on measurements made of the latter system even though the two systems by now are physically so far apart that it would seem entirely legitimate to think of the two systems to be isolated from each other. Such mysterious long range influence undercuts the notion of separating specific systems for observation. Indeed if we truly extrapolate this interpretation of Quantum Mechanics, we would have to regard the whole Universe as an inseparable unit! Worse, inseparability between the observed system and the observer would imply subjectivity in empirical studies, a feature that is anathema to many.

At the same time, it should be emphasized that Quantum Mechanics has so far remained a remarkably productive theory. It is not surprising that a great effort has gone into seeking alternative interpretations of its rules, which free it from some of the mysterious aspects mentioned. We describe very briefly, some of these attempts. Generally, when a new physical theory emerges, it does not merely subsume the earlier one—in that all the hitherto known empirical information can be reproduced by the new theory—but also one expects the new theory to predict results that contradict the earlier version. This is not the case, at least so far, in these newer interpretations.

5. INTERPRETATIONS

We have seen that experiments with entangled microsystems (i.e., systems which had interacted or been 'together' in the past) show that these have to be treated as a whole. If one were to extrapolate this to include the whole Universe (which was 'together' during the big bang) then we would conclude that the Universe cannot be analyzed into separate parts and studied. But then the very idea of observation is that there is in some sense a separation of the observer and the observed system. There is then an inherent contradiction between quantum inseparability and the process of observation and measurement.

It is this paradox that necessitated the so called Copenhagen interpretation, (I shall call this the 'orthodox' one of QM) attributed largely to N. Bohr.[7] The heart of this is a view of the process of measurement. It notes that in the final stages all observations are classically describable. For example, if we want to measure the energy of a proton whose passage

through a cloud chamber has been 'recorded' in a photograph, we use the following paraphernalia. First the cloud chamber is expanded and the proton leaves a curved trail (this itself is a complex process) in the magnetic field surrounding the chamber. Photographs are taken and then the proton trail can be studied at leisure to determine its energy. The original trail (which was photographed) was the result of a sequence of interactions of the proton with the gas molecules.

Now the final act of measuring the energy of the proton can, in principle, take place far away from the cloud chamber (perhaps in the home of the physicist!) and there is really no way the measurement can really interact with the quantum system, namely the proton. Thus, it is argued, all measurement presupposes such a classical level even if the observed system is microscopic, so that one can ignore the links between the observed system and the observer.

This view has unsatisfactory features. For me, the prominent ones are that we are now in need of two theories for the Universe, one for the observed system (QM) and the other for the observer (Classical physics). Worse, there is no clear recipe about where the 'cut' between the observed quantum system and the 'observer' is. After all, an instrument is quite capable of acting as an observer long before a human being takes cognizance of the data. In the above example of the proton and the cloud chamber, we may feel the process 'observation' had finished by the time the trail was left in the chamber—the photograph is a later event, the observer studying it at home is an even later classical system. Where does one draw the line and say: here quantum mechanics stops and it is classical from hereon? Inevitably, there are extreme views here. There is the quite anthropocentric version of E. Wigner that the real break in the sequence of observations occurs when the data enters the mind of the physicist! Perhaps Wigner is democratic enough to include all humans as physicists at least for such cognition. When words like 'mind' and 'consciousness' enter into the basic structure of the theory, it makes many very uncomfortable. What then are the alternatives?

At the heart of the problem with the orthodox interpretation of QM is the question of what happens at a measurement. Although the measurement is potentially capable of yielding any of a set of discrete values, the result of a particular measurement is just one of these. For example, measuring the spin of an electron will yield either + (1/2) or – (1/2). The mathematics develops along these lines and it is asserted that the

measurement actually changes the state of the electron to the one corresponding to the value obtained. (This is the famous 'collapse' of the wave function representing the state.) Among others, one difficulty with this is that we now need to distinguish between two ways in which the state (i.e., the wave function) evolves with time. One, in the absence of a measurement, is a smooth continuous change and the other a discrete (sudden) change! And to compound our difficulties it is not easy, as we have seen from the previous discussion, to define the precise moment when a so called measurement has been made.

Our first thought may be, is this all that unusual? After all, a coin has two possibilities and the probability of a 'head' is 1/2. The moment we look at it, following a toss, the probability 'collapses' to either 0 (if it was 'tails') or 1 (if it was 'heads'). The problem in QM is that the probability, rather the probability amplitude, plays a very important dynamical role in the theory. Indeed it is this amplitude that explains interference phenomena in the double slit experiments described in the appendix. New interpretations have attempted to tackle this issue of 'collapse'—whether it is a sudden change in our knowledge or it can be treated in other ways. The aim of these new interpretations is essentially to eliminate the special role assigned to the process of measurement demanded by the orthodox interpretation.

Perhaps the conceptually simplest, though not in mathematical formalism, follows an idea of de Broglie's and developed by Bohm.[8] The Copenhagen interpretation relies heavily on 'complementarity', the idea that although microentities, like the electron, exhibit both wave and particle-like properties, they are mutually exclusive in the sense that a particular observation can only be designed to observe either the wave or the particle property. The de Broglie-Bohm version assumes, on the other hand, that both aspects are present, i.e., there is a particle with a well defined position and trajectory as well as a 'pilot' wave which guides the motion of the particle. For example, in the double slit experiment, this pilot wave can be arranged to display the interference effects although each particle will actually go through either one slit or the other. A large number of these particles will ultimately reproduce, on the screen, the observed patterns.

This neat solution, however, does demand an extra ingredient called the 'quantum potential' which exhibits non-classical features. For example, the force between two particles at a large distance, due to this potential,

may still be very large. In fact, the influence of one particle on another at a distance acts instantaneously! This is nice to explain the quite 'spooky' behaviour observed in EPR type experiments as well as the so called 'delayed choice' experiments described in the appendix but it continues to confound common sense.

An extravagant interpretation (in the sense discussed below) is the so called 'many worlds interpretation' (MWI). The idea originated from an article by Everett[9] and has now been refined in various forms. Everett disposed of the so called 'collapse' problem by simply denying it! According to him, when a system has alternative choices, it continues to evolve in all possible ways. For example, QM describes an electron travelling to a screen in terms of a wave travelling towards a screen; the wave function will tell us the probabilities that the electron will hit different parts of the screen. What happens when we observe that it actually has hit a particular point on the screen? Rather, what happened to all the other choices that the electron could have had—other points on the screen? MWI makes the bizarre hypothesis that the electron chooses all of these options and actually hits different points—but in different 'worlds'. These worlds are incommunicado with one another so that a particular observer sees the electron hit only one spot; that is his/her world! It is this multiplicity of worlds that is unacceptably extravagant to many. Moreover, it still does not offer any simple explanation of EPR type experiments.

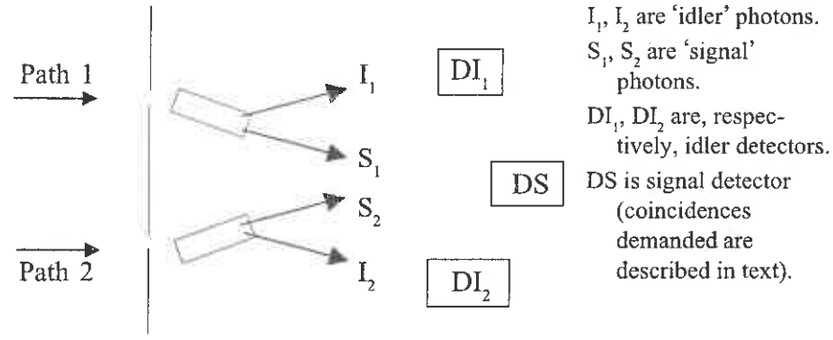
There are now a number of other attempts which try to eliminate 'subjectivism' in interpretations.[10] They are still in early stages of development and one has to wait to see if they are designed only to reproduce established empirical results or predict new phenomena. A new interpretation which merely reproduces the results would still be highly satisfying for the philosophically minded, if the interpretation is far less bizarre than the conventional one. On the other hand, if the interpretation continues to be bizarre one would at least expect it to predict new results that can be subject to tests.

APPENDIX ON SOME RECENT EXPERIMENTS

There are a number of experiments which use light as the source, one of the important reasons being the availability of powerful laser sources. (Other particles, such as electrons and neutrons have also been used.) At

that it must be said that they are ingenious and extremely difficult experiments.

Light from a laser source falls on a (non-linear) crystal which creates a pair of photons from a single photon in the crystal.[11] The pair are prosaically labelled 'signal' and 'idler' photons. These suggestive names are to remind us that the signal photons are used to observe interference or diffraction effects while the idler photons are used to decide which path the original photon followed. The following sketch illustrates the principle:



Suppose one photon is incident from the left on the two slits #1 and #2, following paths #1 or #2 respectively. A photon following path #1 generates a pair of photons, signal photon S_1 and idler I_1 and similarly #2 generates S_2 and I_2. The paths of the signal photons lead to a detector DS which signals the arrival of a signal photon without the information which path it had followed. For this purpose detectors DI_1 and DI_2 are set up in the appropriate paths so that each would signal the arrival of the corresponding idler. If we now demand a coincidence DS + DI_1 or DS + DI_2 we can assert that the original photon from the laser source had followed path #1 in the first case or path #2 in the second case. Alternatively, we many just detect DS and simply switch off the detectors DI in which case we choose to remain ignorant of the path the original photon had followed.

The important point in such experiments is that when we do demand information about 'which path' a photon had followed, we can obtain this by observing the idler photons. On the other hand, the detector DS corresponds to points on the screen in the Young experiment where one

observed bright or dark fringes. Dark, for example, would correspond to practically no signal registered in DS.

The results of such experiments are unambiguous. The rate DS with the detectors DI switched off is quite different from the rate observed if we demand information about which path the photon had followed.[12]

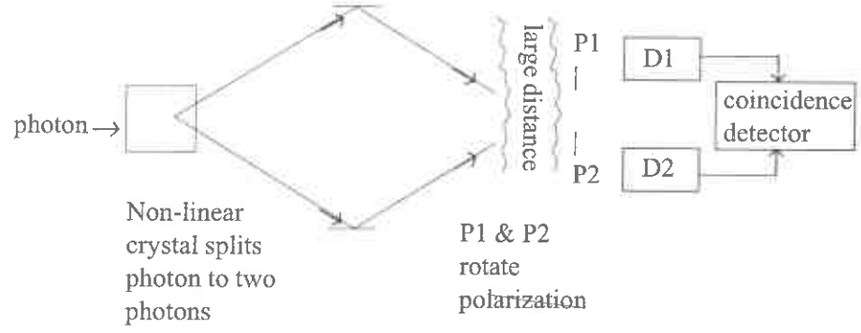
Wheeler[13] suggested a variant of these 'which-way' (WW) experiments. Suppose, he argued, in these double slit experiments we wait until we can be sure that the photon (or any other particle used) has passed through the region of the slits and then decide whether or not to observe which slit it had passed through. The sketch below illustrates the principle:

During the time the photon is in the region between 'slits' and 'WWD' (which way detector) a device may be suddenly activated (or not) to determine which slit it had gone through. An experiment which follows this idea (although the technical features are more complicated than appears from the simple description given) has been performed.[14] The result is again what QM predicts, namely, the intensity pattern for the case where the path (WW) is determined is different from the case when it is not.

Let us essay a very crude and stark description of this experiment. Suppose the photon, on leaving the source has decided to pass through both slits—in whatever fashion that QM says it does(!). On reaching the region 'WWD' the photon finds a detector waiting to record which slit it had passed through. Does the photon now erase that information and proceed in its single slit 'avatar'? Obviously, this crude description simply has no relevance for the dynamics of microentities. But there may be cosmological versions of this delayed choice experiment where such a

choice can be made a few years after passing through the equivalent of the double slit. It is then mind boggling to think that QM still reproduces the orthodox result, namely, WW detection gives the 'incoherent' pattern and no WW gives the 'coherent' pattern.

Finally, there is another bizarre effect observed in so called 'quantum eraser' experiments. Here, an interfering system is rendered 'incoherent' (i.e., information about 'which path' alternative is detected). Now a so called 'quantum eraser' removes this information after the output port detection of the incoherence but still in time to cause interference effects in the final detector. The sketch below is from one such experiment and illustrates the general idea.[15]



The key features are:

(i) Two photons of identical wavelengths (signal and idler) are produced and are both horizontally polarized. They will subsequently follow different paths and finally reach two detectors D1 and D2, a coincidence signalling their arrival.

If there are no other means of distinguishing between the two photons, the two paths will stay coherent (much as in the double slit experiment when we choose not to peek to determine 'which slit' the photon passed through).

(ii) As soon as they are produced, one of the photons has its polarization direction rotated by a half-wave plate so that it is now 'marked'. (This rotation can be varied but in what is to follow, one of the photons is vertically polarized.) If one now detects in D1

and D2, the results should be for two distinguishable paths because we know which way each photon went.

(iii) Just before the detectors D1 and D2, two polarizers P1 and P2 are inserted. Suppose now one photon had been vertically polarized and one horizontally polarized before they are incident on P1 and P2 respectively. If now P1 and P2 are arranged to rotate the polarizations by 45 degrees, it would destroy the information indicating that the two incident photons had originally been polarized at right angles to each other and thereby had been marked.

The results show, astonishingly, that once the 'which path' information is destroyed it seems coherence is restored!

Among the variety of experiments that have tested Bell's inequalities which predict bizarre correlations for entangled pairs, mention may be made of one which has tested the entanglement for photons after they have physically separated for more than 10 km![16] In this experiment, photon source was placed at a telecommunication station near downtown Geneva. On photon then travelled through some 8.1 km of telecommunication fibre to one village and the other to another village some 7.3 km away. (The final destinations of the photons took them 10.9 km apart). The conclusion of the authors is:

> ... this experiment gives evidence that the spooky action between the entangled photons does not break down when separating the particles by a physical distance of 10 km.

Notes and References

1. This quotation is reprinted in *The World of Physics*, Vol. I, Ed. by J.H. Weaver, Simon and Schuster, New York (1987), p. 829.
2. This was carried out by G.L. Taylor in 1909 using a box with a small lamp which cast a shadow of a needle on a photographic plate. The intensity used was so weak that Taylor had to make an exposure lasting several months!
3. *Quantum Mechanics*, P.A.M. Dirac, Oxford University Press, London (1947), p. 9 (Third Edition).
4. The original version highlighting the strange features of QM in this section is due to Einstein, Rosen and Podolsky. This famous paper was published in *Physical Review*, Vol. 47, p. 777. It is now (reverently) called EPR and there was even an international conference later to discuss the status! The version presented here follows D. Bohm given in his text book *Quantum Mechanics*, Prentice Hall, N.J. (1951), Chapters 22 and 23.

5. The mathematical description of the system A and B uses a 'joint wave function' which cannot be separated into a simple product of one of A and one of B. The pair A and B are said to be 'entangled'. Some experiments using entangled pairs are described in the Appendix.
6. There are a number of popular expositions of Bell's Theorem. One very readable account is by David Mermin with the provocative title 'Is the moon there when nobody looks? Reality and the Quantum Theory', *Physics Today*, April 1985, p. 38.
7. Many believe that there is more than one 'Copenhagen' version. I ignore the subtle differences in this discussion.
8. A popular account of Bohm's version is given by David Z. Albert in *Scientific American*, May 1994, pp. 58–67.
9. Everett, H. in *Reviews of Modern Physics*, 29, 454 (1952). This paper is rather technical. For a more popular account of this and subsequent versions, see de Witt, B.S. in *Physics Today*, Vol. 23, September 1970, p. 30 and Vol. 24, April 1971, p. 36.
10. A number of popular articles have appeared in *Physics Today* giving accounts of these. See for e.g. 'Quantum Theory Without Observers' by S. Goldstein, March 1998, p. 52 and April 1998, p. 38.
11. As mentioned earlier, a free photon cannot split into two. Here, the splitting occurs in the crystal and conservation laws are not violated.
12. If we are NOT aware of which path the signal photons had followed, the two paths are COHERENT and if we determine the paths, the paths become incoherent. 'Coherence' results from a 'superposition' of all available paths and incoherence results when a definite choice of the alternatives is made.
13. J.A. Wheeler in *Mathematical Foundations of Quantum Mechanics*, ed. by A.R. Marlow, Academic Press, New York (1978). There is a fine description of this in: J.S. Bell, *Speakable and Unspeakable in Quantum Mechanics*, Cambridge University Press, Cambridge (1987).
14. These experiments are described in *The Meaning of Quantum Theory*, Jim Baggott, Oxford University Press, Oxford (1992), p. 151.
15. Paul G. Kwlat, Aephraim M. Steinberg and Raymond Y. Chiao: 'Observation of a "quantum eraser": a revival of coherence in a two photon interference experiment', *Physical Review*, Vol. 45 (1991), p. 7729.
16. W. Tittel et al., *Physical Review* A, Vol. 57 (1998), p. 3229.

Relevance Logic: An Overview

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1. INTRODUCTION

During the last one hundred years, the status of material implication (symbolized by '$\supset$') as an account of implication-relation (symbolized by '$\rightarrow$') has been varying from the point of controversies to total rejection (for example, [Rou 84a], p. 168, '...Briefly, there are ways and means of rejecting classical logic, e.g. as an account of (intuitive, natural) inference, as incorrect even interpolated at its truth-functional minimal').

In our opinion, material implication is simply a truth-functional operator. It is a kind of operation viz.,

$$\supset : \{t, f\} \times (t, f\} \text{ into } \{t, f\}.$$

That is, given two statements A and B, one can legitimately define a new statement, say $A \supset B$, having a truth-table. A truth-table of a formula just depicts all possible situations where definite truth-values can be assigned to its various atomic constituents and correspondingly to itself. It does not state any fact about the deducibility of B from A. It is not a *move* [Coh 74, pp. 2–6]: 'Truth-tables do not of course provide us with definitions of the truth-functional concepts; or, better, the signs for truth-functions do not denote concepts at all'). The central problem lies in drawing the conclusion that *B is deducible from A or B follows from A or B is a consequent of A or A implies B or A entails B from the assumption that* $A \supset B$ *holds.* It is this misinterpretation of $\supset$ which has given rise to the following counter-intuitive theorems, known as paradoxes of material implication, in classical logic:

(i) $A \rightarrow (B \rightarrow A)$
(ii) $\neg A \rightarrow (A \rightarrow B)$
(iii) $(A \rightarrow B) \vee (B \rightarrow A)$
(iv) $(A \wedge \neg A) \rightarrow B$
(v) $A \rightarrow (B \vee \neg B)$

(vi) $A \rightarrow (B \rightarrow B)$

We fully endorse the Wittgensteinian view that 'if p.q is explained as the proposition which is true when p is true and q is true it adds nothing to this explanation to be told that P follows from *p.q*'. Kielekopf has rightly expressed that 'to talk about a proposition materially implying a proposition is a category mistake ... I use material implication as a noun—a name of an operation'. Bronstein [Bro 36] suggests to read $\supset$ as *implicates* and not as *implies*. It is a well thrashed out matter that $A \wedge (\neg A \vee B) \rightarrow B$, known as *Disjunction Syllogism* (DS, for short), and its equivalent viz., $A \wedge \neg(A \wedge B) \rightarrow \neg B)$, and its mate viz., $(A \wedge B \rightarrow C) \rightarrow ((A \wedge \neg C) \rightarrow \neg B)$, called *antilogism,* are relevantly invalid. However, the rule form of DS, namely Modus Ponens for material implication or

γ: whenever $\vdash A$ and $\vdash \neg A \vee B$, then $\vdash B$

holds both in full Relevance and Entailment calculi [MD 69].

In point of fact, the material implication intends to express simply a state of events as it is. It fails to involve any intensional or non-truth functional dimension. Whereas, we think, exploiting intensional dimension would remain an uneliminable premise underlying any genuine attempt to comprehend the concept of *nonenthymematic implication, or entailment of following from.* Our conviction is that pure thoughts rest on intuition alone. But, in order to abstract them, intuition remains an external metaphysical force; all the steps are to be conducted through strict logical analysis. 'Intuition and strict logical analysis can live in the same science without killing each other; and what one cannot do, the other can' [Bel 45]. In turn, we believe that the ideas underlying intuitionism will continue to have a seminal influence on philosophy of logics. However, it is to be emphasized that the said involvement of intensionality is to be amenable to formalization.

In order to emphasize this point, let us extract an example from mathematics. Let us consider the sketching of the polar curve:

$r = a + b \cos \theta$ (a < b, and a, b be positive real numbers)

It is clear that (a – b) is negative and there are infinitely many points corresponding to other negative values greater than (a – b). But what about (a – b/2) or going about determining a stage from where $(a + b \cos \theta)$ starts giving negative value? We believe, only intensional treatment (of course, being supplemented with other reasonable supports, say continuity property in this case) can solve such problems. We mean to assert the need for a non-classical logic or non-standard analysis (in this case).

A variety of defences of material implication and its complex epicycling have been put forth. Defenders of $\supset$ as an inferential relation take the paradoxes that came with it as inevitable. In our opinion, as long as ε is not interpreted as a canon of deduction, it does no violence to intuition but, then, 'what else is there in classical corpus to represent deducibility?' remains unanswered. The opinion like *inferentially harmless* or *pernicious* or its ilks do not really apply to material conditional. Arguments in [Bag 90] and the like that the rule of relevance has nothing to do with formal validity appear to be misconstrued, because it does not account for the main challenge of relevance logics that the material implication fails to capture the notion of *following from.* Even the interpretation of Gauss [Gau 43] that material implication is an implication but a formal one and always expressible by *if-then* does not change its status much if it is to be comprehended as an implicational relation. Gauss' conviction ([Gau 43], p. 103) that 'to ascertain more than what material implication gives we must drop from the formal level' is not correct. For, the suspicion that any attempt to capture the full force of *implication* would have to push the matter to an informal level has been unveiled by the advent of a family of axiomatics relevance logics.

The relevance logicians outright reject the classical claim that material implication is an inferential relation capturing the notion of deducibility and its close ilks, e.g. entailment, logical consequence, and the like. As is known, certain paradoxical features of material implication have long been thrashed out via modal and intuitionist logics. However, (iv), (v) and (vi) remain theorems of Lewis systems of strict implication and (i), (ii) and (iv) remain theorems of intuitionist logic. Relevance logics claim to do away with all (i) through (vi) and to provide a vertebrate theory of implication.

It is suggested that readers would find in [Bel 77] a lot of powerful and intuitive motivation for rejecting material implication as a canon for drawing valid inferences.

2. SYSTEMS OF RELEVANCE LOGIC

2.1 What is Relevance Logic

As reported in [NS 89, pp. 1, 5], relevance logic is ancient, which we think is true if it is taken as a broadly *relevant* logic in traditionalist's stable which are committed to *connectivity* even at the cost of rejecting one or the other of the firmest rules: transitivity and contraposition. A seminal synthesis of the central theme of relevance logic emerged with the work of Ackermann [Ack 56] and a highly effective continuation of the same by Anderson and Belnap [AB 75], a pioneering document on the topic until date. We note that Baylis' [Bay 31] can be specially mentioned as one of the early contributions in the '30s (in particular, [Fra 69a] appears to be a richer version of [Bay 31]): '... The implication defined as above occurs only when the implicans is relevant to the implicate and that the implicate is a real consequence of the implicans and can be inferred from it, is obvious, for the intensional meaning which is the implicate is always a part of the intensional meaning which is the implicans'. In fact [Moo 22] can be cited as the first place providing an explicit account of the philosophical aspect of entailment: 'A entails B' to mean, 'B is deducible from A'.

Granting minimally that not all propositions are *relevant,* even if true, to the truth of a proposition in question, we believe, relevance logics correctly regard that premises of a valid implication be relevant (connected [Ack 56], in its weakest form) to its consequent. In other words, for the implication to be relevant, the use of antecedent be *effected* (used actually and constructively) in getting to the consequent. That is, in a correct proof there can be no extraneous or unused hypotheses, and it is for this reason that $A \rightarrow (B \rightarrow A)$ and $A \rightarrow ((A \rightarrow A) \rightarrow A)$ are rejected; B being extraneous in the former and $(A \rightarrow A)$ in the latter. Thus, each system of the family of relevance logics is primarily concerned with formalization of a species of implication in which the antecedent suffices relevantly for the consequent. And clearly, this attainment cannot be effected just by consequent being tautologies or antecedent being contradictory, for that would lead to fallacies of relevance. For instance, [Emc 36]: '... Correctly I think, that to assert that "Parrots are birds" (which he takes as necessary) is deducible from "sugar is sweet" does violence to the ordinary meaning of deducibility'. More significantly, the relevance

logicians challenge the classical account of validity or proof: standard material detachment, $A, A \supset B \vdash B$ (or $A, \neg A \vee B \vdash B$), is incorrect.

A host of plausible explications to this effect have been made. Anderson and Belnap [AB 62, 75] raise a highly scholastic debate on this topic, and finally proposed the notion of tautological entailment as a sufficient criterion for justifying (weak) relevant implication.

We present here a brief account of the current treatment of the issue. Keeping in mind that relevant logics are in considerable disarray, particularly due to the complexity arising in settling the decision problem for propositional relevance logic and completeness question for quantified relevance logic, we shall largely deal with the development of statement calculus. Nevertheless, it is known that one can pick up any one of the propositional relevance logics and add a set of reasonable axioms for quantifiers obtaining thereby a quantified relevance logic (see [AB 75], [Rou 80], [Dun 84] and [Fin 88], for example).

Similar to the theme of relevance explicated until the mid-seventies (cf. [AB 75]), there are some relatively recent expositions. We outline the following:

[Coh 74] expounds the notion of Aristotelian-deducibility [or A-deducibility):

Let (P, C) denote the body of an argument with Premises P and conclusion C. A step-by-step deduction interpolating between P and C via intermediate propositions which clearly link the conclusion to the premises, is called A-deducibility. If (P, C) is A-deducible, then (P, C) is valid.

([Fin 74], p. 366): '... the negation of a formula holds at a point if the formula itself fails to hold at a *complementary point* and an entailment holds at a point if whenever its antecedent holds at a point its consequent holds at an appropriately associated point'.

([Pla 80], p. 79): '... literals featuring in the information are fully matched'. ([Ric 86], p. 346): '... my central thesis will be that in some cases, whether one may validly infer B from A will depend on how A has itself been arrived at'.

It is worth mentioning that there exist two longer surveys:

Dunn's survey in the *Handbook of Philosophical Logic and Mares* and Meyer's survey (chap. 13) in the *Blackwell Companion to Philosophical Logic*, where readers would find a lot of authentic material on this topic.

In our opinion, until today, as far as first degree entailments $A \rightarrow B$ (where A and B consist of only negation, conjunction, and disjunction)

are concerned, nothing better than Anderson and Belnap's *tautological entailment* criterion based on variable sharing constraint, has emerged. However, the variable sharing constraint is a necessary but not sufficient condition for ensuring relevance. For example, $A \rightarrow (B \rightarrow A)$ known as the positive paradox, stratifies the variable sharing constraint.

Anderson and Belnap's [AB 62] *tautological entailment:*

Primitive entailments

An atom or literal is a propositional variable or the (single) negate of a propositional variable. A primitive conjunction is a disjunction $A_1 \vee A_2 \ldots \vee A_m$, where each disjunct A_i is a literal. A primitive conjunction is a conjunction $B_1 \wedge B_2 \ldots \wedge B_n$, each conjunct B_j is a literal. $A \rightarrow B$ is a primitive entailment if A is a primitive conjunction and B is a primitive disjunction. A primitive entailment $A \rightarrow B$ is called *explicitly tautological* if some (conjoined) atom of A is the same as some (disjoined) atom of B. Clearly, a tautologous material implication with noncontradictory antecedent and nontautologous consequent is an explicitly tautological entailment, but not all material implicational tautologies conform to this requirement, for example, $A \wedge \neg A \rightarrow B$ fails to satisfy the criterion.

Nonprimitive entailments

For example, $A \rightarrow A \wedge (B \vee \neg B)$, or, in general, $\mathring{A} \rightarrow B \wedge C$ cannot be evaluated on the basis of the aforesaid criterion. An analogous example would be $(A \wedge \neg A) \vee B \rightarrow B$. The technique, developed by Anderson and Belnap, is to convert a nonprimitive entailment into normal form: $A_1 \vee A_2 \ldots \vee A_n \rightarrow B_1 B_2 \ldots \wedge B_m$, where each A_i is a primitive conjunction and each B_j is a primitive disjunction. Such an entailment is valid just in case each $A_i \rightarrow B_j$ is explicitly tautological. Of course, to make this technique work in general, one needs to apply all replacement rules which preserve validity, for example: commutativity, associativity, distributivity, double negation, and DeMorgan's laws.

As an example, it can be easily checked that:

$$(A \supset B) \wedge (B \supset C) \rightarrow (A \supset C)$$

is an invalid entailment, because it fails to satisfy the criterion of tautological entailment?

Anderson and Belnap proposed tautological entailment as a necessary and sufficient condition for the validity of first degree entailment (fde), $A \rightarrow B$, where A and B contain only variables, $\neg, \vee$, and $\wedge$.

For readability and reference, a Hilbert-Style Axiomatization of Relevance Logic R and its modal counterpart, E (Relevance + Necessity) is presented ([AB 75]) in the Appendix.

3. SEMANTICS

It is well known that Boolean algebras provide appropriate structure for classical logic, because all the connectives are extensional. However since both extensional and intensional connectives need to be considered, the semantics for a relevance logic would require some modification in the truth conditions adopted for its classical counterpart. Characteristically, a well-known modification scheme attempting to define truth recursively is to adapt Fregian model whereby the truth-value of a complex wff is determined in terms of some semantic attributes of its constituents. Until Kripke (Kri 63), which provided for a variety of modal logics, a model theoretic semantics in terms of the semantical primitive as *possible worlds* (variously replaced by *reference points, cases, situations, setups, sites, links,* etc.), the work of McKinsey and Tarski [MT 48], which provided certain Boolean algebraic structures for modal and intuitionistic logics, continued to remain the paradigm; and providing a semantics for relevance logic remained an open problem. Now, E and R both have model-theoretic algebraic, and operational semantics.

In [Fra 69a], the semantics for a relevance logic is explicated in terms of the notion of facts and *tautological entailments.* In [Urq 72], the *semilattice* semantics for a relevance logic, with minimal modification in the truth conditions for conjunction, is presented. A slightly different approach concerning positive fragment of relevance logic has been followed in [Fin 74]. We present here a brief account of [Urq 72] and compare it, in particular, with the approach followed in [Fra 69a].

The approach in [Urq 72] exploits the concept of *pieces of information,* symbolized by X, Y, Z ... . A piece of information is a set of basic schemas concerning a subject or subjects about which reasoning is being carried out; for example, in mathematics, elementary facts about numbers would be taken as basic sentences. These sets may be finite or infinite. Let S be a set with X, Y, Z as members.

For two pieces of information X and Y, $X \cup Y$ is defined as the piece containing all the information in X and all the information in Y. Hence, $X \cup X = X$, $(X \cup Y) \cup Z = X \cup (Y \cup Z)$, and $X \cup Y = Y \cup X$ must follow. Also, the empty piece of information $\varnothing$, satisfying $X \cup \varnothing = X$, for all X, is admitted. In other words, the set S of piece of information is a semilattice under the operation $\cup$ with $\varnothing$ (the lattice zero).

Validity: Let ν be a valuation function.

For any basic (atomic) sentence P,

$\nu(p, X) = t$ if P is true on the basis of the sentences in $X \in S$,

$$\nu(p, X) = f, \text{ otherwise.}$$

For implication, $\nu(A \rightarrow B, X) = t$ if for all Y,

$$\text{either } \nu(A, Y) = f \text{ or } \nu(B, X \cup Y) = t,$$

$$\nu(A \rightarrow B, X) = f, \text{ otherwise.}$$

That is, X determines $A \rightarrow B$ just in the case whenever $X \cup Y$ determines B.

A formula A is valid when it is determined by the empty piece of information, that is, when $\nu(A, \varnothing) = t$ for every valuation β in any semilattice S with lattice zero $\varnothing$.

The aforesaid semantic structure for the implicational fragment of relevance logic can be described as follows:

$$\mathbf{I} = < S, \varnothing, \cup, \nu >$$

is a model for the logic of relevant implication, where S is a class of sets X, Y, Z, ..., closed under the operation of $\cup$ (union), $\varnothing$ is the empty set, and ν is a value assignment function (explicated as $\mathbf{I} \models_{\nu,x} A$, ν assigns true truth value based on the information set X to wff A in **I**) satisfying:

$$\mathbf{I} \models_x P \text{ iff } \mathbf{I} \models P \text{ (P atomic)},$$

$$\text{and } \mathbf{I} \models_x (A \rightarrow B) \text{ iff for all } Y \in S, \mathbf{I}_Y \models A \text{ or } \mathbf{I} \models_{X \cup Y} B.$$

$$\mathbf{I} \text{ is called a model for a wff A iff } \mathbf{I} \vdash_{\varnothing} A$$

A is called valid iff for all models **I**, $\mathbf{I} \vdash_{\varnothing} A$

Urquhart notes that it is not in general required that if $\nu(A, X) = t$ then $\nu(A, X \cup Y) = t$ that is, for $\nu(A, X) = t$ to be true, the information in X must be relevant to A. For example,

$\nu(2+2=4, \{2+2=4\}) = t$, but ν (2 + 2 = 4, {2 + 2 = 4, Grass is green}) = f.

He points out that if we do require the function ν to satisfy the additional requirement: whenever $\nu(A, X) = t$, we must have $\nu(A, X \cup Y) = t$, then the positive paradox $A \rightarrow (B \rightarrow A)$ is obtained.

van Fraassen [Fra 69] admits that whenever A is made true by some fact e, then it is made true (of course, in the wider sense) by infinite number of facts, e.é, for any é. That is if ν (A, e) = t, then $\nu(A, e.é) = t$ for any é whatsoever, validating in turn, the schema $A \rightarrow (B \rightarrow A)$.

Further, as shown in [Urq 72], an extension, phrased in terms of the semantics provided for modal logic, of the preceding account of implication does provide the implicational fragment $E_{\rightarrow}$ of entailment with an adequate semantics. Also, it is observed that the extension of these ideas to include extensional conjunction and disjunction is unproblematic, showing that semilattice structures are sufficient to model R^+ and E^+. However, the negation-free formulations of both E and R are incomplete with respect to these modellings, for the schema:

$$((A \rightarrow (B \vee C)) \wedge (B \rightarrow D)) \rightarrow (A \rightarrow (D \vee C))$$

is not provable in R^+ (see [Urq 72], p. 163), etc.

Negation:

Until today, no attempt to devise a semantics for a non-classical logic of relevant species, containing full classical negation, has been found free from difficulties of one type or other. For example, the most obvious classical formulation (capturing Boolean complement):

$\nu(\neg A, X) = t$ if $\nu(A, X) = f$; $\nu(\neg A, X) = f$ otherwise,

will not work since it validates both the *outrageous* and *irrelevance* schemas:

$$(A \wedge \neg A) \rightarrow B, \text{ and } A \rightarrow (B \vee \neg B), \text{ respectively.}$$

In fact, the said formulation does not, in contrast with possible world concepts for which both completeness and consistency hold, have any room for inconsistent piece of information X which would determine both A and $\neg A$, and also some incomplete piece of information X which would determine neither A nor $\neg A$. In turn, under the said interpretation,

the empty piece of information always (of course, unacceptably) determines either A or $\neg A$, validating the law of excluded middle, $A \vee \neg A$.

The studies around this issue abound, but with no clear success. For example, [Urq 72] suggests an alternative to add to the semilattice S a function C (under which S is closed), satisfying

$CCX = X$, $C\varnothing = \varnothing$ and define: $\nu(\neg A, X) = t$ if $\nu(\neg A, CX) = f$; $\nu(A, X) = f$ otherwise.

Clearly, all two-valued tautologies in $\wedge$, $\vee$ and $\neg$ are valid; the laws of double negation: $(A \rightarrow \neg\neg A)$ and $(\neg\neg A \rightarrow A)$ and all forms of DeMorgan's laws are valid. It has a number of pleasant features that paradoxical formulae and extensional disjunctive syllogism are invalid. But, unfortunately, it also rejects some principles: $(A \rightarrow \neg A) \rightarrow \neg A$ (reduction ad absurdum), and classical contraposition: $(\neg A \rightarrow \neg B) \rightarrow (B \rightarrow A)$, which hold as theorems of R (see [Fin 74] and [Bul 87] for some further remarks).

In the early 1970s, Richard and Val Routley [RR 72] invented their star operator defined on worlds to treat negation (see [Dun 93] for details). Herein, for each world a, there is a world a*; and $\neg A$ is true at a iff A is false at a*. In order to circumvent the difficulty Routley star faces in interpreting a part of the formal semantics, [Dun 93] introduces a binary relation, C, on worlds, where 'Cab' means 'b is compatible with a*, and a* stands for the maximal world (containing the most information) that is compatible with a.

There are other semantics for negation, for example, a 4-valued semantics due to Routley and further elaborated by Dunn.

Recently, Urquhart [Urq 83, 84], exploiting the rich environment of projective geometry, has been successful in discovering a new method for constructing R-*model* structures. A three-place relation semantics, developed in [RM 73] as a refinement over Kripke's binary relation semantics for modal logic, is adopted. On this semantics, $A \rightarrow B$ is true at a world a iff for all worlds b and c such that Rabc, either A is false at b or B is true at c. Similar to two-place relation semantics, R is the accessibility relation on worlds. Clearly, on this semantic, there exist possible worlds at which $B \rightarrow B$ fails and, in turn, there exist possible worlds at which $A \rightarrow (B \rightarrow B)$ fails. Kripke's possible worlds semantics has been a fundamental tool in discovering the semantics of relevance logic. It allows for the existence of inconsistent worlds at which $A \wedge \leftarrow A$ holds and consequently there exist worlds at which $(A \wedge \leftarrow A) \rightarrow B$ fails to hold, thus

avoiding paradoxes of implication. Of course, on any adequate semantics of relevance logic, the accessibility relation R needs to be defined on non-bivalent worlds.

At this end it is worthy to note that Urquhart could brilliantly prove *undesidability* of the principal relevance propositional logic, settling thereby an outstanding problem in relevance logic. Essentially, the argument proceeded to show that Cut Elimination was impossible for many logics in the neighbourhood of R–W. However, it seems (see [OK 85], [NS 89] for example) that dropping usual distributivities of $\wedge$ and $\vee$, Cut Elimination can be proved. This, of course, shattered high hopes of relevantists.

In conclusion, it can be said that all the formulations put forth so far have been asymmetrical in one sense or other and semilattice models fail to extend to the full system R, except in a trivial way where one-element semilattice is resorted to. 'Locating semantics which do focus on R and E in a revealing way, or which bring these systems as somehow naturally selected remains an interesting open question' [NS 89, p. 402].

4. THE CURRENT RESEARCH DOMAIN

As the undecidability does not arise classically until the first-order level, and in as much as first-order ideas are extensions of propositional ideas, one could think of truncating relevance logics upto decidability for cultivating automated theorem proving enterprise in rich relevance environment (see [Bib 82], [Bel 77], [Mor 76], [Mur 82], [Res 96], [Sla 80], to name a few), where working with systems weaker than R or E is favoured.

As pointed out in [Bul 87], the problem with having a proper account of implication is not altogether the irrelevance of antecedents but the relationship connecting them which turns out to be *conjunction*. This point was first vindicated in intuitionistic logic, though not withstanding the tests of relevance. The intuitionist account of implication admits the following two-conjunctive principles.

$$(CP1) =: ((A \wedge B) \rightarrow C) \rightarrow (A \rightarrow (B \rightarrow C))$$

$$(CP2) =: (A \rightarrow (B \rightarrow C)) \rightarrow ((A \wedge B) \rightarrow C)$$

As is known, (CP1) is equivalent to $A \rightarrow (B \rightarrow (A \wedge B))$; and $A \rightarrow (B \rightarrow A)$, and hence rejected in the relevance logic.

In this regard, Church (cf. [AB 75]) points out that the idea to replace E.6 of E by $A \to (B \to (A \wedge B))$ gives rise to the paradox $A \to (B \to A)$, and subsequently, in the presence of other axioms, E.11 follows which has turned out to be problematic (cf. [Urq 84]) in investigating deduction procedures, conducting natural deductions, etc.

(CP2) is equivalent to $(A \to (A \to B)) \to (A \to B)$. The counter-intuitive consequences include $(A \wedge (A \to B)) \to B$, $((A \to B) \wedge (B \to C)) \to (A \to C)$, and together with contrapositive axiom, $(A \to B) \to (\neg A \vee B)$ and $(A \to \neg A) \to A$.

Hence relevance logicians, unlike classical logicians and intuitionists, do not accept the following standard condition on deducibility viz., A, B $\vdash$ A, because it gives rise to the paradox $A \to (B \to A)$ on two applications of the full deduction theorem: If $A_1, ..., A_n, A \vdash B$, then $A_1, ..., A_n \vdash A \to B$ (see [Dun 84] for details).

In view of these remarks, following [TMM 88] we outline a new perspective (see also [SC 94]) of the issue followed by an axiomatic foundation of propositional relevance logic, which is decidable. Relevance logic needs to distinguish the two kinds of disjunction: $\vee$ (extensional 'or') and + (intensional 'or', called fission), and conjunction, $\wedge$ (extensional 'and') and $\circ$ (intensional 'and', called fusion). Essentially, the requirement of relevance proposes that as disjunctions and hence directly negated conjunctions are instinctively intensional; they need to be represented by their intensional counterparts i.e., $A \vee B$ be replaced by $A + B$ and $\neg(A \wedge B)$ by $\neg(A \odot B)$. Also as conjunctions and hence directly negated disjunctions are instinctively extensional, $A \wedge B$ and $\neg(A \vee B)$ can be treated as relevant formulations.

Thus, in proof-theoretic terms,

$$\Gamma \vdash \Delta, A, B \text{ iff } \Gamma \vdash \Delta, A + B, \text{ and } \Gamma, A, B \vdash \Delta \text{ iff } \Gamma, A \odot B \vdash \Delta.$$

Also

$$\Gamma \vdash \Delta, A \wedge B \text{ iff } \Gamma \vdash \Delta, A \text{ and } \Gamma + \Delta, B; \text{ and } A \vee B, \Gamma \vdash \Delta \text{ iff.}$$

$$A, \Gamma \vdash \Delta \text{ and } B, \Gamma \vdash \Delta.$$

Typically, the classical DS (Disjunctive Syllogism): $A \vee B, \neg A \vdash B$ is replaced by the relevant DS: $A + B, A \vdash B$; and, in turn, the classical Modus Ponens: $A \supset B, A \vdash B$ by the relevant Modus Ponens: $A \to B, A \vdash B$. As a result, $(A \vee B) \to (\neg A \to B)$ and $A \to (B \vee C) \Leftrightarrow (A \to B) \vee (A \to C)$ stand invalid in relevance logic. Also, as $\odot$ and + (unlike $\wedge$ and $\vee$) are instinctively non-idempotent, the formula $(A \odot B) \to A$ and $(A \odot B) \to B$ do not hold, though the law of exportation, in contrast to the classical conjunction, $((A \odot B) \to C) \to (A \to (B \to C))$ hold. Also from $A \to B$ and $A \to C$, one cannot validly (if linearity is important, see [Gir 87]) infer $A \to B \odot C$; the valid inference would be $A \odot A \to B \odot C$. As in ([Urq 72], p. 164), $\nu(A \odot B, X) = t$ if for some Y and Z, $X = Y \cup Z$ and $\nu(A, Y) = t$ and $\nu(B, Z) = t$; $\nu(A \odot B, X) = f$ otherwise.

The intensional connectives can be introduced as follows:

$$A + B =_{df} (\neg A \to B)$$

$$A \odot B =_{df} \neg(A \to \neg B)$$

$$A \Leftrightarrow B = df\ (A \to B) \wedge (B \to A)$$

The following equivalences hold:

T_1. $\neg(A \vee B) \Leftrightarrow (\neg A \wedge \neg B)$

T_2. $(A \to B) \Leftrightarrow (\neg A + B)$

T_3. $\neg(A + B) \Leftrightarrow (\neg A \odot \neg B)$

T_4. $\neg(A \odot B) \Leftrightarrow (\neg A + \neg B) \Leftrightarrow (A \to \neg B)$

T_5. $\neg(A \to B) \Leftrightarrow (A \odot \neg B)$

Axiomatization

Following [TMM 88], we will call our axiomatization, LR (a contraction of the term *lattice-relevance*). The schematic letters A, B, C, ... will range over formulae.

We will use $\neg$ for negation. The binary connectives, given in order of decreasing binding strength will be $\wedge$ (extensional conjunction), $\circ$ (fusion, or intensional conjunction), $\vee$ (extensional disjunction), + (fission, or intensional disjunction), and $\to$ (implication).

Axioms

A1. $A \to A$
A2. $(A \to B) \to ((C \to A) \to (C \to B))$
A3. $(A \to B) \to ((B \to C) \to (A \to C))$
A4. $(A \to (A \to B)) \to (A \to B)$

A5. $(A \to (B \to C)) \to (B \to (A \to C))$
A6. $\neg\neg A \to A$
A7. $(A \to \neg A) \to \neg A$
A8. $(A \to \neg B) \to (B \to \neg A)$
A9. $(A + B) \Leftrightarrow (\neg A \to B)$
A10. $A \wedge B \to A$
A11. $A \wedge B \to B$
A12. $((A \to B) \wedge (A \to C)) \to (A \to (B \wedge C))$
[Note that A12: $(A \to B) \to ((A \to C) \to (A \to (B \wedge C)))$, in Kanger's form, is weaker than A12 because $A \wedge B \to A \odot B$.]
A13. $A \to A \vee B$
A14. $B \to A \vee B$
A15. $((A \to C) \wedge (B \to C)) \to ((A \vee B) \to C)$
[Note that A15: $(A \to C) \to ((B \to C) \to ((A \vee B) \to C))$, in Kanger's form, is stronger than A15 because $A + B \to A \vee B$.]
A16. $A \to (B \to (A \odot B))$
A17. $(A \to (B \to C)) \to ((A \odot B) \to C)$
A18. $(A \to B) \to ((A \to C) \to (A \to (B \odot C)))$
A19. $(A \to C) \to ((B \to C) \to (A + B) \to C))$

Rules

R1. If $\vdash A$ and $\vdash A \to B$, then $\vdash B$
R2. If $\vdash A$ and $\vdash B$, then $\vdash A \wedge B$

It is to be noted that some of these axioms are though not independent yet reflective of their independent merits. As shown in [TMM 88], LR is the largest natural fragment of R known to be decidable. In fact, though LR has no finite characteristic matrix or algebraic model, it does have fmp (finite model property): Any nontheorem of LR is refuted in a finite model. Together with the fact that LR is finitely axiomatizable, an algebraic proof of the decidability of LR ensues ([RM 73] via a translation of LR into implication-conjunction fragment of Meyer).

Clearly the conjunction and disjunction connectives have exactly the properties of the lattice operations of meet and join respectively. As proposed in [KMV 81], a candidate relevant quantum logic can be obtained by adding to LR, the orthormodular law.

$$\text{OR: } A \wedge (\neg A \vee (A \wedge B)) \to B.$$

LR can equivalently be seen as a linear logic [Gir 87] without its modal operators plus contraction.

We obtain the principal relevance logic R by simply adding to LR the following axiom:

A20. $A \wedge (B \vee C) \to (A \wedge B) \vee (A \wedge C)$ (*distribution*).

Thus is, LR is R distribution (sometimes, symbolized by R-), also called the *Orthorelevant logic* (symbolized by OR).

The unprovability of A20 (distribution axiom) in LR leads to the failure of DS:

$$A \wedge (\neg A \vee B) \to B,$$

and, unlike in R, the failure of the rule-form of DS symbolized by

γ : whenever $\vdash A$ and $\vdash \neg A \vee B$, then $\vdash B$;

with the following example due to Meyer ([AB 75], pp. 298–9):

$$\vdash A \to A \text{ and } \vdash \neg (A \to A) \vee (((A \to A) \wedge B) \vee \neg B),$$

but not

$$\vdash (((A \to A) \wedge B) \vee \neg B).$$

The *modal relevant* logic RK is R plus the following axioms (see [Mar 90] for details):

MRL1. $L(A \to B) \to (LA \to LB)$
MRL2. $(LA \wedge LB) \to L(A \wedge B)$
MRL3. $L(A \vee B) \to (MA \vee LB)$, suggested by N.D. Belnap
MRL4. If A is an axiom, then LA is an axiom

Note that the rule of necessiation: From A, infer LA, is derivable in any of these systems. Now, we have:

RK + T = RT,
RK + 4 = RK4,
RT + Br = RBr,
RT + 4 = R4,
RBr + 4 = R5, etc.

We obtain the classical propositional logic by adding to R the following axiom:

A21. $A \rightarrow (B \rightarrow A)$ (positive paradox)

In order to have a brief introduction of first-order relevance logics, RQ (EQ) and LRQ we need to add the following axioms and the rules to R(E) and LR respectively:

A22. $\forall xA \rightarrow A(t/x)$, called $\forall$-elimination, where the substitution of the term t for x in A is proper, i.e., no occurrence of a variable in t is bound in A(t/x),

Note that A22 can be split into two parts viz.,

A22(a). $\forall x(A \rightarrow B) \rightarrow (\forall xA \rightarrow \forall xB)$, and

A22(b). $A \rightarrow \forall xA$, called vacuous quantification.

(Here again, x is not free in A.)

A23. $\forall x(A \rightarrow B) \rightarrow (A \rightarrow \forall xB)$, called $\Box$-introduction, where x is not free in A.

A24. $\forall x(A \vee B) \rightarrow A \vee \forall xB$, called confinement, where x is not free in A.

(As noted in [Bul 87], A24 is, in effect, *Barcon Formula* for quantified logics of implication. Although it does not hold in Intuitionist logic, it is considered to be an essential feature of first-order logics, particularly in the neighbourhood of $R^+ - W$ for which completeness proofs are available.)

Rule 3. $\dfrac{A(t/x)}{\forall xA}$, called generalization.

Now a weak proof-theory for first-order logic can be sketched as follows (see [Urq 72] and [Bul 87] for details):

Let the semilattice S be adjoined a nonempty (fixed) domain D of individual constants. The valuation schema evaluating the wffs of the extended language consisting of individual variables, n-ary predicate symbols, and quantifiers in addition to the language of the prepositional calculus, would be the following:

Each individual variable x_i is assigned a value $v_i \in D$.

$$\nu(\phi(x_1,\ldots x_n), X) = t \text{ if } \nu(x_1),\ldots \nu(x_n), X_i \in \nu(\phi);$$

$$\nu(\phi(x_1,\ldots x_n), X) = f, \text{ otherwise.}$$

For a complex first-order statement F, $((\forall x)F, X) = t$ if for every assignment ν' which differs from ν at most in the members of D assigned to x, $\nu'((\forall x) F, X) = t$; $\nu((\forall x) F, X) = f$, otherwise.

The derived rule for evaluating a wff F involving the existential quantifier is as usual.

5. FUTURE DIRECTIONS

The 'relevance' (as called in North America) or the 'relevant' (as called in Britain and Australasia) enterprise has come of age. As of now, despite the internal wrangling ([Rou 84a]: '... Of course, tautological entailment is far from exhaustive of correct inferences; it only furnishes all correct inferences at a simple sentential level for a very limited, if much favoured, set of connectives') among relevance logicians, the recent researches that have taken place in the area of Deductive database systems, Question-answering systems, Program analysis and Automated theorem proving techniques sharply suggest that relevance logic and its hybrids, weaker as well as stronger [Avr 84] than R, amongst many other non-classical logics, need to be gainfully exploited.

It is heartening to note that Meyer's proof that the entailment because of its relevance requirement cannot be in any sense a modal logic has not been a deterrent to the emergence of modal relevance logics [Mar 90], owing to the noticeable influence of the work of both modal logicians and their critics ([AB 75], [Bel 81], [Emc 36], etc.). As a matter of fact ([NS 89], p. 7) the first Harvard wave of broadly relevant logics grew from the initial development of modal logic in this century.

We also believe that the themes of thought stemming from intuitionism, appealing to *pre-analytic* judgments, are also further developed within relevance logic (see [Men 87], [Shr 94], [Rea 87] for example); however, '*relevance logic has not yet had its Brower* ([Bel 81], p. 148).

In the recent years, Paraconsistent logic has emerged altogether as a radical trend in the area of non-classical logic and it is closely related to relevant logic for the reasons that both E and R are motivated to minimize the consequences of inconsistency, which forms the basis of paraconsistency. It is known that given usual principles governing disjunction and conjunction, the rejection of DS entails paraconsistency (see [NS 89] for example). As any paraconsistent logic (see [Arr 79], [AT 75], etc.) must satisfy the following.

(1) $(A \wedge \neg A) \rightarrow B$ must not hold, i.e. $A \wedge \neg A \not\models B$, and

(2) the rule modus ponens must be preserved; it cannot be defined by two valued classical logic, but that it can be done by S5 (Modal logic) was

first observed by Jaskowski [Jas 65]. The general theme for constructing paraconsistent logic consists in showing that Duns Scott's law: $A \rightarrow (\neg A \rightarrow B)$ does not obtain. (It may be noted that Duns Scott's law holds in Lukasiewicz many valued logic.) Paraphrasing ([NS 89], p. 8), a (genuinely) paraconsistent logic is one which can provide the logical formulation for a theory which is inconsistent (a theory is inconsistent if it eventually yields a contradiction) but (genuinely) non-trivial (a theory is trivial if it yields all statements of its domain, it is genuinely non-trivial if it does not yield all statements of some given syntactical type). A crucial test for paraconsistency of a logical system is the nonderivability of *spread* principles: $A, \neg A \vdash \delta$ Comp, where δ Comp is some syntactical nontheorematic function of its components. Paraconsistent treatments seem to play a significant role in the study of Arithmetic, Measure theory, Category theory, and so on (see, for example, [Mor 88]).

Concluding we can say that though the original Anderson-Belnap relevance programme, perhaps being classically too strong, may have partly failed, yet it has generated a wealth of material by way of affording major breakthrough and promoting significant improvements over mainstream logics. In particular, it has enormously contributed to both natural and artificial reasoning, a relevance experience guiding to future innovations in the related areas of research. There is lot to be investigated. In order to make relevance enterprise true to its spirit, there is a constant need for a shift from the stable of conventional relevance logics towards developing *deep relevant systems* ([NS 89], ch. 24) involving the general theory of relevant relations characterizing not only implication or entailment but a number of other subtler and more complex ones, for example, cognitive notions like belief, information, explanation, etc., where both incompleteness and inconsistency have to be properly accommodated, say by coupling them with intensionality. At the moment, issues related to exploiting the full strength of natural negation, and respective worth of different proof-theoritic methods and semantics within relevance logic itself are not completely resolved. Nevertheless, for a foreseeable future, paraconsistent and linear logics appear to dominate the scene. Linear logic [Gir 87] provide a new framework for logic programming languages.

APPENDIX

The Full system E of Entailment and R of Relevance

Following [AB 75], the full system E of entailment is axiomatized as follows:

Axiom schemata:

Entailment

E.1 $((A \rightarrow A) \rightarrow B) \rightarrow B$
E.2 $(A \rightarrow B) \rightarrow ((B \rightarrow C) \rightarrow (A \rightarrow C))$
E.3 $(A \rightarrow (A \rightarrow B)) \rightarrow (A \rightarrow B)$

Conjunction

E.4 $A \wedge B \rightarrow A$
E.5 $A \wedge B \rightarrow B$
E.6 $((A \rightarrow B) \wedge (A \rightarrow C)) \rightarrow (A \rightarrow (B \wedge C))$

Relating modality and conjunction

E.7. $NA \wedge NB \rightarrow N(A \wedge B)[NA =_{df} (A \rightarrow A) \rightarrow A = \Box A]$

Disjunction

E.8 $A \rightarrow A \vee B$
E.9 $B \rightarrow A \vee B$
E.10 $((A \rightarrow C) \wedge (B \rightarrow C)) \rightarrow ((A \vee B) \rightarrow C)$

Relating conjunction and disjunction

E.11 $A \wedge (B \vee C) \rightarrow (A \wedge B) \wedge C$ (*Distribution*)
[Note that E.11 implies usual distributive laws:

$$A \wedge (B \vee C) = (A \wedge B) \vee (A \wedge C), \text{ etc.}]$$

Negation

E.12 $(A \rightarrow \neg A) \rightarrow \neg A$ (*Reduction*)
E.13 $(A \rightarrow \neg B) \rightarrow (B \rightarrow \neg A)$ (*Intuitionistic contraposition*)
E.14 $\neg \neg A \rightarrow A$ (*Classical table negation*)

Rules:

Modus Ponens: If $A \rightarrow B$ is asserted, then from A to infer B.

Adjunction: From A and B to infer $A \wedge B$

Nomenclature: (N1) E – E.7 = R, the full relevance logic.

(N2) E – {E.12, E.13, E.14} = E^+, positive fragment of E.

(N3) R – {E.12, E.13, E.14} = R^+, positive relevance logic.

A Gentzen-type formulation of $R_{\rightarrow}$ or $E_{\rightarrow}$ (first appeared in [Kri 59], and subsequently of R or E (see [Dun 86] for various related issues) can be straightforwardly mimicked from formulation of the intuitionistic sequent calculus except the *thinning rule* which would give rise to the provability of positive paradox: $A \rightarrow (B \rightarrow A)$ viz.,

$$\frac{}{A \vdash A} \quad \text{(axiom)}$$

$$\frac{A \vdash A}{A, B \vdash A} \quad \text{(thinning)}$$

$$\frac{A, B \vdash A}{A \vdash B \rightarrow A} \quad (\vdash \rightarrow)$$

$$\frac{A \vdash B \rightarrow A}{\vdash A \rightarrow (B \rightarrow A)} \quad (\vdash \rightarrow)$$

FACT ([AB 62], p. 14): The system E is sound and complete relatively to tautological entailments:

A first-degree entailment $A \rightarrow B$ is provable in E if $A \rightarrow B$ is a tautological entailment.

At this end, we mention that there is now a great variety of approaches to proof theory for relevant logics. Beside natural deduction system due to (AB 75), two elegant Gentzen style approaches are [Bel 82] and (Dun 84).

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Intersubjective Corroboration

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Contemporary ethical sceptics generally do not ask old-fashioned questions like 'who has the moral authority to apply ethical theories?'. Rather they ask, 'What is it to apply ethical theories?' because they think that the 'application of ethical theories' is in itself a vague expression, which does not mean that it is nonsensical and meaningless, rather, that its meaning is not clear. First of all, they ask, which ethical theories are said to be applied, meta-ethical or normative or both? Secondly, they ask if normative ethical theories are said to be applied, how can the application take place when it is contrary to our experience, that in a situation of moral crisis, no one really applies a theory. As the contemporary sceptics do not get satisfactory answers to these questions, they ultimately reject the idea of applied ethics as an important branch of ethics. I think that one has to help the contemporary sceptics to resolve the theoretical crisis they face in ethical discourse and thus diffuse moral disagreement regarding the possibility of applying ethics. In fact, the apparent vagueness of 'applying ethical theories' is inherent in the minds of the sceptics and not in the real applicational possibility of ethical theories. This is so because these people have a very wrong idea about the models of applying ethics. One must accept however that in 'applying ethical theories' a clear idea of a model does not automatically come to our mind. The staunch sceptics attacking application of ethics on the basis of the vagueness of ideas about correct models (possibly after reading a few books), are the people who may not have any idea about applying ethics in the real sense of the term. It is therefore an important meta-ethical task to critically analyze the different models of applying ethics because that in turn may provide us with a sound model of applying ethics.

The first point is that in applying ethical theories, we do not speak of applying meta-ethical theories like Emotivism because these theories are those which tell us about the way evaluative terms, and evaluative

judgements are meaningfully used and the way ethical principles may be either proved or justified. But this does not help us in directly resolving the 'value-laden' problems we face in the society. The knowledge of the meta-ethical theories may be applied in sharpening our skills and in identifying the merits and the demerits involved in the justification of a moral theory. Nevertheless, the ethical knowledge that we have, which included the knowledge of normative ethical theories and meta-ethical theories, obviously helps us in an applied ethics venture because we borrow insights from normative ethical theories to analyze the moral viewpoints of the people involved in an ethical discourse leading towards moral resolution. On the other hand, meta-ethical theories supply us with the reasons behind the soundness of the ethical theory, which may reflect itself in course of moral resolution. Also an involvement with the soundness of the models of applied ethics itself is a meta-ethical task because it delves into the logic of the models, their nuances, merits and demerits. This knowledge may help us later on to know that for such and such sound reason, such and such models are useful. We may, therefore, conclude that it is very difficult to divorce normative ethics and meta-ethics from practical ethics. But practical ethics does not directly need the help of normative and meta-ethical theories to resolve a moral crisis. But the common belief is that at least the normative ethical theories must be directly applicable in resolving moral crisis, otherwise applied ethics makes no sense. This is like picking a tool from a tool box to mend mechanical defects. This presupposes many things. One is that we ought to have an *expert* who is a moral engineer who knows how to pick up the right tool from the tool box to deal with moral crisis. This also presupposes a sound knowledge of the ethical theories (normative) and a knowledge of the relative merits and demerits of these theories based on the critical analysis of the logic behind accepting those theories. But such ideas of ethical sceptics are so unfounded and misleading that it is very important to tell them clearly that their fundamental knowledge about the so-called proper model of applied ethics has made them the sceptics that they are.

J.C. Callahan is a celebrated name in the field of applied ethics. He champions in dealing with the methodologies of applied ethics and in framing courses of ethics (including applied ethics). He says, 'Although applied ethics borrows insight from theories of moral axiology, theories of moral obligation and meta-ethics, the task in engaging in practical ethics is not simply to work out application of existing ethical theories. It

is rather to attempt to find acceptable resolution of moral problems of present and practical urgency. This involves much more than merely doing more sort of philosophical technology where high level theory is simply brought over to practice.'[1]

Let me elaborate on what Callahan says to dispel contemporary doubts expressed by Dr Rajendra Prasad and Dr S.K. Ookerjee: 'In a tricky situation one may fail to see how the relevant theory or theories are to be applied'[2] and 'this entire idea of applying moral knowledge or moral principles is misconceived. In normal cases, people do, of course, act morally, but they do not do so by applying available ethical knowledge.'[3] It is interesting to quote the contemporary sceptics like Rajendra Prasad and S.K. Ookerjee because they suffer from the vagueness of idea about the methodology of applied ethics, i.e., they think that applied ethics is an exclusive affair of moral engineering by ethics experts and this is a hopeless venture for more reasons than one, and, therefore, one ought to take recourse to the rejection of applied ethics as useless (may be they suggest that it should be discarded from ethics). It is not that Prasad–Ookerjee (P–O henceforth) are the only proponents of such a view, there are many in recent times; but I prefer to make special reference to P & O because their papers figured prominently in the *Journal of the Indian Council of Philosophical Research* (*JICPR*) and that in India, where we are beginners in this field, we too are facing such challenges. I shall henceforth use 'P–O' type confusion to analyze what is wrong with such views and what is wrong with moral engineering, which is responsible for creating a vague idea about a proper model of applying ethics. Not only this, I think, I should analyze the apparent defects of another model as well, namely, the 'fruits-of-the-theory'. The search for a correct model may lead me to a consideration about the model of applying ethics.

But before that, other confusions about 'ethical theories' have to be dispelled clearly. Rajendra Prasad is in a state of indecision (as is S.K. Ookerjee). If normative ethical theories are almost impossible to apply artificially (as a tool in a tool box), the sense in which we apply ethics is not clear because 'to apply ethics' is to say that we apply or try to apply normative ethical theories. However, Prasad and Ookerjee have different opinions about the theories of ethics to be applied. Rajendra Prasad thinks that ethical theories that may be applied are 'norms, principles, criteria of rightness'[4] and S.K. Ookerjee interprets them by saying they are 'something like the Ten Commandments or good parental advice or copy book

maxims'.[5] However, Ookerjee says that even if ethical theories are just these things, it can hardly be said to be applied by people in real-life situations. The first point is that ethical theories are basically the generalized principles in morality, believed to act as the standards of moral judgements, as ideals, intrinsically valuable and thus worthwhile and desirable. They are the guiding force of moral actions and the potent source of moral choices and moral decisions. But how could Prasad mean moral theories to be the same as what Ookerjee interprets them to be? I do not think Prasad could mean that (neither should Ookerjee) because ethical first principles and the *secondary moral rules* are not the same thing. Prasad is correct in thinking that moral principles or the first principles of morality (Ookerjee calls them 'super principles') are the basic norms which ought to be followed for their intrinsic worth. They are thus the criteria of rightness as well. But secondary rules or principles are like the 'sign posts' (to borrow from J.S. Mill's 'Utilitarianism') which *do not* necessarily logically follow from the first principles, but are the moral cues in following the end principles. These secondary principles are like the commandments, pieces of parental advice, social maxims etc. Hence, these principles cannot be the same as the generalized principles of morality. But the tragedy is that there may *not* be a single general moral principle which can fit into *all* changing moral situations. Hence, any one general principle in morality cannot be said to resolve all moral problems, nor can it guide moral actions in all changing situations in real life. This may end up in moral relativism which encourages scepticism of another kind because one may think that in fact, it is hopeless to speak about normative ethical theories. This would result in the rejection of normative ethics as well and with the rejection of this, the idea that 'exclusive meta-ethics is only ethics proper' would get its due place. Prasad and Ookerjee were careful not to do so but they nearly headed towards it if they seriously meant that normative ethical theories suffer from some defect or the other, and cannot guide our actions or resolve moral crises. Why on earth should there be one moral theory which is *absolute* and logically so sound that it can resolve everything? Why should we think that in the absence of one absolutely sound theory, ethical theories are in no case applicable? Finally, why should we think that normative ethical theories are a bunch of theories, completely known to us (as if there can be *no* more), and we can choose one according to its merits and then fit it into a situation to resolve a moral problem? Ookerjee is very correct in saying that 'Recalling a

relevant principle, applying it, deciding to *act* on it and then acting on it—all this just does not happen'.[6] But to say conclusively that, therefore, applying ethics is an enigma is incorrect, P–O type confusion leads to dangerous propositions like the conception of wise, ethics experts (Plato's Guardians) according to Prasad. This is naturally the climax of ethical engineering. Such engineers may possess cultivated moral sense, says Prasad, which is *partly inherited.* Hence, moral engineering may end up in hereditary moral sense (possibly owing to the migration of wise souls from one body to another), which Prasad would not like to accept. P–O type confusion is thus a confusion about the proper model of applying ethics, which needs to be dispelled now. But we should not rush head on to show the defects involved in the 'engineering model'; we should instead consider the 'fruits-of-the-theory' model in applying ethics.[7]

The 'fruits-of-the-theory' model is very simple. It is based on a strong presupposition that if we want to speak about 'applying ethics', it has to rest on (a) a well justified general ethical principle, (b) a careful deduction of what follows from such a principle, i.e. what sort of moral prescription follows from it; (c) a careful analysis whether in a real-life situation, the prescription would be useful in resolving a moral crisis; (d) the adoption of the prescriptive guideline as paradigm in moral resolution and moral decisions, i.e. application of the fruits of an ethical principle in a way that it becomes fruitful in practical cases. This is essentially a *deductive* model that proceeds from the 'top to down', i.e., this is an abstract philosophical theorizing with the help of a so-called well-justified general ethical principle prescribing rules of actions and then fitting these rules in order to know what to do and what not to do in a particular situation of moral dilemma. Several questions arise here. One is that why should we think that an ethical theory is the soundest one in resolving all moral dilemma? There is no point in saying this because the range of moral dilemma is so open-ended that one does not know what comes next and where it stops. In an ever-evolving society, moral crisis is a continually emerging phenomenon and with the diversity of the nature of such crisis, one is not sure that one body of sound ethical theory is potent enough to resolve *all* of them because this is a matter of evidential enquiry and not a matter of intuition. No amount of theorizing can help us to know that a particular theory is helpful in resolving all moral dilemmic situations. Moreover, is it really possible to enlist all the fruits of an ethical discourse in establishing an ethical theory? When we are engaged in normative ethical discourse

in establishing an ethical theory, in telling what it consists of and when we are engaged in a meta-ethical effort to justify a theory, we need not start enlisting the fruits of the theory instantly. It is a matter of theoretical interest which comes in due course to our realization that the theory so framed is not without practical value. In fact, there is always an urgency in establishing a normative theory. This is to frame a standard of moral judgements and moral decision making. As such, it is not odd to suppose that an ethical theory is such that some suggestions or prescriptions in the form of action-guiding and decision-making rules may be said to follow from it. Such rules may be useful enough in a real-life situation to resolve moral crisis as well. However, it is odd to think that the prescriptions may be deduced in a very strict logical sense. Hence, prescriptions may be said to be a matter of *heuristic* understanding. We cannot say, for instance, that 'Utilitarianism' is a moral theory from which it may be logically deduced that 'We ought to help the poor' because this rule or prescription may be heuristically understood to follow from that principle but it should not be taken as a conclusion that follows necessarily from the premises given above. The heuristic understanding of what the 'fruits-of-the-theory' may be, is a continuous process of understanding, it does not depend on 'from-the-top' deduction.

Again it is worth asking, even if the prescriptions are heuristically understood to follow from a general ethical principle, is it, in a real sense, useful in resolving a moral impasse, which is essentially practical in nature? To delve into it is to delve into the actual *cases* of moral crisis and finding ways to move out of them. It is in this context that we can address ourselves to the question asked above. How can we really know that the fruits of such and such ethical theory does help in resolving a moral impasse if we do not have the *experience* of a moral problem, the resolution of which fundamentally reflects the basic involvement of an ethical theory? That an ethical theory is not simply the handmaid of ethical theorizing is a matter of discovery through moral experience.

This is not to reject ethical theorizing because we may sensibly theorize about the applicational possibilities of a theory and about the prescriptions likely to follow from them. But such *speculation* will have a value if and only if we relate it to real life affairs. Ethical theorizing of this kind may have social value in so far as it is of theoretical or academic interest for the philosophers but if it remains in isolation, divorced from the actual contexts of application, it has no practical value. From all these we may

conclude that the 'fruits-of-the-theory' model in applied ethics turns out to be a model useful for exclusive ethical theorizing in which philosophers may participate in enthusiastic speculation. It conceived of *ethics-experts* who can apply the fruits of a theory successfully. This is to avoid the *non-philosophers* in ethical application because they have no knowledge of ethical theories and they lack in the speculation of the prescriptions of action and in implementing them to resolve moral crisis. Even if we accept this peculiar *division of labour* in ethical application, some doubt remains whether or not even philosophers can really do what they are expected to do. Ethical application in a deductive way—'from the top', is totally absurd. This absurdity in a much more intense form can be seen in the 'engineering model' or the 'dominant conception' of applying ethics.[8]

This model is related to the 'fruits-of-the-theory' model because it basically propagates the idea that there is one body of ethical theory which can be rightly chosen by an ethics expert to engineer moral problems. Not only this, the expert has to engage further in a teaching programme of ethical theory or theories which could educate non-philosophers how to apply one theory or the other as the situation demands. Clearly, this is a 'deductive model' in so far as it conceives a well-established ethical theory successful in moral engineering, i.e. deriving a set of practical recommendations or prescriptions from the theory and trying to apply them to resolve the cases of moral impasse. As such, the fundamental features of the 'fruits-of-the-theory' model are reflected in this model as well. This model is even more clear in specifying the actual steps in moral engineering, which are: choosing the right ethical theory to be applied, analyzing the value-laden problem supplied by the non-philosophers, enlisting clearly the practical recommendations that follow from an ethical theory chosen for moral resolution, then solving the value-laden problems by an ethics expert thus ending not only the professionals' crisis but also teaching other professionals to do the same. The division of labour and monopolistic chauvinism of ethicists spelt out in this model haunt our minds. These peculiar people called philosophers sit high in their ivory towers with their kits full of ethical knowledge, awaiting the professionals of different fields (the non-philosophers), the cry-babies, to *supply* moral problems. These non-philosophers are thus the potential resources who supply value-laden problems for the moral engineers who then apply the theory that is best suited to resolve such problems, prescribe a list of duties and give a dose of teaching in ethics to the

professionals. Such helpful vanguards of ethics thus apply a well-grounded general ethical theory in order to resolve crisis in different professional fields like medicine, agriculture and many more. Hence, ethical issues that arise in a profession do not become a genuine problem for a professional in the sense that they are not supposed to get involved in resolving that problem, i.e. they do not become a party to that effort. Professional ethical problems are thus problems for the ethics experts.

It is very natural that the P–O type confusion will arise because the entire model is fraught with serious problems, and once we understand that this is *not* applied ethics, the P–O type of thinkers will not want to raise doubts about the sensible application of ethics. This model of applying ethics bears the Seventeenth Century tendency to give *ethical guidance* to the society and this tendency is known as *casuistry*. And casuistry is quite capable of bewildering the best minds to believe that this is what is called applied ethics. We find in this P–O type confusion an added dimension of not understanding how casuistry is not applying ethics. We find W.K. Frankena joining this group. He says, 'Today some philosophers seek to do something like this (casuistry) by discussing the ethics of abortion ... and war ... . In doing so, however, they characteristically tend, rightly in my opinion, to stress general principles ... . This is the most philosophers as such can be expected to do, and it can be very helpful.'[9] Frankena has no doubt that casuistry is the same as applied ethics and it consists in stressing 'general principles' from 'the top' so to say, to resolve ethical problems supplied by the professionals, and philosophers most aptly are expected to resolve such problems. Casuistry turns out to be a linear application of a moral theory by an ethicist, as if it were an 'art'. If one suffers from these confusions (P–O type), one certainly fails to know what applied ethics really is.

Let us first understand the basic difference between casuistry and applied ethics. Casuistry, like sophistry, takes the form of providing a moral agent facing conflict among duties, with an intelligible set of moral reasoning so as to resolve such conflict. Hence, it is sometimes referred to as 'art of moral resolution'. Whereas applied ethics is *not* art (specialized by the ethicists) of applying one sound body of a particular theory in order to resolve all value-laden problems. There can be really no art of ethics which can help a moral agent in moral reasoning by producing a set of universally true moral rules or moral prescriptions. The most sincere effort to teach application of ethical theories in order to make people ethical

has to fail miserably because one cannot act like an artist to perfect the moral actions of people and that too with the help of a sound ethical theory. The problem is that an ethicist, if he is crafty enough to call his ethical knowledge into service, so as to find ways out of moral trifles, can fail miserably in his art in many other demanding situations. Sometimes there will be poverty of ideas; sometimes obsession with one theory will mislead him or her and sometimes he or she will fail to understand the gravity of a problem and to find ways to resolve it with the help of a given tool in *his* tool box. The moral engineers or the casuists, a miserable lot, suffer from all orthodoxy there could be in ethical theorizing and ethical application.

What is nauseating in the engineering model is that non-philosophers have no moral confidence in applying ethics because of the fact that they do not have enough moral knowledge. Hence, the non-philosophers are expected to 'supply' the value-laden problems to the moral philosophers. A philosopher is thus expected to enter into the moral affairs of different occupations and, as such, professional ethics is something to be guided by the ethicists. Different professionals (the non-philosophers) are mere onlookers and followers of the ethicists who are the problem solvers-cum-teachers. Is this an acceptable situation at all? What does it mean to 'supply' ethical or value-laden problems? Is it picking out one practical problem that a professional faces which he or she realizes is not merely a practical problem as it raised moral questions as well? After all, ethicists cannot be omnipotent information gatherers from all occupations. He has to rely on the professionals in some way or other with regard to this matter. But it is not the professional philosophers but the professionals in different fields who get the first feeling of a distinct moral crisis. In fact, it is *not* that the professionals 'supply' a value-laden problem, a value-laden problem is the one that surfaces in a particular field of knowledge, with which some people having expertise may be well acquainted but that does not rule out an interdisciplinary interest, particularly if that problem attracts the interests of others as well. In such cases, it will not be too odd to imagine one supplying some *information* to the other but it will be odd to imagine that one supplies a problem to the other to resolve it. A medical practitioner does not supply a value-laden problem to an ethicist to resolve. It is the value-laden problem that attracts many people in the society to wanting to know about it and thus try to face it in their own ways even if they are unable to suggest concrete moral theories to resolve

it. Ethicists also receive such information and come to know that, really speaking, any practical problem figuring in a particular discipline is a value-laden problem as well. I must say that an understanding of whether or not a problem is value-laden is not the sole business of an ethicist. A practical problem figuring in a particular field does *not* become value-laden when ethicists say so. Whether it is value-laden we *all* can know from our ethical experience. Hence, no one supplies a value-laden problem, and no *one* party applies ethics. There is thus no division of labour like non-philosophers doing one thing and ethicists doing the rest. That a problem raises ethical questions of serious concern is a matter of plain ethical experience that we all have in the society we live in and we all have moral viewpoints as well regarding how to solve these problems. The truth we strike at now is that applied ethics is not moral engineering; instead it is an interdisciplinary discourse in which only the knowledge of the ethical theories and applying them by the ethicists make no sense. The deductive models discussed above are thus to be discarded.

To consider the different moral points of view in moral resolution and framing practical rules is what is the 'bottom down' approach which I call 'intersubjective corroboration'. We have on the cards a model demanding close *co-operation* between the philosophers and the non-philosophers because the ethical views of the *philosophers* and the *non-philosophers* are equally important in moral resolution and framing decision-making rules. I shall now try to justify why this is a sound method of applying ethics. In doing so, I shall perform a *meta-ethical* task of justifying a model of applying ethics. Ethical sceptics need to note that these two tasks (meta-ethical and applied) need not be conceived as completely unrelated.

I believe that this model is free from the core problem of the 'fruits of the theory' and the 'engineering' models because it is based on the commitments that (a) there is *no* one body of justified ethical theory waiting to be applied which can resolve *all* ethical problems; (b) ethicists *cannot* act as moral vanguards applying one or more ethical theory or theories in a mechanical way; (c) non-philosophers do not supply ethical problems and do *not* beg ethicists' directives for moral resolutions; and (d) non-philosophers need *not* be taught the art of resolving moral impasse.

'Intersubjective corroboration' speaks of close *corroboration of moral viewpoints* (in which ethicists are an important party) in raising *value-laden problems* for consideration, *arguing* and *debating* about the *practical*

decisions needed to *resolve* a moral crisis (such arguments are mainly based on why such and such decisions are of moral worth), the philosophers and the non-philosophers *pursuing* the government and other social agencies to implement such practical decisions in the form of rules, the philosophers engaging themselves further in *ethical theorizing* about the active role of the ethical theory or theories figuring prominently in ethical corroboration, moral resolution and construction of morally valuable practical rules. The value of these ethical theories may be further spread by all of us to make it a *social creed*. It is a continuous *social process* of the corroboration of ethical viewpoints, framing rules having moral value and spreading ethical knowledge. It is also an enquiry about the ethical principles involved in moral resolutions and understanding the value of the same. Being a social process, it has to change with the time because with the passage of time, a new set of ethical problems will emerge and fresh corroboration of views, moral resolutions and implementation of value oriented rules shall come into force. It demands 'non-coopted' philosophers to corroborate because a philosopher with a prior bias for an ethical theory and for the unilateral application (like a tool in a tool box) cannot, in any case, be helpful in moral resolution. It would always end up in a highly prejudiced 'ethicists' resolution of moral problems', with which the neglected non-philosophers may not be satisfied. Even the social agencies, if they take the resolutions seriously and construct social rules, the rules will reflect the original bias and very soon moral disagreement will crystallize to reject them completely. This is not to say that 'intersubjective corroboration' will end up in an absolutely useful set of rules in the society, there may be moral disagreement about them as well, but every time we find a set of rules through corroboration, they may be highly practical, of great moral value and free from prejudices. Not only this, the non-philosophers need to be non-coopted as well, because *corroboration* of views does not encourage imposition of one or all views. Hence, the task of the philosopher in applying ethics is to *identify* value-laden issues for consideration (non-philosopher may be helpful too but philosophers may help others in any apparent confusion about such problems) and *arrange and encourage* moral discussions in order to resolve moral problems. For this a moral philosopher has only one assumption, viz. 'inter-disciplinary cooperation'. This enters into the periphery of several professions and involves many professionals. Any moral resolution involving professionals may result in the construction of a set of practical decision making rules, extremely

useful for professionals. We may thus have ethics for the professionals as well. Professional ethics is thus *not* ethics for the co-opted professionals. It demands 'intersubjective corroboration'. Another thing is that the philosophers and the non-philosophers need *not* be 'goal-directed' in the sense that one particular ethical theory ought to be applied in all moral problems in a particular society. But 'goal-directedness' is also important for the philosophers and the non-philosophers in the sense that to apply ethics, one has to keep in mind the range of the ever-evolving value-laden problems of a particular society and the possible ways to resolve them.

The first question that may arise is, 'In what sense can we really call this the model of applied ethics?' This question has a distinct fervour of the P–O type confusion because one wonders, without applying any theory of ethics by an ethicist, how can we talk about applying ethics at all. One has to understand de-novo that applying ethics is not applying one theory of normative ethics, rather it is applying ones ethical knowledge along with a close cooperation with other interested parties. Again, ethical knowledge need not be restricted to 'knowledge of the ethical theories' because that is highly specialized knowledge. We may have ethical knowledge stemming out of the ethical experiences that we have in the biotic-community we live in. All sane human beings participate in a society teeming with individuals engaged in intentional actions, which affect fellow beings and the biotic community adversely or favourably. We are thus engaged in ethical actions, ethical judgements of actions, ethical scrutiny of ends and means we choose and debate about our rights, obligations and duties. We are participants of moral agreement and disagreement as well. Hence, individuals in society are forged in ethical experience and have ethical knowledge. This begs no teaching and no preaching, all these happen without a holiday. Ethical knowledge is thus not the privilege of the ethicists. However, knowing about the theories of ethics and their justification is one advantage that the ethicists may enjoy, but that is not basic in resolving moral crises. What is basic is the incessant moral experiences and moral knowledge which all sane humans enjoy in society. Take away this, and no amount of theorizing and intuition may help us in settling the practical problems we face in this huge biotic community. The moral knowledge that we all have may cover in its fold the basic tenets of an ethical theory, but that is a matter of analysis and discovery in a post-corroboration stage. The parties involved in 'intersubjective corroboration' may be conscious about an ethical theory in corroboration

of ethical views but this is true only for a handful of them. This may not be a great advantage at all because non-cooption is what is most desirable in ethical corroboration. This, however, does not demand completely blindfolding oneself from what one knows. Rather, one has to refrain from *imposing* ones views as a vanguard of ethics. Hence, any social person can be a party in ethical corroboration because he has enough ethical knowledge to do so. However, in a democratic set up, if the government and other agencies are conscious enough to implement the value-oriented practical rules and if the philosophers *and* the non-philosophers take up ethics teaching and learning (mainly the ethical theories) seriously, the moral vocabulary of the entire society will be enriched. This is no day-dreaming. It is becoming a national creed in many countries. Why should we lag behind? All this may not make us persons of high character overnight, but the moral character of the collectives will be certainly better. It may not be a pre-requisite for human civilization but it may be a strong basis for a civilized society. Brown and Barrie Paskins shall gladly support this model, I believe, because we find Brown referring to Paskins in his essay 'On applying ethics', and I quote a few lines to justify what I say. Brown writes: 'We do lack authoritative solutions to ethical problems and it looks as though we shall continue to lack them. It rules out philosophers acting Red Adairs—it rules out philosophers acting as ethical consultants. Part of the task of philosophers is to help to improve public debate on pressing moral issues and, together with those involved in or affected by the work of specific occupations to contribute to the articulation, development and assimilation of occupational ethics. A goal of applied ethics teaching is to supply future professionals and other citizens with a vocabulary and an enrichable set of concepts and distinctions for thinking about and discussing ethical problems.'[10] The philosopher's role has been nicely portrayed by both these thinkers. Brown thinks (and I agree) that 'a philosopher can invite us to see things in a certain way and the invitation is quite likely to be one that a non-philosopher could have initiated'.[11] Brown thus comes to conclude that 'the applied ethics activities are in the main ones that involve active cooperation between philosophers and others.'[12] Let me elaborate this 'bottom down' approach saying that this is not an inductive approach in the sense of establishing an ethical theory on the basis of corroboration of ethical views of individuals. In this sense, it is not the opposite of the deductive model. To call this model, 'the bottom down' is to say that it does not start with picking out

a moral theory after sorting out value-laden problems. Rather, it concentrates on sorting out a value-laden problem at the outset, and this is what is of crucial importance in what we call applied ethics. It sets out to consider the most basic or the fundamental factor in applying ethics and in this sense it is 'bottom down'. It also sets out to consider the moral views of those who are most important in practical resolutions having a moral face. In this sense also, it is 'bottom down' and different from the other approach which is from 'the top' in the sense of recognizing the chauvinism of the ethicists. Applied ethics is thus essentially a project in *ethics proper* that pursues *inter-disciplinary synthesis* and construction of practical rules of moral worth to face ethical dilemma. The value of applied ethics lies in the assurance of a *qualitative* social life. A morally charged social life cannot be conceived without a morally charged public policy and decision-making rules cannot be without moral value if they have to ensure qualitative social life. The other value is that in order to resolve moral crisis and moral disagreement, and to construct decision making rules and public policy, we need not (and cannot) overlook the moral viewpoints of the grown-up humans having moral experience and enough moral knowledge. 'Intersubjective corroboration' is thus a continuous social process and one need not think hopelessly about the vast extent of ones nation's territory and about the ocean of people and their views. Ethical corroboration remains a morally valuable model in applying ethics in so far as it does not become the handmaid of a group of people (philosophers or non-philosophers). Ethical corroboration is valuable only if needless priority of ethical theories in artificial application is ruled out. The importance and need of ethical theorizing is, however, not ruled out because there is every scope for the discovery of and interpretation of an ethical principle in the context of ethical corroboration. It is very likely that a philosopher may be careful enough to consider a context in the light of a principle. But this latter division of labour is not all; the philosopher has to depend on a basic vocation of the social scientific model, the 'intersubjective corroboration'.

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Metaphysics of Consciousness, and David Chalmers's Property Dualism

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All that has happened is that our picture of nature has expanded.

—David Chalmers, *The Conscious Mind*, p. 128

It is widely recognized these days that while doing philosophy of mind one can no longer avoid paying attention to the findings from the relevant empirical sciences, such as neuroscience, evolutionary biology, etc. It has become almost mandatory to expect from a philosopher of mind today that her theory should be in consonance with, or at least should not be in open conflict with, the current world-view depicted by the scientific research community. This current trend of favouring the 'scientism' spirit in a philosopher, or that of considering philosophy as an extension of the scientific enterprise, has been marked by some[1] as against the 'humanistic' character of philosophy. However, there is no way to deny that the contemporary scientific world-view occupies a significant position in our thinking in general, and thus reference to it naturally shows up in many of the recent philosophical debates. For deliberations on the concepts of mind and consciousness, however, it has become one of the crucial criteria.

This article focuses on a particular theory in philosophy of mind in the aforementioned 'scientific' spirit. Proposed by David Chalmers,[2] it promises to lead us toward a 'scientific study' of mind and consciousness guided by its physicalist commitment to the 'scientific' world-view. Except that, as his comment quoted in the beginning of this article suggests, Chalmers demands an expansion of the physicalist world-view at the most fundamental level to accommodate the fact of conscious experience.

While this article has nothing against the 'scientific' philosophical theories on the conscious mind in general, it is critical of the metaphysics that

Chalmers has espoused to support his thesis on conscious experience. More specifically, it argues against the version of *property dualism*, which Chalmers has endorsed to establish his claim that conscious experience is just as much an ontologically independent and irreducible item as is the physical. In this paper, I am going to look into some of the problems which Chalmers's property dualism suffers from. Overall, I argue that it, i.e. Chalmers's version of property dualism, is not the right kind of metaphysics to support his proposed thesis about consciousness.

The plan of the paper is as follows: Section 1 is meant to provide a general introduction with an overview of the history of the problem in western philosophy and is supposed to lead the reader to Chalmers's theory. Section 2 acquaints the reader with the relevant details about Chalmers's position. Finally, section 3 is a critique of property dualism as proposed by Chalmers.

1. WHAT THINGS ARE REAL?

Centuries ago, William of Occam (1285–1349) gifted us an important metaphysical dictum: Entities should not be multiplied in our theories beyond what is necessary to explain the data. We all know this dictum as Occam's Razor. History of Western thought is replete with the examples of its power to chop off entities, such as Phlogiston, that have been held as metaphysical suspects. Its message is clear: one should look for a simpler metaphysics. If theory A and B both can explain the data equally, then it follows from Occam's dictum that the theory which posits lesser metaphysical entities is the winner.

This thought of simplifying, or the thought of not complicating the scenario beyond necessity, in a metaphysical sense seems to be at the heart of the recent controversies with mind and consciousness. Contemporary physics and other basic sciences have supplied us with a scheme of things that are real. If we consider that as the *definitive* scheme of things, where, if at all, do mind and consciousness feature in it? We can reformulate the question by borrowing a phrase from Jaegwon Kim[3] as follows: Can we find a place for mind and consciousness in that worldview that is fundamentally physical and is ruled by laws that are completely physical in nature?

The available options are clear. Broadly, they appear to be of two basic types.

Option A: One may feel tempted to opt for the 'simplicity' thesis and see 'no necessity' to make any room just for the sake of the 'mind' or 'consciousness' in the essentially physicalistic metaphysics, which is the received truth from the contemporary sciences. Many have chosen this path. They have embraced the physicalism endorsed by the sciences wholeheartedly, and have tried to explain the 'mental' in terms of the 'physical'. Consider, for instance, the reductive efforts in the '50s of Herbert Feigl[4] and J.J.C. Smart.[5] Each of them had independently proposed that the mental states are nothing but (identical to) physical states and wanted to show this result in consonance with the-then scientific research. Subsequently, B.F. Skinner[6] openly favoured 'science' and 'scientific outlook' in his psychology, and the outcome, as we all know, was psychology expressed in purely behaviouristic terms. Skinner thought that speaking of or explaining human behaviour in *mentalistic terms* is not only *not* science, but also is inimical to any genuine effort towards a science of human behaviour. These are precursors to Daniel Dennett's present-day physicalist explanation of mind and consciousness. Dennett's reductive philosophical behaviourism[7] suggests that sensations are nothing but complex behavioural dispositions. In a similar manner, scientist Nicholas Humphrey[8] has recently argued in favour of the identity thesis between the physical and the mental, drawing support from what he considers is the evolutionary history of the sensations.

In recent days, the reductionist rhetoric has come to include a newly acquired reference to a 'neuroscientific' model of mind and consciousness. The change is largely due to the galloping pace at which research in neuroscience and brain research has progressed in the recent days. Back in 1981, Daniel Dennett could only raise the possibility as a question:

> Is it *in principle* possible that brain scientists might one day know enough about the workings of our brain to be able to 'crack the cerebral code' and read our minds?[9]

Today some say (for instance the reductionists[10] or the eliminativists, as they are sometimes called) that what Dennett posed merely as a possibility *in principle* has just become close to being a very real possibility. Technological advancement in the broad area of neuroimaging, for example, has given us new powerful tools and techniques, such as PET, fMRI, which enable us to scan and isolate and observe various neuronal activities

in specific areas of the brain. This we could not accomplish earlier. This unprecedented access to the neuronal behaviour not only has made better information about the brain available, but it also has led some to nurture a hope which is often articulated as follows:[11] Findings from neuroscience and neuroimaging of brain areas will ultimately help us to find neural correlates of what we currently call 'mental' states and behaviours and which are considered to constitute human consciousness. Thus, eventually a better micro-level understanding of the brain and neuronal activities in its different areas will lead us to a better understanding of the entire gamut of human activities, mental or otherwise; and thus one day a complete brain map may dissolve the perennial problem of explaining mind and consciousness in a physical world.

In support of this hope, it is further pointed out, for instance, that research on brain events has actually therapeutically helped us to better understand and intervene in debilitating diseases, such as Alzheimer's, Schizophrenia.[12] Breakthroughs such as these have been argued to indicate the palpable correlation between the neural and the 'mental', and also to support the logic behind the reductivist claim that the 'mental' at the core is nothing but the physical.

It is easy to see that this possibility of a completely 'neuroscientific model' of mind and consciousness goes very well with the dictum of simplicity from Occam's principle. For, it meshes well with the standing physicalist understanding of the world, as brain ultimately is physical. Thereby, it brings mind and consciousness within the purview of the same domain which houses the rest of the things, hence the same set of basic laws of physical sciences holds good for it all. It shows a way to accommodate the 'mental' without significantly expanding or altering the contemporary primarily physicalistic scientific world-view. The main contention is that it is not desirable, where we can help it, to make metaphysics unnecessarily bloated by allowing entities to multiply beyond necessity.[13]

Option B: If the dissenters may be labelled as the non-reductionists, for them the option is to appeal to the other facet of Occam's Razor. Though we are more familiar with the sharper side of this principle which hews with ease, let us not overlook, the dissenters appear to say, that Occam's Razor at the same time does concede in case of metaphysical necessity. So, if required, the multiplication of entities and the consequent enlargement of metaphysics will be both unavoidable and appropriate. There are many in this group too.

The main contention of this latter group is that there is enough evidence to indicate that a purely physicalistic account cannot be a satisfactory explanation for the 'mental'. For instance, they refer to the subjective certainty and the indubitable existence of the 'qualia';[14] or to the 'self'-related or 'self'-directed phenomena, which appear to be at the core of our conscious experience. The variety of experiences appears to be represented as experiences of a single subject or experiencer. They maintain that an exclusively physicalist account cannot satisfactorily explain this intimate contextualization in terms of a unitary 'I'. Overall, they argue that despite the advances in sciences and neuroscience, there are 'explanatory gaps'[15] in a totally materialistic world-view, and consciousness features very prominently as one of these gaps. They contend that rather than discarding the fact of consciousness, a serious revision is needed in the contemporary scientific world-view, if that view creates a problem for accommodating consciousness as part of the reality.[16]

The afore-mentioned radical proposal of mind-brain identity by Feigl and Smart, for instance, met serious opposition from Hilary Putnam and his functionalist argument for 'multiple realization' of mental states,[17] and also from Donald Davidson and his position of Anomalous Monism.[18] Putnam claimed that no mental state can be identical to any single physical or biological state, as each mental state can have a very diverse 'realization' in different physical or biological structures. For instance, the 'pain' realized in me may very well be quite different from the 'pain' realized in some other species, e.g., in a centipede. Since it is possible for the 'mental' to be *multiply realizable* in this sense, clearly the claim of one-to-one identity between the mental and the physical is not a tenable thesis. Similarly, Davidson argued that the mental realm is autonomous from the physical. According to him, although every event that can be described in mental terms can also be described in physical terms, no connecting laws or principles between these two sets of descriptions or properties as such is possible.

Though these two above-mentioned options, A and B, appear to be mutually exclusive, recently, however, there is a noticeably growing trend to walk the middle path.[19] The trend is conciliatory in its approach. It is distinctive by its conscious commitment to the contemporary scientific world-view, while maintaining a non-compromising stance about the primacy and autonomy of the mental. In a way, John Searle's position is an example of this. Although his 'Chinese Room' argument till today presents

the best case against strong AI, Searle in his final analysis is ready to accept consciousness as a *biological*, i.e. as a natural, physical phenomenon which is caused by the operations in the brain. He writes:

> ... In my view there's nothing mysterious about it or metaphysical about consciousness—it's just part of the ordinary biological world.[20]

Elsewhere, Searle has put it this way:

> Consciousness simply consists of our inner states and processes of sentience or awareness. By 'inner' I just mean inside the brain.[21]

David Chalmers's theory on consciousness, which as mentioned earlier is the main focus of this paper, is a bolder and more advanced type of example of this combinatorial non-reductionist approach. For Searle, functionalism is his chosen position and that he thinks precludes him from being an overt supporter for the primacy of consciousness. However, for Chalmers, as we shall see, consciousness is both a function of the brain and is irreducible to the physical. The world-view presented by the contemporary science is not a matter of debate to him; it is the truth. Yet, he identifies himself with a 'qualia freak'[22] who is committed to the irreducibility of conscious experience. Starting with the existence of consciousness as a non-physical fact that is not further reducible, he wants to explain its nature and emergence while concurring completely with contemporary science about the scheme of things.

There is nothing wrong as such in the effort to have the cake and eat it too, except that on closer look it seems to go against our basic metaphysical intuitions. Rationalization of claims, which in a way states that a thing both is and is not, usually involves a two-level approach. Chalmers too has adopted this two-level approach as can be seen in his version of property dualism. The focus of this paper, as has been stated earlier, is on his chosen metaphysical scheme. My objections are not against his claim of irreducibility of consciousness. Rather, I try to raise questions against the appropriateness of property dualism as the metaphysics for his theory of consciousness. If we follow the principle of Occam's Razor, then a metaphysical scheme must be guided either by simplicity or by necessity. Chalmers's metaphysics of property dualism, I contend, flouts both of these guiding norms.[23] But first, a few words on Chalmers's theory itself.

2. TAKING CONSCIOUSNESS SERIOUSLY

The *easy* way out, as Chalmers puts it, is to dismiss consciousness as a non-problem. The tougher challenge, he says, is to take consciousness seriously; that is, to recognize it as a genuine problem to be accounted for. Chalmers begins by taking conscious experience as a given irreducible fact about us. The challenge, or what he calls the (by now famous) 'hard' problem[24] in consciousness research, is to explain this fact of conscious experience while staying within a 'scientific understanding' of the physical world. However, in his view the 'scientific world-view' and its underlying metaphysics must be *more expansive* than hard-core materialism to accommodate the fact of conscious experience. It is a case in point for multiplication of entities by force of sheer necessity and the consequent adjustment in metaphysics; simplicity has to be 'sacrificed' because of necessity. He writes:

> Just as Maxwell sacrificed a simple mechanistic world-view by postulating electromagnetic fields in order to explain certain natural phenomena, we need to sacrifice a simple physicalistic world-view in order to explain consciousness.[25]

What Chalmers understands by 'conscious experience can be approached by considering its psychological correlate; namely, awareness.[26] However, as he himself tell us, the best way to understand what he means by consciousness is to be aware of the *phenomenal experience* or the *phenomenal feeling from within*[27] that a conscious agent has. A conscious agent is the subject of many feelings or felt experiences, which is not just psychological but incontrovertibly phenomenal. It is in this sense that the agent has a unique inner life with rich experiential content; an interpretation which is epitomized in Tom Nagel's classic question: what is it like to be an X?[28] When I see the colour red, I don't just see red; as a conscious agent I also know *what it is like* to be from within to see red. Reckoning the phenomenal experience as an integral and incontrovertible part of being a conscious agent, he defines: an agent is conscious if there is something it is like to be that cognitive agent from within.[29] So, it is this 'extra-physical', subjective *feel* of conscious experience from within, which in Chalmers's view is a basic, further irreducible fact about us.

It, he claims, is also something necessarily beyond the explanatory capability of an utterly materialistic hypothesis. His main argument, or at least his most obvious one, for this claim is as follows: Conscious

experience incontrovertibly exists. However, the physical does not logically entail it. Although most of the facts of the world are logical consequences of (in his terminology, they are *logically supervenient* to) physical facts, the phenomenal fact about consciousness (i.e., its qualitative feeling aspect) does not follow suit. If we ask why a certain object has this colour or that kind of weight, the answers in some sort of way are contained in the physical facts about the object. If, on the other hand, we choose to ponder over the question: why must there be this phenomenal side of conscious experience at all? Why must a feeling of being in pain, for instance, accompany pain? In his view, that answer is not to be found in the bare physical structure of the world.

The same point may be put as follows. From an exclusively external point of view, nothing seems to indicate the presence of a 'conscious feel' within the agent. From the outset just looking at the physical or neural states, there is no adequate answer as to why at all my sensations should feel like anything at all; furthermore, it is metaphysically baffling that they should feel any way at all. In this sense, given *all* the microphysical facts about the world or about the individual, the fact about consciousness is not logically entailed. It is something 'over and above',[30] an extra fact among, the physical features of the world. In a different writing, he puts the same point in a slightly different manner:

> The physical structure of the world—the exact distribution of particles, fields, and forces in spacetime—is logically consistent with the absence of consciousness, so the presence of consciousness is a further fact about our world.[31]

This leads, in his opinion, naturally to the conclusion that materialism 'is false' as the right kind of metaphysical view, and clearly underscores the need for a world-view which is more expansive than what eliminative materialism proposes.

His *Zombie argument* is supposed to advance the same point as follows: A world of Zombies is logically possible. That is, there is nothing logically contradictory in the idea of a possible world where human-like creatures exist but they do not have any inner, phenomenal experience at all. In this world of 'phenomenal Zombies' (TCM, p. 95), the Zombie twin of me would be behaviourally and functionally indistinguishable from me. She might not only do all the usual things that I do, but might also claim 'I am conscious'; except that 'all is dark inside' her. There would be

nothing really happening inside her. Looking at the all the physical facts about us, namely the external features and physical behaviour etc., one would not be able to tell which of us actually has something going on within as well. However, the important distinction here, according to him, is on the phenomenal side. I, as a conscious agent, stand out because unlike me there is nothing it is like to be a Zombie. For him, the logical possibility of a Zombie shows in the 'most obvious way' that consciousness escapes the net of general rule of logical supervenience on the physical facts.[32]

Chalmers thinks that the aforementioned arguments establish that therefore dualism is the metaphysical alternative instead. As he puts it,

> This failure of materialism leads to a kind of *dualism*.[33]

His chosen 'kind of dualism' is a version of *property dualism* that we shall look into next.

Property dualism can be of many kinds. There are other property dualists besides Chalmers. Searle, for instance, counts Thomas Nagel and Colin McGinn as among the property dualists (Searle, 1997).

The basic tenets of Chalmers's property dualism are as follows:

- There are two fundamental kinds of properties or features of the world, physical and non-physical. The conscious experience of an individual specifically involves two kinds of fundamental properties; the physical or the neural (n-properties), and the phenomenal (p-properties). By 'neural' property (n-property), I mean a property of a brain-state, which makes it a physical property with a physical or neuro-physiological description. The possibility of this description makes the property accessible from a third-person perspective. By 'phenomenal' property (p-property), on the other hand, I mean a 'felt experience episode' that is accessible only from a first-person perspective and which eludes an objective or physical description.
- This difference between the two kinds of properties is claimed to be fundamental. It is not, for instance, supposed to be a difference just in name as that which exists between, for instance, H_2O and liquidity, as Searle has proposed.[34]
- Though fundamentally different, both the properties may be instantiated at once in the same entity (or substance) such as the

human being or in the same physical state. A conscious agent is conscious when the relevant p-property occurs in him.

- This version of property dualism does not endorse a corresponding dualism at the substance level. That is, just because there are two fundamentally different kinds of properties, Chalmers sees no point to assume that there are two basic kinds of *things* too; the physical and the non-physical. At the level of things, there is only the physical kind; hence the basic laws of physical sciences reign supreme.
- This dualism can be called a *naturalistic dualism* because it allegedly intends to explain consciousness in terms of basic *natural* laws; and not in terms of anything transcendental or supernatural such as the soul or the mind-substance.[35] The basic framework of empirical sciences, thus, remains undisturbed.
- The properties are of two kinds, and both are imputed to be basic irreducible kinds, but there is supposed to be an asymmetrical relation of *supervenience* between them. As mentioned above, in his view the p-property is not logically supervenient on the physical, i.e., its existence is not logically derivable from the physical. Yet, as far as its occurrence or origination is concerned, Chalmers finds a 'systematic dependence'[36] of the p-property on the physical structure, and sees the physical structure clearly as a required condition for the emergence of the phenomenal.

Before proceeding any further, a few words are in order in explanation of supervenience. The term 'supervenience' was perhaps first used by the British Emergentists in the beginning of the 20th century. However, since then the term has become an accepted idiom in the debate concerning mind and consciousness as a way to understand the relationship between the physical and the mental. Davidson interpreted it as a kind of dependence or determination, as can be seen from the passage below:

> Although the position I describe denies there are psycho-physical laws, it is consistent with the view that mental characteristics are in some sense dependent, *or supervenient* [italics mine], on physical characteristics. Such supervenience might be taken to mean that there cannot be two events alike in all physical respects but differing in some mental respects, or that an object cannot alter in some mental respect without altering in some physical respect.[37]

Thus in the Davidsonian sense, supervenience is an *asymmetric dependence* relationship. Kim[38] too has used the same idea to explain supervenience:

> α *supervenes* on β only if an alternation in α is an alternation in β too, but *not* vice versa.

Chalmers has used 'supervenience' in the same aforementioned *asymmetric* sense. According to him, only the phenomenal (i.e. the mental) is *naturally* supervenient on the physical (i.e. the neural) in the sense that it 'arises out' of a certain physical structure (brain or brain-like architecture). The physical property *n* is supposed to act as the base (or subvenient) property which is essential for the occurrence of the phenomenal property *p*. In other words, he notes, as mentioned above, a 'systematic dependence' of the phenomenal on the physical.

The physical, however, is not supervenient on the phenomenal in this sense. Brief reflection on Chalmers's Zombie argument cited above also shows that for him the existence of *n*-property (the physical) is not a sufficient condition for the phenomenal property *p*. For, the two worlds, namely, the worlds in which my Zombie twin and me are in, are supposed to be indiscernible from a physical point of view. Every physical property that belongs to one of the worlds also must belong to the other. The phenomenal perspective is supposed to constitute the only point in difference. Had the physical property been sufficient to bring about the phenomenal, there would not have been any difference between the two worlds. For, in each of them along with the physical the phenomenal would have been there necessarily. In that case, the existence of the phenomenal would have been logically derivable from the physical. The existence of *n*-property therefore in his view clearly does not guarantee the consequent existence of the *p*-property. Supervenience for Chalmers ensures the physical property only as a *necessary condition* for the phenomenal to appear.

No body structure (physical/biological) → No physical property → No phenomenal property

Fig. 1: *p*-property as the necessary condition for *n*-property

This necessity is further explained in his claim that consciousness is *the result of a certain kind of functional organization* existing in a physical

or biological structure. As the brain *usually* supports the kind of intricate network of causal connections needed for the aforementioned type of functional organization, he claims that brains or brain-like architectures *naturalistically* support consciousness. He is willing to admit the logical consequences of this position. For instance, he agrees that this determination of consciousness by functional organization makes consciousness 'multiply realizable'. That is, it follows that conscious experience will be realizable not just in human or biological agents, but wherever a similar functional organization exists, *regardless of whether the system exhibiting the property is a natural or an artificial one*. Although in his Chinese Room argument Searle had contested precisely this possibility, Chalmers has no problem in including artificial systems as probable conscious agents in the broad sense of the term. In his view, cognitive systems with *similar functional organizations* would have *the similar sort of conscious experience*. For, consciousness is, according to him, an *organizational invariant*.

1. Brain or Brain-like architectures *naturalistically support* certain kind of **functional organization** → result is consciousness
2. For all systems φ, which exhibit certain kind of **functional organization**, are *conscious* (may have Brain or Brain-like architectures) → Consciousness is an 'organizational invariant'
3. Cognitive system, α, if it exhibits certain kind of **functional organization**, will be *conscious*.

Fig. 2: *Multiple Realizability* of Consciousness in Chalmers's view

It should be clear from the above that Chalmers's overall position on this is that of functionalism. He clearly thinks that the mental or the phenomenal are the results of the functional or causal relationships that exist among the brain states, and brain states are basically physical. That ought to make the phenomenal ultimately reducible in terms of the brain states. This is why usually, as Searle[39] has pointed out and as it has been already mentioned in this article (see p. 64), the adherence to functionalism and commitment to the claim of irreducibility of consciousness are not compatible. However, Chalmers does not think so. He claims that his theory is functionalism with a difference. He labels it *non-reductive functionalism*. For, it insists that the phenomenal or the mental are the functional states of the brain 'arising out of' the brain structure; yet, they are

non-physical and irreducible to the brain-states or events that help them to 'rise'.

This position is rather precarious because it tries to tread a middle ground that according to many (consider Searle 1997 for instance) simply does not exist. However, in Chalmers's view the ground can be shown to exist once we can explain how exactly the phenomenal consciousness 'rises' from the body or the brain phenomena. We have to remember that the usual Western dualistic kind of metaphysics and its deeply entrenched body-mind dichotomy typically holds causations such as this as something close to a 'miracle'. For instance, Julian Huxley wrote:

> How is that anything so remarkable as a state of consciousness comes about as a result of initiating nerve tissue, is just as unaccountable as the appearance of the Djin, where Aladdin rubbed his lamp in the story ... .

In 1996, which is when Chalmers's *The Conscious Mind* came out, Chalmers clearly has no clear idea as to how to account for this allegedly 'unaccountable' fact. He openly admits that he has not yet mastered the exact details of the mechanism of how the phenomenal consciousness is produced. He also concedes that it is still a long way to go before he can hope for a better statement on how consciousness comes about. However, he thinks that a thoroughgoing research program in this direction will uncover a set of fundamental laws that he believes will be *psycho-physical in nature* and which should find place among the existent fundamental laws and properties of physics which are exclusively physical in nature. It is his hope that these *psycho-physical laws* act as independent 'bridging' laws to close the gap between the brain phenomena and consciousness. As a plausible candidate for being a 'bridging law', he proposes the law of 'observed structural coherence' between cognitive processes (functional states) and consciousness.[40] There is a systematic link between these two; it is observed, he claims, that any change in mental content must be 'mirrored in a change in functional organization' and therefore in behaviour. According to him, this is another way to understand consciousness as an organizational invariant.

However, let us not overlook the fact that until the actual set of 'bridge laws' is discovered, his *non-reductive functionalism* remains a misnomer. His claim of irreducibility of phenomenal consciousness too, therefore, stands out more as a matter of faith than that of reasoned conviction. The

onus is on him to justify his rather radical claim that the phenomenal, although ontologically dependent on the physical, is nonetheless ontologically as basic as the physical.

To sum up, Chalmers in his theory has undertaken to answer two key questions about consciousness. Namely,

- What is the nature of consciousness? That is, what kind of a thing is it?
- How is consciousness generated?

Chalmers's answer to the first question is that although physical or psychological correlates of it are possible, the nature of consciousness is phenomenal and therefore non-physical. There are only two basic kinds of properties in this world, of which consciousness is one kind. Thus, its basic categorization is that it is a *property*. It is supposed to be a part of the reality being as basic and as further irreducible as any other fundamental physical property such as mass-volume, charge, spin, etc. To accommodate it, he claims that the fundamental principles of the sciences will have to make room for certain different kinds of laws which may very well be psychophysical in nature as opposed to the usual laws of physics which are exclusively physical in nature.

As to his answer to the second, Chalmers sides with the extant neuroscientific view that consciousness along with its related cognitive structure of awareness is produced out of the intricate, abstract causal interactions in the brain, or from the 'functional organization' of the brain. Consciousness, thus, in his view is a property which, though non-physical, is dependent on brain or brain-like architecture.

3. TAKING PROPERTY DUALISM SERIOUSLY

Figure 3 on p. 73 shows the basics of the bi-level property dualism which Chalmers is subscribing to. As mentioned earlier, Chalmers's dualistic metaphysics of properties, by its very nature, is rather dangerously positioned. It is much simpler, for instance, to defend in a Cartesian manner a dichotomy at the property level when a corresponding division is maintained also at the substance level or at the level of things. In the Cartesian scheme, the properties of extension and thinking can be considered as two entirely different, irreducible kinds of properties, because they characterize and belong to things of two entirely different irreducible kinds. However, that is not the path Chalmers wants to follow. He has made it clear

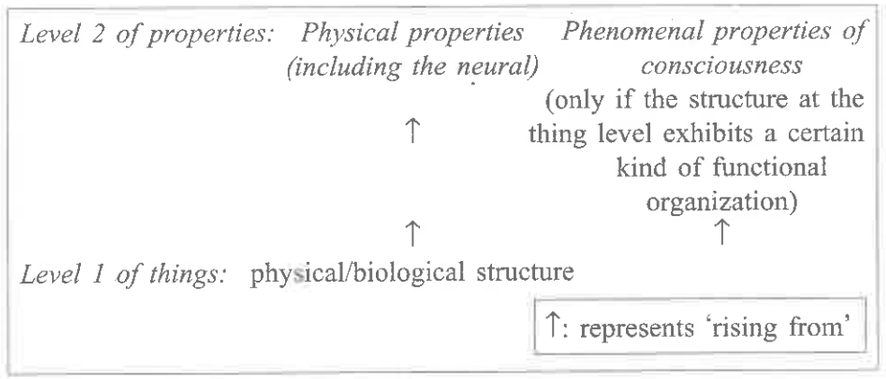

Fig. 3: Chalmers's metaphysical scheme of Property Dualism

that he wants to avoid the dualism at the substance level to evade the intractable difficulties associated with the Cartesian kind of Interactionist dualism. However, while he may save himself from the Cartesian problem, his brand of dualism, as we shall see, has its own set of problems.

Consider, for instance, his claim that there is an observed law-like correlation between the cognitive processes/brain states (physical) and consciousness (the phenomenal). There is supposed to be a 'coherence' between certain physical properties of a structure at time t1 and the phenomenal properties that are also supposed to be there 'invariably', both being the effect of the functional organization in the brain. However, the existence of this 'observed' law-like correlation is highly unverifiable; for, just the subjective verification of the truth of its universality would require a vigilant 'observation' of a lifetime for one conscious subject. Furthermore, it has been argued that even if we suppose that the correlation exists, it is questionable[41] whether we shall be ever able to *objectively* establish it. Yet, the law of 'organizational invariance', which Chalmers wants to advocate as a candidate to be included in an enlarged set of fundamental laws, relies heavily upon this *assumed* law-like correlation.

But, a major problem with Chalmers's property dualism lies elsewhere. One of the most pivotal assumptions that Chalmers's property dualism nurtures is that a reasonable distinction between the phenomenal and the neural (or the physical) can be drawn *quâ* properties without making any further commitment to a corresponding division among substances or events. This is an assumption which, I shall argue below, Chalmers has completely failed to establish.

Figure 3 shows that his dualism holds only at the level of properties and not at the level of things or substances. In his scheme the physical structure or the thing 'gives rise' to consciousness. At the substance level, there is only kind; namely, the physical. So, in a way he should not object to a reduction of the properties to the level of things. The claim of irreducible difference then holds only at the property level. It is the difference between the two sets of properties, physical/neural and phenomenal, that is supposed to be irreducible for Chalmers. Unfortunately, however, Chalmers's argumentation fails to show why it is metaphysically impossible to efface the distinction at the property level.

What can be considered as his most obvious line of reasoning in this direction is encapsulated in the aforementioned Zombie world argument. He claims that the division between the properties follows from the logical possibility of the separate instantiation of the properties in a possible world, such as a Zombie world. If we understand what a Zombie world is, thereby we are supposed to see that he is right that the *p*-properties and the *n*-properties *may* be instantiated separately. As he puts it,

> The mere intelligibility of the notion is enough to establish the conclusion.[42]

The possible existence or the conceivability of an individual, who is verbally, and behaviourally indistinguishable from me and is yet unlike me in the fact that in that individual 'all is dark within', is supposed to establish that it is possible at least *in principle* to maintain a reasonable distinction between the kinds of properties. It is supposed to show that at least we can conceive that the existence of the physical properties (*n*-properties) does not necessarily imply the existence of the phenomenal (*p*-property), hence it must be extra-physical.

Closer look at this argument, I argue, reveals its inconclusive nature. First of all, to rely upon the notion of a possible Zombie world in order to establish a mooted distinction between the phenomenal and the physical is question begging. For, the notion of a Zombie-world already *presumes* that such a distinction can be made. Consider the idea of a 'Phenomenal Zombie' which Chalmers appeals to. The idea is that of an allegedly conceivable creature in whom *by definition* the physical or the neural properties are not accompanied by their phenomenal counterparts. Thus the 'Phenomenal Zombie' is built upon the possibility of a dualistic distinction between properties.

The paradox here is that *unless the absence of the phenomenal is already presumed* in the case of a Zombie, there is no way to tell its absence in the creature. Chalmers has deprived himself of any independent means to decide this. For, behaviourally, my Zombie twin and me are identical. Even when asked, my Zombie twin may not only exhibit the appropriate ecstatic facial expressions and the body language just as I would under the circumstances, but may also verbally report exactly as I would about how wonderful a particular movement in a concert sounded. There is no reason why our verbal reports too should not match. She may even claim that she too has this phenomenal consciousness and that she too is indeed touched by these wonderful feelings stirred in her by the rippling music. There is no independent way to judge my claim about having phenomenal judgements as more justified than that of my Zombie twin's. After all, the physical structure that in Chalmers's view acts as the necessary condition for the rise of the phenomenal is as much in her as in me. So, unless the possibility of a distinct existence of the physical property apart from the phenomenal is invoked, the distinction between me and my Zombie twin (the phenomenal Zombie) cannot be comprehended in the first place. Thus, instead of helping to settle the issue in question, the conceivability of the Zombie world *presupposes* that such a distinction can be made. Therefore, the appeal to the logical possibility of a Zombie-world is an appeal to a foregone conclusion. The argument about the property dualism from the possibility of a Zombie world is thus inherently a circular one.

Chalmers has tried to answer a similar objection by using a convenient 'reliabilistic' yardstick.[43] The distinction between my 'phenomenal twin' and me can be sustained, he argues, *if* the self-knowledge entailed by the phenomenal experience is produced by a 'reliable' mechanism. In my case, in the actual world he considers my claims about having phenomenal experience and judgements about them as 'reliable', if I judge that in a concert I am having a pleasant auditory experience, then 'it is likely' that I am having that experience. Whereas, he writes,

> The phenomenal judgments of my Zombie twin, by contrast, are entirely unreliable: his judgments are generally false.[44]

This amounts to saying that the Zombie's phenomenal judgements are false because they are false. It not only begs the question but also manages to reduce the distinction between my Zombie twin and me to an

unwarranted assumption. It does not tell us *why* on independent grounds my Zombie twin's judgements are 'entirely unreliable', but presumes that my Zombie is supposed to differ from me exactly on the point of thinking that she has the phenomenal judgements when she does not (cannot) have them. His proposed answer therefore, as before, postpones the issue without making a real effort to resolve it.

Second, even if we grant him for argument's sake that a creature such as a phenomenal Zombie twin of mine is possible; that there is nothing logically incoherent to conceive of an entire world full of such beings, with one among them who is 'molecule for molecule' a copy of me but lacks conscious experience completely, how does that help Chalmers's metaphysical position exactly? What can follow from a purely logical possibility? Not much, except that a slim *theoretical chance* is allowable. It certainly does not establish the possibility of such a creature as a nomic possibility. For, such a replica of mine is not empirically or naturalistically possible; in the real world such a creature is most likely to be conscious. So, at best a Zombie world is only logically possible. And its own logical possibility can only validate the ensuing *logical* conceivability of a distinction between the physical and phenomenal property; nothing more. If the Zombie argument is his source of strength, then Chalmers has to rest his case for property dualism on a slim logical possibility.

However, just a logical possibility may not be a desirable outcome for Chalmers. Somewhere, in his argument he has to make a transition from logical to real possibility. For, then only his demand for making metaphysical room for 'accommodating the phenomenal property' makes sense. Absolute zero temperature, all-perfect beings, one-horned hare, the Chinese Room, talking trees—these are all logically possible. However, other than imagination, no metaphysical scheme needs to be stretched to accommodate them. Chalmers, on the other hand, has demanded some serious alteration and addition in the laws of physics at the most fundamental level. No one needs the inclusion of new laws at the most basic level to secure a place for a phenomenon that is merely logically possible. Therefore, Chalmers has no use for what his Zombie argument or its likes entail. Thus, his most powerful argument does not seem to brighten the prospect of his metaphysics. For, it fails to establish the necessity for the multiplication of entities.

On the other hand, if he desires his Zombie argument to validate anything more than logical possibility, then clearly his choice of supporting

argument is unfortunate, as we have seen from the discussion above. For, it does not warrant what he wants it to establish. Hence, his distinction at the primal ontological level between the physical and the phenomenal properties remains suspect. Since this purported dualistic division is the backbone of his further arguments, the suspicion of infirmity at the foundational level therefore seriously impairs the credibility of his entire thesis. Of course, Chalmers may defend himself by pointing out that his attempt is at best a 'prototheory'[45] or a skeletal account of what a fundamental, comprehensive theory of consciousness should be like. Our worry, however, is that even at this germinal stage his preferred metaphysical scheme fails to provide him the support that he expects from it for his theory of consciousness.

At this juncture, Chalmers may argue that the distinction at the property level is *felt* as a brute fact. It is needless to say that from that it does not follow that thereby the distinction is a fact indeed. There is no doubt that to the agent the phenomenal *feels* like a real thing. That does not automatically qualify it to have an independent ontological status. It needs independent argumentation. Similarly, just because the difference between the phenomenal and the physical *feels* to be irreducible, that does not necessarily make it so.

Our next task is to see, therefore, if we can find some other possible ways in which a defence for property dualism can be construed while staying within the mainframe of Chalmers's theory. This automatically rules out some of the possibilities. For instance, to adopt a view of *Mysterianism* may be an option for some, but certainly not for Chalmers. One could claim that the difference between the properties is itself a brute inexplicable feature of reality, a *given* profound mystery. It is a fact that no one can deny, but it is also something that no one can explain. Thus, one may claim that it is unanswerable as to why the two sets of properties differ. Or, following Colin McGinn,[46] one may say that there may be an explanation but due to our limited cognitive capacity it is cognitively closed to us. However, tempting as it may seem, this is not really an option for Chalmers as it severely compromises the 'naturalistic' trait of his position that he is so keen to preserve. The convenient insertion of an element of 'mystery' or 'cognitive closure' at the core of his dualism can seriously undermine his ultimate aim of making consciousness research a topic for 'scientific study'.

So, for him the choices must be rooted in the naturalistic grounds. He could claim, for instance, (a) that the two sets of properties, neural/physical and phenomenal, are discernibly different because there is at least one member, namely, phenomenal consciousness, which belongs to the *p*-property (phenomenal) cluster and not to the *n*-property (neural or physical) cluster. This line of reasoning, however, will be specious; for, the nature of phenomenal consciousness precisely is the issue to settle here.

Or, (b) he may try to justify the property dualism by referring to second-level properties, or properties of properties. Just as substances can have properties, it is possible to argue that properties too can have properties. So, he could claim that the two sets, the physical and the phenomenal properties, differ *because of the distinctive properties that they have*. He may say that the *p*-property (or, pluralistically, *p*-property cluster) has at least some distinctive properties *p*1′ (or, if thinking pluralistically, *p*2′ ... *pn*′) etc., which are unlike any that the *n* (neural)-property (or the *n*-property cluster) has. Similarly, the neural property *n*1 also must have a subset of properties *n*1′, n2′ ... etc. which will uniquely characterize only the physical or the neural properties, and not the phenomenal. Thus, because of the unshared second level properties, a distinction could be maintained at the first level of properties.

However, this alternative also cannot be desirable for Chalmers. For, this appeal to higher-level properties to ensure a distinction is actually essentialism in disguise. It harbours a philosophically controversial assumption that a core set of unique properties constitutes the essence of a thing. Moreover, it really does not explain and merely postpones the explanation of the dualism he wants to maintain at the property level. Moreover, it leaves open the possibility of a vicious infinite regress. For, once a higher-level of properties is introduced to justify the lower, repetitive application of the same logic may lead to arbitrary addition of further and further levels.

In addition, choosing this option may make the problem of 'generation' of consciousness doubly hard for him. That is, he has to explain not only how consciousness itself emerges out of an intricate organized network of functional states in the brain, but also how a distinctive set of properties is caused *along with it* from a structure that cannot have those properties.

Finally, the option for him is (c) to embrace some sort of emergentism to explain the dichotomy of properties. The phenomenal, or consciousness, in that case, becomes a higher-level 'emergent' property rising out

of the physical architecture with the usual physical properties. Under extraordinary circumstances (where a certain functional organization exists), from the same physical structure consciousness may 'emerge' as an ontologically different kind of property.

This option perhaps is the closest to his own formulation of his position. It, however, has a crippling effect on his avowed dualism. Dualism is supposed to be a 'two reals' set-up. It must stand firm with equal weight on each of its cornerstones. Cartesian substance dualism, for instance, depicts a world of two independent realms. There are causal interactions between the domains, but entities in one domain are ontologically independent of those of the other. It is metaphysically possible for one Cartesian domain to exist in absence of the other. Similarly, if other kinds of dualisms are considered, such as Spinoza's double-aspect theory or Leibniz's theory of pre-established harmony, they too maintain their dualistic character by positing two kinds of 'reals'. They allow a relation of covariance between the two domains.

However, the nature of 'basic two kinds' or 'two reals' theory is not preserved intact in a scheme that advocates emergentism, or in a model that posits supervenience as an asymmetric relation. For, such a scheme necessarily makes one kind ontologically more basic than the other. In Chalmers's scheme, even at the property level, the phenomenal is *naturalistically supervenient* on the physical. There is no question of the manifestation of the phenomenal if the physical property is not there. It is supposed to be both causally and naturalistically dependent on the physical in every way. If the asymmetric relation of supervenience holds, then ontologically the neural or the physical, and the phenomenal (non-physical) cannot be at par. The former will have to be ontologically as well as logically more basic than the latter.

Moreover, as an emergent property, phenomenal consciousness becomes causally disabled. The physical can cause it, but the phenomenal has no power to reciprocate. In that case, his claim of ontological primacy for consciousness is actually a compromise. It means only that the phenomenal consciousness is the wispy smoke somehow clinging on to the main machinery of the physical architecture.[47] It exists, but only as a shadow of the real thing; as a side-effect that hardly makes a difference. In that case, his metaphysics has reduced consciousness to an epiphenomenon that is causally irrelevant. Thus, contrary to Chalmers's intention, his version of property dualism compromises the primacy of the phenomenal experience

and makes a mockery of the non-reductionist program. It succeeds only in attributing a secondary status to phenomenal consciousness. It flouts the norm of simplicity prescribed by Occam's Razor to accommodate phenomenal consciousness, and cannot justify the necessity for doing so.

Finally, what is a metaphysical scheme supposed to do for us? An overly simplified answer may be that it is supposed to make sense of our experience and thereby validate it by finding a place for it within the scheme. A sensible metaphysics becomes all the more crucial as far as theorization about abstract items such as mind or consciousness is concerned. For, though every unobservable abstract entity is not a metaphysical suspect, the fact remains that our general penchant for empirical verification makes ontological claims about abstract entities in general particularly susceptible to sceptical queries. So, we should judge the value of Chalmers's property dualism as a metaphysical alternative in the light of what it can do for us specially in our understanding of consciousness. In this regard, however, Chalmers's property dualism seems rather unappealing as a metaphysical scheme. For, because of its skewed dualism, it makes our phenomenal experience somewhat irrelevant for the explanation of conscious behaviour. This result is not only counter-intuitive but also forfeits Chalmers's main purpose. Descartes' theory, in spite of the quandaries it caused, at least was successful to create a metaphysical image of parallel realms of matter and mind, with full causal power to both and with occasional interface between the causal strands from each world. Chalmers's dualistic metaphysics succeeds only in making the mental less distinctive than it already is.

Notes and References

1. See for instance Bernard Williams 2000, especially pp. 479–80 and p. 494. Williams argues in general that philosophy should preserve its wider humanistic character rather than nurturing an illusion that it should become more like an extension of the natural sciences. More specifically, in connection to philosophy of mind, he maintains that philosophy should get rid of the 'stylistic scientism' or the pretence that philosophy ought to behave like an extension of neurophysiology, for instance.
2. This article will follow David Chalmers's 'The Conscious Mind' (see for details Chalmers, 1996 in bibliography) mainly for the exposition of his theory. As there will be frequent citation from this work, henceforth in this article this book will be referred to as TCM.
3. Kim 2000, p. 2.

4. Feigl 1958.
5. Smart 1959.
6. Skinner 1974.
7. Dennett 1992.
8. Humphrey 2000.
9. Dennett 1981, p. 39.
10. Reductionists maintain that all that is 'mental' is essentially reducible to the physical. Thus they see no reason to make any metaphysical concession regarding the 'mental' in the ontological scheme provided by the physical science.
11. See for instance Damasio 1999.
12. In case of schizophrenia, for instance, data from brain research have revealed that in schizophrenics the left hemisphere of the brain is more impaired than the right, and consequently information transfer from the left to the right is also affected. This finding has helped the therapists to pharmacologically treat the disease by trying to bridge the information gap between the two hemispheres. For a discussion on this, see for instance Kaplan, Sadock, Grubb 1994.
13. There is no way to deny that the insistence on the observation as a process, or the general scepticism about the 'unobservables', has helped western science to free itself from the metaphysical baggage of the dark ages to reach the status it has today. The wholesale rejection of the ancient or medieval claims about the soul-substance or the 'spirit' by the Renaissance 'scientific' movement has to be understood in this context. Perhaps, the suspicion about research programs linked to mind or consciousness as a metaphysically irreducible item too needs to be understood as a built-in reaction against the idea of an unnecessarily crowded metaphysics.
14. See Kripke's critique of the identity thesis for instance in Kripke 1997. See Frank Jackson 1997 too.
15. The credit for the first coining of the term 'explanatory gap' goes to Joseph Levine 1983.
16. As is to be expected, the reductionists return the fire with fire. They argue that none of the 'evidence' against the reductive hypothesis holds well in the final analysis. For instance, the very features, which are inalienably associated with 'qualia', such as ineffability, privacy, intrinsic nature, and immediate accessibility only to the agent, disqualify the 'qualia' from earning an ontologically independent status. Similarly, data from neuro-imaging, they argue, show that the 'self-related' phenomena are linked to brain activities especially in the prefrontal cortex. Studies in neuro-psychology have claimed to have traced several disorders related to what we call 'self-perception' to brain disorders. In a similar note, Neuro-physiologists have argued in a Hume-an manner that what is known as the unity of consciousness is likely to be nothing more than the effect of cooperation among diverse systems in the brain. Computer

scientists too have investigated through Connectionist models the mechanism of how 'knowledge' is integrated and a total picture emerges in the brain and is represented in a unified way.

17. Putnam 1975.
18. Davidson 1980.
19. This recent line of non-reductionist arguments is distinctly different from a more traditional line of argument, which contends that no matter what the empirical scientific discoveries say, philosophical queries and disputes cannot *ever* be settled by them. While the traditional line rejects the possibility of holding any meaningful dialogue ever between physical science and philosophy on any subject, let alone on consciousness, the non-reductionist position these days indicates a more interesting possibility of resolution especially on the issue of consciousness, if only the contemporary scientific world-view is widened from the limited scope of pure materialism.
20. John Searle in conversation with Matt Cherry, Deputy Editor, *Free Inquiry*. See Cherry 1998, p. 39.
21. Cherry 1998, p. 39.
22. Frank Jackson calls himself one in Jackson 1982, p. 127.
23. To give credit where it is due, I must mention the well-known facts that David Chalmers has been largely responsible for incidents such as the inclusion of 'consciousness research' as a legitimate research program, for establishing a Centre for Consciousness Studies, and in general for the prospect of a 'scientific study of consciousness'.
24. TCM, p. xiii.
25. TCM, p. 169.
26. TCM, p. 220.
27. TCM, p. 6.
28. Nagel 1974.
29. TCM, p. 4.
30. TCM, p. 125.
31. Chalmers 1997.
32. He further contends that epistemologically also there is no necessary link between knowledge of physical facts and knowledge of consciousness. A completed information pool of micro-level neuro-physical processes about physics of optical processes etc., for instance, does not capture what it is like to see red for the person who has not seen it.
33. TCM, p. 124.
34. Searle 1992.
35. TCM, p. 128.
36. TCM, p. 124.
37. Davidson 1980, p. 214.
38. Kim 1993.
39. Searle's Review of Chalmers's book, see Searle 1997.

40. In his review of Chalmers's book, Christoff Koch wrote 'It is for these bridging principles that this book should be widely read by anybody trying to fathom the physical basis of consciousness. These are the working hypotheses we need for progress' (Koch 1996).
41. See for instance Feigl 1958 for the auto-cerebroscope experiment in support. Pauen 2000, however, argues that the presumption of a law-like correlation on the part of property dualism is unwarranted.
42. TCM, p. 96.
43. TCM, p. 194.
44. Ibid.
45. TCM, p. 277.
46. McGinn 1989.
47. The imagery is borrowed from Huxley and his version of Emergentism.

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Why Qualia Cannot be Quined

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In his famous paper 'Quining Qualia'[1] Daniel Dennett has argued for eliminating qualia from the discourse on mind for the reason that since mind is basically a machine it cannot entertain the so-called qualitative subjective experiences called the qualia; that is, the mechanistic explanations of mind do not need the first-person account of experiences such as sensations and raw feelings of the conscious subjects. Dennett's effort is to prune the qualia off the mind altogether so that there is no place for them in the ontology of the mental.

Dennett's negative thesis on qualia raises very pertinent questions as to whether there could be a subjective view of the mind at all, and also whether the first-person deliverance of the mental contents could have a qualitative nature which cannot be accounted for from a purely objective, third-person point of view. My aim in this paper is to answer some of these questions from a subjective point of view. I believe that the mental life of man cannot be fully represented in a mechanistic system and that there are subjective mental states which need a first-person perspective for their proper understanding.

1. WHAT QUALIA ARE NOT

Dennett's characterization of the qualia[2] as ineffable, private, non-relational and intrinsic personal experiences of the subjects is misleading for the reason that it does not bring out the true nature of the first-person experiences of such mental states as pain, colour-sensation, the sensation of touch and smell, etc. These mental states are the common stuff which characterize the mind we ordinarily know. They are not only heterogeneous in quality but are of a rich variety so far as their taxonomy is concerned. Qualia thus constitute the phenomenal structure of the mind in that they enrich our understanding of the mind and also provide clues to the ontology of the mental. What the mental ultimately is as distinguished

from the physical is to be known from what the qualia reveal about the mind. Therefore the qualia have a strategic role to play in the understanding of the mind.

The important question is: Is Dennett right in calling the qualia the private and ineffable experiences of a queer sort? Obviously, not. The reason is: the notion of privacy as we know from Wittgenstein's private language argument[3] does not apply to the qualia in the sense that the qualia are intersubjectively intelligible and that they are available for interpersonal communication. The qualia of colour-perception are such that any two persons belonging to the same linguistic community can easily communicate their colour-experiences and can thus understand each other well. This shows that the qualia, in spite of being subjective, are not private at all. As to their effability or otherwise, it goes without saying that they are expressible in an interpersonal language; that is the reason why they are accessible to all speakers if they are suitably placed. Thus Dennett's main argument that the qualia are inaccessible to all except the subject of the qualia does not hold good.

The further argument that the qualia are atomistic and non-relational is equally weak for the reason that the subjective experiences need not be atomistic at all because they can be taken as constituting the stream of consciousness[4] in that they constitute a single unbroken series of the conscious experiences. In this sense the qualia are holistic[5] rather than atomistic. The fact of the matter is that the qualia never exist in isolation and that they are always in a constellation. For example, the colour experience of a red rose is not only that of the colour red but also of the rose plant of certain shape and size. Here the two experiences do not stand apart but constitute one whole. This is true of all qualia including those of the dream experiences and perceptual illusions. In all cases the manifold of the mental experiences overlap and criss-cross giving rise to the idea of the unity of experience.

What is true of the qualia which Dennett does not take note of is the fact that the qualia are real and that they have a structure of their own. Dennett is sceptical about the reality of the qualia because he believes that the qualia as the private experiences of how things look are a misnomer and that there is nothing in the mind that can correspond to these qualitative features of the mental states. The qualitative experiences, according to him, are the misleading appearances of the brain states which in reality are the functional states of the brain. The brain functions as a machine,[6]

according to Dennett. The brain-machine is such that it performs multiple functions; that is why this model of mind is called a Multi-Draft Model.[7] The nature of the mind under this model is unfolded in the cognitive processes which the mind undertakes. The mind thus turns out to be a computing machine programmed to cope with the cognitive representations of the world. Dennett agrees with the machine-functionalists that the structure of the mind is fully unfolded in the structure of the machine-representations. In this perspective therefore there is no place for the subjective qualia as extra-mechanical states of the mind.

Dennett's arguments against the availability of the qualia follow from his prior commitment to the mechanistic view of the mind. If the mind is a computing machine, it has only those machine-states which can be mapped in a machine table. In that sense the mental states are non-different from the machine-states; that is why there are no qualitative experiences which can be given in the first-person mode. Thus the qualitative experiences or qualia have to be eliminated from the vocabulary of the mental life. There is no Cartesian Theatre,[8] according to Dennett, to entertain these subjective experiences.

Dennett's above argument against the qualia is flawed on the ground that the mental states are not identical with the machine-states for the reason that while the machine-states differ, the mental states may remain the same and vice versa. That is, two different machines may display identical mental life in the sense that though their machine-constitutions differ, their mental life is identical. The reason is that mental life can be multiply realized[9] in different machines. So it cannot be entertained that mind is identical with the computing machine. Not only is there no type-identity between the mind and the machine-like brain, but also there is no token identity between a particular mental state and the corresponding machine-state. It is empirically false that corresponding to every mental state there is a token-identical state in the brain which can be mechanically mapped. The brain does not correlate each mental state with a token physical-functional state in its own network. It, however, provides a causal background for the whole set of mental states without a one-to-one correspondence between the brain states and the mental processes.

The qualia are thus realized in a physical medium, but yet they have a qualitative nature which cannot be captured in the purely physical medium. The quale of colour-experience, for example, is such that it is felt by the subject in a particular way which cannot be simulated in a machine. That

quale is unique to the subject of experience, though it can be made intelligible to others. Other human beings can understand the qualia without themselves having the same. This is because the qualia are part of our intersubjective vocabulary and that they are made public because of their place in the interpersonal language. They have a place in our intersubjective language-games[10] as Wittgenstein would say.

Now the question is: Can the qualia be made a part of the objective structure of the natural order in the way the physical states of the brain are? This has generated a debate as to whether there can be a complete reduction of the qualia into the physical states of the brain. Dennett's reductivist programme is fully committed to the reducibility of the qualia to the brain-states. This can be opposed, however, on the ground that the qualia are ascribed to a conscious subject and not to the brain because the brain is at best a physical system though with infinite physical capacity. The subject is non-reducible to the brain in the sense that the brain itself belongs to the subject. The subject functions autonomously; the qualia as well as the brain states are only different states of the autonomous subject. Thus the reality of the subject[11] of the qualia has to be admitted if we can have a coherent theory of mind. In this connection, Flanagan's following remark is worth considering:

> Phenomenology, psychology and brain sciences are credible partners in the effort to penetrate qualia, and reveal the nature, structure and causal roles of the various ways things seem.[12]

That is to say, there is the necessity of taking phenomenology and psychology along with the brain sciences in order to understand the complicated structure of consciousness. It is because there is the phenomenological reality of our consciousness which is not accessible to the brain sciences.

2. THE INVERTED QUALIA

The problem of inverted qualia has made the task of the philosopher difficult in view of the fact that if we admit qualia inversion we thereby admit the necessity of revising some of our theories of mind such as functionalism, behaviourism, physicalism, etc. that identify the mental with the physical in some form or other. If we do not admit it, we thereby deny the possibility of our experience being something different from what it has been so far. Since we cannot deny the logical possibility of our

qualia being inverted in the case of oneself and also of others, we must admit that everything is not well with functionalism and other varieties of materialism.[13] Qualia can be inverted, though its actual happening is rare. A man can see something as red today but tomorrow he may see the same as green. That is, the thing remaining constant, a man's colour experience can vary from seeing red to seeing green. What happens in this case is that the person's colour experiences undergo a drastic inversion in the sense that he sees something different from what he used to see earlier. It is not that the person misidentifies the red object as green but that he systematically goes on describing his previous experience of red as that of green now. There is therefore a genuine qualia-inversion in this case.

Qualia-inversion, if possible, entails the following regarding the nature of consciousness:

(a) conscious states are not nomologically tied down to the brain states in the sense that they are not functional states of the brain;
(b) the mental states are type-different from the physical states of the brain because the latter remaining the same, the former can be different;
(c) the qualia are the properties of the mental states which cannot be ascribed to the physical states, including the so-called machine-states.

Thus the possibility of qualia-inversion does entail that the physicalist and the machine-functionalist notion of consciousness must be rejected on the ground that it is false that each conscious state is a physical state in disguise. It is also not the case that the conscious states are in one-to-one correlation with the brain states.[14] Therefore there cannot be any reductionist attempt to do away with the qualia of the conscious states at all. The qualia are what constitute the essence of the conscious states. For example, the qualia 'pain' is the feeling of pain rather than a mere bodily sensation. How pain is felt by a conscious subject marks the qualia-property of the mental state of being in pain. Thus the qualia are the raw feels associated with the conscious states.

Shoemaker[15] has made it clear that spectrum-inversion entails rejection of the thesis that there are no qualia as such as the property of consciousness, since it is possible that there are a species of beings such as the Martians who have a physical structure like ours but have experiences quite unlike ours. For example, they see green where we see only red. That is, they have colour-qualia which are opposite to ours. In a sense,

their colour-spectrum is inverted in relation to ours. Our red is matched by their green and their green by our red. This inversion of colour-spectrum goes along with the fact that we can match our colour-spectra without loss of intelligibility. We can imagine what the Martians see when they see our red roses—they can see only green roses. Therefore when they say 'Green rose here' we must mean 'Red rose here'. Their green-qualia are matched by our red-qualia. Here one can note that, for Shoemaker, there is no barrier to our understanding of the experience of the Martians because we speak the same colour-language and have matchable colour-spectra. The only difference is that one spectrum is the inverse of the other. Thus Shoemaker acknowledges that the inverted qualia are comparable and that we can make mapping from one spectrum to its inverted counterpart.[16]

Now if the inverted qualia are intelligible and we can map the inverted qualia to our colour-spectrum, there is little that we can be sceptical about in the way philosophers have been in the past. It was believed that the inverted qualia could be hardly intelligible and so we are bound to be sceptical[17] about their occurring at all. But in fact scepticism about qualia-inversion is out of place if we simply take the inverted qualia to be the inverted counterparts of ours. There is a spectrum-reversal in this case without blocking our understanding of it. So we cannot doubt the fact that other human beings can see colours differently. Even in our own case we may see colours differently on different occasions. So both the intra-subjective and intersubjective qualia-inversions are possible and we can always imagine what would happen to our present colour-experiences in a drastically different scenario. This possibility of inversion is conceptually guaranteed because we have all the relevant conceptual resources to think of the inverted qualia.

However, the inverted qualia are a hard nut to crack for many philosophical theories especially those that reduce them to the mechanical activities of the brain. The eliminativists among the philosophers of mind feel shy of the very presence of qualia since they believe that their presence is beyond explanation and they deserve to be Quined. Such philosophers have the additional fear that if the qualia are admitted then they may subvert the very coherence of our mechanistic understanding of the mind.[18] But it has been seen that qualia do not easily succumb to elimination as they come back with force owing to the realization that qualitative consciousness must be admitted even if there is still some mystery

surrounding it.[19] Mystery or no mystery, there is consciousness, and we must admit the quality of consciousness, namely the qualia. Qualia are where consciousness is since they explain how conscious states appear at all. If the conscious states would have been totally bereft of qualia or qualitative content, consciousness itself would have been empty.

3. THE REALITY OF RAW FEELINGS

The presence of the qualia or what are otherwise known as the raw feelings[20] makes a qualitative difference to consciousness. Consciousness is manifest in the raw feelings which accompany it. In this sense the relation between the conscious states and their qualitative content is a necessary one. That is, the conscious state C is invariably accompanied by the qualitative content Q such that wherever Q is absent C is also absent and vice versa. This shows that the very nature of our consciousness is such that it necessarily has the raw feelings; e.g. pain. The nature of pain-consciousness is fully grasped in the raw feeling of pain. There is nothing to pain other than the feeling of pain. Thus the qualitative state of pain and the mental state of pain are one and the same.

Now the problem is: How are the raw feelings to be identified? This problem arises because we do not have a clear-cut definition of the raw feelings. The raw feelings have no canonical pattern except that they are how the things look like, and so on. The things have their looks; for example, the red objects look red and our feelings of red are the way the red object appears to us. These appearances are the phenomenal properties of the objects. At the same time, these appearances are in our subjective consciousness and as such they make our colour-experience what it is. In this sense the colour-experience and the appearance of colour together make up one whole. The phenomenal properties of the colour red, for example, are given only in the subjective consciousness. That is why the raw feelings of colour are inextricably related to the qualitative content of colour.

Those who defend the reality of the raw feelings like Flanagan[21] and Kirk[22] offer the argument that we cannot do away with the phenomenological qualities of our experience. They support the view that phenomenology is a co-partner in the study of the mind and that it cannot be pushed aside as of no consequence as done by Dennett.[23] Dennett's anti-phenomenological standpoint issues from his commitment to the view

that mind can be studied only by the scientific method, that too under the purview of the neurological sciences. The raw feelings have been suspected of metaphysical obscurity because they appear to be private and exclusively personal. The reasons offered by the anti-phenomenologists are exclusively dependent on the prior hypothesis that the qualitative features of our consciousness are redundant and are a part of the vocabulary of folk psychology.[24]

However, the claims of phenomenology cannot be so easily wished away since there are qualitative features of consciousness which are a matter of intersubjective understanding. The conscious states which constitute our mind are endowed with features such as being given to a conscious subject, being dependent on a point of view and being experienced and so on. These aspects of our consciousness cannot be studied by the brain sciences precisely because they are not detected by the instruments that study the brain. No instrument can, for example, record the intensity of the feeling of pain while the intensity of the firing of the neurons in the brain can be studied by the scanning machines. This subjective aspect of consciousness has to be left to phenomenological studies since the phenomenology of the psychological states has to be accepted as an authentic method of knowing the qualitative features of consciousness.[25]

It is now widely recognized that there is a first-person dimension of the conscious states in that only from a first-person point of view[26] can the conscious states be fully understood. The first-person point of view is such that it takes the mental states as belonging to a person from his or her subjective point of view. The person's inner self matters for situating the mental states. For example, pain is felt by a person who is the bearer of the pain. In that sense the subject of consciousness comes into the picture. As Searle[27] has made it clear, the first-person perspective provides an ontological status to the subjective mental states. They are subjective not in the epistemological sense of being known exclusively by the subject but in the ontological sense that they are essentially revealed only to a subject. The subject is the metaphysical locus of the conscious states and their qualitative features.

Thomas Nagel's[28] emphasis on the first-person point of view has the merit of showing that the first-person account of conscious states cannot be brushed aside and that we cannot reduce the mental states into those of a machine or of a physical system which is typical of a third-person

point of view. The way to the true nature of the conscious states lies in their being presented from the point of view of the subject who has them. This rules out the fact that we can view the mental states from an absolutely objective point of view.

If the third-person, objective point of view prevails, then there will be nothing uniquely mental because the so-called physicalistic reductions will rule the roost. The third-person point of view threatens to engulf the subjective character of the mental states and their qualia.

Thus we have to admit that the raw feelings of our consciousness are ontologically real in the sense that they are the ultimate qualitative stuff which makes up the phenomenal mind. The mind has irreducible conscious states that collectively constitute the phenomenal structure of our mind. Mind in this sense is not just a machine that acts on the world but is a conscious entity that presupposes a conscious subject to which it belongs. The world of consciousness thus is not a mere function of the physical system of the brain.

4. WHY FUNCTIONALISM GOES WRONG

There is an uneasy relationship between the qualia and the functionalist account of mind since, as shown by Shoemaker,[29] functionalism cannot be true as long as inverted qualia are possible. That is, though functionalism is able to explain the qualia in terms of functional states of the brain, yet it buckles in the presence of the inverted qualia. The inverted qualia show that there is no one-to-one correspondence between the qualia and the functional states. The same functional states could be realized in two organisms and yet the organisms have two different qualia. In the intrasubjective inversion case, the same subject having the same functional organization has two different qualia altogether.

Functionalism as a theory of mind tries to fix the causal-functional role of the mental states in the network of the inputs and the outputs on the model of a machine. It shows that the mental states are so called not because of their inherent mental quality but because of the causal role they play in the functional organization of the organisms. The total functional state of the organism, as Putnam[30] put it, determines the particular mental states in view of their causal role. Thus functionalism essentially brings in a physicalist explanation of the mind in terms of the causal inputs and outputs of the functional system called the human organism.

However, functionalism does not work for the reason that type-identification of the mental states with the functional states cannot be established because the same mental states could be realized in different functional systems. For example, the mental state of being in pain can be realized not only in the human functional system but also in a system made out of the silicon-chips.[31] This shows that the functional systems could vary in their inner structure and yet manifest the same mental state, say pain. Thus the multiple realizability thesis invalidates not only physicalism but functionalism as well.

The Swiss Cheese Principle,[32] as formulated by Kirk taking a cue from Putnam, suggests that the mental state of pain could be manifested in a functional system made of Swiss cheese so that there is no one-to-one correlation between the functional states and the mental states. The system with Swiss cheese is as good as any other to manifest pain, so there is no reason to believe that pain is nomologically connected with the human organism. Human organism is only one of the systems capable of manifesting pain. This idea is suggested by the Swiss Cheese Principle which in a way lays down that there is no nomological connection between the mental states and the functional states of a physical system. It thus allows for the multiple realizability of the mental states.

The Swiss Cheese Principle rules out that there is identity between the mental states and the brain states as the identity theory maintains.[33] It shows that it is wrong to argue that there is a constitutional identity between the mental states and the brain processes. If the mental state of pain would have been the same as the brain state, then if the brain states differ, then the state of pain should also differ. Though the human brain remains more or less the same, it cannot be guaranteed that it does not become something not very different from the brain of the Martians who show the same sign of pain. Thus the brain states are not necessarily tied down to a particular type of brain. Putnam has very aptly pointed out that the identity theory fails precisely because it seeks to establish a necessary relation[34] between the mental states and the states in the brain. But in fact all it could establish is a contingent relation between the type of the mental states and the corresponding type of brain states.

Functionalism, however, tries to escape the difficulties posed by the Swiss Cheese Principle by trying to show that the mental states are only the functional states of the organism and so do not require a particular type of brain-structure. But actually functionalism does not succeed in

view of the fact that it presupposes that the mind-body token-identity theory is true. The machine-functionalists like Dennett accept that in some form or other the identity theory is valid. This itself nullifies the Swiss Cheese Principle because it tries to show that the token mental states are in one-to-one correspondence with the token machine-states of the brain. The identity between the machine states and the mental states cannot, however, be established except on the linguistic ground that mental states can be defined as the machine states. The linguistic argument is not of much help because it avoids the ontological issue as to what the mental states actually are.

Functionalism thus fails to account for the real nature of the mental states because of its not too clear attempt to reduce mental states to the machine-states. As shown by Searle[35] and Putnam[36], functionalism fails as a theory of mind because of its reductionist dogma: it makes mind superfluous in the universe. Mind is made at best a mechanical system with certain determinate functions.

The mechanistic theory of mind in all hues faces the question as to how we can account for the qualitative content of our consciousness. It cannot ultimately tell us how the qualia are possible and also how consciousness can be real in the universe. The mechanistic view does not have any convincing answer to the question how qualia are a necessary feature of consciousness. If mind functions like a machine, it can at best exhibit only mechanical states which look very much like the mental states but ontologically are very different from them.

5. SUPERVENIENCE AND THE INTELLIGIBILITY GAP

The important issue now is to explain how the qualia are possible and how they come into being, given the fact that the conscious subjects are in a physical universe and are themselves physically embodied. This fact recognizes that consciousness itself is surrounded by a physical environment. That is, there is already an admission of the fact that there is not only consciousness with qualitative content but also there is a physical background in which consciousness is embodied or realized. The physical background, according to Kirk,[37] contains the package of capacities, dispositions and the neurological network. Thus there is a whole system of physical states and processes which accompany the mental life of human beings.

But the question is: What is the relation between the physical background and the inner subjective life of human beings? This question has bothered philosophers so much that many have just opted for the removal of the inner mental life itself in favour of the physical universe. But this does not succeed because the reality of the mental life can hardly be denied. This has left open the second best option of making the mental and subjective life supervenient on the physical background. That is to say, according to this thesis,[38] the mental states are not reducible to but are supervenient on the physical states in such a way that whatever changes take place in the physical states must make a difference to the mental states as well. Supervenience thus understood in the strong sense makes room for a nomological dependence of the mental on the physical such that the physical states are necessarily responsible for the mental states. Here, as Kim[39] points out, one must notice that the mental is dependent on the physical but not vice versa, because the mental states are directly a consequence of the physical states. The mental states themselves do not determine the physical states. In that sense the mental states remain nomologically dependent on the physical universe according to the thesis of strong supervenience.[40]

The thesis of strong supervenience does not bridge the intelligibility gap[41] between the physical background and the mental life; it fails to account for how the mental states with their qualitative content arise at all in a material environment. The gap between the physical and the mental remains ever wide open because it is not known how the subjective mental states can be made possible by the physical world. Is it not a possibility that the mental life is not there even if the physical universe perfectly exists. That is, there are possible worlds in which all the physical states of the present universe are there but there is no conscious life at all. Thus there could be situations where physical conditions are present but all conscious states with their qualia are absent. As it is claimed by philosophers, there could be Zombies[42] who behave like human beings but are not having any consciousness at all. The Zombies are very much like us in their outward behaviour but are without any inner life at all. They are without a mind.

The possibility of Zombies threatens the supervenience thesis precisely because it shows that there is no nomological relation between the physical states and conscious phenomena. In fact it shows that conscious states have no causal connection with the physical universe. Though it is an extreme thesis that the physical universe can be without any conscious life at all, it is logically possible that the physical universe is without any mental phenomena. First of all, the physical universe itself is not conscious because in that case everything in the world would be conscious including the stones and the stars which are lifeless material bodies. Secondly, if consciousness is the same in all organisms like the plants, animals, insects, etc., there will be no qualitative difference between the human and the non-human consciousness. Thus we cannot prove that consciousness is supervenient on the physical world. There is no nomological or strict implication relation holding between the physical and the mental as claimed by Kirk.[43] If the strict implication relation holds between the physical and the mental, then the absence of consciousness cannot be conceived at all. The strict implication thesis is too strong to hold between the mental life of the human beings and the physical world.

What is important in this connection is that the mental life with its qualia cannot be nomologically determined by the physical conditions of the universe. The following are the reasons for the thesis that the mental life is independent of the physical body, though they co-exist:

A. The qualia of the mental states cannot be reproduced in an artificial machine like a robot or a machine table; they are unique to the person concerned.
B. The qualia are the essence of consciousness and so must be intrinsic to the conscious subjects.

Thus the intelligibility gap between the qualia and the physical world remains as the qualia are understood widely as belonging to the conscious subjects.

6. IN DEFENCE OF THE INNER LIFE

Now we can defend the reasonably acceptable view that the inner life of man is metaphysically real. This is to reiterate the thesis that the qualia of consciousness are real and that they constitute the essence of human consciousness. This thesis follows from the conviction that we cannot conceive of consciousness unless we view its states as having the raw feelings. There are two aspects of this thesis, the epistemological and the metaphysical. Epistemologically, the raw feelings are intimately known to the subject of consciousness; they are introspectively known to the subject in the sense that he or she can have a first-person account of them more

reliably than others. That is to say, the reports such as 'I am in pain' have a characteristic first-person authenticity which follows from the fact that the person concerned cannot doubt that he or she has pain while uttering the sentence 'I am in pain'. Metaphysically speaking, however, the raw feelings are real in the sense that they are part of the furniture of the mental world. We can hardly deny that the mental world is real.

So far as the epistemology of the qualia is concerned, it is now well acknowledged that the qualia are intersubjectively known and that they are communicable among all subjects of consciousness. They are not like the beetle in Wittgenstein's 'beetle in the box'[44] analogy in that while the latter are not known to others except to the owners themselves, the former are intersubjectively accessible. The beetles in the beetle box are closed to others and are such that they do not have a role to play in the interpersonal language-game. Hence they are as good as non-existent as they drop from the language-game itself. Thus it is clear that the qualia are not in the same position as the private experiences which are epistemically inaccessible. Qualia, according to Wittgenstein, are part of our language-game in the sense that they can be identified and reidentified in the public discourse.[45]

The fact that the qualia are intersubjective does point to the fact that they are objectively real. Qualia are the qualitative entities that are placed in the domain of the conscious states. These states are irreducible in the sense that they cannot be done away with in the process of an ontological pruning. Dretske[46] has an ingenious way of retaining the qualia ontologically by suggesting that in a representational system the qualia are the objective qualities of experience. The Representational Thesis of Dretske's accounts for the objectivity of the qualia by suggesting that these properties are part of the representational mechanism and that they are causally connected with the world. Dretske writes:

> The Representational Thesis identifies the qualities of experience—qualia—with the properties objects are represented as having. The properties that S represents things to have are, in principle, knowable by others.[47]

Thus the qualia have objectively identifiable location in our consciousness which is representational in character.

However, Dretske's thesis objectifies the phenomena of qualia so much so that they ultimately lose their first-person character. What he suggests

is that if subjectivity is retained, then the qualia cannot be explained and so will become unintelligible. Therefore, within his overall mechanistic theory of mind, he offers an account of qualia without eliminating them. But he does not seem to have explained how the qualia are possible in the subjective sense. That is to say, there is no explanation of how the raw feelings are possible if the qualia are ultimately the properties of an objective system. Dretske's externalism goes against the very notion of qualia of our inner mental life.

There are two ways in which we can secure ontologically the subjectivity or the first-person character of our inner experiences. First, we can ask for a proof of the primacy of the first-person point of view so far as our mental life is concerned. Nagel has provided the convincing proof that the first-person point of view is ineliminable and that it cannot be absorbed into the objective third-person point of view. That is, we have to retain the first-person perspective from which we can only inwardly know what it is to be like us.[48] This perspective is the subjective one and is ultimate from a metaphysical point of view. Second, the raw feelings are to be given an irreducible status in the ontological scheme[49] of the phenomenology of the mind. The raw feelings are the hard data available in the domain of consciousness: they can be detached from this domain only conceptually and not ontologically. They make one stream of consciousness which is a holistic system of qualia.

Thus we can argue for the metaphysics of qualia in view of the fact that they are the inward phenomenological features of our consciousness. They are not in any way mysterious at all because, given the fact that we have a whole network of linguistic and physical capacities, it is not surprising that we have consciousness at all. The fact that we have consciousness is not logically implied by the physical history of the universe: it is only a matter of fact that we have consciousness. But once consciousness appears in the universe, it is futile to offer a causal explanation of consciousness. No amount of biological explanation can do away with the gap between our knowledge of the physical universe and our knowledge of the mental world.

To what extent mental life is autonomous[50] we can hypothesize only on the basis of our knowledge of the inner structure of consciousness. If the mental world is irreducible and we have a reasonable assurance that mind at any cost stands beyond the horizon of the physical world, we can make a safe bet that mind has a reality of its own and that physicalism,

functionalism and identity theories of all sorts fail to understand the inner dynamics of the mind.[51]

Notes and References

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2. Ibid.
3. See Wittgenstein, *Philosophical Investigations*, trans. G.E.M. Anscombe (Oxford: Basil Blackwell, 1953), especially sect. 243.
4. Cf. Owen Flanagan, *Consciousness Reconsidered* (Cambridge, Mass.: The MIT Press, 1992), Chapter 8.
5. Ibid., Chapter 4, especially p. 64.
6. Dennett, *Consciousness Explained* (New York: Little Brown, 1991; Allen Lane, The Penguin Press, 1991), Chapter 5.
7. Ibid., pp. 134–8.
8. Ibid., pp. 126–34.
9. See Hilary Putnam, 'Philosophy and Our Mental Life', in *Mind, Language and Reality (Philosophical Papers Vol. 2)* (Cambridge: Cambridge University Press, 1975).
10. See Wittgenstein, *Philosophical Investigations*, sects. 257, 261.
11. Cf. Robert Kirk, *Raw Feelings: A Philosophical Account of the Essence of Consciousness* (Oxford: Clarendon Press, 1994), Chapter 5.
12. Flanagan, *Consciousness Reconsidered*, p. 85.
13. Sydney Shoemaker, 'The Inverted Spectrum' in *Identity, Cause and Mind* (Cambridge: Cambridge University Press, 1984). See also Jerry Fodor (with Ned Block), 'What Psychological States Are Not' in *Representations: Essays on the Foundations of Cognitive Science* (Brighton, Sussex: The Harvester Press, 1981), pp. 79–99.
14. See John R. Searle, *The Rediscovery of the Mind* (Cambridge, Mass.: The MIT Press, 1992) Chapter 2 for a detailed criticism of the materialist theory of mind, including functionalism.
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16. Ibid.
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51. This paper was presented in an ICPR-sponsored National Seminar on 'Consciousness and Phenomenal Mind' held at Butler Palace, Lucknow in 1999. I am grateful to those who had commented on my paper.

Postmodern Relativism Revisited

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I propose to present in this paper an overall critical review of postmodernist relativism, especially in the field of knowledge. As is well known, 'postmodern' thought has developed in conscious contradiction to various tenets of Enlightenment inspired 'modern' viewpoint. The term 'modern' is neither an 'ism', nor even a definitive viewpoint but is rather a general attitude of mind which developed during a long span of time from the fifteenth to nineteenth centuries. For the limited purpose of this paper, I suggest that this consists of the following implicit or explicit theses:

(i) Certain forms of knowledge, e.g. scientific and mathematical, are objective, universal and indubitable.
(ii) Experience and reason are the only two sources of all our knowledge.
(iii) Reason is universal, is shared by entire humankind, and is the source of all universal truths and values.
(iv) Epistemology or the examination of the sources and nature of knowledge and its validation is basic to all philosophical discourse.
(v) Our knowledge is founded upon and validated by direct experience and/or certain fundamental principles of reason, the view being generally known as epistemological foundationalism.
(vi) Our empirical knowledge is reliable because it represents or 'mirrors' the outside world.
(vii) This implies the correspondence theory of truth.
(viii) Most judgements have a referent outside the speaker's language and are justified with reference to that, the view being known as epistemological externalism.
(ix) Knowledge or thought must be developed independent of any external authority, either church or the state.
(x) At the same time, the role of experts in knowledge, especially in science, is acknowledged.

(xi) Individual person is the locus of reason and the subject of all rights and duties.

(xii) Equality, dignity and inviolability of all human beings follow from their common humanity and/or rational nature.

Postmodern thinkers have developed each and every tenet of their philosophy in contrast to modern thought and *Weltanschauung*. I would try to first present postmodernist views in brief outline, and would then give a critical evaluation of it in the next section. Unlike the modern viewpoint, postmodernism is an 'ism', i.e. a definitive viewpoint or attitude which did not develop gradually like the modern thought but burst forth on the academic horizons of the Continent with the force of a revolutionary movement. Postmodernism embodies a shrill revolt against modernist thought, especially its claims for universal validity of certain forms of knowledge. And yet, it is not a unified theory being a composite product of several independent thinkers. As in the case of modern thought, I propose to analytically distinguish several theses of postmodernism which are expressed with different emphases by postmodernist scholars. They are:

(i) Postmodernism challenges the claim to indubitability on the part of any form of knowledge, especially scientific knowledge.

(ii) It also challenges the concept of objectivity, and argues that the perceived or experienced world is a construct of the concepts, attitudes, desires and goals of the subject and her conceptual framework.

(iii) It emphatically opposes the representational view of knowledge, and its corollary, the correspondence theory of truth. It affirms that there is no way to 'know' the objective world as-it-is-in-itself, and therefore no way to validate our perceptions.

(iv) Instead, it assumes the duality of scheme and content, the former consisting of the conceptual framework of the subject's community.

(v) It questions the claims of reason and asserts that there are no universal or necessary truths. All truths are relative to various contingent factors, especially the conceptual framework of the subject's culture.

(vi) There is an irreducible plurality of such conceptual frameworks. The latter are embodied in different languages which are mutually untranslatable.

(vii) There is indeterminacy of reference; and meaning is a product of the interrelationships between different words and terms within a linguistic framework which do not refer to anything outside our knowledge.

(viii) These conceptual frameworks are mutually incommensurable.

(ix) The standards and criteria of our judgements are derived from within our own cultures. And there are no cross-cultural criteria of comparison; no overarching framework or language in and through which different languages can be translated and different conceptual frameworks can be comparatively evaluated.

(x) It rejects externalism in knowledge and its justification, and advocates epistemological internalism. That is, the standards and criteria of our judgements are derived from our culture and our judgements can be made and justified from within our conceptual framework only. (Their internalism must be distinguished from the internalism advocated by R.M. Hare in his recent works.)

(xi) Postmodernism rejects not only the centrality but also the possibility of epistemology. It rejects the modernist foundationalism, i.e. the desire to ground our knowledge either on our experience or reason. The general thrust of all their arguments is to emphasize the unconditional relativity of all knowledge and judgement to our plural and mutually incommensurable conceptual frameworks.

(xii) Postmodernism further glorifies mass culture, and 'opinion' as against rational judgement.

(xiii) It rejects the role of experts in any form of knowledge. It makes community, and not the individual, as the basic unit of all knowledge and praxis. The community is not only the source of the standards and criteria of our judgements, but also that of our perceptual patterns, and even our very personhood.

Let me quote here Thomas McCarthy who has given a concise and pointed description of postmodernism:

> To the necessity that characterizes reason in the Cartesian-Kantian view, the radical critics typically oppose the contingency and conventionality of rules, criteria ...; to its universality, they oppose an irreducible plurality of incommensurable lifeworlds and forms of life, the irremediable 'local' character of all truth, argument and validity; to the *a priori*,

the empirical; to certainty fallibility; to unity heterogeneity; to homogeneity the fragmentary; to self-evident givenness ('presence'), universal mediation by different systems of signs (Saussure); to the unconditional, a rejection of ultimate foundations in any form.[1]

Perhaps the most important tenets of postmodernism are the determination of our knowledge by our cultural conceptual frameworks, the impossibility of any universal or cross-cultural criteria to compare our different assertions and the distinction between scheme and content. According to the view our standards of judgement, whether aesthetic, moral, or empirical, our valuational preferences and goals, even the way we perceive the objects of the world, are derived from the culture, language, and conceptual framework of the community we happen to belong to. We know the world and other selves as already interpreted through the conceptual framework of our community.

There is nonreducible plurality of languages which are mutually untranslatable; conceptual frameworks which are mutually incommensurable. Add to these the theses of the duality of scheme and content; the inscrutability of reference; and the impossibility of any cross-cultural criteria or neutral framework in and through which we can compare various versions of reality, or even meaningfully communicate with each other—and we have an extreme, uncompromising kind of cognitive relativism.

Our knowledge and praxis are not only relative to, but are also determined by, our plural, mutually incommensurable conceptual frameworks. We seem to be prisoners of our community's culture or conceptual framework; almost like the windowless monads of Leibnitz. Not only do we judge differently, we even perceive, behave and respond to empirical facts and similar human situations differently. And we can neither share with others our concepts and percepts, nor even understand them properly.

Richard Rorty has argued against the representational view of knowledge and claims of superiority on the part of either science or philosophy. Our knowledge is neither founded on raw unmediated experience of the 'external world', nor does it mirror or represent that world. It is rather a product of our conceptual framework which we inherit from our community.[2]

A particular opinion or theory can be understood and justified only in the context of the world-view and conceptual framework in which it has been developed; and there is no point in attempting a comparative evaluation of theories or opinions which express different points of view or

world-views. Distinctness of cultures and civilizations is structurally connected with the meanings of concepts employed by that culture (Oswald Spengler); and all systematic inquiries are similarly determined in their scope and the answers they come up with by the initial or 'absolute presuppositions' which are their starting point (R.G. Collingwood). Michael Krausz call this view *semantic relativism*, according to which,

> meaning is a function of some sort of conceptual framework, such that difference of conceptual framework necessitates difference of meaning.[3]

This view closely resembles, and is influenced by Ludwig Wittgenstein's language game theory. According to the latter, both the meaning of concepts and their use are determined by the particular language game in which the participants are engaged. The meaning of a word or concept does not consist in naming, but is determined by the way it is used in a language.

This kind of relativism is further strengthened when the reference theory of meaning is questioned and more or less rejected. Rorty, W.V.O. Quine and Wilfrid Sellers argue for the 'inscrutability of reference', that is, a linguistic expression cannot determine the external referent the sentence is about. They also talk of the 'theory-ladenness of facts', and underdetermination' of theories by facts. To quote Rorty:

> It seemed possible to say that the question what was real or true was not to be settled independently of a given conceptual framework and this in turn seemed to suggest that perhaps nothing existed apart from such framework.[4]

Thomas Kuhn's famous work—*The Structure of Scientific Revolution*, seems to have revolutionized the western thought and brought it to a point of no return. According to him, different scientific theories are both incompatible and incommensurable with each other. It is not that they view the same world from different perspectives; rather, 'the proponents of competing paradigms practice their trades in different worlds.'[5]

Postmodern relativists have painstakingly offered arguments how the speakers of different languages not only have different concepts but also have different patterns of perception and behaviour. These languages cannot be satisfactorily translated into each other, especially because of the 'indeterminacy of reference'. Each language, culture, or lifeworld has its own conceptual framework which is incommensurable with those of others.[6]

In the words of Richard Bernstein, the essential claim of the relativist is that,

> ... there can be no higher appeal than to a given conceptual scheme, language game, set of social practices, or historical epoch ... . There is no substantive overarching framework in which radically different and alternative schemes are commensurable—no universal standards that somehow stand outside of and above these competing alternatives.[7]

Since there is no access to 'the world' as an undescribed and unperceived reality, we cannot compare our version of the world with the world itself; or decide which version of the world is truer than the others; or even say that they are all different versions of the same world. Nelson Goodman takes this view to its logical conclusion when he says that 'there are many worlds, if any.'[8]

Paul Feyerabend has frequently argued that good arguments can always be found for opposite sides of any issue.[9] This suggests that there are no right or wrong sides of any issue; both sides have an equal claim to validity or justification. Thus, both Galileo and Cardinal Bellarmine were equally justified in their mutually opposed versions of the relationship between the sun and the earth.[10] Cognitive relativism cannot go any further than this.

Relativism in other walks of life naturally ensues from this kind of cognitive relativism. The beliefs, practices, ways, as well as values, moral norms and standards of a people are declared to be strictly relative to the conceptual framework/world-view/way of life of that people. And they must be understood and evaluated from within that given lifeworld. Not only must they never be criticized from an external point of view, two peoples inhabiting two different lifeworlds cannot also understand and communicate with each other in a satisfactory manner. Any two world-views, conceptual frameworks, or lifeworlds are, thus, incommensurable.

II

(A) Even though commonplace, it is worth pointing out that relativism, or what Hilary Putnam calls anarchism, is self-refuting. As argued by him, if all languages and conceptual schemes are both culture-specific and mutually untranslatable, as well as incommensurable, then the thesis of cognitive relativism and incommensurability of various conceptual

frameworks can be true or valid only for the contemporary (postmodern) western culture. It can neither be explained into other conceptual schemes, nor be acceptable to the inhabitants of other lifeworlds.[11] If relativism is true, that is, if every belief and theory is relative to the culture and conceptual framework of its genesis, then relativism is no more than a local viewpoint which cannot have any validity outside the particular local culture. Relativism denies more than relative validity to every viewpoint or theory; but there is an implicit and unjustified assertion of relativism being valid for all lifeworlds and their conceptual frameworks.[12] However, if relativism is true, it cannot have any cross-cultural validity. It seems to me that postmodern conceptual relativism is trying to act here as a meta-epistemological theory. As such, it can claim universal validity for itself; but the moment it does so, it cannot sustain its relativist epistemology.

Putnam compares cognitive relativism to solipsism. He contends that a self-consistent solipsist cannot recognize the being of other selves. Similarly, a self-consistent relativist must confine himself to the assertion that the norms of his own culture are true for him; but if he says that the norms of other cultures are true and valid for them, he leads himself into self-contradictions. That is to say, like the solipsist, the relativist also cannot recognize other cultures, and their uniqueness.[13]

(B) In a way the postmodernist philosophy revolves round the twin theses of conceptual framework and the duality of scheme and content. The people speaking a particular language are supposed not only to have unique concepts which differ widely from those of other cultures or conceptual frameworks, but these concepts also organize their perceptions in some way which is very different from the way people speaking another language, say Chinese, organize their experiences.[14] These theoretical paradigms (Kuhn), or conceptual frameworks in some way literally 'construct' the world we live in, react to, and seek to change. Not only our ideals and theoretical concepts, but our patterns of perception of, and response to, the physical world are also relative to a specific conceptual scheme, theoretical framework, paradigm, form of life, society, or culture. There is a nonreducible plurality of such conceptual schemes, which provide different but equally valid ways of interpreting humanity's experiences. And since there is no way we can apprehend the uninterpreted objects-as-they-are-in-themselves, we cannot say whether or not our various versions of the world describe one and the same world.[15]

Hence Goodman's suggestion that there may be 'many worlds, if any'. Goodman and others have emphasized the interdependence of facts and versions or conventions. It means that the world we perceive and react to is the world which has already been interpreted according to the perceptual and linguistic categories of our community.[16]

This may well remind us of Kant's distinction between the noumena or things-in-themselves, and phenomena or the objects as they are experienced as already systematized by the categories of understanding. However, there is a world of difference between Kantian transcendental perspective and the postmodernist one. While Kant affirms the *a priori*, transcendental, and necessarily universal character of the organization of sense data; for the relativists, the organizing schemes are contingent, local and plural.

Rorty and other postmodernist scholars assert that 'the question of what was real or true was not to be settled independently of a given conceptual framework and that perhaps nothing existed apart from such frameworks.'[17]

No attempt is made to explain either the nature, or the status of the conceptual framework. All that the relativist can claim is that we do not know the knowledge-independent world, as all we know is the world which has already been interpreted by our categories and concepts. When she asserts that these categories are strictly a product of the culture/lifeworld/form of life/conceptual framework of the community to which a person belongs, she is making an extreme claim which cannot be supported either by experience and commonsense, or by reason.

Various relativist theses, regarding inscrutability of reference; the total determination of our knowledge and praxis by the conceptual framework of our community; the irreducible plurality of such frameworks, or lifeworlds; the indeterminacy of mutual translation of different languages; and finally, the mutual incommensurability of these frameworks or lifeworlds, are somehow or the other based on the relativists' conception of an all-encompassing conceptual framework. Karl Popper calls it 'The Myth of the Framework'. He argues that this thesis suggests that 'we are prisoners caught in the framework of our theories; our expectations; our past experience; our language; and we are so locked into these frameworks that we cannot communicate with others who are encased in radically different frameworks or paradigms.'[18]

The problems associated with the thesis of scheme and content have led Donald Davidson to a rejection of this distinction, and finally to a strange conclusion:

> Beliefs are true or false, but they represent nothing. It is good to be rid of representations, and with them the correspondence theory of truth, for it is thinking there are representations that engenders thoughts of relativism.[19]

He believes that,

> Given the dogma of a duality of scheme and reality, we get conceptual relativity, and truth relative to a scheme. Without this dogma, this kind of relativity goes by the board.[20]

It seems to me that the solution is worse than the problem. While relativists offer at least limited validity to our knowledge, Davidson here is simply denying all validity or truth to every kind of knowledge. It is so because our knowledge 'represents' nothing, and so the question of the truth or falsity of any knowledge does not arise.

(C) Relativism seems to say that the concept of meaning should be given up. According to the thesis of indeterminacy of translation, no sentence of any language has a definite meaning which can be translated into another language in a way so that the meaning and reference of the two sentences can be equated. Chinese language provides a favourite paradigm for the advocates of indeterminacy of translation. It is argued that not only are the Chinese concepts and categories of thought very different from those of the writers (modern western ones), the Chinese also perceive and classify even everyday objects differently.

Quine calls this thesis the indeterminacy of translation and inscrutability of reference. According to this thesis, the concepts and percepts enshrined in one language are so very unique that we cannot find any equivalent concept or expression in one language for another language's concepts and percepts. At most we can learn another language and understand it from within. And yet, after all the effort in learning a language we can never determine what its words refer to in the outside world.[21]

It is just unbelievable that the Chinese people cannot distinguish between grass and shrubs, or green and blue. It is also unbelievable that they are incapable of understanding and formulating a simple proposition such

as 'the cat is on the mat'. We can take it for granted—our entire experience and instincts supporting us—that all humankind perceives the middle range mega objects in the same way. Many of us may not have proper conceptions of micro level objects. Many others might have irrational beliefs about various mega level objects; but all do perceive the world, and generally react to it in a very similar manner. The fact that Eskimos have about 100 words for snow, and modern European languages have just a few does not prove either untranslatability, or incommensurability. It only proves that the natural surroundings of the two populations are very different.

As to the theses of indeterminacy of translation and inscrutability of reference, they are not corroborated by our everyday experience. Translating a word into another language means a prior determination of its reference. When we translate a term into another we simultaneously equate the reference. As Putnam puts it, it is nonsense to say that a certain word A in another language means wheel in our language; and then to say that it does not refer to wheel in the objective world, i.e. we do not know whether the referent of the term A is the same as that of the word wheel. To say that the term A means wheel is to say that 'A refers to wheel'. An essential step in every exercise in translation is the determination and equation of objective reference.[22]

(D) The rejection of mutual translatability of different languages, and the assertion of indeterminacy of reference further make it impossible for us to determine whether a given assertion in another language and culture is true or false even by the standards of that other culture. When the postmodern relativists assert that all propositions—from scientific theories to religious dogma—have their explanation and justification in the same sociological factors, they seem to deny all distinctions between true and false propositions, even within any linguistic or conceptual framework.[23]

I agree with Putnam that all humans perceive and think in quite a similar fashion. Minimum laws of logic and logical words are found in all languages; and no language is possible without them. To quote Putnam:

> Not only do we share objects and concepts with others to the extent that interpretative exercise succeeds, but also conceptions of the reasonable, of the natural, and so on. For the whole justification of an interpretative scheme, remember, is that it renders the behaviour of others at least minimally reasonable by our lights.[24]

Richard Bernstein has tried to develop and defend a milder kind of relativism, keeping in view its criticism by philosophers such as Popper and Putnam. According to him,

> There is always some overlap between rival paradigms, overlap of observations, concepts, standards and problems. If there were not such overlap, rational debate and argumentation between proponents of rival paradigms would not be possible.[25]

Several contemporary relativists agree that either there is considerable overlapping of references and meaning, in which case there is no sense in talking of total untranslatability and incommensurability; or the two sentences or terms are referring to two different things, in which case the two assertions are independent of each other and there is no incommensurability.[26]

Putnam, Newton-Smith and others have argued for a common observational core to all perception and belief. The truth of a sentence depends upon both the meaning of the sentence or proposition, and what the world 'is'.[27] This observational core anchors translation from one language to another. The elaborate examples of Chinese language and its very different concepts and perceptual patterns are both misleading and unconvincing.

(E) Incommensurability thesis is closely related to the idea of indeterminacy of translation. But if we cannot translate one language into another, we have no basis whatever for declaring what is being asserted in another language as incommensurable with our own assertions. The relativists, such as Kuhn, Feyerabend and Rorty, have talked as if the theses of incommensurability and untranslatability are interdependent or integrally related. On the contrary, the two cannot be maintained together. Unless we know what the 'other' is asserting, which implies translatability and mutual understanding, we cannot know whether their views are incommensurable with ours or not.

The anthropologist-relativists, such as Evans-Pitchard and Peter Winch, and the socio-philosophical thinkers, such as Charles Taylor, who emphasize the immense diversity in the ways people belonging to diverse cultures perceive and think, and the postmodern relativists who harp on

incommensurability of different lifeworlds and conceptual frameworks, are constantly basing their arguments on the 'knowledge' of the 'other'. Without such knowledge of the 'other', not only incommensurability but also immense, irreducible diversity of various cultures or lifeworlds cannot be argued. And once some form of knowledge of the 'other' is acknowledged, the two languages no longer remain mutually untranslatable; and the two lifeworlds no longer remain incommensurable.

Human beings have an irresistible urge to extend their mental horizons by communicating with larger and more varied groups. No culture can survive, far less thrive, in the absence of communication with other cultures. Humans have undertaken travel to and trade with distant lands from times immemorial. Mutual translations have successfully been done not only among sister languages but also between languages as distinct as Sanskrit and Pali on one hand and Chinese on the other.

People are bilingual and multilingual. It would be absurd to say that they cannot understand their thoughts in one language when they happen to be thinking and expressing them in another language; or their views and beliefs in one language are incommensurable with their own views and ideas in another language!

(F) Contemporary realists, such as C.A. Hooker, Michael Davitt, Hilary Putnam and Michael Dummet (the latter two supporting a milder version of realism) have generally accepted both Frege's theory of reference, and Tarski's theory of truth. They emphatically contend that the world is real and objective, and our knowledge does not construct the world. There is a causal relationship between the world and our perceptions and conceptualizations.[28] Finally, truth consists in its correspondence with the reality, though this last contention is often made conditionally. Realists admit that we can never be sure of the correspondence of our beliefs with the world for the simple reason that we cannot 'know' the world-as-it-in-itself. The meaning of truth, however, still lies in its correspondence with the reality. They assert fallibilism in knowledge and the limited convergence of scientific theories or scientific progress. They also assert coherentism by which they mean that any scientific theory can be justified not by comparing it with the as-it-is, but by a complex method of correlated mutual support.[29]

Devitt points out that we do respond selectively to our experience, and to some extent interpret it. 'But this is not to say that we construct the world; it is our experience of the world and not the world itself that we are imposing on, organizing and cutting up.' Devitt adds that 'existence-relative-to-a theory' is literally incoherent.[30]

In the postmodern contemporary world, perhaps the correspondence theory of truth can no more be upheld at the critical level. But there is substance in the realist's assertion of some form of causal relationship between the world and our knowledge. It means that the world 'causes' or constrains our knowledge; and this, in turn, should mean that we do not 'construct' the world. Even if we experience the world as it has already been organized by our perceptual and conceptual schemes, there is yet a common core of the 'given' in all our knowledge. This is not to go back to the duality of scheme and content, as the content here literally determines our organizing scheme, and forms the common core or basis of the varied schemes. This may, however, mean some form of foundationalism, though the realists, particularly Putnam, have avoided using foundationalist terminology.

(G) Postmodern writers, such as Foucault, Feyerabend et al., have decried the role of both reason and experts, thereby giving the place of honour to everyday life and experience, or what they call opinion and/or prejudice. In the words of Feyerabend:

> As far as I am concerned truth lies with us, with our 'opinions' and 'experiences' and we 'the many', not abstract theories, are the measure of things.[31]

And yet at the same time, they failed to properly appreciate a simple fact of everyday life, that of mutual understanding and communication between people supposedly belonging to different conceptual frameworks/lifeworlds/cultures. As I have argued earlier, inhabitants of different cultures or lifeworlds had mutual trade relations possibly from two millennia BC; and had cultural communications and give and take long before the Christian era.

W.H. Walsh argues that points of view have been successfully questioned as to their explanatory power and truth; and we may *objectively* discuss and comparatively evaluate different points of view. Krausz calls this view 'wherein intersubjective communication about a given subject matter is possible' epistemological objectivist view. He contends,

> Rational non-cross purpose deliberation is possible between proponents who agree with what the range of application of the appropriate concepts are, and what the subject matter is ... meaning of concepts cannot be defined according to the parameters of the conceptual frameworks ... Consequently semantic relativism must be rejected.[32]

(H) Once semantic (or what I have called cognitive) relativism is rejected, or at least questioned, all other forms of relativism are weakened.[33] Granting the immense plurality of the ways of life, and the fact that we all initially learn our beliefs, values and ways from our culture, it still does not follow that we cannot communicate, share with, and learn from each other. Human nature does not drastically change from one culture to another. Even though conditioned by their respective conceptual frameworks, human being do share not only similar ways of perceiving and responding to the world and life, they also spontaneously share some of the values, moral norms and standards. And where they do not so share, they can always enter into rational discourse and try to achieve some semblance of agreement. Like all human knowledge, such agreements would be fallible, but still desirable.

To sum up, I have argued that (A) the drastic separation of scheme and content is both unfounded and leads to an extreme kind of cognitive relativism. (B) The idea of conceptual frameworks is correct to a limited extent; but when it is turned into a windowless monad, a system complete in itself, it becomes untenable. (C) Knowledge and meaning definitely have a determinable reference without which no mutual communication is possible, not only interculturally but also intraculturally. (D) Indeterminacy of translation is too drastic a thesis and does not do justice to the facts that mutual translations of languages and intercultural communications have been going on for time immemorial. (E) Incommensurability thesis, when combined with the indeterminacy of translation, becomes self-contradictory and untenable. (F) If this implies a milder version of realism—both metaphysical and epistemological—so be it. We have no prior commitment to an idealistic viewpoint. (G) It is true that the world-as-it-is-independent-of-our-knowledge cannot be known through our knowledge. But there are various other ways to satisfy ourselves regarding the validity of our knowledge. Above all, it can be verified by the 'knowledge' of the fact that most of our perceptions, and a large number of our

conceptions are shared by the entire humankind. Not only the objective world, but the ways we perceive it, the categories of perception and conception, and some basic principles of logic or reasoning are more or less shared by humankind. We can understand each other because we share a common world and common ways of perceiving it and conceptualizing our experience, as well as a more or less common human nature with similar instincts and interests and ways of reasoning. Mutual understanding and commensurability of our thoughts and languages are presupposed at every stage of our life.

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6. See Lucius Outlaw, 'Lifeworlds, Modernity, and Philosophical Praxis: Race, Ethnicity, and Critical Social Theory'; Bernstein, 'Incommensurability and Otherness Revisited'; Jiang Tianji, 'The Problem of Relativism'; and A.C. Graham, 'Conceptual Schemes and Linguistic Relativism in Relation to Chinese'; in Eliot Deutsch, ed; *Culture and Modernity: East-West Philosophical Perspectives*, 1994, pp. 21 ff.; 85 ff.; 161 ff.; and 193 ff.
7. Op. cit., pp. 11–12.
8. 'How can divergent diagrams or versions be of the same facts, the same world? They must be either of no world or of different worlds. There must be many worlds if any.'
   'Just the Facts, Ma'am!' in Michael Krausz, ed., *Relativism: Interpretation and Confrontation*, 1989, p. 83
9. 'For every statement (theory, point of view) that is believed to be true with good reasons there may exist arguments showing that either its opposite, or a weaker alternative is true.' *Farewell to Reason*, 1987, p. 74.
10. See Rorty, op. cit., 328 ff.
11. Hilary Putnam, *Realism and Reason: Philosophical Papers*, Vol. 3, p. 168.
12. 'The sociological character of *all* knowledge, of *all* the forms of thinking, perception, cognition, is indubitable: not, of course, the content of all knowledge, still less its objective validity, but the selection of its objects according to the *ruling social-interest perspective*; and furthermore that the 'forms' of the mental acts by which knowledge is won are *always* and *necessarily*

sociologically determined; i.e., by the structure of the society.' Max Scheler, 'The Sociology of Knowledge: Formal Problems', in James E. Curtis and John W. Petras, eds., *The Sociology of Knowledge*, 1970. (The words 'all' and 'always' are italicized by me.)

'It is not only a choice between two mutually incompatible beliefs, but one between sets of beliefs *so structured* that each has internal to it its own standards of truth and justification.' Alsdair MacIntyre, 'Relativism, Power, and Philosophy', in *Relativism: Interpretation and Confrontation*, 1989, p. 189 (italics mine).

13. Putnam, op. cit., p. 236 ff.
14. See Rorty, op. cit., p. 192 ff.; also see articles by Bernstein, Jian Tianji and Graham, referred to in ref. no. 4 supra.
15. See Bernstein, op. cit., pp. 8 ff., 11–12; Rorty, op. cit., p. 178 ff.
16. See Goodman, 'Just the Facts Ma'am!', op. cit., p. 80 ff.
17. See ref. no. 4 supra.
18. Quoted in Bernstein, op. cit., pp. 84–5.
19. 'The Myth of the Subjective', in *Relativism: Interpretation and Confrontation*, pp. 165–6; also see ibid., p. 159 ff.
20. 'On the Very Idea of a Conceptual Scheme,' in Michael Krausz and Jack W. Meiland, eds, *Relativism: Cognitive and Moral*, 1982, p. 79.
21. See Rorty, op. cit., p. 192 ff.
22. Putnam, op. cit., p. 194 ff.
23. See Barry Barnes and David Bloor, 'Relativism, Rationalism and the Sociology of Knowledge', in Martin Hollis and Stevenson Lukes, eds., *Rationality and Relativism*, 1994, p. 21 ff.
24. Op. cit., p. 196.
25. Op. cit., p. 85.
26. Chris Swoyer, 'True For', in *Relativism: Cognitive and Moral*, p. 84 ff.
27. See Newton-Smith, 'Relativism and Possibility of Interpretation', in *Rationality and Relativism*, p. 84 ff.
28. A.C. Hooker, *A Realist Theory of Science*, 1987, pp. 98, 256.
29. Ibid., pp. 34, 58.
30. *Realism and Truth*, 1984, p. 140.
31. *Farewell to Reason*, 1987, p. 50.
32. 'Relativism and Rationality', op. cit., p. 312.
33. Though at the theoretical level semantic and cognitive relativism are slightly different, for all practical purposes they say the same thing, that is, all knowledge is relative to its conceptual framework.

Jacques Derrida's Deconstruction: A Logic of *Différance*

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For the last three decades or so, Jacques Derrida (L. 1931–) has emerged as a controversial writer in philosophy. He has aimed a strong reaction not at a single philosopher, but at the entire modern European movement in philosophy. He has dubbed this reaction as 'deconstruction', '... it did indeed become the systematic rejection of the most basic premises of modern European philosophy: the celebration of the self and subjectivity, the new application of history, and most of all the already flagging philosophical confidence in our ability to know the world as it really is. It was in a phrase, the wholesale rejection of the transcendental pretence.'[1] In his attempt to deconstruct the fundamental presuppositions of Western philosophy, Derrida has occasioned considerable confusion and misunderstanding among the enthusiasts and detractors alike, as well as some sound criticism. In what follows, I shall furnish some clarifications, annotations and summations that may be of help to appreciate Derrida's deconstruction as a logic of *différance*. I call *différance* a logic simply in the sense that *différance* is a kind of argumentation though it has no settled meaning and operation. But *différance* does operate in very many ways and hence it could with certain reservations be called a logic.

Before I come to Derrida's deconstruction, I would like to say a few words on Derrida's general philosophic development. In an interview in Paris in 1981, Derrida has said, 'My philosophical formation owes much to the thought of Hegel, Husserl and Heidegger.'[2] Derrida hails originally from the phenomenological movement of Husserl, Heidegger and Levinas and it is within and around this particular framework, more than anything else, that his thinking has evolved. Derrida's work of rigorous 'deconstruction' attempts to pose a radical challenge to such notions as the

Eternal Idea of Plato, the Self-Thinking-Thought of Aristotle, the *Cogito* of Descartes, the Transcendental Consciousness of Kant and the *Geist* of Hegel. I wish to furnish a rather larger passage which can briefly summarize how Derrida appreciates the modern Western thought:

> I have never been very happy with the term 'modernity'. Of course, I feel that what is happening in the world today is something unique and singular. As soon, however, as we give the label of 'modernity', we inscribe it in a certain historical system of evolution or progress (a notion derived from Enlightenment rationalism) which tends to blind us to the fact what confronts us today is *also* something ancient and hidden in history. I believe that what 'happens' in our contemporary world and strikes us as particularly new has in fact an essential connection with something extremely old which has been covered over (*archidissimule*) so that the new is not so much that which occurs for the first time but that 'very ancient' dimension which recurs in the 'very modern'; and which indeed has been signified repetitively throughout our historical tradition, in Greece and in Rome, in Plato, in Descartes, in Kant, etc. No matter how novel or unprecedented a modern meaning may appear, it is never exclusively *modernist* but is also and at the same time a phenomenon of *repetition*. And yet the relationship between the ancient and the modern is not simply that of the implicit and the explicit. We must avoid the temptation of supposing that what occurs today somehow pre-existed in a latent form, merely waiting to be unfolded or explicated. Such thinking also conceives history as an evolutionary development and excludes the crucial notions of rupture and mutation in history. My own conviction is that we must maintain two contradictory affirmations at the same time. On the one hand we affirm the existence of ruptures in history, and on the other we affirm that these ruptures produce gaps or faults (*failles*) in which the most hidden and forgotten archives can emerge and constantly recur and work through history ... . The difference between our modes of thought does not mean that I or other 'modern' thinkers have gone beyond Plato ... .'[3]

It is this understanding of the history of Western thought that Derrida tries to deconstruct. In *Of Grammatology*, Derrida has this to say about deconstruction, 'A sowing that does not produce plants, but is simply infinitely repeated ... a semination that is not insemination but

dissemination, seed spilled in vain, an emission that cannot return to its origins in the Father.'[4] In *Positions*, he remarks, 'In the final analysis, dissemination means nothing and cannot be reassembled into a definition ...'[5] and therefore deconstruction is not a theory, not a position, not a critique, not a technique, 'not a method and cannot be transformed into one.'[6] With deconstruction, Derrida tries to transcend the binary oppositions like truth and falsehood, reality and appearance, good and evil, etc. With deconstruction, Derrida dismantles these conceptual oppositions. It is the logic of *différance* that is the most operative term in Derrida's deconstruction. Richard Kearney, in a Prefatory Note on Derrida, writes, 'Derrida was working out his central notion of the irreducible structure of *différance* as it operates in human consciousness, temporality, history, and above all in the fundamental and overriding activity of writing (L'e'criture). By means of this concept of *différance*—a neologism meaning both to 'defer' and to 'differ'—Derrida proposed to show how the major metaphysical definitions of Being as some timeless self-identity of presence (e.g. *logos ...*), which dominated Western philosophy from Plato to the present day, could ultimately be 'deconstructed'. Such deconstruction would show that in each instance difference *precedes* presence rather than the contrary ... .'[7] In *Positions*, Derrida writes, '... *différance* refers to the (active and passive) movement that consists in deferring by means of a delay, delegation, reprieve, referral, detour, postponement, reserving. In this sense, *différance* is not proceeded by the originally and invisible unity of a present *possibility* that I could reserve, like an expenditure that I could put off calculatedly, or for the reasons of economy. What defers presence, on the contrary, is the very basis on which presence is announced or desired in what represents it, its sign, its trace ... .'[8]

In the above, I have mixed a great many issues together in explaining deconstruction with the logic of *différance*. Deconstruction involves two terms—'to defer' and 'to differ'. 'To defer' means 'to put off to another time', 'to delay', and 'to differ' means 'to be unlike', 'to disagree' and so on. However, these renderings do not fit into the much more technical and precise sense in which Derrida has used the term deconstruction. Deconstruction means to 'marginalize and reject'. Though archaic, it connotes something of the philosophical significance of deconstruction. 'To marginalize' means to decentralize the metaphysical notions and 'to reject' means to outdo with that. 'Marginalization' means not to resolve into a higher unity and 'rejection' has the meaning of not bringing again into

wholeness but reviving what is already fragmentary. Derrida's deconstruction of Western metaphysics shows that he first decentralizes the metaphysical issues, then he marginalizes them and finally he rejects them. Derrida develops this problematic in order to put the system of metaphysics as a whole into a question. In his Exergue; or 'outwork' to *Of Grammatology*, Derrida focuses attention on a triple movement of our logocentric epoch. According to this analysis, the metaphysics of phonetic writing (=logocentrism) has controlled and ordered in one system: '1. The concept of writing .... 2. The history of (the only) metaphysics, which has always assigned the origin of truth in general to the *logos*: the history of truth, of the truth of truth, (which) has always been ... the debasement of writing and its repression outside "full speech". 3. The concept of science or the scientificity of science—what has always been determined as logic."[9] In fact, theory of sign is much of Derrida's deconstruction, and it can describe actual situations and the changing transformations of the *logos*. *Logos* (Greek for 'word'), as a matter of fact, has different meaning in different stages in the development of ancient Greek thought and modern philosophy. There are, in fact, five meanings of the term *logos*. 1. Heraclitus of Ephesus (died after 480 BC) is supposed to have used the term *logos*—meaning both the 'word' and the 'reason'. *Logos* appears as a kind of non-human intelligence that organized the discrete elements in the world into a coherent whole. 2. Sophists used the term *logos* to approach the modern uses of its derivatives 'logic' and 'logical'. For them, *logos* could mean an argument, or the content of an argument. 3. The Stoics equated it with that sort of God who is the supposed source of all the rationality in the universe. 4. The meaning of the *logos* given by the Stoics has influenced the most modern meaning of the term. It appears in the opening words of St. John's Gospel where it is equated with Jesus Christ in his creative and redemptive aspect. 5. Socrates' doctrine of 'know thyself' is another expression of logocentrism which has given rise to human subjectivity and rationality in modernism.

In his celebrated works *Positions* and *Of Grammatology*, Derrida has acknowledged overwhelmingly the significant place of the *logos* in his own 'theory of sign' on many occasions. Derrida has said, 'The problematic of the sign derives from a fundamental logocentrism, a philosophy of consciousness of the originary subject'.[10] The notion of sign occupies the central theme of Derrida's writings. In his analysis of the history of the notion of sign in *Of Grammatology*, Derrida attempts to show that '... the

very concept of the sign has always depended upon, or been determined by that fundamental metaphysical opposition: the sensible and the intelligible. His various treatments of the sign work show that the metaphysical tradition has always treated the sign as a transition or bridge between these two moments of presence. Because the sign could only function as a provisional reference between presence in the form of the object (the sensible) and the presence in the form of self-presence (the intelligible) ...'[11] With the logic of *différance*, Derrida first decentres the *logos*, then he marginalizes the *logos* and finally he rejects the *logos*. This is how Derrida, on the basis of the method of *différance*, moves from a unified world-view based on the metaphysics to a world-view which is essentially pluralistic. In what follows, I will try to explain Derrida's position on 'writing' which will furnish ample illustrations regarding the operations of the *différance*. Writing is always historically situated, emerging at a particular time and place, but it should be read at the same time in terms of history because to write is to supply a context with all that is necessary for its operation as well as that is necessary for its erasure, the reopening of context that would close down the question of the relation even as it works, and protect the present from the past. Derrida's historical writing is located in *différance*: between past and present, determination and under-determination, in the space traced out and traversed by the supplement as excess, therefore between binary poles or on the 'fourth side' of the triangle. *Différance* as history has the effect, in fact, of reopening the present to the past, situating each in terms of the other.

In the Derridean project of science of writing—*Grammatology*—we come across transforming, marginalizing and finally deconstructing the metaphysics. Viewed positively, the critique of metaphysics allows Derrida to avoid a simple rejection of metaphysics which would inevitably fix his own place within the metaphysics. It also allows Derrida to locate *logos* quite firmly within the metaphysical and religious traditions; particularly the Biblical traditions. Derrida argues that it is with the help of the theory of sign that logocentrism can be deconstructed. He says, 'The sign unites an independent "representation" and "intuition", in other words, a concept (signified) and a sensory perception (signifier),'[12] but in logocentric systems, Derrida charges, there is a kind of 'separation' or 'disjoining' which, by dislocating the 'intuition', opens the space and plays off signification. There is no longer a unity between signifier and signified. The *logos* as specified has nothing as corresponding signifier. Derrida now reverses the

process. He argues that a sign leads to another sign, which in turn leads to another. Thus we have the plurality of signs and we never come across something as the first sign or word or *logos*. Derrida's point is that the logocentrism involves a strange '*intuition*', which lies in its '*ideality*'—the ideality of meaning. And as the unity of the signifying body and the signified ideality, the sign 'becomes a kind of incarnation'.[13] Thus, in general and most importantly, the way we are concerned with Derrida's project, 'the opposition of the intelligible and the sensory, condition the difference between the signified and the signifier, between the signifying intention (*bedeuten*), which is an animating activity, and the inert body of the signifier.'[14] Derrida adopts the method of *différance* not only to bring out the fundamental ambivalence involved in the doctrine of *logos* but also to show the obscurity in the writings of logocentrism.

In the above, there are so many issues that need clarifications. In order to clarify Derrida's position, I will take a little help from Kant's transcendental philosophy. Derrida, as a matter of fact, belongs to a non-Kantian and dialectical tradition—the latest attempt to shatter Kant's claim that 'understanding makes nature'. The work of Derrida, as a philosopher of language, can more suitably be understood in terms of relations between words and the world. In his view, 'language is the last refuge of the Kantian tradition, of the notion that there is something eternally present to man's gaze (the structure of the universe, the moral law, the nature of language) which philosophy can let us see more clearly. The reason why the notion of "philosophy of language" is an illusion is the same reason why philosophy—Kantian philosophy, philosophy as more than a kind of writing—is an illusion. The twentieth-century attempt to purify Kant's general theory about the relation between representations and their objects by turning it into philosophy of language is ... to be countered by making philosophy even more impure—more unprofessional, funnier, more allusive, sexier, and above all, more "written".'[15] The basic issue is that Kant, like Aristotle, has developed a conceptual scheme, i.e. percepts without concepts are blind. The blindness of percepts means their meaninglessness. In order to give meaning to percepts, concepts are required. But concepts are universal and therefore a-temporally true and percepts are spatio-temporal. Derrida, in fact, takes up Kantian project—to show how the a-temporally true can be contained in a spatio-temporal vehicle, regularize the relation between man and what man seeks by exhibiting its 'structure', freezing the historical process of successive reinterpretations by exhibiting

the structure of all possible interpretation. On 'writing', Richard Rorty says, 'Writing is an unfortunate necessity; what is really wanted is to show, to demonstrate, to point out, to exhibit, to make one's interlocutor stand at gaze before the world. The copy theory of ideas, the spectator theory of knowledge, the notion that "understanding representation" is the heart of philosophy, are expressions of this need to substitute an epiphany for a text, to "see through" representation.'[16] On writing, Derrida's position is that there is no end to it, writing always leads to more writing and more and still more; just as history does not give us complete knowledge or the final struggle but to more history. The question arises how can Derrida spell out his answer that writing about writing will help to deconstruct the Kantian way of looking at things. I wish to focus on a few of Derrida's remarks about writing to see how he answers the question, 'what must philosophers think writing is that they resent so much the suggestion that this is what they do?' Consider, to begin with, the following passage: 'There is therefore good and bad writing: the good and natural is the divine inscription in the heart and the soul; the perverse and artful is technique, exiled in the exteriority of the body. A modification well within the Platonic diagram: writing of the soul and of the body, writing of the interior and of the exterior, writing of conscience and of the passions, as there is a voice of the soul and a voice of the body ... The good writing has therefore always been comprehended. Comprehended as that which had to be comprehended: within a nature or a natural law, created or not, but first thought within an eternal presence. Comprehended, therefore within a totality, and enveloped in a volume or a book. The idea of the book is the idea of a totality, finite or infinite, of the signifier. This totality of the signifier cannot be a totality, unless a totality constituted by the signified pre-exists it, in its ideality. The idea of the book, which always refers to a natural totality, is profoundly alien to the sense of writing ... If I distinguish the text from the book, I shall say that the destruction of the book as it is now underway in all domains, denudes the surface of the text.'[17]

In such passages as this, Derrida goes ahead of modernism to create a new thing for writing to be about not the world but texts. Books tell the truth about things. Texts comment on other texts, and we should stop trying to test texts for accuracy of representation: 'reading ... cannot legitimately transgress the text toward something other than it, toward the referent (a reality that is metaphysical, historical and psychobiographical,

etc.) or toward a signifier outside the text whose content could take place. Could have taken place outside of language, that is to say, in the sense that we give here to that word, outside of writing in general ... there is nothing outside of the text.'[18]

With deconstruction, Derrida claims that he is not writing a philosophy like Kant who claimed that only a transcendental idealist could be an empirical realist. Derrida is also not offering a comprehensive view of the world, like Kant who said that the order and regularity in the field of appearances that we entitled nature, we ourselves introduced. Derrida is also not protesting against the errors of a philosophical school, like Kant who critically examined the claims of rationalism and empiricism. Derrida is, however, protesting against the notion that the philosophy of language, pursued realistically, as the study of how language and world are related is something more than it is first philosophy. The basic question is—what is Derrida's solution to the problem of the relation between the language and the world? Derrida does not come right out and tell his view about the relation of language and the world. 'To this one can only reiterate that Derrida is in the same situation in regard to language that many of us secularists are in regard to God. It isn't that we believe in God, or don't believe in God, or have suspended judgement about God. It isn't that we know that God is a cognitively meaningless expression, or that it has a role in a language-game other than the fact stating, or whatever. We just regret the fact that the word is used so much. So is this the case for Derrida with the vocabulary of Kantian philosophy. His attitude towards centuries of worry about the relation between subject and object, representation and the real, is like the Enlightenment attitude toward centuries of worry about the relation between God, man, faith and reason.'[19] For Derrida, a sign always has a reference to another sign and so on. In other words, a text always refers to another text and it cannot refer to something, which is not a text. Derrida applies his method of *différance* to deconstruct the metaphysical claim of logocentrism based on the theory of sign.

To bring this paper to a close, we can say that Derrida has an intense distrust of metaphysics. For Derrida, the job of philosophy is not to account for a system, but to deconstruct it. In rejecting the presuppositions of Western philosophy, Derrida, however, fails to offer a serious and constructive counter hypothesis to supplant the doctrines that lie at the roots of Western metaphysics. Derrida's method of deconstruction means,

like in guerrilla warfare, to attack quickly and run back, to puncture and parody, and to defuse through refusing to take a thesis seriously. The logic of *différance* has been designed to do the same function.

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Sign, Sense and Reference: Reflections on Problems in the Philosophy of Language

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Language, ontologically speaking, *cannot* exist. It *is* an existential contradiction, not in the sense in which the term is used in existentialism but in the simple sense in which things are supposed to 'exist' empirically, that is, in space and time and hence be apprehensible by the human senses. What 'exists', that is, which is apprehended by the eye or the ear or even by touch as in Braille is not, and cannot be, 'language'. The truth of the statement can easily be checked by anyone by simply opening the page of a book in a language one does not know or by being amidst a people who speak a language one does not understand. This will be found to be as 'true' in the case of those who talk of 'universals of language' as those who write of 'deep structures' which every language must have, forgetting that in case it is an empirical statement then it is, at best, only a probable generalization subject to modification in the light of contrary evidence and in case it is a stipulative definition it is bound to be true, but at the cost of being trivial.

Language, it should be remembered, is a 'living' thing found in innumerable varieties that are ever changing, coming into being and dying like all that lives. But 'life' itself is 'ontologically' unintelligible, at least in the sense in which an inert piece of matter is supposed to be so. Normally, one makes it 'intelligible' by reducing it to 'matter' as far as it is possible and hoping that the rest will also be 'reduced' as 'knowledge' about it increases. 'Reductionism' is not, and cannot be, confined to what is called 'mental' only. It has to be extended to cover all that is non-material, including the 'living' and that which may be regarded as 'trans-mental' or 'spiritual' in the ordinary sense of these terms. Philosophical behaviourism as exemplified in the works of Ryle and Wittgenstein, forgets that 'behaviour' itself cannot be 'understood' if it is reduced or translated without a residuum into physical terms, that is, 'terms' which are used to describe the phenomena studied by such sciences as those of physics and chemistry.

The 'attraction' and 'repulsion' amongst elementary particles or chemical substances is not, and *cannot* be, even analogously the same as is found in 'non-material' phenomena at all levels, unless 'matter' itself is endowed with non-material properties 'analogous' to those found at the level of 'life' or 'mind' or even that which may be called 'trans-mental'. Analogy can work both ways and 'reductionism' *can* be carried in the reverse direction also. If one wants to avoid 'reductionism' one has to accept the 'autonomy' of the realms and conceive of 'intelligibility' in terms of the categories specific to a particular realm and to that alone.

The distinction between the realms occurs at many levels. It is both phenomenological and ontological, and is reflected in the categories we use to articulate and understand those realms. The overlapping at the boundaries and the fact that many objects have various levels intermixed in them creates the problems which have led Wittgenstein and many others to deny the very possibility of any distinctive characteristics of these realms. But this is a manifest 'absurdity', a 'suicidal' position as *all* these persons themselves use language for distinctive designation and demarcation of realms and talk and 'behave' in respect of them as if they were 'really' so.

The 'self-contradiction' involved in all this, both at the level of thought and action, is ignored in the hope that some day it will be resolved, somehow or other. But the sheer 'facticity' of both 'life' and 'language' which just cannot '*be*' there on any rational understanding which regards only that as 'intelligible' which is 'essentially' insentient in nature, disproves this. But this poses the paradoxical question as to how that which cannot 'be' still 'is'. The question has haunted all philosophical traditions since their very beginnings, Zeno found 'motion' unintelligible and Parmenides the 'plurality' which surrounded him all the time. The Buddhists could not believe how anything could last longer than the 'moment' when it was born and Śaṁkara could not understand how the 'world' including himself could ever '*be*'.

But, unfortunately for the philosophers, these *are*, even if he finds them intrinsically and essentially unintelligible. Normally, this should have led him to suspect that there was something wrong with his notion of 'intelligibility'. But where is the 'philosopher' who can give up his infatuation or obsessive lure of reason, as that 'defines' his very being as a 'philosopher'. What is strange, however, is to see the 'scientist' succumbing to the same temptation.

Life is unintelligible and shall remain so till we regard 'matter' as the *only* thing that can be accepted on rational grounds, as ontologically real.

But, what is 'life'? Can it ever be conceived without the capacity of feeling pleasure or pain, and can what is called 'matter' be ever regarded as having the capacity for feeling them? To bring in the question of 'pleasure' and 'pain' in the context of a consideration of 'reality' is not palatable either to the philosopher or the scientist and to ask whether this can be supposed to be there without some sort of 'consciousness' is to commit the unpardonable sin amongst those who pride themselves as being interested in 'knowledge' and knowledge alone. A philosopher or a scientist is a 'cognitivist' par excellence and 'cogito' is his essence even if he does not say so.

But if 'feeling' is the essence of 'life', can it be conceived without the presence of what we try to convey by the term 'consciousness'? Yet if consciousness is supposed to be present wherever life is found, then one will have to grant consciousness to plants if they are considered as possessing 'life'. Normally, the study concerning them is included in the 'Life-Sciences'. But the implications of this classification have scarcely been paid attention to either by the scientist or the philosopher. Do plants 'feel' pleasure or pain and can they be said to possess consciousness, are questions which it is difficult to decide either way. In case one agrees to characterize them in some such way, the very 'meaning' of these terms will change in a radical manner. On the other hand, if one chooses to deny them these characteristics, one will have to think of the distinction between 'living' and 'non-living' in another way. But can one conceive of 'life' without the capacity for 'feeling' in some way, a capacity that we do not grant to inanimate matter and, in fact, consider it as its defining feature which distinguishes it from all that is regarded as different from it? The recourse to the capacity to 'reproduce' as the distinctive mark between 'living' and 'non-living' is of no avail as there can be no such thing as 'mechanical' reproduction. Also, the phenomenon of 'reproduction' amongst living beings, at least at the bi-sexual level, involves 'intense feeling' as evidenced in their behaviour in that context. Not only this, it is regarded as the example of what is regarded as the most pleasure-giving sensation at the biological level.

Life, then, at all levels presents an ontological paradox in that it *is* what *cannot* be, something whose contradiction is involved in its very being, as it cannot be conceived without its own cessation, that is, 'death'. It is,

to put it mildly, an ontological absurdity as it not only involves time in the mode of 'futurity' within itself, but also 'time' as that which will bring necessarily its end, that is, relapse into that which alone appears to be real, that is, inanimate 'matter'. Heidegger had talked of 'Being-towards-Death' as an essential characteristic of '*Da-Sein*' but he not only sees 'death' as something 'outside' life but also confines 'Da-Sein' to life at the human level alone. All existentialist thought suffers from this defect as it is not only 'homo-centric' but also refuses to see the 'life' around at the animal and the plant level. There are radical transformations at all these levels, and within each level, but 'life' shows the same basic characteristic at all of them.

But, are 'life' and 'language' related together in such a way that the one cannot be conceived without the other? In case consciousness is supposed to be necessary for the capacity of feeling pleasure and pain, and if the latter is considered to be an essential characteristic of life, then language in some form or another will have to be granted as being present wherever 'life' is considered to be there. Consciousness expresses, articulates and communicates not only as these are involved in its very nature, but also because it cannot but be conceived, at least in most of the forms that we know of, as being always situated amongst other consciousnesses. Communication between consciousnesses has not only to be through some 'language' or other but also, at its most primary level, in the context of the pleasure or pain that one feels. The cry of pain is a 'call' for help, and the joy or smile or laughter of pleasure an invitation to the others to join and share in it. This is the basic structural situation in which language is embedded, without understanding which its nature cannot be understood at all.

Language, it should be clearly understood, is nothing in itself as it has no being of its own. It is neither 'in-itself' nor 'for-itself', to use the language of the existentialists. It is just 'for-the-other', some 'other' or any 'other' who is 'alive' and has consciousness and is capable of feeling pleasure and pain and wants to share the former and answer the call for help to ameliorate the later.

But, as remarked earlier, 'life' at the level of plants presents a problem. Shall we ascribe consciousness or the capacity to feel pleasure and pain, and hence the possession of language to them? No one will be prepared to go that far, not even perhaps the author of *The Secret Life of Plants*. As for the animal world, there can be little doubt that they do feel pleasure

and pain and actively seek the former and avoid the latter. This makes us grant to them some form of consciousness and the capacity to communicate amongst themselves. The work on the bees and the ants has led to the deciphering of the communication system between them and though it does not consist of spoken speech, it shows that 'behavioural communication' may have a systematic structure analogous to the one we find in language at the human level.

The facts of feeling, consciousness, and language at the human level need no proof even if, for methodological reasons, some may deny the one or the other or even all of them. But the denial, even if it be only for methodological purposes, reveals a new dimension of consciousness which is not found at any non-human level, including that of the anthropoid apes who are regarded as closest to man amongst the animals. This is the ability to deny, to negate, to doubt everything, including itself. In language this is symbolized by the sign of negation without which no language can function as 'language' at the human level.

The possibility of negation, as everyone knows, creates perplexities and dilemmas which have plagued thinking since the very inception of philosophy in India and Greece sometime at the beginning of the first millennium BC. Negation, however, is only *one* aspect of language that has been noticed. The other, and perhaps the more important aspect, is the 'freedom' that it confers on consciousness because of the unending possibility of linguistic combinations that it offers which bring into being new 'worlds' for the apprehension of the listener and, eventually, to that of the speaker also.

The freedom thus conferred brings the world of possibility into being and makes imagination an integral element in the constitution of consciousness propelling one to act in certain ways, or rather deciding to act for the realization of that which was imagined because of the freedom conferred by the possibility opened by the achievement of the linguistic ability at the human level. *Mīmāṁsā* is perhaps the only school of thought in world philosophy which has grasped the 'radical reality' of this aspect of language and formulated it in its notion of '*śābdi*' and *ārthi* '*bhāvanā*'. But it has not seen that besides impelling one to desire to act in a certain way, it also not only expresses feeling but also 'creates' the feeling in the listener whose relation to the feeling expressed by the speaker may take diverse forms, ranging from 'similarity' to a tangential resonance which recalls it in a more far-fetched way.

The 'expressive' aspect of language is known and so also its injunctive or imperative aspect. But the intimate relation of these to 'negation' without which no language can function has, as far as I know, not been seen up till now.

Negation is of various kinds and can take multifarious shapes which logic has not yet taken note of. One of the most important of these is the one that lies at the root of moral, aesthetic and spiritual consciousness which, though radically different in the directions of their development, share a common origin which lies in the dissatisfaction with what '*is*' and the feeling that something is lacking which would be there if one makes the effort required to bring it into being. Indian thinkers have thought of this in positive terms and called it '*abhāva*' and treated it as an ontological correlate of that which functions as 'negation' in language. The acceptance of '*abhāva*' as an independent *padārtha* around the tenth century AD shows a radical revolution in the philosophical history of India whose far-reaching repercussions that later occurred resulting in a total recasting of epistemological formulations has not drawn the attention that it should have because of various reasons that are difficult to unravel at present. But the effect that such a postulation could have and perhaps did have, to some extent, on the nature of self's reflection on itself or of self-awareness, is still a matter of historical investigation.

Language at the human level, thus, brings into being a new ontological reality whose character is intrinsically unintelligible as it is a positive 'something' which cannot be as it is '*nothing*': a *padārtha* which is an '*abhāva*' or a 'non-being' that '*is*'. The paradoxical absurdity of such a notion has not been seen because of the fact that the *abhāva* that is talked about is generally the *abhāva* as absence of something specific such as a *ghaṭa* or a *paṭa*. The idea of an *abhāva* which is not an *abhāva* of anything as of 'abhāva-as-such', or pure non-being or *asat* has escaped the attention of Indian thinkers even though it was mentioned as early as the Vedas in the famous *Nāsadīya Sūkta* which is known to everybody. Professor Ramchandra Gandhi has drawn attention to the bewildering character of the question, 'why is not there Nothing?', a question which makes all 'being' contingent and opens the dark abyss before which consciousness recoils as it is that which shows it the possibility of its own cessation which, in the context of life, is called 'death'.

The denial of 'self-consciousness' has been considered by philosophers to be an impossibility as any attempt to do so involves its reassertion once

again. The Cartesian formulation of the contention is well known but it has been known to humanity since it became self-conscious long ago. Śaṁkara's formulation in the Indian tradition has not attracted the attention it deserves but, interestingly, the self-certainty of consciousness, at least in one of its formulations, has been seen in the way it negates all that is 'other' to it, just as the 'other' is seen as that which negates consciousness. The dilemma of a hard-core advaitin is whether he *can* affirm a pure assertion without involving this negation in any form whatsoever. Consciousness may do so, but 'self-consciousness' can never do it and, for language, it is a sheer impossibility.

But if Being is just 'being', language cannot '*be*'. Nor, for that matter, can there be self-consciousness if it necessarily involves negation in itself. Yet, as both self-consciousness and language *are*, pure Being cannot Be. The ultimate opposition or negation, therefore, is that of Being and consciousness on the one hand and of Being and self-consciousness on the other. The former arises because of the fact that it questions the 'closedness' of Being and its 'self-grounded' 'self-sufficiency' which has been seen as the hallmark of the 'really real' by most philosophers who ultimately seem to share the common belief that only that which is inconscient can alone be regarded as 'real'. In consciousness, however, the 'other' is only implicitly involved, an 'implicitness' that becomes 'explicit' at the level of self-consciousness. The insufficiency of Being is fully revealed at this level and language at the human level loudly proclaims this fact as it is rooted not only in its relation to the 'other', but in its reflexivity it makes the self an 'other' to itself.

The unending dynamics that this brings into being has seldom been reflected upon as the transformation of self in self-consciousness through the vulnerabilities which this 'opens' because of language has not been seen for the simple reason that thought cannot accept the idea of an 'unending openness' which is essentially indeterminate in principle, as it cannot understand it.

Logic, which is generally the instrument of understanding, is essentially 'closed' as it operates within a set of presuppositions which may be described as 'axioms' or 'assumptions' or 'postulates' without changing the situation in any way. The 'openness' in logic comes, if it comes at all, from 'infinite regress' which is usually regarded as a fallacy. There is another 'openness' which comes from the 'unendingness' of derivations even in a system which is 'closed' because of the axioms or assumptions

or postulates from which it started. The stricter 'closedness' which is introduced by the derivation of the presuppositions from the conclusions themselves was, till very recently, regarded as a fallacy known as *petitio principii* or arguing in a circle. Circularity, however, it has recently been argued is not a fallacy, but it is not clear whether the contention is a generalized one, or is a restricted one. In case it is the latter, one would have to give a criterion to distinguish 'virtuous' from 'vicious' circles and, in that case, the contention will be philosophically uninteresting except as drawing attention to the areas where it is considered to be harmless and the reason why it is considered to be so. But if the contention is a generalized one then it will have to be proved that it is in the very nature of a formal deductive system to be circular in nature. But, then, it will have to be clarified what exactly is meant by 'circularity', particularly if the derivations are, as we have said, 'unending' in nature. Not only this, it will have to be argued that either the 'presuppositions' are derivable from each and any of the 'derived' propositions or from the whole set of them, taken together. In the latter case, it is obvious that the set of 'derivations' will have to be a 'closed' set, an assumption which is incompatible with the idea that the 'derivations' are unending in nature.[1]

Both circularity and infinite regress, thus, haunt thought all the time and one has always to decide when to treat them as a fallacy or not. Thought has to embody itself in language at the human level and thus has to enter into a strange relationship where the body determines the spirit as much as the spirit determines the body. The mutual 'determination' is so continuous that it is impossible to even conceive of what will be 'pure' thought uncontaminated or 'undetermined' by any language whatsoever. As for the idea of a language undetermined by thought, it is a contradiction in terms as the very being of language consists of the thought it conveys or embodies within itself.

But as language is always specific and as 'translatability' is always an intrinsic characteristic of every language, the 'specificity' of the features imposed by the 'particularities' of the language have always an indefinite 'generality' in-built in it.

No language, however, is static or unchanging and even those who believe in some basic 'structure' of a 'given' language will find it difficult to decide when in the 'evolution' of a language, the 'new' language has become a different species altogether. The universal structural characterization which all languages have necessarily to have, would not help as it

is bound to be either an inductive generalization subject to falsification in face of conflicting evidence or an arbitrary definition which determines in advance what is to be called a 'language' in terms of the definition that has been adopted. The dilemma occurs with all empirical classifications and, surprisingly, even with non-empirical ones such as numbers, as there are always border-line cases when the 'decision' is mainly determined by pragmatic considerations. This has little to do with the essentialist vs. non-essentialist view of definition as whichever view one adopts will have to face the same situation and live with the consequences of the choices one has made.

Thought, language, consciousness, translatability and life are so intimately and interdependently intertwined and interrelated to one another that one cannot even be conceived without the other. Yet, man's thought is so homo-centric that when it tries to 'think' of these it thinks only in terms of itself as if it *alone* represented them, inspite of the fact that he sees 'life' all around him. Plants and animals abound in their myriad forms and though man hesitates to grant them 'predicates' which he freely applies to himself he has perforce to apply some which he will never apply to the non-living world. There is, of course, the wondrous 'world' of stones which has incredible colours and varieties in it. The 'precious' and 'semi-precious' amongst them are well known, but the granite and the marble in their myriad colours are even more enchanting as they form architectural designs standing free or 'floating' in space, silhouetted against the morning or the evening sky.

Yet, whatever the wonder, one will hesitate to call them 'living' even though they may 'appear' and be 'felt' as more 'alive' than those we call 'living'. This quality which seems to surpass the quality of 'living' and make it more alive than 'living' itself comes from that which makes language, which itself *is* 'nothing' or almost nothing, have such pulsating life that which has 'life' gets sustenance from it as can be easily seen when one reads, say, a poem. All art is 'language' and what we call language achieves the status of 'art' when it becomes what 'poetry' is supposed to connote.

Language, then, is the 'key' to the understanding of all that '*is*' as it contains everything in it, even though it is nothing-in-itself, a pure emptiness, a mere sign or just a blank, except when what is written itself becomes 'art' as in calligraphy.

Writing when it assumes the form of calligraphy undergoes a strange transformation as it seems to have 'meaning' even when one does not 'know' the language which is written in it. Another dimension of meaning is, of course, added if one knows the language in which it is written. The relation between the two dimensions is complex, even conflicting, as becomes evident when words are set to music and sung by human voice. All representational art exhibits this ambivalence and compromise as one asks in bewildered wonderment and confusion 'what does it mean?' But what could art possibly mean when it does not have any reference outside itself? Yet, it is not without meaning as an encounter with it not only enriches and uplifts one but lingers in ones memory and constitutes ones being as only the encounter with persons does in ones life. But, then, in both cases it needs a self-conscious being to relate, appreciate, relive, recreate and develop further the 'meaning' that one apprehends and encounters in the 'other'. And, it is not something that is grasped completely ever, but rather something that ever grows within oneself as one returns to it again and again, either in actuality or in memory.

There is, thus, ultimately no reference, but only sense or 'meaning' which is immanent and inexhaustible and without which there is only the dead 'sign' which makes no sense. It waits to be deciphered and till it is deciphered, it is 'nothing', sheer nothing. The 'Real' has no 'outside' to itself and it gives us the illusion that it is so and we ask what does it all mean, when the 'meaning' lies all around us, immediate, immanent and inexhaustible. And, 'immanence' means that everything 'refers' to everything else, even though we may not apprehend it ever fully in that way. The mystery of 'being' is reflected in the mystery of language and one may perhaps get a glimpse into the understanding of the former by understanding the latter. And, as the latter is closer to us and constitutes us in a certain sense, we may understand ourselves through it also. But, then, language will have to be seen in a different way than the contemporary philosophers of language have seen it up till now.

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Inconsistencies in the *Brahmasūtra* and *Śāṅkarabhāṣya*: With Special Reference to the Competence of *Śūdra*

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1. INTRODUCTION

Human beings can broadly be classified into two, from the point of view of *Brahmajñāna* (Brahman-knowledge), namely, (1) *Brahmajñāni* (those who have realized Brahman), and (2) *Ajñāni* (those who have not realized Brahman). Depending on their qualifications for Brahman-realization (*adhikāritva*) the latter can be further classified into three, namely, (i) *Uttamādhikāri*, (ii) *Madhyamādhikāri*, and (iii) *Adhamādhikāri*.

Advaita Vedānta is taught in three different ways,[1] namely, (a) *Ekasattāka Dṛṣṭi Śṛṣṭi Vāda*, (b) *Dvisattāka Dṛṣṭi Śṛṣṭi Vāda*, and (c) *Śṛṣṭi Dṛṣṭi Vāda* corresponding to the three kinds of *adhikāris* respectively. This paper does not deal with the first two, for the context of incompetence of *Śūdra* arises only in the third, that is, *Śṛṣṭi Dṛṣṭi Vāda* of Bādarāyaṇa Vyāsa. From the point of view of *Śṛṣṭi Dṛṣṭi Vāda*, human beings can be classified into two, namely, Qualified human beings (those who have attained *sādhanacatuṣṭaya*[2] or four-fold qualifications), and (ii) Unqualified human beings (those who have not attained four-fold qualifications).

According to Śaṅkara *Brahmajñāna* through the *Brahmasūtra*, which represents the *Śṛṣṭi Dṛṣṭi Vāda*, should be deliberated only to those who have attained the four-fold qualifications.[3] The second group, that is Unqualified human beings, needs to get training to attain the *sādhanacatuṣṭaya* in order to receive the teachings of Vedānta. Śaṅkara in his *Prakaraṇagranthas*, such as *Vivekacūḍāmaṇi*, has attempted to motivate those who have not attained the four-fold qualifications by illustrating the glory of human life and the ways in which a human being attains the four-fold qualifications. Nowhere has he mentioned that there are human beings who cannot attain *Sādhanacatuṣṭaya*.

Contrary to this view, Śaṅkara in his commentary on the *Apaśūdrādhikaraṇam*[4] in the *Brahmasūtra* has explicitly attempted to introduce one more group of human beings, namely, Disqualified human beings—consisting of *Śūdras* (and women[5]) apart from the Qualified and Unqualified human beings. The reason for such disqualification of some human beings (*Śūdra*) for *Brahmajñāna* through the teachings of Vedānta, according to Śaṅkara, is that some *Smṛtis* prohibit them from *Upanayana* (the ceremony of investiture with sacred thread). This reason sounds strange and suspicious for, if one accepts such disqualification of *Śūdras* for Brahman-realization, then it not only keeps a large number of human beings away from *Brahmajñāna* but also goes against the secular nature of Vedānta teachings. Therefore, an attempt is made in this paper to repudiate the reasons given by Śaṅkara for the incompetence of *Śūdras* for *Brahmajñāna* through the study of the Vedānta by exposing some inconsistencies in the formulation of *Apaśūdrādhikaranam* in *Brahmasūtra* and Śaṅkara's commentary on the same.

2. ŚAṄKARA'S OPINION ON *ŚŪDRA'S* COMPETENCE

Śaṅkara's intention in the commentary on the *Apaśūdrādhikaraṇam* is to remove the assumption that the *Śūdra* also may be accepted as qualified for knowledge through the *Veda* (after denying any monopoly of qualification by the three castes of twice-born, namely, *Brāhmaṇa*, *Kṣatriya* and *Vaiśya*).[6]

Logical Stand of Śaṅkara

Śaṅkara takes the stand of the *Śruti* text, that is, 'The *Śūdra* is unfit for performing a sacrifice,'[7] and argues that since *Śūdra* is not qualified for performing sacrifice he is also not qualified for acquiring knowledge through the *Veda*. Why? Because 'it is based on a logic having common application, it suggests that the *Śūdra* has no right to knowledge as well, for the logic applies both the ways.'[8] The logical arguments underlying the above quotations can be summarized as follows:

1. Vedic study presupposes the investiture with the sacred thread (*upanayana*).[9]
2. The ceremony of the investiture with the sacred thread is confined only to the three castes, namely, *Brāhmaṇa*, *Kṣatriya* and *Vaiśya*.[10]

3. Therefore, a born *Śūdra* cannot have investiture with the sacred thread.
4. Since a born *Śūdra* cannot have investiture with the sacred thread, he is not allowed to study the *Veda*.[11]
5. A born *Śūdra* cannot study the *Veda*, and without studying the *Veda*, he cannot become competent for things spoken in the *Veda*.[12]

The above arguments of Śaṅkara depend on two assumptions, namely, (i) caste is determined by birth, and (ii) *upanayana* cannot be given to a *Śūdra* by birth. The complete arguments of Śaṅkara against the competence of *Śūdra* for *Brahmajñāna* through the study of the *Vedānta* stand only on the above assumptions. If they are proved to be wrong assumptions then the whole edifice of Śaṅkara's arguments against *Śūdra's* competence will crumble. We will make an attempt in the following arguments to show that (i) caste is not determined by birth, (ii) a *Śūdra* may be eligible for *upanayana*, and (iii) all human beings along with *Śūdras* and women may also be qualified for *Brahmajñāna* through the study of the *Vedānta*.

3. A CRITIQUE ON THE CRITERION OF THE CASTE AND *UPANAYANA*

3.1 Criterion of the Caste

There are two versions of the criterion of the caste, namely, (1) caste should be determined by birth, and (2) caste is determined by ones own qualities. The first view is supported by the scriptures (*Smṛtis*) such as, the *Manusmṛti*, the *Gautamadharmasūtra*. The scriptures such as, the *Mahābhārata*, the *Viṣṇubhāgavata*, uphold the second. The *Yājñavalkyasmṛti* states that 'by husbands belonging to a particular class upon wives belonging to the same class—the husbands and wives having been united in unblemished marriages are begotten sons who belong to the same caste as that of the father and the mother and who are capable of continuing the line.'[13] On the contrary, the *Mahābhārata* states that, 'Not birth, nor *samskāras*, nor study of the *Veda*, nor ancestry, are the cause of being twice born. *Conduct alone* is verily the cause thereof.'[14]

In confirmation of this view, it is further stated that, 'Truth, charity, forgiveness, good conduct, gentleness, austerity and mercy where these are seen O! King of Serpents, he is called a *Brāhmaṇa*. If these marks exist in a *Śūdra* and not in one twice-born, the *Śūdra* is not a *Śūdra* and not the *Brāhmaṇa* a *Brāhmaṇa*.' 'Where this conduct is shown, O! Serpent,

he is called a *Brāhmaṇa*; where this is not O! Serpent, he should be regarded as a *Śūdra*.'[15] Almost parallel to this view, the *Viṣṇubhāgavata* states that, 'what is said as to the marks of conduct indicative of man's caste, if those marks are found in another, let him be designated by the caste of his marks and not of his birth.'[16]

The two versions of caste, namely, (1) caste by birth, and (2) caste by qualities, contradict each other. If the first view were accepted, then the born *Śūdras* would be prohibited from the study of the *Veda* as Śaṅkara argues in his commentary on the *Apaśūdrādhikaraṇam*. On the other hand if one accepts the second version, then the arguments given by Śaṅkara in the same place, which are purely based on the former view stand for scrutiny.

The controversy between the two criteria of caste demands one to seek a method to settle such controversies between two *Smṛti* texts. When such context arises, Śaṅkara himself suggests a method that, 'in the event of *Smṛti* opposing another *Smṛti*, its authority is decided by the criterion of its being in harmony with the *Śruti* from which alone it derives its own validity.[17] Thus, one needs to look out for the *Śruti* reference regarding the criterion of caste determination in order to decide which view of the caste should be accepted. The *Chāndogyopaniṣad* states an incident in the story of Satyakāma Jābāla, in order to make one understand how ones caste is determined. Even Bādarāyaṇa Vyāsa has formulated one of the *Sūtras*[18] in the *Apaśūdrādhikaraṇam*, that is, 1.3.37, referring to the same story.

Satyakāma Jābāla, in this story, goes to Gautama and asks him to teach the *Veda*.[19] Then, 'He (Gautama, the son of Haridrumat) said to him (Satyakāma), "Of what family are you, my dear?" He (Satyakāma) replied, "I do not know this, Sir, of what family I am. I asked my mother. She answered me, 'in my youth, when I went about a great deal as a maidservant, I got you. So I do not know of what family you are. I am Jābāla by name and you are Satyakāma by name.' So I am Satyakāma Jābāla, Sir."[20] He (Gautama) then said to him (Satyakāma), "None but a *Brāhmaṇa* could thus explain."[21] When owing to the utterance of truth (by Satyakāma Jābāla), Gautama proceeded to initiate and instruct (Satyakāma Jābāla).'[22]

The controversy between two views of caste determination demands an inquiry into questions such as what was the reason for Gautama to confer *Brāhmaṇatva* on Satyakāma. Was it Satyakāma's birth as a *Brāhmaṇa*?

Or was it Satyakāma's quality, namely, speaking truth? If one considers the view, that is, ones caste is determined by birth, then Satyakāma should have had his father and mother belonging to *Brāhmaṇa* caste in order to be a *Brāhmaṇa* by birth. But as a matter of fact, Satyakāma's father is not known and his mother was a servant maid who was supposed to be a *Śūdra* or at least a *non-Brāhmaṇa*. According to the *Yājñavalkyasmṛti*[23] since Satyakāma's parents (at least his mother) did not belong to *Brāhmaṇa* caste and his mother was not married to his father (who is unknown) one can understand that Satyakāma could not have been a born *Brāhmaṇa*.

Then to which caste does Satyakāma belong by birth? Since Satyakāma's mother was a *Śūdra* or a *non-Brāhmaṇa* and his father was not known, he cannot even be called a *Śūdra* according to the *Yājñavalkyasmṛti*.[24] Thus in the case of Satyakāma, the view that 'caste is determined by birth,' is untenable. Therefore, one needs to take the alternative stand, namely, that caste is determined by ones qualities. One can understand that *Brāhmaṇatva* of Satyakāma was declared by Gautama by his quality, namely, 'Speaking the truth.' With this elucidation one can finally put down the view of the *Śruti* regarding caste determination, that 'caste is determined by ones qualities and it is not determined by birth.' After knowing the *Śruti's* viewpoint regarding caste determination, one can reject the opinion that caste is determined by birth. Thus the version of the *Mahābhārata* and the *Viṣṇubhāgavata* regarding caste determination is accepted on the basis of their harmony with the *Śruti*, namely, the *Chāndogyopaniṣad*.

3.2 Criterion of Upanayana

There are two mutually contradictory views of *Smṛti* regarding the eligibility of *Śūdra* for *upanayana*. They are (i) *Śūdra* is not eligible for *upanayana*, and (ii) *Śūdra* is eligible for *upanayana*. The first view is upheld by the *Manusmṛti*[25] and the second by *Parāśaragṛhyasūtra*.[26] The contradiction between the two *Smṛtis* regarding the eligibility of *Śūdra* for *upanayana* can be settled in the same way as it is done in the case of criterion of caste. One needs to find out the *Śruti* text, which refers to the eligibility of *Śūdra* or a non-*traivarṇika* by birth for *upanayana* in order to settle such controversy. We can refer to the story of Satyakāma Jābāla in the *Chāndogyopaniṣad* in order to decide which one of the above *Smṛtis* is in harmony with the *Śruti*. For Gautama, in the story, gives *upanayana* to Satyakāma Jābāla after determining his caste by his quality,

namely, speaking the truth. It is established above in the case of 'criterion of caste' that Satyakāma Jābāla does not know what family he belongs to and he does not belong to *traivarṇikas* by birth, and yet, Gautama initiated him to Vedic study by giving *upanayana*. It can be understood that, according to the *Śruti*, that is, the *Chāndogyopaniṣad*, one need not belong to *traivarṇika* by birth to get *upanayana* and any one possessing good qualities, such as speaking the truth, can be given *upanayana*. The *Śruti* view stating eligibility of a *Śūdra* or a non-*traivarṇika* for *upanayana* is in conformity with the view of *Parāśaragṛhyasūtra*, namely, a *Śūdra* with good qualities and without bad activities may get *upanayana*.

Thus the two basic assumptions behind Śaṅkara's logic to argue for *Śūdra*'s incompetence for Vedic study, namely, (1) Caste is determined by birth, and (2) a born-*Śūdra* is not eligible for *upanayana* are proved not to be in harmony with the *Śruti*, that is, the *Chāndogyopaniṣad*. Hence Śaṅkara's views relating to the eligibility for Vedic study may be rejected on the basis of their inconformity with the *Śruti*.

4. A CRITIQUE ON THE INCOMPETENCE OF A BORN *ŚŪDRA* FOR KNOWLEDGE THROUGH THE *VEDA*

In his commentary on the *Apaśūdrādhikaraṇam*, Śaṅkara out of context, quotes the *Śruti* text relating to sacrifice that 'The *Śūdra* is unfit for performing a sacrifice,'[27] to prove *Śūdra's* incompetence for acquiring *Brahmajñāna* through the *Veda*. According to him, *Śūdra* cannot perform a sacrifice because he is not taught the sacrificial part of the *Veda*. *Śūdra* is not taught the sacrificial part because he is not permitted to have investiture with the sacred thread. Since *Śūdra* does not have *upanayana*, he lacks the competence not only for the sacrificial part but also for the knowledge part of the *Veda*.

Śaṅkara maintains in his introduction to the commentary on the *Brahmasūtra*, namely, *Adhyāsabhāṣya* that caste, stage of life, age, etc., are mere superimpositions. He holds: '... such scriptural injunction as "A *Brāhmaṇa* shall perform a sacrifice," can become effective only by taking for granted various kinds of superimpositions of caste, stage of life, age, condition, etc.'[28] The above statement implies that the scriptural injunction such as, 'A *Brāhmaṇa* shall perform a sacrifice' and the scriptural prohibition such as, '*Śūdra* is unfit for performing a sacrifice' are ineffective because they are based on the superimpositions such as caste, stage of life, age, conditions, etc.

Now the question that arises is that while Śaṅkara clearly states in the very beginning of his commentary on the *Brahmasūtra* that caste is a case of superimposition, how could he adopt an entirely different posture that a born *Śūdra* is incompetent for acquiring knowledge through the *Veda* in his commentary on the *Apaśūdrādhikaraṇam*.

This question provokes one to inquire further into Śaṅkara's commentary on the other topics in the *Brahmasūtra* in order to find his original stand on the competence of *Śūdra* for Vedic knowledge. The inquiry should be focused on the specified area, namely, 'competence for knowledge part of the *Veda*', rather than on the competence for studying *Karmakāṇḍa* or the *Veda* in general. It has to be done so because the given context is only about the competence for having deliberation on Brahman and not on the competence for 'performing a sacrifice'.

In his commentary on the *Brahmasūtra*, 1.1.1, Śaṅkara rejects the opponent's view that the study of the sacrificial part of the *Veda* is a prerequisite to studying the knowledge part of the *Veda*.[29] He establishes the four-fold qualifications as a prerequisite to studying the knowledge part of the *Veda*. He holds: '... discrimination between the eternal and the non-eternal; dispassion for the enjoyment of the fruits (of work) here and hereafter; a perfection of such practices as control of mind, control of the senses and organs etc. and a hankering for liberation. Granted the existence of these, Brahman can be deliberated on ... .'[30] He never mentioned anywhere in his writings that a *Śūdra* is prohibited from the attainment of four-fold qualifications in order to get deliberation on Brahman. Nor did he mention that *Śūdra* couldn't attain the four-fold qualification.

Vyāsa directly makes a statement in his *Brahmasūtra*[31] that all human beings are competent for Vedic knowledge. The reasons for such an integrated human competence for the study of the *Veda* are: The *Kaṭhopaniṣad* states that, 'The Being (*puruṣa*) of the size of a thumb, resides (in the heart) within the body.'[32] It also states, that 'The *puruṣa*, who is of the size of a thumb, is light without smoke. He is the ruler of the past and the future. He exists today and He will exist tomorrow. This is that.'[33]

It can be reasoned from the statement of the *Kaṭhopaniṣad* that since heart exists in all human beings including women, all of them have Brahman in their heart in the size of the thumb. Therefore, it can be understood that any living human being is competent for Brahman-knowledge.

Śaṅkara adopts the characteristics of a competent human being from the *Jaiminisūtra*[34] in his commentary on the *Brahmasūtra*, 1.3.25. Referring to the same, Śaṅkara holds: 'Though the scripture (*Kaṭhopaniṣad*) speaks impersonally, still it postulates the competence of human being only, because human beings are able, desirous (of result), and not debarred, and because there are texts about initiation with the sacred thread.[35] It can be argued that since the said characteristics are adopted from the *Jaiminisūtra*, which has its purport as deliberation on *Dharma*, they are meant only for the competence for *Dharma* (performing sacrifice) and not for the competence for the *śāstra* which has its purport deliberation on Brahman.

Now it can be reasoned that while the *Brahmasūtra*, 1.3.25, and the *Kaṭhopaniṣad*, 2.1.12 and 13, directly establish the competence of all human beings for Brahman-knowledge, Śaṅkara's quote from the *Jaiminisūtra*, which contradicts the view of Vyāsa and his own view expressed in the commentary on the *Brahmasūtra*, 1.1.1, seems to be unwarranted. Did Śaṅkara at least adhere to the view of Jaimini regarding the competence for Vedic knowledge all through his commentary?

Though the *Jaiminisūtra* rejects the competence of animals, gods, *ṛṣis* and *Śūdras* and establishes the competence of only *Brāhmaṇa*, *Kṣatriya* and *Vaiśya*, Vyāsa and Śaṅkara did not maintain this view in relation to the gods and *ṛṣis*. It is argued against Jaimini's view in the commentary on the *Brahmasūtra*, 1.3.26: (*Devatādhikaraṇam*) 'Though the competence for rites is denied in, "There is no competence for the gods, since they have no gods (to sacrifice to)," "the *ṛṣis* have no competence for the performance of rites, since they have no *ṛṣis* (to perform to),"[36] still that non-competence does not apply to knowledge (of Brahman).'[37]

The above statement clearly shows that those who are not competent for performing a sacrifice (among gods, *ṛṣis* and *Śūdras*) may be competent for attaining knowledge of Brahman. Now the question that stands is that did Vyāsa and Śaṅkara adopt the same view, that is, non-competence for performing a sacrifice does not apply to knowledge of Brahman in the case of *Śūdra*?

On the contrary, by applying the characteristics of a competent person (to perform a sacrifice) mentioned in the *Jaiminisūtra* it is argued by Śaṅkara (and Vyāsa) in his commentary on the *Brahmasūtra*, 1.3.34: 'As for the text, "The *Śūdra* is unfit for performing a sacrifice" (*Taittirīyasamhita*, 7.1.1.6). Since it is based on a logic having common application, it suggests that the *Śūdra* has no right to knowledge as well, for the logic applies both ways.' The logic that Śaṅkara adheres to is that there can be no reading of the *Vedas* by a *Śūdra*, for Vedic study presupposes the investiture with the sacred thread, which ceremony is confined to the three castes.

It is reasoned by Śaṅkara that, since *Śūdra* does not qualify for *upanayana*, he is not qualified, not only for performing a sacrifice, but also for attaining knowledge of Brahman through the *Veda*. Here, the whole argument is based on the assumption that *Śūdra* is not qualified for *upanayana* and thereby not fit for acquiring Vedic knowledge.

Śaṅkara seems to have relied on the customary type of *upanayana* ceremony for three castes as mentioned in the *Manusmṛti*, X.4, and rejects the possibility of *upanayana* for a *Śūdra* and thereby incompetence for studying the knowledge part of the *Veda* is attributed to *Śūdra*. If one goes by the Vedic sense of *upanayana* as it is to be sanctioned on examining the potentiality and conduct of the student and not by birth, then the whole argument given by Śaṅkara and Vyāsa against *Śūdra's* incompetence becomes redundant. It is not the case that there are no texts declaring the *Śūdra's* eligibility for *upanayana* and Vedic study. In support of *Śūdra's* eligibility the *Parāśaragṛhyasūtra*, 2.6, declares that '*Śūdra* with good qualities without bad activities may get *upanayana*.[38] The *Vṛddhagautama Smṛti*, states that '*Śūdra* also can practice the religious act.'[39] It appears that Śaṅkara deliberately ignored the texts in support of *Śūdra's* competence.

The foregoing arguments prove that *Śūdra* is qualified for *upanayana* and therefore, the above arguments of Śaṅkara for the incompetence of *Śūdra* for Vedic knowledge can be rejected.

5. A CRITIQUE ON THE AUTHORSHIP OF *SŪTRAS* AND *BHĀṢYA* ON *APAŚŪDRĀDHIKARAṆAM*

The question that arises now is that, can Śaṅkara, after having a great exercise of logic and interpretation in order to prove the competence of gods and *ṛṣis*, afford to argue only against competence of *Śūdras*? We believe that Śaṅkara could not have argued against the competence of *Śūdras* for attaining *Brahmajñāna* through the Vedic study. The following arguments will prove the same.

1. A question may be raised as to who initiated Śaṅkara to write the commentary on *Brahmasūtra*. According to Mādhava Vidhyāraṇya it is *Chaṇḍāla*, that was, an outcaste man (Lord Śiva) in Vāraṇāśi, who initiated Śaṅkara to write a new commentary on the *Brahmasūtra*.[40] The *Śaṅkaradigvijayam* clearly states that Śaṅkara has realized the falsity of caste and outcaste and such knowledge is given to him by a *Chaṇḍāla* before writing the commentary on the *Brahmasūtra*. How can Śaṅkara, who has realized the falsity of caste and outcaste and having been initiated by a *Chaṇḍāla* (Lord Śiva) to write a commentary on the *Brahmasūtra*, write such a commentary on the *Apaśūdrādhikaraṇam* to prevent *Śūdras* from having access to the *Veda*?

2. When Śaṅkara says in his commentary on the *Brahmasūtra*, 1.1.1, that the competence for the *Pūrvamīmāmsā* is different from that of the *Vedānta* on the basis of mutual difference in their subject matter and goals then how can he directly adopt the characteristics of a competent person (for the *Pūrvamīmāmsā*) from the *Jaiminisūtra* and apply it to *Śūdra* to show that *Śūdra* is not eligible to study the *Vedānta* in his commentary on the *Apaśūdrādhikaraṇam*?[41]

3. When Śaṅkara says in his *Adhyāsabhāṣya* that, caste is a case of superimposition, which should be discarded by a *mumukṣu*, how could he adopt the *Pūrvamīmāmsā* view of caste in his commentary on the *Apaśūdrādhikaraṇam*, which directly opposes the view of the *Vedānta*?

4. How can Śaṅkara eliminate only *Śūdras* from the study of the *Veda* relying on the *Manusmṛti* by ignoring the texts, which declare that even *Śūdra* can receive *upanayana* and study the *Veda*?

5. Śaṅkara admits in his commentary on the *Brahmasūtra*, 1.3.38, that *Śūdra* can attain knowledge through the *Smṛti*.[42] The *Brahmasūtra* is a *Smṛti*, which has its purport on the deliberation on Brahman. Hence a *Śūdra* can attain Brahman-knowledge through the study of the *Brahmasūtra*. How then can Vyāsa write such *sūtras* in this text against the competence of *Śūdra*?

6. Śaṅkara in his commentary on the *Brahmasūtra*, 1.3.37 opines that the *Chāndogyopaniṣad* (4.4.5) statement, namely, 'No one who is not a *Brāhmaṇa* can speak thus. Dear boy, bring the sacrificial fuel, I shall initiate you' (*Tam hovāca naitadabrāhmaṇo vivaktumarhati samidham somyāharopa tvā neṣye na satyādagā iti tamupanīya*) establishes the absence of Śūdrahood in Satyakāma Jābāla. Śaṅkara seems to have taken the meaning of the word, that is, *abrāhmaṇa*, as *Śūdra*. Does *abrāhmaṇa*

mean only *Śūdra*? It cannot be. For the word *abrāhmaṇa* means other than *Brāhmaṇa* caste, namely, *Kṣatriya*, *Vaiśya* and *Śūdra* in the given context. If the word *abrāhmaṇa* indicates the ineligibility for *upanayana* and Vedic study as Śaṅkara has taken, then all the *abrāhmaṇas*, namely, *Kṣatriya*, *Vaiśya* and *Śūdra* would be ineligible for Vedic study. But Śaṅkara accepts eligibility of *Kṣatriya* and *Vaiśya* for *upanayana* and Vedic study in his commentary on the *Pramitādhikaraṇam*. *Devatādhikaraṇam* and *Apaśūdrādhikaraṇam* and therefore, Śaṅkara's opinion, that is, *abrāhmaṇa* indicates ineligibility for Vedic study becomes a contradiction.

Hence, the following question may be raised: Does the *Chāndogyopaniṣad* statement mean to establish the absence of *abrāhmaṇa* caste in Satyakāma Jābāla? Or does it mean to glorify and recognize the character of Satyakāma Jābāla, namely, speaking the truth, as the significant character of a *Brāhmaṇa*? It can be understood from the above argument that the Upaniṣadic statement cannot mean to establish the absence of *abrāhmaṇa* caste in Satyakāma Jābāla. Rather it means to signify the characteristic of a *Brāhmaṇa* in Satyakāma Jābāla, namely, speaking the truth, that is, Satyakāma Jābāla does not know his father and *gotra*. This being the position, how then can Śaṅkara write such a commentary, which is self-contradictory?

7. According to Śaṅkara, Satyakāma Jābāla is not a *Brāhmaṇa* by birth. Gautama conferred *Brāhmaṇatva* in Satyakāma Jābāla because of his quality of speaking the truth, namely, that he does not know his father and *gotra*. This being the position, how can the other *sūtras* in the *Apaśūdrādhikaraṇam* maintain an entirely opposite view to this *sūtra*? Śaṅkara should either stand on the view of *Brahmasūtra* on Satyakāma Jābāla, that is, anybody irrespective of absence of knowledge of ones caste and *gotra*, just by having qualities such as speaking truth, etc., can get initiated (*upanayana*) to *Brahmajñāna* or stand on the view of the other *Brahmasūtras* in *Apaśūdrādhikaraṇam*, namely, caste is designated by birth and a *Śūdra* by birth is not competent for Brahman-knowledge through the *Veda*. 'If a born *Śūdra* recites the *Veda* his tongue should be cut off and if he hears the same then melted lead should be filled in his ears.'[43] But how can Śaṅkara and Vyāsa maintain both views in the same context?

8. It can be shown that Śaṅkara cannot afford to maintain his views on caste that he presented in the *Apaśūdrādhikaraṇam* and also Vyāsa cannot

afford to author such *sūtras* in the same place confirming Śaṅkara's views on caste. Śaṅkara clearly maintains that caste is determined by birth in his commentary on the *Apaśūdrādhikaraṇam*, *Devatādhikaraṇam* and *Pramitādhikaraṇam*. According to his view only *Traivarṇikas* by birth are eligible for the Vedic study. The *Yājñavalkyasmṣti* states that, '... by husbands belonging to a particular class upon wives belonging to the same class—the husbands and wives having been united in unblemished marriages are begotten sons who belong to the same caste as that of the father and the mother and who are capable of continuing the line.'[44] If Śaṅkara's views on caste as stated in the *Yājñavalkyasmṛti* were true then we argue that the same should apply for the author of the *Brahmasūtra*. But according to the above *Smṛti*, Vyāsa the author of the *Brahmasūtra* cannot be a born *Traivarṇika*, for his father was a *Brāhmaṇa* and his mother was a non-*Traivarṇika* and both of them were not married. Thus when one applies the criterion of caste being determined by birth, which is adopted in the commentary on the *Apaśūdrādhikaraṇam* by Śaṅkara, to the birth of Vyāsa, then Vyāsa, the author of the *Brahmasūtra*, becomes ineligible to study the *Veda*. Then how can Śaṅkara adopt such a contradictory and meaningless view of caste in his commentary on the *Brahmasūtra*?

6. CONCLUSION

It can be concluded by the strength of the foregoing arguments that (i) caste is not determined by birth, (ii) a *Śūdra* may be eligible for *upanayana*, (iii) all human beings along with *Śūdras* and women may also be qualified for *Brahmajñāna* through the study of the *Vedānta*, and (iv) Vyāsa and Śaṅkara may not have authored the *Apaśūdrādhikaraṇam* and *bhāṣya* on the same respectively.

NOTES AND REFERENCES

1. The Advaitins have three methods of explaining their philosophy, namely, (i) *Ekasattāka Dṛṣṭi Śṛṣṭi Vāda*, (ii) *Dvisattāka Dṛṣṭi Śṛṣṭi Vāda*, and (iii) *Śṛṣṭi Dṛṣṭi Vāda*. These explanations are offered in accordance with the qualification of the persons. According to the Advaitins, the *mumukṣus* are classified into three, namely, (i) *Uttamādhikāri*, (ii) *Madhyamādhikāri*, and (iii) *Adhamādhikāri*. The first of the above methods is meant for the *Uttamādhikāri*. According to the *Ekasattāka Dṛṣṭi Śṛṣṭi Vāda*, Brahman-*Ātman*, which is non-dual, alone exists always and nothing else. If at all anything other than Brahman seems to exist, then it is ones own imagination. Thus the individual's imagination becomes responsible for the appearance of duality in non-duality. According to the Advaitins this is the most difficult way to understanding Advaita philosophy.

It is hard to understand the position that there exists only non-duality while one is seeing the duality. In order to make it easy for the sake of *madhyamādhikāri*, the Advaitins introduce the second method, namely, *Dvisattāka Dṛṣṭi Śṛṣṭi Vāda*. This method upholds the view that duality exists only as long as one perceives it, but in fact duality never exists. Thus, the *prātibhāsika sattā* is ascribed to the appearance of the duality of the world in this method. The *prātibhāsika sattā* is mentioned only to say the *mumukṣu* that the duality never exists and appearance of it is caused by ones imagination. This duality disappears when one realizes and keeps oneself in non-duality. Thus this system admits of two levels of reality, namely, (i) *Pāramārthika sattā*, that is, *Brahman-Ātman*, and (ii) *Prātibhāsika sattā*, that is, world of duality.

However, it is also difficult for most people to understand the theory, which advocates the existence of the world as long as one perceives it, for people always keep using the things of the world for their needs, such as to satisfy hunger, etc. In order to make the *adhamādhikāri* understand Advaita, the third method, namely, *Śṛṣṭi Dṛṣṭi Vāda* is established. This theory, unlike *Dṛṣṭi Śṛṣṭi Vāda*, advocates three levels of reality. According to it, *Īśvara* (Brahman) causes duality by His power of *māyā*. The people mistake this illusory creation of duality for non-duality. The Advaitin distinguishes dreams and such illusory objects as snake on rope, etc., from the worldly physical objects in *Śṛṣṭi Dṛṣṭi Vāda*. Since the empirical objects are used as real entities for the worldly needs and are not sublated by any other objects, they are ascribed of a reality called *vyāvahārika sattā*, which is distinct from *prātibhāsika sattā*.

Dṛṣṭi Śṛṣṭi Vāda can be found in the texts such as *Aṣṭāvakragītā*, *Avadūtagītā*, *Sītārāmañjaneyasamvādamu* and *Māṇḍūkyopaniṣadkārikā*. According to this theory *sādhana* is not required for *brahmajñāna*. In other words, liberation is attained without any *sādhana*. The *adhikāri* for *Dṛṣṭi Śṛṣṭi Vāda* is supposed to be so matured that when one listens to *āpatavākhya* or *Śruti* one should attain *brahmajñāna*.

Śṛṣṭi Dṛṣṭi Vāda is found in the *Brahmasūtra*. According to Śaṅkara, one should attain the four-fold qualifications in order to get the teachings of *Śṛṣṭi Dṛṣṭi Vāda*. Śaṅkara clearly states in the beginning of his commentary on the *Brahmasūtra*, that one should attain the *sādhanacatuṣṭaya* and Vyāsa mentions explicitly in his *sūtra* 1.3.25 (*Hṛdhyapekṣayātu manuṣyādhikāratvāt*) that all human being are qualified for *brahmajñāna*. Contrary to this view, it is maintained in the *Apaśūdrādhikaraṇam* that only *Śūdras* (and women) are disqualified for *brahmajñāna* through the *Vedānta*. It is obviously a contradiction in the *Brahmasūtra* and, therefore, we are attempting here an examination of the same in this paper.

2. *Sādhanacatuṣṭaya* or four-fold qualifications according to Śaṅkara are as follows: (1) Discrimination between the eternal and the non-eternal; (2) Dispassion for the enjoyment of the fruits (of work) here and hereafter; (3) A perfection of such practices as control of the mind, control of senses and organs, etc.; and (4) a hankering for liberation.
3. Please refer to the meaning of the word *Atha* in the first *Brahmasūtra* given by Śaṅkara.
4. *Brahmasūtra*, 1.3.34 to 38 consist of the *Apaśūdrādhikaraṇam*.
5. Disqualification of women is not dealt with in this paper for the context taken here is to deal only with the incompetence of *Śūdra* mentioned in the *Apaśūdrādhikaraṇam*. However, one should understand that Śaṅkara implicitly rejects the *adhikāritva* for women. Such disqualification of women for *brahmajñāna* through the *Vedānta* based on gender is redundant.
6. *Brahmasūtra Śāṅkarabhāṣya*, 1.3.34, pp. 135–6, Motilal Banarsidass, New Delhi, 1998:
   Yathā manuṣyādhikāraniyamamapodhya devādīnāmapi
   vidhyāṣvadhikāra uktastathaiva dvijātyadhikāraniyamāpavādena
   śūdrasyāpyadhikāraḥ syādityetāmāśaṅkām
   nivartayitumidamadhikaraṇamārabhyate.
7. *Taittirīyasamhitā*, 7.1.1.6.
   '*tasmācchudro yajñe anavakluptaḥ*'.
8. *Brahmasūtra Śāṅkarabhāṣya*, 1.3.34, p. 136.
   Yaccedaṁ Śūdro yajñe anavakluptaḥ' iti, tat nyāyapūrvakatvādvidhyāyāmapyanavakluptatvaṁ dhyotayati: nyāyasya sādhāraṇatvāt.
9. Ibid.,
   Upanayanapūrvakatvādvedādhyayanasya.
10. Ibid.,
    Upanayanasya ca varṇatrayaviṣayatvāt.
11. Ibid.,
    Na ca Śūdrasya vedādhyayanamasti.
12. Ibid.,
    Śāstrīyasya ca sāmarthyasyādhyayananirākaraṇena nirākṛtatvāt.
13. *Yājñavalkyasmṛti*, 1.90.
14. *Mahābhārata*, *Vanaparva*, CCCXIII, 108.
15. Ibid., CLXXX, 21, 25, 26.
16. *Viṣṇubhāgavata*, VII.IX.35.
17. *Brahmasūtra Śāṅkarabhāṣya*, 2.1.1, p. 181.
    Vipratipattau ca smṛtīnāmavasyakartavyo anyataraparigrahe anyataraparityage ca śrutyanusāriṇyaḥ smṛtayaḥ pramāṇamanapekṣyā itarāḥ| Taduktaṁ pramāṇalakṣane—'Virodhe tvanapekṣam syādasati hyanumānam.' (Jaimini Sūtra, 1.3.3).
18. Ibid., 1.3.37, p. 138.
    Tadabhāvanirdhāraneca pravṛtteḥ.

19. *Works of Śaṅkarācārya in Original Sanskrit*, Volume 1. *Ten Principal Upaniṣads with Śaṅkarabhāṣya*, p. 450, Motilal Banarsidass, Delhi. 1992, *Chāndogyopaniṣad*, 4.4.3.
    Sa ha hāridrumataṁ gautamametyovāca brahmacaryaṁ bhagavati vatsyāmyupeyāṁ bhagavantamiti|
20. Ibid., 4.4.4.
    Tam hovāca kimgotro nu somyāsīti sa hovāca nāhametadveda bho yadgotro ahamasmyaprccham mātaraṁ sā mā pratyabravībdahvahaṁ carantī paricāriṇi yauvane tvāmalabhe sāhametanna veda yadgotrastvamasi jābāla tu nāmāhamasmi satyakāmo nāma tvamasīti so ahaṁ satyakāmo jābālo asmi bho iti|
21. Ibid., 4.4.5.
    Tarn hovāca naitadabrāhmaṇo vivaktumarhati.
22. Ibid.,
    samidhaṁ somyāharopa tvā neṣye na satyādagā iti tamupanīya.
23. *Yājñavalkyasmṛti*, 1.90.
    'By husbands belonging to a particular class upon wives belonging to the same class—the husbands and wives having been united in unblemished marriages are begotten sons who belong to the same caste as that of the father and the mother and who are capable of continuing the line.'
24. Ibid., 1.91. Also see 1.90 to 96.
25. *Manusmṛti*, X.4.
    Śūdraścaturdho varṇa ekajātiḥ. Also see *Brahmasūtra Śāṅkarabhāṣya*, 1.3.34, p. 136.
    Upanayanasya ca varṇatrayaviṣayatvāt.
26. *Parāśaragṛhyasūtra*, 2.6,
    Śūdrāṇām aduṣtakaramaṇām upanayanam.
27. *Taittirīyasamhitā*, 7.1.1.6,
    '*tasmācchūdro yajñe anavakluptaḥ*'.
28. *Brahmasūtra Śāṅkarabhāṣya*, *Adhyāsabhāṣya*, p. 3,
    Tathāhi—'brāhmaṇo yajeta' ityādīni śāstrāṇyātmani varṇāśramavayovasthādi viśeṣādhyāsamāśritya pravartante|
29. Ibid., 1.1.1, p. 4.
    Nanviha karmāvabhodhānantaryaṁ viśeṣaḥ| Na| Dharmajijñāsāyāḥ prāgapyadhītavedāntasya brahmajijñāsopapatteḥ|—kramasya vivakṣitattvānna tatheha kramo vivakṣitaḥ, śeṣaśeṣitve adhikṛtādhikāre vā pramāṇābhāvāt, dharmabrahmajijñāsayoḥ phalajiñāsya bhedācca| Abhyudayaphalaṁ dharma jñānam taccānuṣṭānāpekṣam| Niḥśreyasaphalam tu brahmavijñānam na cānuṣṭānāntarāpekṣam|
30. Ibid., p. 5.
    — nityānityavastuvivekaḥ, ihāmutrārtha bhogavirāgaḥ, śamadamādisādhanasampat, mumukṣutvam ca| Teṣu hi satsu prāgapi dharmajijñāsāyā ūrdhvaṁ ca śakyate brahmajijñāsituṁ jñātuṁ ca na viparyaye| Tasmādathaśabhena yathokta sādhanasampatyānantaryamupadiśyate|

31. Ibid., 1.3.25, p. 119.
Hṛdhyapekṣayātu manuṣyadhikāratvāt|
32. *Works of Śaṅkarācārya in Original Sanskrit*, Volume 1, *Ten Principal, Upaniṣads with Śaṅkarabhāṣya*, p. 89, Motilal Banarsidass, Delhi, 1992, *Kaṭhopaniṣad*, 2.4.12.
Aṅguṣṭamātraḥ puruṣomadhya ātmani tiṣṭati|
Īśānaṁ bhūtabhavyasya na tato vijugupsate|| Etadvai tat|
33. Ibid., 2.4.13, p. 90.
Aṅguṣṭamātraḥ puruṣo jyotirivādhūmakaḥ| Īśāno bhūtabhavyasya sa evādhya sa u śvaḥ| Etadvai tat ||
34. *Jaiminisūtra*, 6.1.25–28.
35. *Brahmasūtra Śāṅkarabhāṣya*, 1.3.25, p. 119.
Śāstraṁ hyaviśeṣapravṛttamapi manuṣyānevādhikaroti, śaktatvādarthitvādaparyudastatvādupanyanādiśāstrācceti varṇitametadadhikāralakṣaṇe|
36. *Jaiminisūtra*, 6.1.6–7.
37. *Brahmasūtra Śāṅkarabhāṣya*, 1.3.26, p. 12.
na tadvidhyāsvasti.
38. *Parāśaragṛhyasūtra*, 2.6,
Śūdrāṇām aduṣṭakarmanām upanayanam.
39. *Vṛddhagautamasmṛti*, Chapter 16,
Śūdro vā caritavrataḥ.
40. Mādhava Vidhyāraṇya, *Śaṅkaradigvijayam*, pp. 60–61, Translated by Swami Tapasyananda, Canto - 6, Sri Ramakrishna Math, Chennai, 1980.

'On one of such noon, the great *Āchārya*, desirous of doing his midday rites, walked with his disciples to the Ganga, whose surface looked discoloured by the pollen of lotus flowers. On their way, the party came across a hunter (*Chaṇḍāla*), an outcaste, approaching them with his pack of four dogs. They thereupon ordered him to move away to some distance and give them way. But the hunter raised an issue. He asked: "... you asked me to move aside and make way for you. To whom were your words addressed, O learned Sir? To the body which comes from the same source and performs the same functions in the case of both a *Brāhmaṇa* and an outcaste? Or to the *Ātman*, the witnessing consciousness, which too is the same in all unaffected by anything that is of the body? How do such differences as 'This is a *Brāhmaṇa*, this is an outcaste' arise in non-dual experience." When he said thus finished his submissions, the great *sannyāsin* (Śaṅkara) noted for his truthfulness and unblemished life spoke to that outcaste with a mind struck with astonishment but nonetheless full of cordiality towards him. He said: "All that you have said is true. You are, indeed, one of the noblest of men. Your words of wisdom make me abandon the idea that you are an outcaste ... . A person who sees the whole world as *Ātman* only, whose mind is unshakably established in that conviction is worthy of worship, irrespective of whether he is a

Brāhmaṇa or an outcaste by birth. I am the same pure consciousness which shines alike in Mahāviṣṇu as also in flies. All objective phenomena are false ... he who is ever established in this consciousness is my *Guru* worthy of respect, be he an outcaste by birth." Scarcely had he finished speaking when the outcaste disappeared from sight, and in his place appeared Lord Śiva. To that great *sannyāsin* who fell at His feet with tears of devotion in his eyes, the great God Śiva said thus: "Vyāsa edited the *Vedas*, he composed the *Brahmasūtras* (aphorisms on the subject of Brahman); and therein he refuted the doctrines of the Sāṅkhyas, Kaṇādas and others. ... Therefore, you who have got a real understanding of the purport of the *Veda*, should write a new commentary on the *Brahmasūtras*, wherein the false theories have to be refuted both through reason and scripture."'

41. *Brahmasūtra Śāṅkarabhāṣya*, 1.1.1, p. 4.
Nanviha karmāvabhodhānantaryam viśeṣaḥ| Na| Dharmajijñāsāyāḥ prāgapyadhītavedāntasya brahmajijñāsopapatteḥ|—kramasya vivakṣitattvānna tatheha kramo vivakṣitaḥ, śeṣaśeṣitve adhikṛtādhikāre vā pramāṇābhāvāt, dharmabrahmajijñāsayoḥ phalajijñāsya bhedācca Abhyudayaphalaṁ dharma jñānam taccānuṣṭānāpekṣam| Niḥśreyasaphalaṁ tu brahmavijñānaṁ na cānuṣṭānāntarāpekṣam|
42. Ibid., 1.3.38, p. 139.
'Śrāvayeccaturo varṇān' iti cetitihāsapurāṇādhigame cāturvarṇasyādhikārasmaraṇāt|
43. Ibid., 1.1.38. Śaṅkara in his commentary on the *Brahmasūtra*, 1.3.38, quotes the *Gautamadharmasūtra*, 12.4, which states that, 'if a born *Śūdra* hears the *Veda* then melted lead and lac should be filled in his ears,' in order to support his view, namely, a born *Śūdra* is unfit for studying the *Veda*.
44. *Yājñavalkyasmṛti*, 1.90.

What Does Udayana Mean by *lokavyavahārasiddha iti cārvākāḥ*?

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In the beginning of *Nyāyakusumāñjali* Udayana (fl. eleventh century), the Nyāya-Vaiśeṣika philosopher, in his endeavour to prove the existence of God, declares all men to be theists at heart. Every school of philosophers and even non-philosophers like the craftsmen, he says, believe in Him in some form or the other, notwithstanding the difference in calling Him by various appellations. By way of example he refers to the Cārvāka-s who, according to him, consider 'What is established in the worldly practice' their God (*lokavyavahārasiddha iti cārvākāḥ*).[1]

Commentators have tended to explain the term, *lokavyavahāra* in two ways. Varadarājamiśra (eleventh century), the earliest known scholiast, offers two alternatives: (i) the visible king and the like, or (ii) idols of gods in the form of having four arms.[2]

He is followed by Kāmākhyānātha Tarkavāgīśa and T. Vīrarāghavācārya Śiromaṇi.[3] Four other commentators, viz. Vardhamāna Upādhyāya, Rāmabhadra Sārvabhauma, Śaṅkaramiśra and Guṇānanda Vidyāśāgara, mention only the second interpretation.[4] The point they wish to make is that one needs a visible entity for ones god, not an invisible one.

When does a commentator offer two or more alternatives in interpreting a word or a passage in the text? Instead of digressing into a long excursus, the question may be answered briefly as follows: If a commentator finds several interpretations equally appropriate to the context and/or equally logical but is not sure which of them corresponds to the author's intention, he records all the possible ones. In short, alternatives betray uncertainty in the mind of the commentator himself.

In this case, why some later commentators opted for one interpretation only is not clear. Perhaps they found the other alternative inappropriate or redundant or both.

Whatever the case may be, I propose that both the interpretations are wide of the mark. *Lokavyāvahārasiddha* is a term used to distinguish between two kinds of probanses—the first actually seen and verifiable in everyday life, such as smoke from which one can and does infer the existence of fire, and the second which concerns unseen and unverifiable inferences regarding God, the other-world (*paraloka*), heaven and hell, etc. which have to be established with the authority of the scriptures. This is how Udbhaṭabhaṭṭa elucidates the difference between *lokaprasiddha* and *tantrasiddha hetu*-s.[5] Apparently, Udayana intends to suggest that the Cārvāka-s make God out of their insistence of perception: whatever is not and cannot be perceived in this world is rejected by them.

Two maxims (*nyāya*) found in some philosophical works also uphold the importance of 'the worldly way' and 'worldly practice'. They run as follow:

> *laukiko mārgo'nusartavyaḥ lokavyavahāraṃ prati sadṛśau bālapaṇḍitau.*[6]
>
> The worldly way should be followed. As regards worldly practice, the ignorant (lit. child) and the scholar are similar.

It is well-known that even a world-denying philosophy like the Advaita Vedānta, with all its disavowals of the objectivity of the material world, has to speak of *vyāvahārika sattā* (practical existence) as the idealist Buddhists had thought of *saṃvṛti satya*.[7] As to everyday practice, no amount of philosophizing and logic-chopping can make one deny that food is required to satisfy hunger, water to quench thirst. This kind of everyday practice is followed by all, whether he is an ignorant man or a scholar.[8]

Sāyaṇa-Mādhava (fourteenth century) in his presentation of the Cārvāka system refers to a saying, 'The king, established in the world, is the supreme lord' (*lokasiddho rājā parameśvaraḥ ... lokasiddho bhaved rājā pareśo nāparaḥ smṛtaḥ*).[9] What Sāyaṇa-Mādhava has in mind is that, according to the Cārvāka-s, there is no invisible overlord: the king on earth is the only visible lord one can think of. The key-word is *lokasiddha*, as in the other two maxims mentioned above.

I therefore suggest that *lokavyavahārasiddha* in Udayana should be taken to mean 'what is established in worldly practice, i.e., perceptible and hence followed by all in actual life'.

Notes and References

1. Prose section following *kārikā* 1.2.
2. *lokavyavahārasiddhaḥ rājādidṛśyamānaścaturbhujādirūpā pratimā vā.* Varadarāja, p. 4.
3. *lokavyavahāreti, yathā loke vyavahriyate caturbhujādyupeta dehavān īśvara na tvadṛśya iti tathā. athavā lokvyavahārasiddhah rājā 'lokasiddho rājā parameśvara' ityukteḥ*, Kāmākhyānātha, p. 8; *prajāpālakamhārājarūpeṇa vā ālayādiṣvabhimanyamānapratimādirūpeṇa vā vilakṣaṇaprabhāvaśāliśrīrāma-kṛṣṇadirūpeṇa vā.* Vīraraghavācārya, p. 5.
4. *yathā loke vyavahriyate caturbhujādyupetadehavān, natvudṛśya ityarthaḥ. Vardhamāna*, p. 6; *lokavyavahārasiddhaḥ pratimādyākaraḥ*, Rāmabhadra, p. 7; *lokavyavahārasiddha iti pratimākāra ityarthaḥ*, Śaṅkara, p. 8; *lokavyavahārasiddhaḥ caturbhujādiśarīraṃ tādṛśī pratimeti kecit.* Guṇānanda, p. 8.
5. *yat tu tenaiva paramalokāyatammanyena* (sc. Udbhaṭena) lokavyavahāraikapakṣapātinā lokaprasiddhadhūmādyanumānāni *puraskṛtya* śāstrīyasvargādisādhakānumānāni *nirācikīrṣata* ... lokaprasiddheṣvapi hetuṣu *vyabhicārādarśanamasti* tantrasiddheṣvapi *tena vyabhicārādarśana-lakṣaṇaguṇasādharmyataḥ* tantrasiddhahetunāṃ *tathābhāvo vyavasthapyata.* Quoted in Vādidevasuri, pp. 256–66. Even before Udbhaṭa (fl. ninth century), Purandara (fl. eighth century) referred to the 'worldly way': lokaprasiddham anumānaṃ *cārvākair apīsyata eva, yat tu kaiścit laukikaṃ mārgam atikramyānumānam ucyate tan niṣidhyate.* Quoted by Kamalaśīla, Vol. 2, p. 528. Other works by non-Cārvāka authors also refer to such 'inferences as tend to facilitate worldly activities' admitted by the Cārvāka-s. For example, *viśeṣaḥ punaścārvākair* lokayātrā-nirvāhaṇapravaṇaṃ dhūmādyanumāna-miṣyate *kvacana na punaḥ svargādṛṣṭādiprasādhakamalaukikamanumānamiti.* Guṇaratna, on Haribhadra's *Ṣaḍdarśanasamuccaya*, v. 83, p. 306. The anony-mous *Avacūrṇi* on the same text also contains the same sentence (p. 508). (All emphases mine.)
6. Jayarāśibhaṭṭa, p. 1 (p. 68 in Franco) quotes both; Vyomaśiva quotes only the second (Part 2, pp. 108, 172). On both occasions he calls it a *nyāya*. D.R. Shastri and Mamoru Namai have accepted the second one as a Bārhaspatya aphorism (p. 201, No. 54 and p. 41, B1 respectively). But see Franco, p. 299, n. 4 and Intro., pp. 43–4.
7. See Debiprasad Chattopadhyaya, pp. 98–100.
8. Franco, however, interprets the maxim in a quite different way in conformity with his thesis regarding Jayarāśi as a sceptic Lokāyatika. Matilal's reference to Sextus (quoted by Franco, p. 43) is, in my opinion, misleading. The ques-tion is not of being active or inactive, but of accepting reality as reality, not as illusion, whatever ones philosophical view might be.
9. Sāyaṇa-Mādhava (Mādhavācārya), p. 6. The second extract is taken from the versified version following the prose statement.

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DISCUSSION AND COMMENTS

Rejoinder to Professor Rajendra Prasad's Response

As a rejoinder to Professor Prasad's response to my evaluation of his article 'Reactive Attitudes, Rationality and Determinism', I will take up his points one at a time.

Based on my unpublished abstract, Professor Prasad asserts that I take the philosophical discussion between him and P.F. Strawson as a bitter quarrel because I characterize his critique as 'trenchant'. My only mention of any dispute takes the following form:

> P.F. Strawson's influential paper 'Freedom and Resentment' has been much commented on, one of the most trenchant commentaries being Rajendra Prasad's 'Reactive Attitudes, Rationality and Determinism'.

Professor Prasad misunderstands 'trenchant' to connote bitterness. Although 'trenchant' can occasionally describe a tone as being caustic to a degree, most commonly it means simply 'incisive', 'penetrating' or, as my dictionary states, 'vigorously effective and articulate'. Without a context that would indicate a feeling of bitterness, Professor Prasad inexplicably takes my use of the term to be a derision of the tone of discussion rather than a compliment on the high calibre of his article.

In his second point, Prasad again refers to my unpublished abstract, saying, 'Bruya begins with making a general point to the effect that both Strawson and I proceed under "the reactive/objective dichotomy" which is "impoverished and is itself in need of a broadening perspective (*sic*)"' (p. 217). In fact, as one can see from the article, itself, I do not begin that way. Professor Prasad must have had in mind the final paragraph of my unpublished abstract, which reads as follows:

> By the end of the paper, I have shown that although Prasad's arguments miss the mark at times, he does succeed in putting forth a legitimate challenge to Strawson's notion that determinism cannot be a long-term inhibitor of the reactive attitude, even in light of Strawson's own response to Prasad's paper. I also attempt to show that the reactive/objective dichotomy under which Strawson and Prasad both proceed

turns out to be rather impoverished and is itself in need of a broadening of perspective.

Pursuing my claim regarding the reactive/objective dichotomy, Professor Prasad offers the following equivocal rejection, 'I do not want to complain that Bruya does not show how it is impoverished and how it can be broadened, though on both the counts the complaint would have been genuine' (p. 217). My arguments regarding impoverishment and broadening are stated explicitly on pages 212 and 213 of my article.

A third point that Professor Prasad makes is that 'Strawson cannot be taken as advocating compatibilism', as I take him to be; this, even though Strawson himself says, 'If [...] I have dwindled into a mere compatibilist [...] I am content with that' (p. 431).

Fourthly, Professor Prasad takes exception to my attributing to him the exclusionist claim that only the inhibitors can justify the adoption of the objective attitude (p. 219). He has apparently misread the following statement:

> Prasad is making a similar exclusionist claim to Strawson's claim that *only* the inhibitors can justify the adoption of the objective attitude. Prasad is claiming that *only* a belief in the possibility of influencing another's actions can justify the reactive attitude (p. 206).

I am actually attributing such a claim to Strawson and asserting that Professor Prasad makes a very different claim, but which is similar to Strawson's in its also being exclusionist.

Professor Prasad's fifth point contains two complaints. He says, without citation, 'Bruya's complaint is that I do not give a precise definition of being rationalist and neither does Strawson, nor do I give a definition of determinism which both of us accept, and that is very basic to our dispute or disagreement' (p. 220). The second complaint, about the need for a precise definition of determinism, is not a complaint on my part. I merely reiterate Prasad's complaint, which he makes as follows:

> The real issue [of whether or not determinism will be a reason for suspending reactive attitudes] can be settled not by any appeal to facts, but by precisifying the nature of the thesis of determinism (p. 374). (He makes the same point on p. 370, saying, 'the content of determinism cannot be treated as a matter of no significance.')

It is odd that Professor Prasad now denies making such a claim and instead attempts to defend Strawson's reluctance to define 'determinism', especially since Strawson, in his response to Prasad, relents, saying:

> I agree [...] with Professor Prasad that unless the determinist thesis is spelled out (precisified?) in much fuller physical and psychological detail, we remain unclear as to what either its affirmation or its denial effectively amounts to (p. 431).

As for my making a complaint regarding a precise definition of being a rationalist, I do not make such a complaint, and without a citation, it is difficult to know to what part of my article Professor Prasad refers.

Finally, and on this same topic, Professor Prasad lodges the following complaint:

> If the belief in determinism is a reason for suspending all reactive attitudes, then certainly one, who entertains this belief, must suspend reactive attitudes if he is a rationalist because he has a reason for doing that. If he does not, then we would naturally call him irrational [...]. Therefore my drawing this conclusion is not 'unwarranted' as Bruya claims (p. 208) (p. 220).

My original statement reads as follows:

> The [...] conclusion [that the person faced with a conceptual incompatibility (on one hand they are committed to determinism which implies the suspension of inter-personal relations, and on the other they are committed by nature to interpersonal relations) must abandon the reactive attitude or reveal complete logical insensitivity] seems unwarranted, with Prasad assuming that the person will, after thorough evaluation, choose the world-view of determinism over the world-view of human interaction. No justification is offered (pp. 207–8).

In his original article, Professor Prasad says, 'Faced with this incompatibility, he can continue having reactive attitudes only if his nature is also blessed or cursed with some sort of a logical insensitivity' (p. 369). My complaint about this assertion being unwarranted is simply taking exception to the logic of his argument. He says that if one is honestly evaluating the compatibility between a belief in determinism that denies the reactive attitude and a self-nature that requires it, he can continue to hold the reactive attitude 'only if' he is irrational. Such a conclusion is unwarranted in that someone undertaking such an evaluation could also reject the

belief in determinism, a possibility that Professor Prasad, himself, entertains only a few sentences further on in regard to the extreme libertarian who rejects determinism.

In summary, of the above six complaints that Professor Prasad lodges against my article, three are complaints about general remarks I make, two of which are from my unpublished abstract. Of these three, one incorrectly rejects my evaluation of the tone of his article; the second misattributes a claim from the abstract to the beginning of the article, rejects the claim without support, and mistakenly asserts that my claim is unsupported; and the third mistakenly rejects a characterization I make of Strawson's position. Of the three purported claims that Professor Prasad entertains (and rejects) from the main body of my article, only one turns out to be a claim I actually make, and his rejection of it is mistaken.

An author typically hopes that his paper will be read and is more pleased by a negative response than no response at all. In this sense, I am pleased that Professor Prasad has taken the trouble to respond to my article. I am disappointed, however, that he has not responded to the assertions I make in the main body of my article and that when he does appear to do so they turn out to be based on obvious misreadings. In my article I examine Professor Prasad's original arguments in some detail, asserting that they can be grouped into seven types of argument and that four of them are directly aimed at Strawson's four types of argument in support of optimistic determinism. I then assert that three of Prasad's four types aimed at Strawson's four types succeed and one fails. Of the three remaining types, one succeeds, and the others fail. None of these assertions draws substantial comment in Professor Prasad's response.

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B.K. Matilal and Bhartṛhari's Logic of Translation: A Discussion

Language is defined in two ways, firstly, as referring or designating tokens (verbal or written marks) that stand by proxy for the things or thoughts and, secondly, as a unit expressive by nature.

Language, if defined as references representing things and thoughts or as marks/designations (written or verbal) which stand by proxy for the things, is not self operative and it requires a cognitive base for its own acceptance and for cognitive-operation made through them. It varies from community to community, even, from person to person in the same language community. It is a trivial way of taking language as confined to speaking and hearing or to writing tokens and reading them only and signified as that which is referred to or is represented by the tokens/marks because it is a unit awareness by nature and communication is accomplished independently by itself without any physiological, psychological and metaphysical entities and our allegiances to them.

Language, if defined as that which is the expressor and the expressed or illuminator and the illuminated, that is, which reveals itself first and then its signified is revealed non-differently by it, then, tokens, as defined in the former view, stand instrumental only in revealing the language as defined in the latter view. In this view language is a revealing/expressing unit. It is a unit of awareness in nature which reveals itself and its signified which is non-different from the language itself. In this latter sense it, as Bhartṛhari says, is *sphoṭa* or *madhyamā-śabda* which is not a representative of signified but a cognitive unity, a unit expressive of itself and of its signified. Meaning in this view is the idea or thought-object which figures non-differently by language in the mind. With this brief note on language and meaning let us come to the discussion on possibility of translation.

There are two different logics[1] on the basis of which the problem of translation is interpreted. (i) The logic of difference of content (of the text and of translations) and of their garbs[2]; and (ii) the logic of non-difference of content (of the text and of translations) and difference of their garbs. The first is a logic acceptable to realists according to which any kind of translation implies a transcendental signified as its substratum. It is pure signified as it is independent of language, the signifier, and the signified of translated expressions. B.K. Matilal writes, 'Language is often uncritically thought to be a vehicle of thought or meaning. And from this flows the pervasive idea that in a multilingual world, the same thought is or can be conceived by different expressions which are distinguishable parts of different languages. It is probably what a modern philosopher, Jacques Derrida, would call the metaphysician's old-age desire to search for a 'transcendental signified', that is, a concept independent of language, that forces upon

us the duality and opposition of the signifier and the signified.[3] 'Transcendental signified remains constant, i.e., a content constant in its different translations.[4] This theory maintains a difference between the signified of the text or the transcendental signified and the signified of the translations. The transcendental signified is the constant content of the translations but the signified of the translations are not transcendental signified itself but it as conceived by the minds of the translators. The same logic is applied by idealists who accept the content of the original expression as transcendental constant for translations and accept that the goodness or badness of a translation depends on the level and capacity of ones mind in approaching the transcendental signified.

B.K. Matilal, applying the logic of difference of content/signified and of garb on Bhartṛhari's philosophy of non-difference of the signifier and the signified observes, 'Since linguistic expressions are not regarded in this theory as conveyor-belts for thoughts, there cannot be any absolute transposition of virgin thoughts from one language to another. Each thought is already a part and parcel of its so-called "verbal" cloak. They are not separable.'[5] 'The very idea that meaning, thought or 'what is said', is isolatable from the speech or the text seems repungant to Bhartṛhari's holistic conception of language. Hence, the so-called translation in the sense of transfer of thought from one garb to another seems impossible in this theory.'[6] In one line there is no possibility of translation if we view Bhartṛhari from this logic because he, contrary to it, accepts the non-difference of the signifier and the signified of the text and that of those translated in garbs of different communities.

According to the second, namely the logic of non-difference of content (of the text and of translations) and difference of their garbs, the content is indivisible object of cognition figured in the mind by language. As both the language and its signified revealed non-differently by the former are non-different content or object of cognition which is revealed in all occurrences in different garbs, it is original in all occurrences and, hence, there is no possibility of translation. All cognition in this theory is a new cognition and, thus, the concept of translation has no room in this theory. This argument supports the conclusion derived by Matilal. But if we view the problem of translation and the originality of content translated on the basis of the second logic, with which I am concerned here in this paper, we come to a totally different conclusion—different from Matilal's.

Now on the content of knowledge. Whether it is language-token, i.e., verbal noises/written language-tokens, transcendental signified or real-language given ubiquitously in the mind as a flash of awareness in character and the signified revealed non-differently by it? There is no question of translation of fleeting and material marks which are so different in nature that they vary in tone, shape in writing, inscription, diction, etc.; in each of its occurrences by the same person and even in the same language that there is no possibility of them being translated and the entities, being uniquely real individuals to which it refers, cannot be translated.

Translation is deeply a cognitive problem. All cognition, for Bhartṛhari, is revealed by language (*sphoṭa*) which in his philosophy, is ubiquitously given and is the indivisible unit of awareness in nature. As translation requires a cognitive content and things are not only non-cognitive but are individuals or uniquely reals separate from, rather beyond, language, their translatability is unthinkable. It is accepted even by realists that what is revealed by the text in the mind, though it is independent from the language, is the content of translation. According to Bhartṛhari, isolated from real-language (*sphoṭa*) nothing can be revealed.[7] As per this statement, the transcendental signified cannot be revealed without the real language which is the only revealer in his philosophy. Language-token, for Bhartṛhari, is instrumental only in manifestation of the real-language which reveals itself when manifested by them. The language revealed thus reveals its signified non-differently and is the constant content revealed through different kinds of language-tokens conventionally fixed in different language communities.

Transcendental signified, isolated from language-token or if it is not revealed by the real language, is unthinkable as what is thought, for Bhartṛhari, is revealed and infused by language.[8] If it is revealed, its cognitive character cannot be denied. A transcendental signified isolated from language is a metaphysical entity and cannot be the object of translation which is a cognitive being. In such a situation the question arises as to what is the cause of expectancy for translation. There is no cognitive possibility of translation and transformation of a transcendental signified isolated from the beings figured/revealed by language in the mind and, thus, the logic of transcendental signified goes against even the realist's view of translation.

Matilal is right in taking reading of a text as a translational activity and the translation as a cognitive activity. He writes 'each "reading" is a

creative formulation, and hence a translation based upon such a reading is a creative transformation.'[9] If we accept the logic of identity of content (of the text and of the translations) and difference of their garbs only then translational activity will be a philosophical activity and the reading of the writings of other philosophers, ancient or modern, will be a kind of translation as a cognitive activity. Reading and reading without being aware of the content is a trivial and purposeless activity having no cognitive sense and, hence, it will not be a creative transformation.[10] Reading as a cognitive activity may vary in content from reader to reader or for the same reader in different readings but the cause of such differences is not that the content is independent of the garb in which it is presented. The cause of such a difference is the difference of intention, physiological, psychological, metaphysical and cultural allegiances and the level of consciousness in reading and the competence in the observation of the garbs used in different communities. Accuracy and exactness of translation can well be observed if the translated content is identical to the original content figured by the text. The realist cannot deny to accept the difference of the English word 'dog' from '*gauḥ*' in Sanskṛt and its non-difference from its translated Sanskṛt word '*śvānaḥ*' on the basis of which identical cognition of the content expressed in different garb of Sanskṛt is known. Though the knowledge revealed by the original and that by the translating statements are different, identical cognition of the content by them is revealed in the mind. It is the identical cognition of the content in its several occurrences that on the basis of which not only translation is made possible but which serves as the criterion of goodness and badness of translations also.

Now on the problem of good and bad translation. Tolerability and intolerability as Matilal observes are the criteria accepted by realists. He writes, 'the goodness or badness of a translation, the distortion, falsity or correctness of it, would not be determined simply by the inter-linguistic or intra-linguistic semantic rules, but by the entire situation of each translation with all its uniqueness, that is, by the kind of total reactions, effects, motivations and preferences it generates on that occasion. We can decide that the translation is bad or distorted to the extent it becomes intolerable.'[11] The question of deciding good or bad translation on the basis of logic of identity of content and difference of garbs is a cognitive problem and is different from realist's logic of tolerability and intolerability which are moreover subjective elements that need to be decided beforehand. The criterion of good translation, as per the second logic, is the identical-

cognition of content revealed by the text and that by its occurrences in the same or in different garbs.

Bhartṛhari[12] makes a difference between the knowledge and the object of knowledge. The knowledge of the original and that of the translated are different but the object/content, i.e. universal or individual, is required to be the same for a good translation. It is to be kept in mind here that he accepts universal as the import of language.[13] Identical-cognition of the original/text and the translated is possible because of the universal revealed by the text and that by the expression of the translation as well. In other words, the constant-content is not the transcendental-signified but the cognitive signifier (*vācaka*) revealed in its several occurrences in different garbs and in the garb of the text as well. It is the cognitive ground for a good translation and if the cognition is otherwise or deviated from that content it is a bad translation. Translating or rendering implies a constant content, universal in nature, which according to Bhartṛhari, is *sphoṭa*, i.e. the signifier which reveals its signified (*vācya*) non-differently.[14] The relation between the two is eternal/natural-fitness of the signifier. Such a relation[15] between a *vācaka* and a *vācya* is not possible in case of transcendental signified and, hence, it may be the signifier neither of the text, as it is accepted by realists as independently of language, nor of the signifiers in translating garbs, as their difference is accepted by the theorists. *The signifier, in Bhartṛhari's philosophy, is isolated from our allegiances but not from the language as it is itself the language which reveals the signified non-differently.* Language-tokens used in different communities are its garbs through which it is articulated. As it is awareness in nature it can be expressed through different garbs of different language communities. Tokens like *śvan* in Sanskṛt, *kuttā* in Hindi, dog in English and in Dutch, dogge in German and so on in different regional and national, natural and non-natural languages, as Bhartṛhari would say, manifest the same signifier (*sphoṭa*) and identical cognition by the signifier is revealed in all instances. In this theory translation does not mean duplication of the original but revelation of cognition of non-difference of signifier and the signified articulated through different garbs of the observation of their uses familiar in different language communities. However, no translatability of a transcendental-signified is possible as it ceases to be so isolated from language, the signifier.

Concluding the discussion, it can be said that Matilal, in his paper, has primarily taken notice of the Realist's logic of translation on the basis of

transcendental signified as the constant content of translations which, in my observation, is not only improper even for a consistent interpretation of realist's own theory of translation but insufficient for a proper evaluation of Bhartṛhari's theory also. A transcendental signified, isolated from language, can be the object neither of the original nor of the translation. The idea of being as transcendental-signified of all signifiers or any such idea of a transcendency of discourse, is a mirage, for the very idea of signified is thinkable in terms of language. Even Jacques Derrida and his interpreter, Paul Ricoeur, reject such concepts as that of transcendental-signified by countering them as deferred and absent.[16] According to Bhartṛhari it is not a transcendental signified but the signifier which is inner, indivisible and ubiquitously given *sphoṭa* and which serves as the constant content of translation.[17] This content is non-different from the signified. It is *the non-difference of the signifier and the signified that serves as the basis of the logic of identity of content.* As it is of awareness in nature which when manifested by language-token of ones observation, reveals itself and its signified non-differently, the manifestation of this content, constant in several occurrences and instances, from one garb to others, is what we call translation of the former in another garb. The cognition revealed by the text and that of its translations are different from one another. They vary in garbs also but the content/object does not change with their changes. Being awareness in nature it is revealed and, hence, original in each time and can be presented/translated in different garbs belonging to different language communities. Goodness or badness of a translation is known not by inference but on the basis of cognition of the translated content identical to or different from the cognition of the content of the text or original respectively. This theory is justified if translation is taken as a cognitive activity in which translation is the expression of the content, cognized in the garb of the text, in different garbs and if in each case the content, non-different from the former, is cognized the translation is good; if otherwise or deviated, it is bad upto the extent of intolerability.

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Notes and References

1. By the statement 'The logic of difference of content and of garbs' I refer to the view of the theorists for whom the signified of the text/original is a transcendental-signified and is different from the signified of the translations which are mere copies of the transcendental-signified or as grasped by the minds of the translators. By the statement, 'The logic of non-difference of content and difference of their garbs' I refer to the theorists, specially to Bhartṛhari, for whom the content of the translational expression is the same content of the text/original as in each case it is revealed non-differently by the *sphoṭa* which is the only revealer in his philosophy.
2. 'Garb' is the term used by B.K. Matilal for the language-tokens; see, *The Word and The World*, Oxford University Press, p. 122, 1990, which in Bhartṛhari's terminology is *Vaikharī-śābda* which is articulated differently by different language communities for communicating the signified. Language-tokens are garbs of the expression which differ from community to community even in different occurrences of it by a person in the same community. A 'content of a text' is the object of verbal-knowledge which, in realist's logic, is a transcendental signified and the 'contents of the translations' are the copies of the transcendental signified or the transcendental signified as appeared to the minds of the translators.
3. B.K. Matilal, *The Word and the World*, chapter 11, entitled 'Translation and Bhartṛhari's concept of language (*śābda*)', which largely derives from a paper presented by him at a conference organized by J. Derrida and his colleagues in Paris during the festival of India in France, p. 122, 1990.
4. B.K. Matilal, *The Word and the World*, p. 122.
5. Ibid., p. 123.
6. Ibid., p. 122. Matilal is right in his finding that there is no possibility of translation if this logic is applied on Bhartṛhari's philosophy. However, he has overlooked the second logic which is, particularly, concerned with Bhartṛhari.
7. In Vp. 1/123 he clearly says that language infuses cognition, '*Na so'sti pratyayo loke yaḥ śabdānumādṛte. Anuviddhamiva jñānam sarvam śabdena bhāsate.* There is no idea/cognition isolated from language and all cognition is cognition shot through and through by language.
8. Unlike the senses in perception, the language, in a verbal-cognition, when manifested by the token, reveals itself first and then its meaning is revealed non-differently by it. There is no possibility of a language-free cognitive-content. Vp. 1/55–56.
9. B.K. Matilal, *The Word and the World*, p. 122.

10. Ibid., p. 122. While defining translation Matilal has rightly observed reading as a creative transformation and translation as a part of the accepted style of philosophizing. I have simply furthered some criteria for accepting translation as cognitive and, hence, philosophical activity. For my presentation, translation is the cognition of the same content in several occurrences through different garbs of different language communities.
11. *The Word and the World*, 1990, p. 123.
12. *Ghaṭajñānamiti jñānam ghaṭajñānavilakṣaṇam. Ghaṭa ityapi yajjñānam viṣayopanipāti tat. Yato viṣayarūpeṇa jñānarūpam na gṛhyate. Artharūpaviviktam ca svarūpam nāvadhāryate.* Vp. 3/1/105–6. This issue, in rather great detail, is discussed in a paper entitled, 'Cognition Being and Possibility of Expressions: A Bhartṛharian Approach', by the same author, *JICPR*, Vol. XIV, No. 1, pp. 65–95, 1996.
13. Bhartṛhari's concept of universal as the import of words is discussed, in detail, in a paper by the same author entitled 'Bhartṛhari's reply to Vaiśeṣika's arguments against universal as the import of words', Darshana International, Vol. XXXVII, No. 4, pp. 22–34, 1997.
14. The *sphoṭa*, for Bhartṛhari, is universal which is manifested by language-tokens differing from community to community. With the differences of tokens the *sphoṭa* does not differ or change. He writes, '*śabdasyordhvamabhivyaktervṛtti bhedam tuvaikṛtāḥ, dhvanayaḥ samupohante sphoṭātmātairnabhidyate*, Vp. 1/77. *Mahābhāṣyakāra* has also mentioned the same idea in his commentary of *TAPARA sūtra* of *Pāṇini*.
15. See, Bhartṛhari's 'Philosophy of Relation Between the Word and the Meaning', by the same author, *JICPR*, Vol. XI, No. 2. pp. 43–54, 1994.
16. See, the paper of Paul Ricoeur, 'Existence and Hermeneutics', in *Contemporary Hermeneutics*, edited by Josef Blender, pp. 242–3, Routledge and Kegan Paul, London, 1980.
17. *Jñānaśabdārthaviṣayā viśeṣā ye vyavasthitāḥ. Teṣām duravadhāratvājjñānādyekatvadarśanam.* Vp. 3/1/101; also see, *Helārāja* on it. While discussing the same signified by the use of *Apabhraṃsas* (language-tones belonging to different language communities other than Sanskṛt) in the first part of Vp., Bhartṛhari theorizes that the same real language is manifested by them. They are synonymous. Vṛtti on Vp. 1/149. The correct form of the word is manifested by them to a person versed in communication Vp. 1/142 and from the correct form of the word the *sphoṭa* is revealed from which signified is revealed non-differently. *Vṛtti* on Vp. 1/150–51.

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Some Comments on the Article Entitled 'Solidarity or Objectivity? Richard Rorty and the Predicament of Relativism' by Professor Amitabha Dasgupta published in the *JICPR*, Vol. XVIII, No. 1

Professor Amitabha Dasgupta's interesting paper entitled 'Solidarity or Objectivity? Richard Rorty and the Predicament of Relativism' has raised some issues concerning Rorty's approach to solidarity, ethnocentrism and relativism. He argues that the question, namely 'Solidarity or Objectivity?', is a wrong one raised by Rorty and argues further that Rorty's methodology is untenable and unattainable. He concludes his paper by saying that Rorty's position is 'relativism *par excellence*'.[1]

Dasgupta's discussion of Rorty's understanding of truth and objectivity, no doubt, is interesting. This is the main focus of the paper. He fairly deals with objectivity and solidarity in order to understand the theoretical background of relativism. He says: 'Rorty's argument against truth and objectivity and the ethnocentric perspective in philosophy represent relativism'.[2] Further he says that Rorty's understanding forms the conceptual methodological core of relativism. Is this methodological relativism acceptable? This is one of the issues which I shall address in this response. He analyses two notions, namely truth and objectivity, in order to show that the notion of truth can neither be given up nor be dissolved into social consensus.[3] A close look at Rorty would reveal that Dasgupta's criticisms cannot stand examination.

The contention, namely, that Rorty is a relativist, is the central focus of Dasgupta's paper in the first section. The second section examines the two notions of objectivity and solidarity. He says that there is some inconsistency, which leads to the predicament, in the characteristic of relativism. In the third section, Dasgupta wants to show that the principle of incommensurability is the corollary of relativism. I shall start my comments with this point. The principle of particularity is embodied in the concept of incommensurability. Rorty's account of it can be seen in *Philosophy and the Mirror of Nature*.[4] It is the key concept in Rorty. It is unfamiliar in the sense that its conventions are unknown to us and we do not share its goals or its grounds for the adjudication of disputes. For example, the incommensurability thesis can be drawn from disciplines like history and anthropology. It is inevitable that different cultures or different historical

situations act on different assumptions. 'If there is not such common ground, all we can do is to show how the other side looks from our point of view. That is, all we can do is be hermeneutic about the opposition—trying to show how the odd or paradoxical or offensive things they say hang together with the rest of what they want to say and how what they say looks when put in our own alternative idiom,' says Rorty.[5] He believes that incommensurability is nothing more than a temporary inconvenience. Putnam's critique of the thesis of incommensurability[6] is not acceptable to Rorty. I shall come back to this later.

Dasgupta finds fault with the pragmatism of Rorty because he believes that it takes Rorty to relativism. There are other points like the ethnocentric account of knowledge, reason, truth and objectivity, which lead Rorty to relativism, claims Dasgupta. For him, the base or ground for Rorty's relativism lies in his ethnocentrism account of knowledge. But what exactly is the philosophical project of Rorty? No doubt, he is against the foundationalist way of doing philosophy. The anti-foundationalism and neopragmatism always go together. For example, this can be seen in the anti-foundationalist tradition represented by the neopragmatists like Rorty, Stanley Fish, Steven Knapp, Lyotard and others. For them, there are no perennial and eternal problems. Rorty is against the traditional conception of knowledge where mind has been given primary importance which, of course, was later replaced by language. This means that for philosophers either the philosophy of mind or philosophy of language is the preoccupation. But Rorty has rejected this for the main reason that he believed in the social practices. In all his writings he has been explaining the notion of truth, objectivity, etc., in terms of social practice and relevance. This is possible only through conversation. Instead of searching for a fixed structure based on foundation, he was depending on the mode of conversation. Social community is more important than the foundational principles. This is his ethnocentric world-view. Where does this relativism emerge? Scholars including Dasgupta believe that since we cannot go outside of our culture or paradigm, the relativism is implied in ethnocentrism. But my question would be: Can we really have a universal world-view? Let me go further to explain my point.

The question whether it is solidarity or objectivity, according to Dasgupta, is a wrong one. But not only Rorty, many have talked about this polarity. Dasgupta says that Rorty is pessimistic regarding the possibility of enlightenment.[7] Is it so? The question that is raised by Dasgupta

is as follows: 'Can objectivity be desired in favour of social loyalty?' Also, he is interested to know whether science proceeds in this way. The problem is that Dasgupta is all the time worried about the scientific world-view. This has led him into difficulties. He asks the question, whether a relativist can talk about other culture. He wrongly believes that in the Rortean mode of understanding, there is no way to communicate with others. Further, in order to develop a definite definition of truth, he depends on Putnam and McCarthy. For Putnam, truth is a regulative principle and this is exactly what Rorty wants to reject. While developing the notion of truth, Putnam depends on 'correspondence relation' and 'reference'. There is no place for the so-called correspondence relation in the Rortean conception of truth. With regard to the notion of reference that is employed in truth, Rorty would say that it should be a 'conversational reference'. Similarly Rorty will not have any objection to McCarthy's understanding of truth if it is based on social factors alone. But what McCarthy does is that he makes the notion of truth a transcendental one. Rorty would be ready to accept the situational part of the truth, which is stressed by McCarthy, but there will not be any place for the principle of transcendence in truth. This would go against his neopragmatism.

Rorty's notion of truth depends on the following: (i) his anti-foundationalist and anti-representationalist approach, (ii) truth for the community, and (iii) his ethnocentric world-view. I would like to throw some light on these in order to show where the error lies in Dasgupta's understanding of Rorty.

RORTY AS ANTI-FOUNDATIONALIST AND ANTI-REPRESENTATIONALIST

The positive side of Rorty's contribution that has been neglected by Dasgupta lies in anti-foundationalist approach. As a theory it claims that the problem of justifying our knowledge-claims by providing a secure 'foundation' is a misconceived idea. The foundationalists are those who want to do for knowledge, what the tradition from Descartes through Kant wanted to do for it, i.e., to provide a justification wherever possible. Thus for them, all our knowledge rests on a firm, indubitable, unshakable basis. For the foundationalists, epistemology is an important discipline. The anti-foundationalists move from the indubitable ideas of the individual thinking subject, to the intersubjectivity shared practice of actual language and believe that there is no such foundation outside or beyond the changing

and contingent social practices. Further, an anti-foundationalist would argue that there is no theory-neutral set of facts. In other words, there are no absolutely unblurrable distinctions, no unmediated 'given', no timeless structure of reason, no absolutely neutral standpoint for inquiry outside the ongoing interpretations in our social practices. Thus traditional epistemology, which is based on analysis of 'form', 'ideas', 'essences', 'language' are to be rejected.

Rorty as an anti-representationalist talks about the relation between natural science and the rest of culture. He is one who does not view knowledge as a matter of getting reality right, but rather as a matter of acquitting of action for coping with reality. Rorty is advocating anti-representationalism from 1979 onwards. He tries to clarify the relation between anti-representationalism and anti-realism. He claims that the representation vs. anti-representational issue is distinct from the realism vs. anti-realism one. He uses the notion of ethnocentrism as a link between anti-representationalism and political liberalism. The representationalists think of mind or language as containing representations of reality. The anti-representationalists are of the view that these representations of facts of matter have no useful role in philosophy. 'For representationalists, 'making true' and 'representing' are reciprocal relations: the nonlinguistic item which makes *S* true is the one represented by *S*. But anti-representationalists see both notions as equally unfortunate and dispensable—not just in regard to statement of some disputed class, but in regard to all statements,' says Rorty.[8] The solution to the philosophical problem, according to him, lies in the edifying philosophy, which establishes a conversation. This conversation of humanity rejects the rational arguments in support of any systematic philosophy.

IS TRUTH FOR THE COMMUNITY OR FOR ITS OWN SAKE?

Dasgupta is concerned about developing an absolutistic conception of truth. Do we accept such a conception of truth in reality? Following Rorty, I shall present arguments in support of solidarity thereby rejecting Dasgupta's claims. Rorty believes that there are two ways by which human beings give meaning to their lives. One is by telling the story of their contribution to community. This is a desire for solidarity. Here the community which we are thinking of, may be an actual historical one in which we participate or another actual one distinct in time or place or even an

imaginary one 'consisting perhaps of a dozen heroes and heroines selected from history or fiction or both'. The other way is to describe himself or herself in standing in immediate relation to a non-human society. What is important here is that in this relation it is immediate in the sense that it does not derive from a relation between such a reality and their tribe or their nation. It is the desire for objectivity. Rorty very correctly says: 'Insofar as a person is seeking solidarity, she does not ask about the relation between the practices of the chosen community and something outside that community. Insofar as she seeks objectivity, she distances herself from the actual persons around her not by thinking of herself as a member of some other real or imaginary group, but rather by attaching herself to something which can be described without reference to any particular human beings.'[9]

The tradition in western culture, which always focuses its search for truth, is the best example of turning away for solidarity to objectivity. Here truth is for its own sake. Those who ground solidarity in objectivity like Dasgupta construe reality as correspondence to reality. On the other hand, the pragmatists who reduce objectivity to solidarity do not depend on metaphysics or an epistemology. Truth for them is what is good for us to believe. Rorty rightly thinks that they see the gap between truth and justification not as something to be bridged by isolating a natural and transcultural sort of rationality which can be used to criticize certain cultures and praise others, but simply as the gap between the *actual good* and the *possible better*. For them, the desire for objectivity is not the desire to escape the limitations of ones. Community makes intersubjective agreement as much as possible, there is a desire to extend the reference of 'us' as far as we can. The pragmatist as the one who supports solidarity, believes that his approach has only an ethical base, and has no epistemological or metaphysical base.

Rorty explains explicitly the reason for rejecting objectivity by showing the advantages of solidarity. He says that the desire for solidarity is connected with human progress, which will make possible for human beings to perform more interesting things and not as heading towards a place which has somehow been prepared for humanity in advance. He observes: '... the pragmatist, dominated by the desire for solidarity, can only be criticized for taking his own community *too* seriously. He can only be criticized for ethnocentrism, not for relativism.'[10] Further he says: 'To be ethnocentric is to divide the human race into the people to whom

one must justify one's beliefs and the others. The first group—one's *ethnos*—comprises those who share enough of one's beliefs to make fruitful conversation possible. In this sense, everybody is ethnocentric when engaged in actual debate, no matter how much realist rhetoric about objectivity he produces in his study.'[11]

Rorty is of the view that solidarity is our only comfort which does not depend on any metaphysical support. Then why is it that people desire objectivity? Why is it preferred rather than solidarity? 'It is due to a disguised form of the fear of the death of our community,' says Rorty. 'I think we need to say, despite Putnam, "there is only the dialogue", only *us*, and to throw out the last residues of the notion of "transcultural rationality".'[12] The argument in support of solidarity as against objectivity can be seen in the writings of Nietzsche who believes that the traditional Western metaphysico-epistemological way of firming up our habits simply is not working any more. Thus we have to substitute it with ethical foundation of our sense of community based on hope and trust. It should be noted that scholars like Dasgupta who favour objectivity all the time think in terms of scientific objectivity. The scientific objectivity has proved its failure. The scientific objectivity has made us believe that natural science is a sort of false god. Where does the wrong lie in science? Rorty says that the wrong lies in an attempt to divinize it. Rorty feels that notions such as science, rationality, objectivity, and truth are bound with one another. It is believed that science is offering hard, objective truth, i.e., truth as something corresponding to reality etc. It is believed that these concepts are something in which we follow some procedures laid down in advance and hence methodical. The scientist is always seen as the person who keeps humanity in touch with something beyond itself. The following remark of Rorty is important. 'The scientist becomes a moral exemplar, one who selflessly expresses himself again and again to the hardness of fact.'[13]

For Rorty, those who are in support of solidarity do require neither metaphysics nor epistemology; what they need is the community. Dasgupta very rightly says that for Rorty, in order to accept solidarity and extend it to others, we must give up positivist philosophy of science especially the universal application of its scientific method. Rorty says that the positivists have spent lot of time in trying to use notions like objectivity, rigour and method to isolate science from non-science. He is of the view that the revival of Dilthey's notion that to understand human beings

'scientifically' we must apply non-Galilean 'hermeneutic' methods. What Rorty is suggesting is that instead of scientific method, we shall follow the hermeneutic method, which will allow the participational discourse and understanding. In his *Contingency, Irony and Solidarity*,[14] Rorty claims that human solidarity would be seen as the imaginative ability to see strange people as fellow sufferers. According to him, 'solidarity is created'. It is created by increasing our sensitivity to the particular details of the pain and humiliations of other, unfamiliar sorts of people.[15] No doubt, Rorty admits that this is limited within a particular language community. Solidarity cannot be grounded or justified in any metaphorical consideration. In reality we act in solidarity by nothing deeper than contingent historical circumstance.[16]

Whether it is universal or local, solidarity is a useful notion. It is a social ideal insofar as it brings well-intentioned people together in a tolerant community. We should not suspect it. Thomas Nagel's *Equality and Partiality* talks about the political reality of solidarity, but no doubt it has some problems. Nagel admits that solidarity requires identification with those with whom one feels it. For that reason there is always a potentially sinister side to it; it is essentially exclusive. Solidarity with a particular group means lack of identification with, and less sympathy for, those who are not members of that group, and often it means active hostility to outsiders. But Nagel admits that it is inevitable to a certain extent. For him, it is such a powerful source of political allegiance to institutions which deal equitably with members of the group that it must be relied on. But its absence will weaken the support for cooperative efforts in certain collectivities, particularly if they contain subgroups whose solidarity is strong.

But it should be noted that in Rorty, the 'we' is not formed by excluding others. In a dialogue 'we' is not a relation of exclusion but a condition of communication without which a subsequent perception of difference and otherness would be impossible. This can be seen, for example, in the writings of Gadamer. In his hermeneutic theory of communicative solidarity 'we' is formed by an initial act not of exclusion but of inclusion. Similarly, Foucault sees 'we' as a matter more of community-formation than of exclusion. Habermas makes solidarity a universal one. For him, solidarity is the realization that each person must take responsibility for the other as all associations must have an interest in the intergrity of their shared life contact in the same way. Whether solidarity is for entire

humanity or for the group is an important issue. Dasgupta's main contention against solidarity is that it is limited. Keeping this sort of possible objection in mind, Rorty argues that if solidarity is for the entire humanity, there might be a danger of it falling into inaction rather than action, because a single individual cannot help or change entire humanity. Rorty believes that solidarity can have meaning to those closer to home. This implies that if we take care of the small group that itself is sufficient. But here one might introduce the notion of relativism like Dasgupta, by saying that if solidarity is restricted to local then we will land up in relativism. But we should not forget that each of us belongs to several communities.

RELATIVISM: BUT WHAT SORT?

Dasgupta charges Rorty for embracing relativism. Relativism is the traditional epithet applied to pragmatism by the realists. Dasgupta also joins the group of the realists. Rorty himself talks about the three different views, which are attributed to relativism. The first one is the view that every belief is as good as every other. The second one is the view that truth is an equivocal term, having as many meanings as there are procedures of justification. The third is the view that there is nothing to be said about either truth or rationality apart from descriptions of the familiar procedures of justification which a given society—ours—uses in one or another area of inquiry. The pragmatists hold the ethnocentric third view. The first view is self-refuting according to Rorty and the second, an eccentric one. For the pragmatist, the term 'true' is merely an expression of commendation—ensures its univocallity. He would expect that the term 'true' must mean the same in all cultures as in the words like here, there, good, bad, you, etc. Commenting on this, Rorty says: 'Relativism is the view that every belief on a certain topic, or perhaps about any topic, is as good as every other. No one holds this view.'[17] The issue according to him is not between people who think one view as good as another and people who do not. 'It is between those who think our culture, or purpose or intuitions cannot be supported except conversationally and people who still hope for other sorts of support.'[18] Further he says: 'Perhaps nobody is a relativist. Perhaps "relativism" is *not* the right name for what so many philosophers find so offensive in pragmatism.'[19] Which relativism is Dasgupta talking about? There are two meanings to the term. One is the cognitive or epistemic relativism and the other is methodological

relativism. Dasgupta supports the methodological relativism. But there are problems with regard to both. For example, the cognitive relativism is the position that no scientist wants to embrace and the methodological relativism makes sense only if one adheres to cognitive relativism.

WHO ARE OUR CONVERSATIONAL PARTNERS?

In his reply to Clifford Greetz, Rorty explains the importance of ethnocentrism.[20] Greetz argues that ethnocentrism relegates gaps and asymmetries between individuals or groups to a realm of repressible or ignorable difference, mere unlikeness. This means that there are some with whom we cannot converse. They cannot be our conversational partners. Rorty is of the view that the pragmatists tell us that the conversation, which it is our moral duty to continue, is merely our project, the European intellectual's form of life. It has no metaphysical or epistemological guarantee of success. We are not conversing because we have a goal but because Socratic conversation is an activity which is its own end.[21] Rorty very boldly rejects the role of the anti-pragmatist. 'The anti-pragmatist who insists that agreement is its goal is like the basketball player who thinks that the reason of playing the game is to make baskets.'[22] The anti-pragmatist mistakes an essential moment in the course of an activity for the end of the activity. No doubt, Rorty supports ethnocentrism, which divides the human race into people to whom one must justify ones belief and the others. This means that according to him we can converse with people with whom we have enough in common to make discussion more fruitful. This simply means that Rorty admits diversity. He would allow the marginalized and the downtrodden in the horizon of the 'we'. Does this mean that Rorty is identifying the human solidarity with humanity as such? Rorty believes that 'we' ought to grow in its own sensibility to the pain and humiliation of others. 'Are you suffering?' is the question to which Rorty expects an answer. The above question involves the other to answer it. He expects a conversation. He expects an answer. He is really interested in solving the problem of humanity. If somebody takes his solidarity seriously, then he can think of solving the problem by conversing with others. Thus, Rorty as a pragmatist is really interested in solving the problem of humanity. Solidarity, according to him, involves action.

Rorty considers the identity of the self as its final vocabulary. For example, he justifies liberalism because it allows individuals the freedom

to rework their final vocabulary poetically while protecting people from humiliation. He says that the liberal pragmatist's sense of solidarity is based on a sense of a common danger, not on a common possession or a shared power.[23] The real issue, he believes, is not between people who think one view as good as another and people who do not. It is between those who think our culture, our purpose, our intuitions cannot be supported except conversationally and people who still hope for other sorts of support.[24]

Rorty believes that there is no universal human nature. The self is a decentred contingency. It is decentred for the reason that it has no central defining essence, which transcends its social and historical location in a particular society. Since there is no such transcendental human nature, the self is not distinct from its changeable identity. Rorty further believes that there are as many human natures as there are different human societies. For example he would say that the notion of human rights is a liberal notion, and not a universal fact. Different cultures have different ethics, and there is no universal ethical system. Ones location within a particular society decides many things. It should be noted that Rorty rejects the strong form of realism for the main reason that we cannot make a definite claim about the universal human nature. He is saying that we cannot step outside limited perspectives.

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Comments on the Article 'Metaphysics of Unobservables in Microphysics' by Saurabh Sanatani

In his discussion on this subject Sanatani is not always consistent, specially in the introduction.

Firstly, he appears to equate the 'observable' with 'visible' and, thereby, would relegate energy, force, potential to the category of unobservables. But, in returning the service, a tennis player certainly finds force and energy in the ball as observable. If only visibles are to be accepted as observable many items of classical physics, that are taken as observables, would lose this status. For instance we see the sun rising and setting, and don't see the earth moving round the sun.

Sanatani finds the wave–particle duality of the electron as non-intuitive and so suspect. But, then, the same ambiguity affects the macroscopic and intuitive phenomenon of light, and it is through the study of light (spectral) that most of quantum mechanics originated. Thus duality affects not

only the microscopic particles but also the media for their study, light and the instruments. Thus the problem gets further compounded. As a result, the very attempt to fix one item of a pair of canonical conjugates like position and momentum, makes the other one uncertain; minimum uncertainty remaining to the order of Planck's constant (h), $\Delta x \times \Delta p = \hbar$.

The author states that he is for the realistic view of scientific theories, but then he asserts, 'The properties attributed to theoretical entities are helpful in the progress of science, whether or not they are true.' This is not a realistic stand.

The author says that, 'Quantum mechanics has not been contradicted by an experiment so far' but, actually, quantum mechanics is not a finished theory. It has constantly evolved approximating more closely to observed facts. Thus in explaining the fine structure of the hydrogen atom with splitting in spectral lines, when Schrödinger's wave equation was not satisfactory, Sommerfeld's relativistic atom model, and Pauli's theory of electron spin were mooted, till, finally, Dirac's relativistic wave theory of electron was found more satisfactory.

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Agenda for Research

Gangeśa's Tattvacintāmaṇi is regarded by common consent, as the most outstanding work on epistemological issues relating to the problem of knowledge in the Indian tradition. Yet, as far as I know, there is no clear formulation of his contributions to the field of philosophy, or even the way he saw the problems relating to the issues he raised. What is even more surprising is the fact that inspite of the numerous references by name to the earlier thinkers whose views he explicitly mentions or refutes, there is almost complete ignorance about the development of Nyāya between Udayana and Gangeśa which should by now have attracted the attention of scholars, particularly as there is supposed to have been the most radical break in the philosophical tradition of India during this period. Amongst his predecessors, Gangeśa mentions the following names in the Pratyakṣa and Anumāna Khaṇḍa respectively:*

Name	*No. of times mentioned*
Pratyakṣa Khaṇḍa	
1. Rucidatta	1
2. Āloka Kāra	2
3. Pragalabha	2
4. Miśra (Vācaspati)	1
5. Maṇikāra	2
6. Vācaspati (Miśra)	2
7. Kusumānjali (Udayana)	2
8. Prābhākara	5
9. Navya Prābhākara	1
Anumāna Khaṇḍa	
10. Upādhyāya	8
11. Yajñapati	3
12. Jayadeva	6

*The references to thinkers in the Pratyakṣa and Anumāna Khaṇḍa of Tattvācintāmaṇi have been taken from the content pages of the volumes published by the Kendriya Sanskrit Vidyapeeth, Tirupati in 1973 and 1982 respectively. It is not clear whether all these references occur in the main text of Gangeśa or in the commentary thereon published alongwith the original text in these volumes.

13.	Cudāmaṇikāra	1
14.	Prakāśakṛd	7
15.	Khaṇḍanakāra	1
16.	Maṇikāra	1
17.	Cudāmaṇi Kāra	1

Amongst the Naiyāyikas well-known in the tradition, only Vācaspati Miśra and the author of Kusumānjali are mentioned. The latter's view is explicitly refuted, while the former's is further explicated and defended. The mention of Navya Prābhākara is strange as generally no one seems to know about it.

There is another problem regarding the mention of Maṇikāra whose views are explicitly refuted. It must have been an earlier work, as in the tradition the term *Maṇi* and Maṇikāra refer only to Tattvacintāmaṇi and Gangeśa respectively. A similar problem arises with reference to Prakāśakṛd, the author of *Prakāśa*, whose views are refuted a number of times in the *Anumāna Khaṇḍa*. The reference to *khaṇḍānakāra* most probably refers to Śrī Harśa who wrote *Khaṇḍana Khaṇḍa Khādya*. A different problem arises in respect of the views of Upādhyāya whose full name is not given. Generally the term is taken as referring to the work of his son Vardhamāna Upādhyāya, but obviously this could not be the case here. There must have been some other Upādhyāya whose views have been refuted by Gangeśa.

Perhaps one could reconstruct the position of these thinkers on the various issues on the basis of Gangeśa's mention of them and his refutation of their position in his work. This might provide a clue to the lost history of Nyāya between Udayana and Gangeśa giving us an idea of the continuity of development instead of what we generally see as a sudden break which seems inexplicable in terms of what went before. As the work of Maṇikaṇṭha Miśra, that is, 'Tarkaratnam', *JICPR*, Vol. IX, No. 1, is already available we might also take it into account to reconstruct the history of Nyāya after Udayana and before Gangeśa.

DAYA KRISHNA

Focus

Bṛhadāraṇyaka Upaniṣad is a well-known work. Yet it has hardly been noticed that it calls its chapters as Brāhmaṇa which, normally, refers to those parts of the Vedic Corpus which are supposed to be completely separated from the portions called the Saṁhitā, the Āraṇayaka and the Upaniṣad. The Saṁhitā part is supposed to consist of Mantras alone while the Brāhmaṇas are supposed to deal exclusively with the correct procedure for the performance of the different Vedic sacrifices. *Īśopaniṣad* is an obvious exception as it forms an integral part of the Śūkla Yajurveda. The use of the term 'Brāhmaṇa' in the context of the Bṛhadāraṇyaka Upaniṣad needs an explanation as it questions the usual understanding of the term 'Brāhmaṇa' in the tradition.

There is another aspect of the Bṛhadāraṇyaka Upaniṣad which does not seem to have been noticed as it raises a basic question regarding the tradition of knowledge about the Brahman *before* Śaṁkara in the Indian tradition. Śaṁkara himself starts the Bhāṣya by saying:

ॐ नमो ब्रह्मा दिभ्यो ब्रह्म विद्या सम्प्रदाय
कर्तृभ्यो वेश ऋषिभ्यो नमो गुदुंभ्य।

This means that there was a *Brahma Vidyā Saṁpradāya* to which Śaṁkara belonged and which existed before Śaṁkara. The history of the Saṁpradāya needs to be explored and note taken of the fact that it considers itself as a *Saṁpradāya* amongst other *Saṁpradāyas* and was regarded as such by others, in the tradition.

Strangely, Śaṁkara does not say anything at the beginning of his *Bhāṣya* on the *Brahma Sūtra* about this Saṁpradāya and, what is stranger still, starts the Bhāṣya not by talking about *Brahman* or about *Ātman* but about *Asmat-Yuṣmat* between which there is supposed to be a fallacious identification which he considers to be the paradigmatic example of *adhyāsa* in his philosophical framework. The above-mentioned discrepancy would suggest that the *Bhāṣya* on the Bṛhadāraṇyaka Upaniṣad was perhaps written earlier than the *Bhāṣya* on the *Brahma Sūtra* as at that time Śaṁkara considered himself to belong to the *Brahma Vidyā Saṁpradāya* which he later gave up for *Ātma Vidyā Saṁprādaya*. The term *Ātma Vidyā* was used earlier than Śaṁkara and is mentioned by Uddyotakara in his *Vārtitka* on

the *Bhāṣya* of Vātasyāyana on the *Nyāya Sūtras*, and its *Niḥsreyasa* was regarded as *Mokṣa*. But as far as we know, the term *Brahma Vidyā* does not seem to have been widely prevalent in the tradition, even though the *Brahma Sūtra* was explicitly written on the topic concerned. This may perhaps explain why we have no *Bhāṣya* on the *Brahma Sūtra* prior to Śaṁkara as what the philosophers in the non-Buddhistic tradition were interested in was in establishing the independent reality of *Ātman* and not that of *Brāhmaṇa* or even of the Īśwara. The Nyāya Sūtras are a classic example of this as also the other schools of Indian philosophy which never talk about Brahman but do talk in some sense or other of the *Ātman*. Still, the explicit mention of a *Brahma Vidyā Saṁpradāya* by Śaṁkara suggests that there was such a *Saṁpradāya*, though not perhaps as popular amongst the philosophers.

DAYA KRISHNA

Notes and Queries

1. Is there is a *Sāmānya* of *abhāva*? In case there is, is it known by perception or inference?
2. What is the difference between *atyantābhāva* and *sāmānyābhāva*, in case the latter is accepted as a genuine universal by those who accept *abhāva* as a separate *padārtha*?
3. What is the difference, if any, between *abhāva* and *anuplabdhi?*
4. How are *prāgabhāva* and *dhvaṁsābhāva* known? Is the beginninglessness of the former different from the endlessness of the latter and, if so, how is this difference known?
5. Is *anyonyābhāva* known by *pratyakṣa* or *anumāna?* In case it is the latter, how can any *vyāpti* be established in the usual sense of *vyāpti* in the Nyāya tradition? Alternatively, if it is supposed to be known by *pratyakṣa* how could there be two simultaneous *indriyārtha sannikarṣa* which themselves will have to be different from each other?
6. In case *indriyārtha sannikarṣa* is supposed to be a necessary condition for *laukika pratyakṣa* according to Nyāya, how can there be a *pratyakṣa* of *abhāva* as, by definition, there can be no *indriyārtha sannikarṣa* in its case? The same problem arises in the case of *sāmānya*, in case its perceptual apprehension is accepted as is generally alleged to be the case with Nyāya.

DAYA KRISHNA

Book Reviews

BINA GUPTA (Ed.): *Explorations in Philosophy: Western Philosophy—Essays by J.N. Mohanty*, Oxford University Press, New Delhi, 2002, pp. 276, Rs 495

This is a work comprising 21 essays by J.N. Mohanty, the well-known spokesman of Edmund Husserl's phenomenological philosophy. Bina Gupta's 37-page introduction to the essays is elegantly written and discusses, among other things, the very *raison d'être* of Mohanty's anchorage in Husserl's phenomenology. The essays, initially given as lectures and later on published, are divided into two parts: the ten essays in Part I have for their focus various themes directly dealt with by Husserl, and the eleven essays in Part II form Mohanty's phenomenologization of certain independent themes. One of the problems Bina Gupta discusses in her introduction and leaves pretty open is whether Mohanty's early training in Indian logic and Vedanta predisposed him towards Husserl's phenomenology and towards the understanding of Husserl's work. Bina Gupta does not rule out the fact that since there is a certain sort of marriage between Saṁkara's *Brahmasutrabhasya* and Husserl's phenomenology in Mohanty's mind one could say that Mohanty bestows nuances he *sees* in Saṁkara Vedanta onto Husserl's phenomenology and vice versa. Whatever it may be, Bina Gupta has done yeoman service to philosophy by bringing together the insights of one of the most creative Indian philosophers on Husserlian phenomenology, which by any measure, opened up a new gate for the study of human consciousness.

What is the relevance of Husserlian studies and, for that matter, of philosophical studies, today? This question forms one of the concerns of Mohanty's essays. Mohanty seems to be on the defensive in answer to this question. He writes: 'It is deeply distressing to note the concern one finds today amongst philosophers about the "end" of philosophy. People who talk endlessly about meta-philosophical questions, including if philosophy is not breathing its last, do little philosophizing themselves.' Mohanty is emphatic about his view that 'every movement of thought currently reigning on the continent owes something' to Husserl's phenomenology. The development of structuralism, that of hermeneutics, the revised readings

of Marx and Freud, the deconstructionist programmes, Mohanty holds, can trace their lineage to Husserl's phenomenology *via* Heidegger.

One of the seminal notions in phenomenology Mohanty has exhaustively written on (more than four essays in this collection are devoted to the study of its expression) is intentionality. Mohanty's essay entitled 'Husserl's Concept of Intentionality' is designed to give a comprehensive account of intentionality in the total *Husserliana*. There are four aims which this essay is written to fulfil, says Mohanty: the portrayal of the philosophical relationship of Husserl's idea of intentionality to Brentano's; the concept of intentionality as it had developed through various phases of Husserl's thinking; an answer to the critics of intentionality, such as Sartre and Merleau-Ponty; and a fresh restructuring of the concept. Actually, there is nothing in Husserl's deliberations on intentionality which Mohanty has left untouched. The most argumentative of Mohanty's essays on intentionality is 'Can Intentionality be Explained Away?' Some of the trends in today's philosophical thinking are that the mental states and several facets of human behaviour exhibit a directedness towards objects, that consciousness need not be taken as 'attached' to an object, that the subjective idealists would, for instance, believe that the object should be looked upon as an idea located within consciousness, that the object is a representation, called eminently the *ākara* of consciousness. If regarded in this way, the whole idea of intentionality is to be dismissed.

It is well-known that Carnap, Quine and Shaffer interpret intentionality as a relation amongst terms which are far from being 'intentional'. For them the objects of intentional attitudes are linguistic entities and therefore intentional sentences could be replaced by sentences denoting linguistic entities. Russell too argues in his *Analysis of Mind* that if by intentionality we refer to a mental act then the acceptance of such an act appears to be 'unnecessary and fictitious'. For Russell, we need not grant the thesis that there are mental acts like intentionality and therefore the intentionality idea must be rejected. Mohanty, however, comes out with a retort in response to Carnap's, Quine's, Shaffer's and Russell's understanding of intentionality. He says: 'A (mental) act is anything which exhibits intentionality, and if empirically it may not be possible to detect anything like a mental *activity* it surely is possible to discern the directedness, the of-ness, the peculiar aboutness which characterizes our thoughts and beliefs, desires and wishes, loves and hatred.' It is difficult

to find out how strong the thesis defending 'mental acts', intentionality being one such, is.

Mohanty's book, *Edmund Husserl's Theory of Meaning* (1966), is widely known among Husserl scholars. The essay, 'On Husserl's Theory of Meaning', reproduced in the volume is from the *Southwestern Journal of Philosophy* and pointedly discusses the generally held opinion that Husserl borrowed from Frege the distinction between 'meaning' and 'reference' and dressed it in his own terminology. Mohanty claims, with very substantial evidence collected by him from Husserl's works, that the distinction between 'meaning' and 'reference' Husserl has made is independent of Frege's '*Sinne*' and '*Bedeutung*'. Besides, for Mohanty, it is not right to believe that it is Frege who had aroused in Husserl the sense that he (Husserl) was being psychologistic—Mohanty tries to show that 'Husserl had already overcome psychologism, to the extent that he ever did, before Frege's review of his *Philosophie der Arithmetik* (1894).' One of the most interesting findings of Mohanty is that the correspondence between Husserl and Frege shows us that on receiving copies of Husserl's 1891 papers and also Husserl's *Philosophie der Arithmetik* Frege had emphasized that the two had many ideas in common.

Of great interest to the general student of philosophy, and particularly of philosophy of religion, would be the question Mohanty deals with in his essay, 'What is Special About Phenomenology of Religion'. This essay visibly leans on Steven Laycock's *Foundations for a Phenomenological Theology* and Anna-Teresa Tymieniecka's *The Three Movements of the Soul*. Although the two books are far apart from each other in their project, they are written from a phenomenological point of view and this has attracted Mohanty's leaning on them. Mohanty places the phenomenology of religion, unlike the philosophy of religion, as an incisive discipline. Phenomenology of religion, he says, is not (and should not be) preoccupied with the questions well-known to the philosophers of religion, such as the rational proofs for the existence of God, 'if God is omniscient, omnipotent and absolutely benevolent, then how can there be evil in his creation?', etc. Surely, Mohanty remarks, phenomenologists of religion need not be oblivious of these questions but they should mainly dwell on the experience as 'the source of meaning and validity of' what makes one raise such questions. One of the basic problems Steven Laycock, for instance, raises is about the God-phenomenon, i.e., '*God as experienced by me in my reflective act*' (italics, Laycock's). But Mohanty goes deeper

and asks whether there is any 'specifically religious intentionality', that is, 'an intentional act of a type such that its object is only a religious object.' If one argues that there are emotions, such as faith, worship, love, prayer, etc., which amount to the facets of religious consciousness, it is not difficult to point out that these emotions are not necessarily directed towards God alone, that they could have non-religious objects for their arousal. Perhaps religious experience does not entail a type of intentionality called religious intentionality, and perhaps Levinas is right in saying that religiosity implies the transcending of the intentional in which the totality of all our intentional experiences (cognitive, affective and volitional) and the totality of the relationships we have vis-à-vis the world and the others are encompassed.

As a matter of fact, there is a continuity of phenomenological exploration in Mohanty's two essays in the collection: 'What is Special About Phenomenology of Religion' and 'Phenomenology of Religion and Human Purpose'. Reiterating what he writes in the former essay, Mohanty states in the latter essay that 'the question whether God exists is of no concern to the phenomenologist. What concerns him is what religious acts constitute for the religious person, the divine being as an existent reality and as divine.' Mohanty clarifies that 'a phenomenology of religious acts has been made possible by the modern discovery that feelings are not merely subjective states but are intentional in as much originary sense as cognitive acts.' Along the same wavelength, Mohanty argues that the feeling of absolute dependence on God religious people talk about should be taken as 'an intentional experience' and not a mere subjective state. If this is so, one will have to take for granted that religious consciousness is a universal phenomenon, whatever may be the variety of its expressions or acts. Even religious language will have to be analyzed hermeneutically so that we are able to bring to the surface the hidden nuances of its metaphors and its peculiar regionally and culturally originating figures of speech.

However, there seems to be the rub here. Would a phenomenologist of religion maintain that we could infer from the religious intentionality the existence of the divine? Could we take the universality of religious consciousness or religious intentionality as pointing to the objective reality of God? Mohanty writes that 'the mere fact that there is a certain intentional act directed towards an object does not entail either the existence or the non-existence of such an object.' He further writes that 'intentionality is

not a relation relating a mind to an object in a certain specific manner, for if it were a relation the subsistence of this relation would have implied ... the reality of both the terms involved.' Mohanty warns us against making a hasty transition from phenomenology to ontology, from 'a phenomenology of religious acts to an ontology of divine being or beings.' One must point out here that even in transcendental phenomenology the question would arise 'what is the origin and the meaning of religious intentionality?'

The phenomenological study of religious consciousness and religious intentionality does not appear to be the main concern of Mohanty's explorations. As Bina Gupta, the editor of the volume, has pointed out, noema, intentionality, descriptive psychology, essence and meaning are the central issues in his writings. And these issues form the foundation of Husserl's phenomenology. It is very revealing that in the essay entitled 'Phenomenology and History' Mohanty says that 'phenomenology' is for him 'transcendental phenomenology', that is, a phenomenology which is not ontic in the sense in which Heidegger takes it, but one which tries to grasp the structures, contents and meanings that are interwoven with consciousness or *Dasein*. It is this radical interest within the domain of phenomenology that has made Mohanty visibly tilt towards idealism, and this is despite the realist temperament prevalent among philosophers of our time.

A case for idealism is presented by Mohanty in the essay with the same title. This was originally a lecture delivered by him at Oxford (at All Souls College) in the company of two other eminent philosophers, Donald Davidson and Peter Strawson.

In 'A Case for Idealism' Mohanty speaks of two versions of idealism, one based on Hegel's *Phenomenology of Mind* and the other anchored in phenomenology. For the former, whatever may be the form of consciousness—perceptual, scientific, or religious—what is perceived by consciousness is posited *outside* it. That is to say, there is some sort of realism built into this kind of idealism: the perceiver has to posit the perceived as something independent of the act of perceiving. In the second kind of idealism, it is the intentional experiences of a certain kind that brings the object into being. The second version has a transcendental force in the sense that according to it consciousness is so related to the world that the latter is secreted by it. Mohanty, however, puts forth Indian idealism, which is not too distant from the phenomenological version of idealism. The fundamental characteristic of consciousness, in Indian idealism, is its

transparence (*svaprakāsa*) and its *jnānasakāra* or the internality of the content in relation to consciousness. The third characteristic Mohanty adds to these is *svatāprāmānyavada* or the intrinsic validity of whatever consciousness knows. His contention is that all these three characteristics, when seen from a phenomenological point of view, would give rise to a strong idealism.

It is necessary to observe that idealism is in-built in transcendental phenomenology. What Bina Gupta states while explaining the idealistic presuppositions of phenomenology is extremely enticing. She points out that the main role of phenomenology is to be concerned with essences, i.e., the essential relations or structures, and not with particular facts. The very method of eidetic reduction Husserl is known for is designed to detach essences (Eidos) from the particular or individual entities. Suppose the phenomenologist asks the question 'What is the essence of consciousness, or that of a work of art, or that of a moral experience?' The search would be not for the world in which we live and in which we encounter the varied situations but for the essences which are, as Husserl holds, transcendental. The transcendental nature of essences would inevitably give rise to the question about their appearance in linguistic constructions. Whether the task of philosophy is to describe these essences, and what 'description' would ultimately consist in, form the thrust of four papers by Mohanty in the volume: 'The System and the Phenomena: The Kant-Interpretations of Nicolai Hartmann and P.F. Strawson', 'Thoughts on the Concept of "World"', 'Phenomenology and Psychology' and 'On Philosophical Description'.

That phenomenology is committed to description and not to speculation or system-building is emphasized by Mohanty throughout the four essays. What are the contents of description? What does one describe, even if one claims to give a 'pure' description? What should a philosopher do when he undertakes a descriptive enterprise?

First of all, it has to be taken for granted that the actual experience-based sentence, such as 'I have a toothache', would surely not be a philosophical description. But the sentence 'All conscious states are *of* something' would be both philosophically and essentially important. In the same way, Mohanty maintains in the paper entitled 'Phenomenology and Psychology' that the theory of the unconscious that psychoanalysts, for instance, take as a postulate should not be of much interest to a phenomenologist or a descriptive philosopher. A phenomenologist would

be interested in finding out the essential background of the unconscious, and therefore would want to find out how whatever is retained, or driven back, from the conscious gets converted into the unconscious. In other words, there is always an element of *hyle* which goes to form the unconscious. Thus, the essential relations within the whole of the *hyle*, some at the conscious level and the others at the unconscious level, would be of concern to a phenomenologist.

As I have already remarked, it is very ingenious of Bina Gupta to have dealt with the question whether Mohanty's dedication to the study of Husserlian phenomenology could have resulted from his early training in the Vedanta philosophy of Sankara. Indeed, the question how far a thinker's exposure to a dominant thought in his tradition can be shown to have coloured his involvement in a particular style of ontological thinking is bound to remain debatable. The Indian situation has always been amorphous. If Mohanty's early appropriation of the Sankara Vedanta is conceived to have pushed him into phenomenology, one knows that there have been philosophers with training similar to Mohanty's who have shown commitment to the analytic philosophy, to Marxism, to positivism and neo-positivism, and not a few of them have been vitriolic critics of the phenomenological school. We do not know clearly how the genealogy of knowledge works. When, some years ago, I brought to Marvin Farber's notice the umpteen zones of similarity between Husserl's phenomenology and Sankara's thought and said stoically that perhaps Husserl was a reincarnation of Sankara, Farber smiled enigmatically and muttered 'Yes, perhaps.'

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MICHAEL KRAUSZ: *Limits of Rightness*, Rowman & Littlefield Publishers, Inc., 2000, pp. vii + 167

One of the perennial problems of philosophy has been to locate, identify and articulate the nature of the connection between language and reality. It is true that the concept of reality itself is problem ridden. There is no general agreement regarding the nature and number of reality. Nevertheless,

whatever be the nature of reality one has in mind, as soon as it is expressed in language, it invites scores of problems. Professor Krausz has addressed some of these problems in his extremely elegant book—*Limits of Rightness*.

In very naïve terms, we can say that reality consists of concrete objects and their interrelationships. On the other hand language is a rule-bound abstract activity. We also assume that a realm of concrete objects, including our own physical presence (reality) exists independently of our activities—mental or physical. In fact, a realm of independent objects is presupposed in order to act; though this realm of objects may get altered due to our activities. However, to act and to obtain the desired results, the agent must know something about his/her environment, what are the constituents and how they behave, in which (s)he lives. Such knowing demands a symbol system (a set of indivisible symbols and a set of rules to put them together), a language. The availability of a symbol system, independent of the realm of objects, allows the symbol system to float on its own. The language constitutes a reality of its own. The problem is that of co-relating the two realms—the realm of concrete objects and the abstract realm of symbol system.

It is quite possible to have a collection of some arrangements of concrete objects, which can be co-related, with many alternative symbol systems with equal ease. If we prefer to call such symbol systems, which can be co-related with some arrangement of concrete objects as *interpretations*, we immediately find that alternative interpretations are available for the same reality. The language–reality connection becomes too fragile. On the other hand, if we make the language-reality connection too rigid, we are forced to maintain that the realm of objects can only be construed through the symbol system available to us. Hence language–reality connection is unique. In other words, alternative symbol systems create alternative realities. It is only apparently we believe in alternative interpretation. The fact of the matter is that some sharing between two symbol systems generates the illusion of multiplicity of interpretations—many interpretations of the *same* object.

The problem further thickens when we find that even within the same symbol system alternative formulations are possible for the same segment of reality. The problem is really a problem of understanding the term 'same' and its other cognates. The pertinent question is that of *sameness*. Let us assume that two objects X and Y are the same. This sameness is

only in terms of the predicates [or descriptions] of X and Y. We can always make these descriptions of X and Y coarse enough to say that they are same. On the other hand, we can also make the descriptions fine-grain enough to say that even two occurrences of the same X are different. It is clear enough that sameness is imputed as a matter of convenience. This brings us to the notion of purpose and intention.

Is interpretation a purposive activity? Do we relate a particular object with a particular symbol system with an intention? The tendency to relate an object of experience with some symbol system may be instinctive but the choice of the symbol system may not. Why do we choose to describe a bottle as half-empty when it is half full?

In an attempt to deal with such problems related to interpretation, Krausz has undertaken the task of analyzing various shades of realism, relativism, constructivism, singularism, multiplicism, aims of interpretation, etc. For almost all such items, he has devoted reasonably detailed account of the contemporary controversy.

In order to prepare the grounds for entering into the arena of contemporary debate, Krausz has also made his position clear. On p. 1 itself he lays down his project in terms of admissible interpretation, cultural entities, aims of interpretation, ontological entanglement, etc. The project seems to be divided into five sub-projects. The most important of them all, it seems to me, is the question: 'How do issues concerning the singularity and multiplicity of admissible interpretations bear on the singularity or multiplicity of life-paths and projects?' The thirteen chapters that follow the introduction are elaboration and explication of the project continuously progressing towards the desired conclusions—twenty-seven in all.

One of the significant points that Krausz tries to bring forth is that the theories regarding singularity or multiplicity of interpretations are 'detachable' from the realism-antirealism issue: '... orthodox association of singularism with realism and multiplism with constructivism are not necessary' (p. 35). Through a series of arguments, he tries to show that both singularism and multiplism (theories regarding interpretations) are compatible with both the alternative metaphysical stands of realism and constructivism: 'One could coherently adopt one of the four combinations: singularism–realism, multiplism–realism, singularism–constructivism and multiplism–constructivism' (p. 35). This seems to be a great achievement. If his arguments are convincing enough to show that the relation between epistemology and metaphysics is as fluid as between language

and reality then, undoubtedly, the book is a great success. Even if a reader remains sceptical regarding the detachability of the theories of interpretation from the metaphysical positions, the book is an excellent exposition of the contemporary controversy regarding the problem.

In order to make it more salable in the American market, the author has also brought in Hinduism and Buddhism under 'Two Soteriologies' as an independent chapter (Chapter Twelve) in this book. The three/four page summary of Hinduism(?) and Buddhism, especially to elucidate aims of interpretations which are in turn rooted in life-paths is destined to miss very many nuances of the life-form. It eventually does so and presents both Hinduism and Buddhism as two homogeneously uniform life forms. This itself is a debatable issue. It is quite difficult to see a homogeneous life form under any religious practice, which has survived a long history. Over a period of time, the homogenizing factors and attempts, which lead to orthodoxy eventually, give way to more liberal trends. Consequently heterogeneity is the rule and not aberration for any culture with a substantial history. If a culture has survived that long (Hinduism or Buddhism), it is mainly because of its liberalism, tolerance and ability to accommodate. Such factors necessarily give rise to heterogeneity rather than homogeneity.

Let us come back to the main issue—objects and their descriptions, the language-reality knot. As mentioned earlier, it is indeed a naught problem and no viable answer seems to be in the offing. One of the problems is that of methodology itself. How are we going to settle the issue? The unsettling feature of the problem is basically due to a kind of hermeneutic circularity—interpretation needs an object and an object is available (visible) only through an interpretation. One is so intrinsically dependent on the other that isolating interpretation from the object or the object from the interpretation appears to be a hopeless task, yet they are not the same. One may be (intrinsically) dependent on the other, nevertheless, they are two different entities—so diametrically different that even a connection between them is difficult to establish, not to speak of their dependence.

In order to elucidate the point Krausz has brought most of the contemporary thinkers under his consideration. Consequently, the attempts made by the different contemporary thinkers by stipulating 'further objects' (Thom) to *no objects* (Goodman) via 'objects-as-represented', 'intentional object' (Krausz), 'object-as-such', 'intentional denotatum' (Margolis), etc. have been thoroughly discussed. There seems to be an inflationary race in

terms of terminology and all these to locate 'that which is interpreted' (Chapter Three). Later, the author has moved towards a 'Constructive Realism' (Chapters Five to Nine) and has discussed various attempts to reconcile the Realism–Constructivism debate due to Harre (Chapter Six), Harrison and Hanna and Wallner (Chapter Seven), Putnam and Gupta (Chapter Eight) and Margolis (Chapter Nine).

After all these attempts, the author had to ask a serious practical question regarding the 'Aims of Interpretation' (Chapter Eleven). Again the same problem of pluralism versus multiplism reappears in another disguise. The issue has been handled with an open-ended solution. The plurality of objects may happen to be due to a plurality of aims. Different aims may address the same object differently and thereby the object of interpretation may take different forms. As an explanation for the plurality of aims, the author has brought in the 'Life Paths and Projects' (Chapter Thirteen). The plurality of objects or, for that matter, the plurality of interpretations is due to the differences in the life paths, since the activity of interpretation is to be viewed as a project specifically rooted in some life path.

In short, the book is pleasant reading and I personally have enjoyed every bit of it. I am sure, any scholar of philosophy will find enough material on the contemporary debate related to the Realism versus Constructivism issue and many of its subsidiary problems. The human activities, even that of interpretation are to be viewed in the perspective of other activities placed in a larger network of life paths, is an interesting thesis and needs further probing.

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SANJAY KUMAR SHUKLA: *Kant's Copernican Revolution*; Snigdha Publication, Allahabad, 1999, pp. xiii + 243, Rs 350 (Hardbound), Rs 250 (Paperback)

This book has five chapters. The first is an introduction. The last is a conclusion. The second, third and fourth are on the nature, epistemic implications and non-epistemic implications of Kant's Copernican Revolution, respectively, of 23, 111 and 37 pages. This page counting is to

indicate the degrees of importance the author gives to the three different aspects of the Revolution. As Professor R.R. Pandey writes in his Foreword, 'The major thrust area of the monograph is undoubtedly epistemic implications though non-epistemic implications are duly recognized and given proper place' (p. vi). The author's doctoral thesis is entitled *Kant's Copernican Revolution and its Epistemic Implications*. The book is a 'slightly revised and extended version' of this thesis. In other words, this book is an output of Dr Sanjay Kumar Shukla's (henceforth SKS') post-doctoral research work on his doctoral research work on Kant's Copernican Revolution. Dr Sanjay Kumar Shukla (henceforth SKS) is a senior lecturer, Department of Philosophy, Ewing Christian College, Allahabad. He got his Ph.D. from B.H.U. I mention all these usually-omitted particulars, because the unusual number of printing errors may distract one from entering into the text seriously.

The book is an attempt to examine the nature and the epistemic and non-epistemic implications of Kant's Copernican Revolution.

In the Introduction, three sections follow a brief sketch of Kant's biography. The sketch outlines Kant's disciplined life, his academic pursuit, thirteen of his important works, and how Kant arose from his 'dogmatic slumber' in addition to the factors that influenced Kant's philosophy. Of the three sections, the first covers the distinction between geocentric and heliocentric theories in astronomy. The account clearly points out how, in spite of its genuine difficulties (for example, absence of Stellar Parallax and that of any explanation for the falling bodies), the heliocentric theory becomes significant. The second is a survey of precritical philosophy, i.e., of rationalism and empiricism. Under rationalism, SKS describes the epistemological underpinnings of Descartes, Spinoza and Leibnitz. Under empiricism, he describes that of Locke, Berkeley and Hume. These descriptions are directed towards an explanation of how Kant reconstructs metaphysics 'on the debris of Hume's sceptical ravages' (p. 25). The third is on Kant's transcendental (critical) philosophy. Distinguishing transcendental necessities from logical and psychological, SKS clarifies how synthetic *a priori* is a transcendental necessity. Then, SKS outlines the similarities and differences between rationalism and empiricism. This is to explain how synthetic *a priori* as a transcendental necessity overcomes the difficulties of rationalism and empiricism.

SKS' elucidation of the heliocentric theory's significance suggests that the significance of Kant's philosophy, insofar as it has brought about a

methodological change in philosophy, cannot be undermined even if some of the Kantian ideas can be subject to severe criticisms. This can defend against an assessment of SKS' account. The assessment is that SKS has not argued in defense of any particular concept of Kant, nor has he refuted any. The task he has undertaken is rather expositional. The peculiarity of this exposition is that every important concept of Kant's philosophy has been exposed in the light of a conceptual change.

Copernican revolution is construed as a methodological change. The change that Kant brings about is in the methodology of philosophy. In the second chapter, SKS explains this methodological change in philosophy. Philosophy, in this novel treatment, is a 'critical appraisal of the capacities of human reason' (p. 37) and SKS identifies Kant's Copernican revolution with the achievement of this critical appraisal. The critical appraisal is not to annihilate metaphysics but to get us prepared for metaphysics (p. 38). In this chapter, SKS explains the significance of synthetic *a priori* judgements. He clarifies how Kant finds the possibility of these judgements through a critical pursuit that explains how objects confirm the faculty of understanding, not that the mind confirms the objects. SKS confuses it with 'egocentric view of knowledge'. He says, 'The enduring contribution of Kant consists in advancement of egocentric view of knowledge instead of the Cosmocentric or the Theocentric view' (p. 55).

SKS explains that the methodological change with respect to epistemology is a change in the conceptual relation between objects and consciousness. The talks on 'objects of consciousness' replace the talks on 'consciousness of objects'. We get the objects through space and time, and think of them through understanding. SKS considers Will Durant's assessment of Kantian space and time the proper assessment (p. 74). He does not provide any reason for that. On the contrary, he finds a basis—considering Samuel Alexander's and Einstein's conceptions—on which Kant's conception seems to be inconsistent with the scientific viewpoint. At the same time, he prefers Kantian space and time. For, unlike Newton's absolute space and absolute time, Locke's *a posteriori* space and time and Leibnitz's existence-relative space and change-relative time, Kant's space and time are *a priori*. The scientist's vision of space and time approximates to the Kantian. The scientists tend to emphasize the subjective element. However, space and time are not concepts albeit dependent on human mind. They are *a priori* intuitions. One can make out that the Kantian conception of space and time has its significance even if it has

some genuine difficulties. This is no less true if the Kantian conception is evaluated in terms of scientific theories. Perhaps, SKS wants to convey it through his seemingly inconsistent statements. There are two expositions of space and time, namely, the metaphysical and the transcendental. The former substantiates the claim that space and time are *a priori* intuitions. The latter substantiates the claim that space and time are synthetic *a priori*. SKS notes that Russell and A.C. Ewing have criticized Kant's conception of space and time. However, he appreciates Strawson's remarks on Kant's emphasis on the *a prioricity* of space and time. That is, the emphasis is on subjectivity. Finally, SKS puts the subjective element in its Copernican garb and says, 'it turns out to be nothing less than saying that the mind literally makes the world' (p. 70).

SKS makes a distinction between the Aristotelian (ontological) and the Kantian (epistemological) conception of categories. SKS' exposition of Kant's metaphysical and transcendental deduction of categories and transcendental schematism follows a summary of Kant's general arrangement of Transcendental Analytic. The exposition is an attempt to show how Kant derives the categories from the forms of judgement. Also, it tries to show how the categories are necessary for the possibility of experience. It clarifies how a 'mediating representative' (viz., time, which is sensible and *a priori*) between categories and sensible intuition is required in the Kantian framework. SKS points out that Kant 'however does not show how different categories are related to one another' (pp. 87–8).

In SKS' opinion, Hegel has overcome the gulf between phenomena and noumena by 'criticizing Kant's basic contention that categories of understanding are incapable to penetrate the thing in itself' (p. 90). He also opines that Alexander is in agreement with Hegel in regarding categories as all pervasive (phenomena plus noumena), as they are not only epistemologically primary but also ontologically. Then, SKS discusses the understanding of self. Self is understood at three levels—epistemological, empirical and moral—as the knower, known and the noumenal self, respectively (p. 91). In the transcendental unity of apperception, it is taken in its epistemological sense. Distinguishing it from the Cartesian and Humean, and the sense of apperception from that of Leibnitz, SKS concludes—after considering the viewpoints of Strawson, Edward Caird, Green, A.C. Mukherjee, Korner, Findlay, Ewing, Cassirer and Wilkerson—that it is a logical presupposition rather than an ontological (p. 105).

SKS considers the distinction between empirical and spiritual realms the basis of the distinction between phenomena and noumena. He explains how noumena is different from appearance as well as from phenomena. An object of understanding not given by sensible intuition is different from both an object of sensible intuition without being determined by categories and that being determined by categories of human understanding. SKS explains the positive and negative sense of noumena. The former sense is refutable and the latter sense is useful. This is so to explain the ideas of reason, i.e., the idea of immortality of soul, the idea of freedom of will and the idea of the existence of God. SKS' critical discussion of noumena includes the opinions of Findlay, Cassirer, Hegel, Lenin, Korner, Graham Bird, Ewing, Miller, Broad, Dixon and Paton. The discussion lacks a clear-cut statement of the author's viewpoint. However, with Paton's saying—without thing in itself the whole of critical philosophy shatters like house of cards (p. 119)—SKS describes Kant as a metaphysical realist and epistemological idealist. Following Kant, SKS characterizes Kant's idealism as 'Formal or Critical or Transcendental' distinguishing it from all types of material idealism in which he puts Descartes, Berkeley and Hume. SKS explains the debate on whether Berkelian idealism is subjective or objective. For this he employs the criticisms of Perry, Moore, Russell and Kant on Berkelian idealism. It makes it easier to understand Kant's Transcendental idealism. SKS outlines the criticisms of Dixon, Fichte, Schelling, Hegel and Whitehead on Kantian idealism. Then, he outlines Ewing's points on what Kant has contributed to idealistic movement (pp. 133–5).

SKS' discussion on Causality (pp. 135–41) explicates the contrast between Humean theory of causation and Kant's theory of causation. It also outlines how Schopenhaur, Cassirer, Wilkerson, Korner, Strawson and Einstein differ from Kant's viewpoint on causation. In his discussion on synthetic *a priori* judgements (pp. 141–53), SKS takes up the issue of analytic-synthetic distinction and Kant's argument for the possibility of synthetic *a priori* judgements in mathematics and physics. He outlines the Kantian version of analytic-synthetic distinction and says 'the Kantian notion (analytic-synthetic distinction) is objectionable, first of all it is confined only to subject predicate form excluding relational and existential propositions. Secondly, the phrase subject contains the notion of predicate is purely metaphorical' (p. 144). Then, SKS puts Korner's version, Ayer's version and Britton's version, as more and more improved ones, in

terms of 'contradiction', 'meaning', and 'possible worlds'. Outlining the criticism of Edward Caird, N.K. Smith, Findlay, Carnap and Quine, SKS outlines the defense of Strawson and Grice (SKS misses Grice's name) against Quine's refutation of that distinction. Outlining Cassirer's points on the special nature of synthetic *a priori* judgements, SKS tries to answer, though without rigour, A.J. Ayer's criticism on Kant's concept of synthetic *a priori* judgements. Towards the end of Chapter III, SKS discusses Reason. He distinguishes Kant's conception of Reason from that of rationalists, empiricists, Hegelian and Neo-Hegelian. He tries to explicate Kant's Theoretical reason by distinguishing it from Platonic reason. Theoretical reason (reason in its wider sense) has been distinguished from its narrower sense which 'is the source of ideas in a technical sense' (p. 152). After distinguishing the pure theoretical reason from pure practical reason, SKS discusses the functions and limits of reason. And, here, he concludes that the Transcendental dialectic vindicates the Copernican turn 'by inflicting heavy damage on metaphysical systems' (p. 163) as these systems mistakenly presuppose a correspondence between Reason and Reality. The dialectic establishes that there is no such correspondence.

The ethical, metaphysical and aesthetic implications comprise the non-epistemic implications of Kant's Copernican revolution. SKS discusses categorical imperative, maxims and postulates of morality under the ethical implications. Under the metaphysical, he discusses four antinomies of Rational Cosmology, four paralogisms of Rational Psychology, and the ontological, cosmological and teleological arguments for the existence of God of Rational Theology. Under the aesthetic implications, he discusses the concept of Beauty and Sublime. SKS points out that 'Kant's most important discovery is that moral law is not a restriction on freedom rather it is itself a product of freedom which can be said to be a Copernican revolution in moral realm' (p. 169). The order of enquiry from definition of good to concept of duty via a moral law has been changed. It is from law to objects suitable to it via will. The phenomenal world has nothing unconditional, hence, moral laws being based on freedom of will are in the noumenal world. Moral actions are performed in the phenomenal world. 'Man is a metaphysical amphibian living in both phenomenal and noumenal world' (p. 173). The Categorical imperative and the three maxims and postulates of morality have been explained before considering criticism on Kant's ethics.

SKS says that the denial of metaphysics is the logical culmination of Kantian Copernican revolution. Kant argues for the impossibility of metaphysics by showing the limits of reason. Hume does so by showing the limits of experience. The *a priori* forms are the *a priori* conditions. Hence, nothing is unconditioned but resulted from it. Thus knowledge, being processed through those forms, must not be unconditioned. We can never know the objects of speculative metaphysics though we can think of them. 'Theoretical reason cannot venture into the realm of noumenal entities such as God, soul and cosmos as shown in Rational Theology, Rational Psychology and Rational Cosmology respectively' (p. 182).

In his discussion on Ontological Argument, SKS' symbolization of the first version could have been more appropriate if he would have put '(x) (Px $\supset$ Ex) and Pg, $\therefore$ Eg' in place of '($\exists$x) (Gx.Px) and (x) (Px $\supset$ Ex), $\therefore$ ($\exists$x) (Gx.Ex)' (p. 192). Secondly, SKS presumes, without any supporting argument, that the recent attempts (SKS gives no reference of any such argument) to revive the Ontological Argument would fail to resist Kant's refutation (p. 193). Of course this does not substantially weaken the main thesis. This, plus some other remarks, like 'The French revolution has gone into the dustbin of history' (p. 207), lead one to think that SKS has made some unwanted sweeping comments.

The conclusion has four sections. The first concludes that the Revolution is a conceptual revolution. The second concludes that science tends to be anthropocentric and this tendency is in conformity with that of conceptual revolution. The third suggests that the Indian thinkers like Dignag and Sankara have parallel conceptual presuppositions (if not revolutions). The fourth concludes that the Revolution has significant influence on phenomenology, existentialism and analytic philosophy. If one thinks, as one goes on reading the preceding chapters, that SKS may point out the conceptual basis of the different implications of the Revolution in the conclusion, then, he would be disappointed.

What is there in this book that I have not mentioned so far in a straightforward way? It is an exposition of (i) Kant's Critique of Pure Reason, and (ii) the assessment of Kant's philosophy made by some reputed philosophers. The exposition has its merit in that it displays the nature of all important Kantian concepts in the light of the conceptual revolution Kant has made in philosophy.

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H.M. Joshi: *Traditional and Contemporary Ethics—Western and Indian*, Bharatiya Vidya Prakashan, New Delhi, 2002, pp. 437, Rs 450

The book under review is a significant contribution to the study of ethics because of its novelty of presentation. The book is divided into three parts and though an attempt has been made by the author to systematize both western and Indian ethics in their modern and contemporary set up, it has given special emphasis on the discussion of contemporary ethical thinkers of the West. Professor H.M. Joshi has opted for a wider canvas to cover the main issues of ethics in a comparative style in an apparent attempt to search for a spiritual freedom for mankind.

The book starts with an eight-page preface in which the author has tried to focus on the semblance of the Greek and Indian thinkers on the issue of an identification of self-knowledge and self-discipline which is evident in all ethical thinkers down the ages. According to Joshi, 'Moral problem has two aspects, one its reflective implications and second will and influencing power' (p. VIII). He also attempted to bring a distinction between 'morality' and morals and claims the former to be universal. Joshi however does not support the view of the contemporary moral thinkers about the relativity and specificity and morals. He holds that moral issues are similar as they affect the entire mankind. According to him the traditional ethics brings out a significant distinct between fact and value but, 'Contemporary ethics discusses certain distinct problems such as moral disagreement, moral adjectives, generalisations, moral syllogism and moral decisions' (p. XIII). We find that the summary version in the preface of contemporary ethics does not give a clear position of different ethical thinkers. But the detailed expositions of the chapters clarify the issue. So far as the Indian approach to ethics is concerned which constitute the Part III of the book, the author proclaims that moral problems of Indian ethics are intimately related with tradition and religion. The author has approached the issues of moral philosophy in a both historical and analytical manner. On the whole, the preface indicates that Joshi aspires to confirm the view of Russell on ethics in his *Outlines of Philosophy* where Russell tries to establish an ethical life as the Good life which is being inspired by love and is guided by knowledge. In his introduction, besides bringing the relation of ethics with other subjects of study, Joshi seems to have equated moral philosophy with applied philosophy as was done by R.M. Hare.

I

Part I of Joshi's book deals with traditional ethics. The theme of this part is more or less the same as that of any standard book on ethics written by either an Indian or a western writer on the subject and starts with the nature and problem of ethics and ends with the discussion of the theories of punishment and moral progress. However, his discussion of the development of morality in Chapter IV deserves special mention. The evolution of conduct is the main theme of this chapter. The addition of this chapter and the discussion of the theme in a cross-cultural set up has to be studied carefully. Although the chapter ends with the traditional discussion of external law as a standard of morality, it discusses the issues of group morality, customary morality and reflective morality in the development of moral consciousness. Group morality and customary morality lead to changeable individual values. But according to Joshi, 'reflective morality is possible by reflective consciousness which is analytical in character' (p. 43). The moral person according to him, 'looks at the justification of his behaviour in society and the state' (ibid.). Joshi delineates the requirements of a moral person in Chapter X, where he discusses standard as value. He says, 'in moral philosophy the term value has got many subjective connotations such as (1) the aim of life, (2) the realization of moral ideal, (3) the intrinsic goodness, and (4) different types of values such as pragmatic, idealistic, realistic and utilitarian prevalent in society' (p. 119). Joshi studies the importance attached to either body or soul of a moral person in a cross-cultural understanding and opines that, 'in comparison with the soul the value of body is temporary and its significance is secondary' (p. 123). He further says, 'actually in modern times there is an intensive search of a synthesis of body and soul' (ibid.). This chapter brings into reference a long list of values like economic values of Marx, discussion of values in the Rāmāyana and Mahābhārata and also Plato, Homer, Dante, Tolstoy, Gandhi and Kalidas. Even if we find in this long list, a discussion of commensurability of values or Nietzsches' 'the transvaluation of values', all these require more detailed discussion and analysis. Moreover Joshi's chapters on the postulate of morality (Chapter XII) and moral progress (Chapter XIII) are very good attempts to bring out comparative ethical theories of India and the West.

II

In Part II of his book Joshi devoted himself to the discussion of contemporary western ethics in ten chapters. By equating traditional with historical ethics, Joshi tries to bring forth in a debatable manner the difference between a traditional and a contemporary ethics. He says, 'the traditional ethics was divided as regards the moral standards among the ideals of pleasure, utility, obligation and perfection. This is not the case in contemporary ethics. It had assumed that morality is essentially related with day-to-day life and moral ideals of happiness, health and social cohesion' (p. 171). The search for meaning which is the hallmark of contemporary philosophy is found in G.E. Moore's question in *Principia Ethica*, 'What is the meaning of Goodness?' Joshi has well taken Professor Moore's position that goodness cannot be equated with naturalistic terms and also how goodness as unity leads to an ideal utilitarianism. He writes by rejecting the criticisms of C.D. Broad and Mary Warnock on Moore's theory, 'On the one hand Moore thinks that goodness is simple and unique whereas on the other hand he thinks that goodness can be shared among the people of society' (p. 185). The topic of next discussion for Joshi is Sir David Ross, who differs from Moore and tries to establish 'Right' as unique and indefinable. He summarizes Ross by saying, 'The ethics of Ross ends into intuitive realisation of moral duty and obligation. It is the moral perception of the agent which justifies duty and obligation as the right and the good in their intimate relationship' (p. 205). Very pertinently Joshi brings Ross into discussion which finds the source of moral obligation in performing 'Prima Facie Duty' such as 'duty for health, duty for the neighbour, duty for justice and duty for reforms in society' (p. 189).

Both the views of Moore and Ross are rejected by A.C. Ewing in his *The Definition of Goodness*; where he held that good and the right are not fundamental terms of ethical consideration. According to Ewing duty and obligation are neither good nor right but they are 'recommendatory' for the individual agent. In this regard Joshi rightly observes that, 'it is not enough to hold that moral proposition is a "recommendation" to other persons in moral discourse. Moral activity itself becomes a determinant of moral imperative uttered by the individual' (p. 216). However, Joshi raises an important question in connection with A.J. Ayer's emotivism. 'A question would arise why moral philosophy cannot discuss social surroundings, sociology of knowledge, moral criteria, nature of duty and analysis of experience?' (p. 221). In his analysis of moral judgement, 'Ayer intends to point out that moral terms and judgements appear to be facts but in fact they are not facts. They refer to subjective emotions which fluctuate from individual to individual' (p. 222). It seems that Joshi subscribes to the view of Mary Warnock who criticizes Ayer to hold that 'moral judgement can not rest upon subjective approval or disapproval shown by the moral agent' (p. 234). In this context, when C.L. Stevenson 'tries to go beyond the psychological analysis of moral proposition and attempts to arrive at cognitive evaluation of moral proposition' (p. 237), in his modification of emotivism, Joshi will not subscribe to this view. On the contrary, he says, 'it seems that Stevenson does not take cognizance of certain types of belief which are radical and can bring change in moral conduct of life' (p. 257).

In discussing Stephen Toulmin, Joshi reasserts his earlier question in a different way. He says, 'the fundamental question in moral philosophy is whether moral activity is to be performed for its own sake or whether it is to be done in accordance with social customs, environment and cultural values' (p. 269). According to Joshi, 'Toulmin appears to be directed towards objective evaluation of moral event' (p. 273). In his own attempt to decide for either the subjectivity or objectivity of moral values, Joshi brings in J.O. Urmson who 'has tried to show that moral problem is that of "grading" terms and articles similar to things in the market place ... and Urmson thinks that there is objectivity in moral judgement and it is possible to have common aim of evaluation' (p. 278).

A significant turn in contemporary Western ethics is coming with R.M. Hare's *The Language of Morals and Freedom and Reason* where Hare holds that moral activity is not simply 'emotive' or 'descriptive' but it is prescriptive as well. Hare was not in favour of deriving 'Ought' from 'is'. Joshi refers to Hare's views on individual autonomy which is a fallout of his doctrine of 'No Ought from Is'. He writes, 'a person has to consider morally relevant features of a situation and decide accordingly what ought to be done in that specific situation' (p. 289). Although Joshi supports the view of Hare, he rightly criticizes Hare for providing a narrow view on human values. He writes, 'Value is not limited to moral judgement and practise alone but it has several dimensions such as physical, social, intellectual, psychic, cultural and spiritual. Hare has not taken into account various types of values which enrich and comprehend human thinking, affection and conative activity' (p. 295). In Chapter XXII, Joshi reviews P.N. Nowell Smith's *Ethics* which discusses the meta-ethical theories from

G.E. Moore to R.M. Hare. Regarding Smith's own view on morality, Joshi writes, 'it is true that according to Smith moral judgement is prescriptive and he denies previous naturalistic view. He thinks that moral language is essentially choice-making and guiding the action' (p. 296). We may say that Smith has tried to bring out a harmony in the previous meta-ethical theories. But, Joshi's criticism is left unresolved when he brings out an assessment of meta-ethical theories. He writes, 'Goodness is not merely an analytic term subject to descriptive and prescriptive aspect but it is at once related with truth and beauty. It is actually capable of liberating individual from ignorance and evil. This view is of course alien to the view of meta-ethical theories but this is required to be brought in moral conceptualizing' (p. 231).

The last chapter of contemporary ethics deals with existentialist ethics and moral philosophy of Sartre. According to Joshi, 'existentialism poses a peculiar moral and metaphysical problem for human person in so far as it is arising from empirical, practical and paradoxical situations of the life and the World' (p. 317). Joshi discusses both Nietzsche and Sartre in detail to discuss the conflict between passion and reason in human situation. Although we find a lot of discussion of Freedom in Sartre, Joshi rightly says, 'existentialism fails in general to develop the nature of moral freedom which is the corner-stone of individual and social life ... the truth of true inward freedom is being ignored by existentialistic thinkers' (p. 318).

III

The present work is a product of the author's lifelong academic involvement with the study of ethics and Indian philosophy. This is evident from the Part III of the book which deals with Indian ethics. Joshi's approach to Indian Philosophy in general is spiritual and all-comprehensive. According to him, discussion on morality in the Indian context will make sense only in connection with a world-view. He writes, 'moral philosophy is not entirely autonomous and cannot be thought alone in terms of moral relationship and values. For this purpose it is necessary to think about ultimate reality and self which are pivotal for action and intention of agent and individual' (p. 323). For him, 'ethical value flourishes on inward self-knowledge and self-discipline' (p. 325). Joshi subscribes to the view of studying individual personality from a 'holistic' standpoint. Hence, the study of 'Dharma' in its multifaceted meaning, brings within its fold the study of 'Karma' because, 'death is not the end of life nor the termination of moral endeavour but it is the preparation for better and righteous life' (p. 328).

Joshi devotes a separate chapter to discuss the interrelation between freedom, obligation and right. He tries to put forth a comparative study of the concept of Freedom in Western philosophy and science along with the Indian context. He discusses Kant's 'Committed Freedom', Hartman's 'Categorical Freedom' along with Heisenberg's principle of 'indeterminism' and Schopenhauer's discussion on 'will' very successfully but, it seems, his main concern was to emphasize 'Spiritual Freedom'. To substantiate his emphasis on this type of Freedom, he brings in K.C. Bhattacharya's *Self as Freedom* and summarizes the views of Bhattacharya who 'has distinguished between bodily, psychical and spiritual freedom and has said that true knowledge and freedom belong to pure subject. It is the subjective consciousness which truly cognizes real freedom. In the search of true freedom the seeker rises from bodily freedom to psychical and finally toward spiritual freedom' (p. 337). Moreover, Joshi is this chapter deals with the concept of moral obligation (dharma) in the Gītā and other scriptures and Dharmashāstras in the broad framework of the pursushārthas and otherwise. He writes, 'I want to point out that in the Hindu religion the concept of dharma has a two-fold nature and function, (1) its metaphysical and ontological character which is found in reality, and (2) its moral, autonomous and secular nature expressed as will, imperative and duty to be fulfilled by pursuing specific vocation in life' (p. 338). However, his discussion of rights in a cross-cultural understanding brings in novelty to the discussion. It is more so when he tries to relate rights and philosophy of work. He writes, 'society cannot thrive without proper work by the individual. Work with sincerity and devotion for the progress of society is true service of the individual man or woman, toward the unity and welfare of mankind' (p. 347). Very rightly Joshi suggests, 'Freedom and demand of rights are conditional upon the determination and performance of action of duty' (p. 349). Joshi, it seems, has adopted a deontological stance here on the issue of duty.

The next two chapters of the book are devoted to the discussion of Jaina ethics which is a fallout of Jaina metaphysics. There is a single aim for Joshi, of providing a theoretical blueprint for the concept of non-violence (*ahiṁsā*). He writes, 'Jainism has uniquely contributed to the development of the doctrine of non-violence not only individually but collectively' (p. 351). Jainas in their attempt to reconcile extremes have

established the concept of Pudgala, 'an intermediary entity which is supposed to be the synthesis of material particles and conscious formation of individuation' (p. 371). This pudgala bridges the gap between the values of empirical life (*anuvrata*) and values of higher spiritual life (*mahāvrata*) of which non-violence is the foremost. In this connection, Joshi very rightly proclaims, 'the gap between *anuvrata* and *mahāvrata* requires to be minimized by bridging the gulf between individual and collective life. Jain ethics shows the direction in which the virtues of moral life are to be followed in public life in spite of major hurdles' (p. 384).

The theoretical aspect of non-violence of Jaina ethics is getting its most glorious illustration in the ethics of Mahatma Gandhi. Joshi is attempting to provide a new interpretation here. He writes, 'in this chapter I intend to show that in his technique of non-violence, Gandhi is more "mass-centered" rather than "individual centered". It seems that Gandhi has resorted to public-persuasion and its supposed success as a criterion of the validity of the weapon of non-violence' (p. 386). Joshi believed that Gandhi's method of non-violence was not a principle of abstract nature, neither was it just a policy, but it is a constructive programme (Satyāgraha) emanated from human psychology. He observes, 'Gandhi developed especially psychological strategy consisting of persuasion, emotional rapport, change of attitudes, love and fearlessness on ones own part while encountering complex problems of human dimensions' (p. 387). The discussion of human personality in the Gandhian framework is understood by 'self-suffering' where the person's moral hovers round countering the violence to bring forth a social harmony. Joshi writes, 'according to Gandhi it is possible for human personality to forget one's own ego and surrender to public welfare and cause of goodness of other human beings' (p. 403). Satyāgraha as the technique of resisting violence is all pervading. Joshi defines, 'the liberal meaning of the term "non-violence" is the "mental" intention of non injuring, harming, disturbing and agonising the mind or body of the opponent or other party' (p. 404) and tries to explain the relevance of non-violence in the present international scenario. The policy of non-alignment in international politics pursued by India is a redefinition of the Gandhian concept of non-violence. Non-alignment is in its simple form a 'no war alliance' or a 'self-defence strategy in non-violent manner'. Joshi rightly observes 'the moral fibre and bedrock of non-alignment is still living and its dynamic leadership is potentially capable of directing UNO and major powers of the World' (p. 413).

The last chapter of this lengthy work is devoted to a discussion of two concepts of 'detachment' and 'liberation', their impact and relevance in modern times. Joshi claims, 'the purport of this discussion is that it is essential and natural in human life and progress that human person aspires for liberation and it does not require any hypothesis or philosophical principle to pursue this craving' (p. 419). He has attempted to bring forth a distinction between freedom as a political ideal and liberation as a philosophical and spiritual ideal. The ideals of a moral person, according to Joshi, ought to be Sarvodaya, Lokasamgraha and Collective Welfare in the Indian context. His picturization of a modern man is correct. He says, 'modern man is not only maladjusted from psychological point of view but is mentally deficit in comprehending the perspectives of life' (p. 428). He also provides the remedial measure, 'unless a new way of life, ethics, sense of awareness and integration of norms and values are brought to the mind of modern man, it is not possible to give abiding peace, security and way to experience reality to mankind' (ibid.). Joshi in his subjectivistic interpretation brings in the concept of detachment as the foremost moral virtue in an immensely complex modern life. Rightly he asserts, 'the necessity of moral detachment, purity and inner withdrawal have become imperative on account of modern complexity of life' (p. 427). This is probably the path to spiritual freedom.

The book contains a fairly good bibliography both at the end of each chapter and also a comprehensive one (p. 432) towards the end followed by a detailed (subject and author) index—a boon to the serious students on ethics. On the whole, Joshi's work acts as a fillip to the study of comparative ethics.

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SUBRATA MUKHERJEE AND SUSHILA RAMASWAMY: *A History of Socialist Thought: From the Precursors to the Present*, Sage Publications, New Delhi, Thousand Oaks, London, 2000, pp. 460, Rs 295

'One can have democracy without socialism and vice versa. Whether the two can be effectively combined is the prime question of our age'

(Lichtheim, 1975, *A Short History of Socialism*, Glasgow, Fontana, p. 302).

This appears to be the prime concern with which the book under review—*A History of Socialist Thought: From the Precursors to the Present* has been written by Professor Subrata Mukherjee and Dr Sushila Ramaswamy. In fact the book is dedicated to the memory of Eduard Bernstein (1850–1932), the finest and the best exponent of social democracy. According to the authors, Bernstein had announced the obsolescence of Marxism to advanced industrialized countries more than one hundred years ago and had emphasized the need to simultaneously realize democracy and socialism without being dogmatic.

The authors point out that socialism like democracy is a modern concept. To trace the origins of socialist ideas to classical antiquity creates an ambiguity for it overlooks its modern concerns, that it arose first as a critique of rampant commercialization and then became a reaction to the industrial revolution which decisively shaped human societies and lives. For the first time in history there was a tremendous sense of optimism that it was possible to create a prosperous, abundant, free, equal and rational society for all with the aid of science and technology. Marx speaks of the truly revolutionary potential of electricity replacing steam. Socialism accepts science and technology based industrialization but is highly critical of capitalism, which with its emphasis on private property rights and free market leads to dehumanization, alienation, inequality, oppression and exploitation. Socialism proposes an alternative society based on public/social/common ownership of these highly potent means of production thereby ensuring liberty, equality, fraternity and justice for all in the true sense.

Given the myriad variations of socialism the authors do not try to undertake the impossible task of defining it. Instead they discuss all the major schools of socialism—Marxism, Anarchism, Guild Socialism, Syndicalism, Fabianism and Social Democracy with special emphasis on important theoreticians like Saint Simon, Marx and Engels, Lassalle, Luxemberg, Cole, Gramsci and, of course, Bernstein.

The authors are of the opinion that in trying to provide a moral and humane alternative to the liberal capitalist state most of the variants of socialism and in particular Marxism—Leninism fell short of its libertarian ideas. Marxism by shying away from theorizing about rights, freedom, political power and the rule of authority in socialist society did not offer

any scope for a constitutional government nor did it ensure efficiency and commodious living for its citizens. Instead it led to a repressive and totalitarian state, which subjugated the civil society. The Leninist experiment in the former Soviet Union was not an aberration from Marx's original position for it could not have been conceived without Marx. The authors maintain that the originators themselves are responsible for the collapse of communism because they remained ambivalent about what they understood as the best order.

However the authors are of the opinion that though socialism as an alternative to capitalism appears to have failed, its importance both as a critique and as a humanizing tendency would continue to be an integral part of the modern political and social theory. After the collapse of communism and with the subsequent universalization of democracy, the authors maintain, that if socialism has to remain relevant it must re-establish its moral and libertarian ideals which would involve a commitment to democracy, human rights, equity, social justice and non-violence. According to the authors what is needed today is Social Democracy.

The term social democracy is sometimes used to mean the theory and practice of democratization applied to all social institutions and not merely to the institutions of government. In a more particular sense the modern use of the term social democrat emerged in 1905 following the split between the Bolshevik and the Menshevik wings of the communist party and second adhering to the label social democrat. However, the general sense in which the authors use the term Social Democracy represents a system of ideas with basic elements of socialist belief with a policy of peaceful social change by popular consent, which seeks reform rather than revolution, which respects constitutional procedures and the principles of democratic election. The underlying belief is that what makes a party truly democratic is that it seeks to rule not merely in the name and interest of people, but also by consent from the people. This means that social democrats must seek to retain the means whereby effective consent is offered and must accept opposition parties and elections, which might lead to their own removal from office.

Social democrat parties have been an important force in European politics. Originally these were dominated by the Marxists, whether orthodox or revisionist, but in Germany the Social Democrat Party (SPD) definitively broke with the Marxists in 1959 when it renounced revolutionary goals even at the level of theory. It was a revolutionary but not

revolution making party. Eduard Bernstein through the Erfurt programme emphasized the importance of: (a) using the existing state for uplift of the working class, (b) universal suffrage for all with proportional representation, (c) freedom of expression and association, (d) free schooling, free legal and medical assistance, (d) local self government, (f) direct legislation by means of proposal and rejection, and (h) an eight hour day. All these goals were to be achieved not through revolutionary violence but through peaceful democratic procedures stressing on the sanctity of means along with ends.

However one finds an excessive faith in democratic institutions and procedures throughout the book particularly in the institution of free and fair periodic elections, which operationalize democratic ideals and goals. Looking to the widespread apathy (the normal poll percentage being 50 to 60) and the ignorance of the average voter who is uninformed about the representatives he is going to vote for, their parties and platforms and their programmes and policies, one tends to take elections with a grain of salt. The huge electoral expenses have corrupted and criminalized electoral politics beyond repair, the money power and muscle power is obvious and all pervasive. It has overshadowed whatever little remains of the people's power. One tends to believe that democratic procedures may not be non-violent. Instead they may thrive on violence of a more routine, more comprehensive and of a more damaging nature. What is needed is a complementary volume on 'A History of Democratic Thought'.

However the connections between the socialist thought and the feminist thought worked out by the authors is of particular interest. The biographical sketch of the theorists makes the book lively as it brings out the personal and the humane face of the philosopher.

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PARUL DAVE MUKHERJI: *The Citrasūtra of the Viṣṇudharmottara Purāṇa*, Motilal Banarsidass Publishers Pvt. Ltd., Delhi, 2001, Rs 750

The book has been published by the Indira Gandhi National Centre for the Arts under the project of *Kalāmūlaśāstra* Series No. 32. It has been beautifully produced, surpassing the previous studies of the *Citrasūtra* of the

Viṣṇudharmottara Purāṇa, as it includes a critical editing of the text comparing it with a number of manuscripts among which two are new and consulted by this author for the first time. The manuscripts from Nepal and Dhaka have been consulted to arrive at authentic readings of the controversial words. Besides, it includes English translation, critical notes, bibliography and glossary. The book presents interesting reading as it includes all the information given by the previous scholars and other texts regarding the use and interpretation of technical terms, techniques of painting and its classification. The author has been successful in the task she sets before herself to present a thoughtful interpretation of a text and the underlying aesthetic theory of Indian art and its relevance today. The text has been translated and edited by many erudite scholars of Sanskrit and art history, like Dr Stella Kramrisch, Coomaraswamy, Priyabala Shah and Sivaramamurti. But none of these works were able to put forth the aesthetic theory in such a lucid manner. For instance, Stella Kramrisch has highlighted the notion of inter-dependence and inter-penetration while attempting the translation of portions consisting of painting and image making of the *Viṣṇudharmottara Purāṇa*, known as the *Citrasūtra*. Though she included all the chapters of *Citrasūtra* taking the meaning of *citra* as image of the unmanifest reality in embodied manifest form of *nṛtta*, *mūrti* and *citra*, but she has not delved deeply into the meaning and interpretations of the terms. Her work only presents a literal translation, based on the text published by Venkateśvara Press. Dr Parul Dave Mukherji has deviated from this notion and has taken only the nine chapters especially related to the content, form and techniques of painting, but has used a number of new manuscripts which had led her to rectify many errors in the text. Her approach to present a new viewpoint goes further than that of Coomaraswamy, who had taken a biased view because of the nationalist agenda of defending Indian art against Western naturalism of Greco-Roman ideals and enthusiasm in search of the identity and idiom of expression of Indian art. She emphasizes Naturalism as the basic ideal of the theory of all visual arts propounded in the *Citrasūtra*, which can be explained in the Indian context through the term of *sādriśya*, *anukṛti* and *satya* or *pramāṇa*. The word Naturalism has different connotations in Western and Indian art historical contexts. This has always to be kept in mind while considering approach to nature in Indian art and Naturalism in Western aesthetic theory. In this approach her viewpoint supports the ideology followed by Sivaramamurti in his book, *The Chitrasūtra of*

Viṣṇudharmottara published in 1978. He bears rather a liberal view regarding Naturalism in Western art as opposed to representation of nature in Indian art. In fact, Sivaramamurti's attempt in his book is to supplement the work of Priyabala Shah, who is only a sanskritist and has tried only to translate and present a critical edition of the text but has not commented on the technical issues of the text which was only possible after an intensive study of Indian art. Sivaramamurti has fulfilled the lacuna by citing examples from paintings, sculptures and classical Sanskrit literature in order to explain the meaning of the technical terms used in the text. The effort of Parul Dave Mukherji leads us further to prove the stand which should be taken to understand the text in its totality, the underlying aesthetic theory of visual arts and its relevance in the modern period. It is through the ideology of naturalism which is the central theme and the binding thread of all the visual and performing arts. She has been successful in presenting her viewpoint.

The book, the *Citrasūtra*, presents only the nine chapters (from 35 to 43) of the third *Khaṇḍa* of the *Viṣṇudharmottara Purāṇa* also known as the *Citrasūtra*, the treatise on painting. *Citra* means image. It is the visual image of unmanifest or may be a mental image which is yet to be transferred in the visual form either in two dimensions or three dimensions. The text of the *Viṣṇudharmottara Purāṇa* has used the term in this sense, hence it describes the images in all the forms—aural, visual and dynamic i.e., music, painting, sculpture and dance. It would have been a complete work on the *Citrasūtra* if the chapters on image making and dance had been included in it.

The text of the *Viṣṇudharmottara Purāṇa* was first published by Venkaṭeśvara Press, Mumbai in 1912. The *Citrasūtra* belongs to the third section. Though it is not mentioned in the list of Mahāpurāṇas or Upapurāṇas, it has been composed in the style of the Purāṇa literature. The first *khaṇḍa* of this *Purāṇa* deals with the usual subjects of creation of the world, geography, astronomy, chronography and genealogies of the kings and sages and legends regarding them. The second *khaṇḍa* includes treatises on *Dharma* and *Rājanīti*. The third *khaṇḍa*, which is the largest of all, contains short treatises on various subjects that are of interest to art historians, indologists, art critics and literateurs. The first 118 chapters of the third *khaṇḍa* deal with subjects like *Kāvya*, *Alaṁkāra*, *Nāṭyasūtra*, *Gītalakṣaṇam*, *Ātodya*, *nṛttasthāpanaṁ*, *navarasāḥ*, *nṛttyamudrā*, *citrasūtraṁ*, *Devapratimānirmāṇaṁ*, *mandirasthāpanaṁ* and *mūrtipratiṣṭhā*.

The *citrasūtra* is the first text that establishes the supremacy of painting in all visual and performing arts. Before this, *citra* was known as *Ālekhya*, as one of the arts in a group of sixty-four arts in the *Kāmasūtra*. Even the encyclopaedic work of Bharat only mentions *citrakarma* as *ālekhya* in the context of decorating the stage with painted images of *śālabhañjikās*. The author of *Viṣṇudharmottara Purāṇa* for the first time proves the interrelation between visual and performing arts, placing the art of painting at the centre. He says, '*Kalānāṁ pravaraṁ citraṁ dharmārtha kāma mokśadaṁ*'. The text is composed in the form of conversation between the sage Mārkaṇḍeya and King Vajra, the son of Aniruddha, who was the grandson of Lord Krishna. Vajra desired to learn the art of image-making for the worship of gods. Mārkaṇḍeya replies explaining the interdependence of the arts. Even then the text does not present a systematic treatise to fulfil the requirements of a *śāstra*.

The word *citrasūtra* occurs in the first chapter of the third *khaṇḍa*, clearly emphasizing that learned man worships the image having proper form made according to *citrasūtra*, '*citrasūtra-vidhānena devatārchāṁ vinirmitāṁ*' (III, 1, 7) and *iti śrī viṣṇudharmottare tritīyakhaṇḍe vajrasamvāde citrasūtre prathamodhyāyaḥ*. This clearly shows that the focal theme of the third *khaṇḍa* remains the *citrasūtra* meaning thereby painting, sculpture, and architecture, especially the temples.

The expression of emotions and representation of the three worlds (*Trailokya*), being the aim of all visual and performing arts of painting, sculpture and dance, the movement of limbs of body, postures, gestures and ornamentation of the form are common to all these arts. But this does not mean that dance, painting and sculpture are one and the same. In fact, one is placed in the actual space and movement, while the other takes place in pictorial space and the third is spatial but static. This difference has also been maintained by the author of *Viṣṇudharmottara Purāṇa*. For instance, the proportion and measurement are particularly useful to painting. Hence, the author of the *Viṣṇudharmottara Purāṇa* does not mention proportion and measurement in the chapters on dance, but emphasizes these in the chapters on painting and seeks indulgence of his pupil to consider them in the *Devamūrtinirmāṇa*. Similarly, *tāla* and *laya* are common to dance and music but not to painting. The proportion of parts and limbs of the body are described first in the context of male figures but

above all the skill and genius of the artist is emphasized on which the successful completion of image depends. At the end of the Chapter 39 on proportion it says that people in the world lack proportion because of being conditioned by time. The proportion is determined by the wise artist using his own discretion in conjunction with the laws of foreshortening.

Besides proportions and measurements, the delineation of nine postures of the body given by the *Citrasūtra* is one of the important contributions to iconometry and painting. It is the only text where nine postures of the body are elaborated with clarity. The author Parul Dave Mukherji has graphically explained the postures after comparing them with all other concerned texts. She has so minutely studied the translations, emendations and critical additions of her predecessors, that she not only compares their interpretations but also evaluates them in order to show the worth of her own work. The critical notes accompanying the translation hence have become very exhaustive and informative. Though textual works have their limitations to remain objective, but the interpretations are subject to change in the social setting. Her analysis of the contributions of her predecessor scholars has shown this difference between the colonial and post-colonial editors. Still, she is careful to adhere to the role of an objective translator rather than entering into the field of its contribution as a śilpa text.

The text of the *Citrasūtra* raises a number of questions. Composed in the form of a conversation, it lacks the scientific approach to aesthetic theory of painting, but provides the conventions, characteristics, techniques and principles for appraisal of painting. It also tries to illustrate the interrelationship of fine arts and establishes the importance of the visual arts over other arts. But it does not present any discussion about the prevalent theories of *Rasa*. Though it reflects the state of development of arts, motifs, techniques, merits and demerits of painting, sculpture and other fine arts, it is silent about the *pūrvapakṣa* of this *śāstra*. It has borrowed from the *Nāṭyaśāstra* of Bharat especially in the chapters on dance. It mentions the number of *Rasas* and importance of *rasayukta citra* but is silent about the theory of *Rasaniṣpatti* given by Bharat. Though the date of composition of both these texts is only ascertained on the basis of other internal and external evidences, it is certain that the *Nāṭyaśāstra* of Bharata belongs to an earlier period. Hence, it can be safely presumed that there is a shift of emphasis from performing art, i.e., from drama to painting by the time of composition of the *citrasūtra*. There may have been possible reasons, like lack of practising stage artists of drama, or

patrons being more interested in individual arts like painting, music and dance than in the organized activity required in drama and stagecraft. It may be one of the reasons that painting among other fine arts had reached its perfection in the representation of Naturalism. Hence the author of the *purāṇa* felt the need of establishing its superiority among other visual arts.

The author has not delved into these issues as she claims to be performing the duty of an objective and sincere translator, for which she has all appreciation from the readers of *Citrasūtra*.

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RAJA RAM DRAVID: *The Problem of Universals in Indian Philosophy*, edited by Kanshi Ram, published by Motilal Banarsidass Private Limited, Delhi, pp. xxi + 389, 2001, Rs 595

The book under review is a significant work of my Guru's tradition. Therefore to write a review of this book is a great privilege for me. I have learnt and still have to learn more from this book. And the case may be the same for those who are interested in the crucial problems of classical Indian philosophy.

There was a time, most probably from 1960 onwards, when the scholarship of Professor T.R.V. Murty was matured and institutionalized by the single stock writing on Nāgārjuna entitled 'The Central Philosophy of Buddhism'. It was the genius of Professor Murty which has been extended and explored in so many works of his students at that time. The Ph.D. thesis of Dr Raja Ram Dravid (1968, Banaras Hindu University), which was published later, is one of them.

I first came into contact with this book when I was a Ph.D. scholar at Banaras Hindu University. Since then a question usually haunts my mind as to why could not this book become very popular in the world of philosophy, even among researchers and scholars of traditional Indian philosophy. The learned author has pitched his work among or a little bit over the several celebrated works like *Buddhist Logic* by Stcherbatsky, *The Buddhist Philosophy of Universal Flux* by Satkari Mukherjee, *Critique of Indian Realism* by D.N. Shastri and *The Philosophy of Word and Meaning* by G.N. Shastri, etc. After a long acquaintance and affinity with

this book if I try to answer the above question, I can say that the book under review is a study, or rather, a vast reading, of a particular problem of Indian philosophy. However the works referred to by the author for comparison (Preface, p. ix) are the full-fledged study of a system. If we think about the development of philosophical consciousness in India, we find that it has been thoroughly system-centric throughout the ages. Therefore it seems that an account of problem-oriented study does not suit or least appeals to the traditional temperament of Indian scholars because of their uncompromising attitude towards system centricity.

Another point regarding the popularity of this book is to be noted here that the flourishing and institutionalization of any work takes time and demands some kind of supportive, rather implicative, writings by the author himself. Unfortunately this could not be done by Dr Dravid as he died in harness.

It is true that the creative use of history regarding a particular problem is a difficult task where the various approaches are bound to be system-centric. Yet Dr Dravid has taken great pains to write his enquiry proper regarding the problem of universals in Indian philosophy. An enquiry into the same problem in the History of Western Philosophy, to which the author has devoted three chapters (XII, XIII and XIV) out of fifteen cannot be said to be the integral part of his book. As Professor Murty has commented (Foreword, p. vii), 'The main emphasis, is, however, on the problem of universals in Indian thought, and Dr Dravid is only secondarily concerned with Western philosophy.' Even in relation to the depths of Indian thought Dr Dravid's treatment can be said to be primarily expository and secondarily critical. It is not a book which mainly deals with the history of ideas but with the history of arguments and counter-arguments of not less than one thousand years' debate among Indian philosophers on a particular problem, i.e. universals. Although the whole book is well documented, yet the weakness of reflectivity is quite natural due to the wide range of subject matter. So that in a few cases the author has enjoyed thinker-centric freedom over and above system-centric rationality.

The first four chapters, excluding the long introduction, deal with the descriptive account of the realistic approaches to the problem of universals which includes the Nyāya-Vaiśeṣika and Mīmāṁsā viewpoints regarding jāti or universal. The author has started discussion around the problem all of a sudden at its advanced stage without making clear the historical

perspective of the conception. It is to be pointed out here that the objective status of universal emerges in Nyāya-vaiśeṣika tradition after a long-term exercise and intensive thought. Dr D.N. Shastri has pointed out the dispute regarding objective existence and Buddhyāpekṣita status of universals in his *Critique of Indian Realism* (pp. 310–14). Even Avayavīvāda seems to be the basic concept for Nyāya-vaiśeṣika but how and why does it transcend into universal that is one, eternal and resides in many particulars simultaneously? Thereafter it becomes the distinctive feature of almost all realistic philosophies of India. It is by accepting the objective status of universal as highest being (Sattājātimat) the Nyāya-vaiśeṣika system has interpreted the eternalistic world-view of vedic tradition in an entirely different way. The impact of this line of thought can be seen when the Brahman of Advaita-vedānta is supposed to be called Mahāsāmānya.

Apart from this, the author has put forth the idea of Jāti and Upādhi along with six impediments (jāti bādhaka) of universal in a lucid manner. I agree with the author's remark that with reference to universal there are three types of real in the Nyāya-vaiśeṣika school. The first consists of the categories of substance, quality and action in which the universal inheres. The second type of real consists of the categories of generality, particularity and inherence in which universal existence does not inhere. The third type of real is non-existence (Abhāva) which has neither existence nor a positive 'self being' and yet it is a real entity. This type of typological categorization has not been considered in Nyāya-vaiśeṣika tradition but it does not do any harm to the monolithical structure of Padārth in Nyāya system.

Similarly, while unearthing the Mīmāmsā view of universal the author has explained the view of Kumārila and Prabhākara separately along with the subtle differences between the two. The learned author is a committed realist, and therefore he has considered the Buddhist charges against the objective existence of universal seriously. The most damaging criticism from Buddhist side centres around the unintelligibility of the relation between universals and particulars. Pārthasārthi Mishra seems to be a champion, as author opines, who met the challenges successfully and reconstructed the relation between universals and particulars on the basis of Vyāsajyavṛtti properly.

In the next two chapters (VI, VII) the author has discussed Non-absolutistic (Jain) and Absolutistic (Advaita) viewpoints of universal. The

exposition of Jain theory reveals the fact that there is no one single theory advocated by the all Jain philosophers. Dr Dravid has come across three distinguishable theories regarding universal. The first theory is represented by Samantabhadra, Vidyānand and Mallisena etc. for whom the universal is an identity in difference. The second view, propounded by Abhayadevasūrī, who is supposed to be influenced by Buddhist logicians, does not recognize the universal in any form. The third view is reconstructed by Prabhāchandra, Vādidevasūrī and others, for whom the universal is 'Similarity' (Sadṛs'apariṇāma) of particulars. So far as the question of fundamental Jain position is concerned, Dr Dravid has supported the first view of identity-in-difference by criticizing the remaining two views.

While discussing the Advaitic theory of universal, the author has briefly considered the Citsukhācārya's dialectical criticism of the realist position. He has formulated five possible definitions of universal which are applicable to the realist position and finds them fallacious. Although the author has simply pointed out Dinakar Bhaṭṭa's reply to Citsukhācārya, he has not discussed the refutation of samavāya as padārtha as well as Samavāya as relation by Advaitins which seems to be the most important point of debate between the two sides.

The author seems to be least interested in dealing with the epistemology of universal. It will be pertinent to note that two-thirds of the discussion regarding universal is of epistemological nature in Indian philosophy. But the author has devoted only one chapter (V) to the Buddhist view of perception and its Nyāya criticism. If it is necessary to locate the ontological status of universal in the schema of Pramāṇas of different systems, then the discussion must be enlarged to some extent. For we find a great disagreement among Indian philosophers regarding the object of perception and in this reference the acceptance and denial of universal plays a considerable role. That is why Jayant Bhaṭṭa provides vital importance to determinate and indeterminate perception consequent to the Nyāya and the Buddhist epistemology. An ordinary man never hesitates to say that he perceives particulars but he must hesitate in saying that he perceives universals. Therefore the epistemology of universals is established by an aided perception or by observation determined by theory. Hence the controversy regarding epistemology of universals hangs upon the consideration that the aided perception should be explained in terms of ordinary experience or it should be interpreted in terms of certain *a priori* sources. The realists try to explain it with a view of ordinary experience (*pratyakṣh bala siddhasya*) while the idealist or nominalist takes recourse to some kind of *a priori* concepts (Anyāpoha).

After a certain stage of development we find a subtle change in the nature of discussion concerning universal. Despite ontological and epistemological discussion, most Indian philosophical systems try to approach the problem of universal with a viewpoint of language philosophy. Professor T.R.V. Murty has rightly remarked (Presidential Address, I.P.C., 37th Session) that 'Indian philosophy is repeated twice over, once in the accredited metaphysical systems as we know them and once again in their standpoint with regard to language.' Almost all types of metaphysics—'Absolutism and Pluralism, Empiricism and Transcendentalism, Realism and Nominalism and their shades and subshades are found here'. At this juncture of repetition the problem of universals has been the very core concept for being interpreted in terms of the philosophy of word and meaning. Perhaps taking into account this change in direction, Dr Dravid has discussed several Indian theories of word and meaning (Chapter VIII) in which the status of universal is being reflected.

In this connection he has presented a penetrating analysis of grammarians views on the imports of word right from Vājjapāyana to Bhartṛhari (Chapter IX). Patañjali in his Mahābhāṣya indicates 'catuṣṭayī sabdānām pravṛttiḥ', while Bhartṛhari mentions only three different theories regarding the meaning of a word, i.e. universal, particular and both. Out of these three, Bhartṛhari legitimately supports the universalist theory of meaning and necessitates it at the same time for the science of grammar which propounds word as eternal. The question as to what is denoted by a word can be decided only on the grounds of what is apprehended when the word is uttered. On this general criterion the universal alone can claim to be the denotation of words. Further Bhartṛhari maintains that all words signify their own universal first before signifying their meaning, because a word cannot convey its meaning without first conveying itself. Therefore he distinguishes the universal of word (Śabdajāti) from the universal of thing (Arthajāti). So far as the relation between the two is concerned, the word-universal is superimposed (Adhyāropita) on the thing-universal. This theory of superimposition is very much akin to the principle of Śabdāvaitavāda. According to this, the whole world of universal as well as particular are nothing but the vivarta of śabdabrahman, i.e. universal par excellence. Hence the diversity of universal and particular along with the distinction of the two is real only from the empirical point of view. If

it is so then the position of both, the universalist and the individualist, can be said to be identical. For the universalist, all words refer to Brahman as Existence under various determinations and for the individualist, all words denote Brahman as substance under various adjuncts. The two aspects might be distinguished only on the basis of the difference of the imports of words, existence and substance. But, ultimately, Brahman as Existence and Substance being non-different, the position of both, the universalist, and individualist are identical.

No amount of discussion regarding universal in Indian philosophy can be said to be sufficient without discussing the theory of Apohavād in its details. As we know, this theory of double negation (Atadvyāvṛtti) has been developed in a capacity of total denial of the objective existence of universal in any form. According to the Buddhists, universal is a mental construction and it is misconceived as extra-mental reality due to the ignorance of the mental mechanism of double negation. Having in mind the conceptual depth of this theory, Dr Dravid has discussed very sharply the suggestive, systematic and implicative stages of its development right from Dinnāga to Ratnakīrti (Chapters X, XI). The merit of his exposition lies in identifying the significant role of counter-criticisms by orthodox philosophers in the development of Apohavāda. In this reference Dr Dravid has unknowingly presupposed that 'Udayana defence of realism is classic and may be considered as last word regarding the realist stand in Indian literature' (p. 263). I would like to note here that the rare text 'Udayana Nirākaraṇam' by Ranakīrti was not available to the author as he could not go through any reference from that work. So, the last word is still awaited from the Nyāya side as a rejoinder to Ratnakīrti. History has recorded a long-term Nyāya-Buddhist controversy which is an example of interminable clash between two radically opposed metaphysics. Out of the metaphysical moorings, the minimum requirement of universal like property is for conceptual knowledge. If realist takes the shelter of objectively real universal for explaining the conceptual knowledge, then mentally constructed universal (Atadvyāvṛtti rūpa kalpita) of Buddhist too possesses all the advantages which are supposed to belong to real universal. They have unity, since they are the same in each particular, they are eternal (logically), since their negative substratum is never destroyed, they inhere in every individual in their full completeness. Therefore the master of Buddhist logic, Dinnāga, declares that the theory of 'Apoha' is preferable (as compared with the realist one), since it has many advantages.

Thus dealing with the crucial problem of Indian philosophy, Dr Dravid has touched upon each and every aspect of universal from the viewpoint of respective metaphysics. The work, no doubt, reveals a miraculous exercise of the author in the Śāstric tradition. As a result of this pioneer attempt, the book under review can be accredited as a standard source book of the Indian account of universals. It is entirely based on the original texts and appropriate references of respective systems. The author has never committed any 'Apasiddhānta' knowingly throughout the work to the best of my knowledge.

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Paul Deussen: *The Philosophy of the Upanishads*, Motilal Banarsidass, 1999, pp. 429, Rs 225

Paul Deussen's study of the Upaniṣads is indeed 'a work of very marked ability and of surpassing interest'. It was originally written in German and subsequently rendered into English in 1906. The rendering was done by Rev. A.S. Geden. Since then it has been recognized as a standard work on the subject and remains so till today. In India such a work is yet to be written. Somehow Indian scholars are indifferent and have not addressed themselves to the task. In view of this desideratum, Motilal Banarsidass' Indian edition of Deussen's book is quite welcome.

Apart from a brief introduction to the philosophy of the Upaniṣads, there are four major divisions in the book—Theosophy, Cosmology, Psychology, and Eschatology. While the first two deal with the concepts of Brahman and the world, the rest discuss the concept of soul. The whole presentation is marked by a rare but penetrating insight into the teachings of the Upaniṣads.

As the book is already in wide circulation in India and other parts of the world, we shall speak only about certain things that have to be noted in our review. Deussen rightly points out that the word *upaniṣad* is used in three distinct senses—a secret word, a secret text, and a secret import. The Brāhmaṇas were custodians of the Vedas and occupied with the Vedic rites. At one stage in history the Kṣatriyas excelled them and arrived at the knowledge of Ātman or Brahman. And the knowledge 'was

transmitted in a narrow circle among the Kṣatriyas to the exclusion of the Brāhmaṇas' (p. 19). As this knowledge was 'withheld from them' (ibid.), it came to be called *upaniṣad*. In support of this view he invites our attention to a passage in the Kauṣītaki Upaniṣad (4–19) where King Ajātaśatru teaches the knowledge of Ātman to Bālāki, a Brāhmaṇa, and says that the usual rule has been reversed, for now a Brāhmaṇa is taught by a Kṣatriya. If we carefully read the above passage, we cannot agree with Deussen that the knowledge of Ātman was 'withheld' from the Brāhmaṇas because they were not members of the Kṣatriya class. For here we do not see any hesitation on the part of Bālāki or Ajātaśatru: Bālāki feels free to seek the knowledge from Ajātaśatru; and Ajātaśatru readily agrees to teach Bālāki. We must therefore conclude that the knowledge of Ātman was a secret in the sense that it was revealed only to those who sought it with the right qualification. It is for the sake of right qualification that a text was held to be a secret and not for any other purpose. In the matter of either receiving or giving the knowledge the class was never a barrier between the Brāhmaṇas and the Kṣatriyas.

Another point we come across in the book is about a passage in the Muṇḍaka (p. 60). It speaks about the *vidyās* (1-1-5). As the four Vedas are classed under *aparā vidyā*, Deussen thinks that they are 'rejected' as of no use in the attainment of *tad-akṣaram* (p. 60). If the Vedas were so considered, then the Upaniṣad would not have said that both the *vidyās* were to be acquired by the seeker of *tad-akṣaram* (1-1-4). The four Vedas, when properly studied with the six *aṅgas* (*śikṣā* and the rest), lead to the knowledge of the imperishable Brahman. As this knowledge obtained through interpretation cannot make one a *brahmavit* (knower of Brahman), the Vedas are declared to be a means of lower knowledge, *aparā vidyā*. As distinguished from it, there is another means which makes knowledge by attainment possible, the direct knowledge of *tad-akṣaram*. By this, *yayā*, one becomes a *brahmavit*, and so this means is rightly called *parā vidyā*. In other words, *ātmavidyā* is the higher means by which the knowledge of the imperishable Brahman is directly attained. This is evidenced by another text in the Muṇḍaka Upaniṣad which runs thus (2-2-9): 'what the knowers of Ātman know is that, *tad yad ātmavido viduḥ*'. If *tad-akṣaram* is attained by the higher means of *Ātman*, what purpose does the study of the Vedas serve? As we have already said, the study cannot make one a *brahmavit*; but it does not mean that the Vedas have no use at all for the seeker of the Brahman. As the infallible source

of knowledge, they are indispensable. For they help him to fix his mind firmly on *tad-akṣaram* and discover the right means of attaining the object held before him. In this sense the Vedas play an important role in the process of realization of Brahman. Therefore it is wrong to conclude that the Upaniṣad rejects the Vedas by calling them *aparā vidyā*.

There is a third point and it is about ignorance and knowledge, *avidyā* and *vidyā*. According to Deussen, there are two forms of knowledge, knowledge 'that rests on experience' and knowledge that 'is only of Brahman' (p. 77). While the former is ignorance, the latter is true knowledge (ibid.). This does not truly represent the position of the Upaniṣads. When Ātman is excluded and all is seen without reference to Ātman (*anyatrātmanaḥ*) (Bṛhadāraṇyaka, 2-4-6), one sees himself as other and everyone else as other, *anyo asau anyo aham* (ibid., 1-4-10). This is ignorance. On the other hand, when Ātman is seen as the source, abode, and indweller of all, *sarvam ātmaivābhūt* (ibid., 2-4-14), there is no longer other for him and he is freed from ignorance. He and all else are now known to be absolutely dependant on Ātman. This is knowledge. If perception of all to the exclusion of Ātman produces darkness (*tamaḥ*) (Īśa., 9), perception of Ātman to the exclusion of all produces a greater darkness (*bhūya tamaḥ*) (ibid.). A seeker of Ātman must go beyond the world, but in doing so he is prohibited from seeking Ātman for its own sake and rejecting the world, by being told that he who ignores it will fall into a greater darkness. Therefore knowledge consists in seeing not only Ātman but Ātman as all—the origin, support and inhabitant of all. He sees the world, but he is not subject to ignorance because the world of plurality is not separated from Ātman and not seen as consisting of others. Knowledge of Ātman does not exclude but includes knowledge of the world. If the world perceived without its original connections with Ātman is a domain of ignorance and causes death, the same world, when rightly perceived, ceases to be the domain of ignorance and causes no death, *avidyayā mṛtyuṁ tīrtvā* (ibid., 11); by perceiving Ātman as the source etc. of the world, one attains immortality, *vidyayā amṛtam aśnute* (ibid.). These are the true Upaniṣadic conceptions of *avidyā* and *vidyā*.

As the power of illusory creation, Māyā is unknown to the principal Upaniṣads. Even the word Māyā does not exist in any of them except the Śvetāśvatara (4-10). There is nothing in it to show that the word is used in the above sense; all it says is that Māyā is a synonym of Prakṛti. Those who support the theory of Māyā argue that though the word Māyā is not

found in the Upaniṣads, the idea of Māyā is implicit in their teachings. So Deussen makes a vigorous attempt to find evidence for this idea. He proceeds on the view that the idea is found in all texts which speak about the falsity of the world.

Let us take two of the pieces of evidence Deussen has produced, one from the Ṛg Veda (1-164-46) and another from the Chāndogya Upaniṣad (6-1-3). The Ṛg Veda says that reality is one which the *viprās* call by many names, *ekam sad viprā bahudhā vadanti*. According to Deussen, the Veda says that one is real and plurality is 'a mere matter of words' (p. 229). If we carefully read this line, we may find that the key word in it is *viprā*. It means wise persons. As the wise always speak on the basis of truth, their words must be about what they have known of Sat. When they call the Sat by many names, they do so on the basis of right perceptions of this sole Reality. In other words, they speak about many gods, but the gods represent to them the many aspects of one Godhead, *ekam sat*. Therefore the Veda does not deny reality to the many gods. Rather it affirms that the gods are the real expressions of the one supreme God.

As for the Chāndogya text, Deussen points out that the change on which the appearance of the world depends, the change of one into many, *vikāra*, is 'a mere matter of words, nothing but a name', *vācārambhaṇaṁ vikāro nāmadheyam* (p. 155). If we take the context of the text (*ekena mṛtpiṇḍena sarvam mṛṇmayam vijñātam syāt.vācārambhaṇaṁ vikāro nāmadheyam.mṛttikety eva satyam*) (Chāndogya, 6-1-3) into consideration, we find that the word *vikāraḥ* is not used in the sense of change but in the sense of an object that has lost its real nature through confusion with the word by which it is denoted. In other words, if the clay is mistaken for the word 'clay', it deviates from its real nature, *vācārambhaṇaṁ vikāraḥ*, and from this 'clay' no knowledge of clay products is possible, for it is but a mere name, *nāmadheyam*. But from the original clay, knowledge of clay products is possible, for it is the real clay, *mṛttikety eva satyam* (ibid.). The words 'what is said to be clay is alone real' are intended to distinguish not the real *clay* from the unreal *clay products* but the *original* clay from the *word* 'clay'. Therefore the clay example does not speak about the unreality of the world.

If we go by the strict wording of the above two texts, we find that they do not deny reality to the world of plurality. If the world is real according to the Veda and Upaniṣad, then the question of Māyā being an idea implicit in them does not arise. This is our comment on the fourth and important point to be found in Deussen's study.

If we remember the difficult nature of the task to which Deussen has addressed himself in writing this book, the defects we have pointed out in it cannot belittle the value of his contribution to the subject. For no student of Vedānta can hope to start his study in a proper manner without going through Deussen's work. If an Indian author is to write a book of this kind, he has to first understand that he may use Śaṅkara's commentaries, but he should be prepared to reject them whenever they do not agree with the original texts. For text is more important than commentary.

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SOMRAJ GUPTA: *The Word Speaks to the Faustian Man*, Vol. III, Motilal Banarsidass, Delhi, 1999, Rs 550

> ... the heavenly powers
> cannot do all things. It is the mortals
> Who reach sooner into the abyss. So the turn is
> With these. Long is the time
> But the true comes into its own.
>
> —Holderline

> From the Koran, from the Vedas & from deuteronomy
> From every dogma, full of fury, all the gods
> Have come out into the open. Look out! & keep a better watch
>
> —Verlaine

The song of the sirens—the lure of the rational-scientific discourse is irresistible. But, so is the fascination of The Word that speaks to the Faustian Man—'a translation and interpretation of the Prasthantrayi and Sankara's Bhasya for the participation of contemporary man'. That 'the contemporary man' does include the Naipaulian as well as the not-so Naipaulian 'half-a-life' intellectuals too, is obvious from the preface to this third volume:

> Being human has really become a nauseating phrase. How crudely it makes us forget that we are all disinherited beings! To regain our humanity, our openness to Being, our urge for transcendence, we have to heed the call of the sruti. Modern world has to remember this truth, the developed part of it as well as the 'developing' part of it.

It is the experience of having grappled with the first two volumes that facilitates our entry into the next one comprising two more Upaniṣads (Taittiriya and Aitereya). By now the tone and temper—the very rhythm of the great argument—is so well-entrenched in our sensibility that we perceive the autonomous as well as the inter-relative resonance of the texts and the corresponding meditations upon them. Richer by hindsight, we often find ourselves better able to overcome our resistance and acquired fixations. 'The inhumanity of humanism' is hardly likely to snatch a ready assent from you if you cannot 'place' or connect it with what has gone before—particularly with the factual account of the descent of revelation on a dark stormy night embedded in the preceding volume. The account itself was transplanted from a biography of the author's spiritual mentor, which the present reviewer has had the privilege of reading in the original. It is only when we have internalized this evidence and many other things in the preceding books that we come to understand something, which is crucial to the whole argument and which was obviously inaccessible to even the subtlest deconstructionist of the history of western philosophy:

> The Greeks we know, found man a being that lived among others as constituted by and constituting them. The polis was the ontological place, the ground of man; beyond it lay the desert, the home not of man but of beasts. The desert and the polis were opposites for the Greeks with the exception of a few like the wise Sophocles. The Indians on the contrary interiorised the forest into the village or the city so thoroughly that the capital city extended to it. For the forest was not merely the home of birds and beasts but also of rsis, seers ... the civilization that interiorises the forest to such an extent is a civilization that, in a sense, disowns itself; it does not find itself pitted against nature; rather it extends itself into that nature ... . (Vol. III, p. 175)

From this understanding of civilization as nature's extension, nature's step towards the divine through the human, let us go back to what the author had said in his preface to the second volume:

> Modern man finds no use in the seer that fuses the forest into civilization. For him, a system embodying his rationality is enough. The loneliness of the helpless old man does not add new dimensions to it, nor the tragedy of the unsuccessful man nor of the mad man. There torture and despair have nothing to enrich his system to make it less confident.

This comparatist perspective becomes all the more compelling because the author is by no means oblivious of the fall and disgrace of the very civilization he seeks to evoke in its pristine purity and still living exemplars. We recall how he had already spotted and diagnosed its sickness:

> The forest-polis civilization met its decline when the brahmin became arrogant, 'holy' and privileged—he who was supposed to emulate the seer ... . The culture was ruined when ... caste was divorced from aśram, the system embodying the various stages of life. Caste turns into evil when the guiding spirit of renunciation embodied in the aśram ceases to inform it.

It is the guiding spirit of renunciation that the author has sought to reinterpret and reinstate through his own startlingly fresh and original reading of the basic texts embodying that spirit. Because he chooses to write in the language and idiom that has become part of the contemporary intellectual world, he has been enabled to engage almost all shades of the modernist and the post-modernist sensibility. Besides his existentially authentic enactment of that ancient wisdom, he has another weapon he wields with consummate skill—his ability to evoke and yoke the evidence of literature to drive home his points. How incisive this marshalling of literary evidence can prove is amply demonstrated by the way he has brought in Tolstoy's 'Death of Ivan Illych' and Wordsworth's 'Resolution and Independence' in the course of his exegetical discussions in the first volume and Plato and Coleridge's 'Kubla Khan' in the present book. He himself has provided the best justification for his approach; this is what he had said in the preface to the first volume:

> Indeed if truth be told, the literary tradition of the west provides better analogues to the spirit of the Upaniṣads and Advaita Vedānta than its philosophers. I have often invoked Homer, Dante, Shakespeare and poets like Rilke and Wordsworth to communicate at least a part of the meaning of the Upaniṣadic vision ... . Its a mistake to undermine the intellectual depth of the great literary writers of the west.

Ones instinct calls for immediate assent to this, and there are numerous occasions in this volume to bear it out. 'We should turn to the muse and not to our reasoning powers'—the author tells us, 'to know what that life, what that soul, that self is, the Upaniṣad calls the breath-self.' He then proceeds to quote the full text of Coleridge's Kubla Khan. No reasoning, we realize, could have convinced us of 'the vision of man as a willing sacrificial victim, a tragic vision with redemptive possibilities' as this evocation does. We do come to perceive Kubla Khan as a poem aspiring for a vision of the reconciliation of birth, life and death. But we hardly realize the full implications of this deep reading until we reach the conclusion of the poem. Commenting on that, the author observes:

> Men and women cannot perceive the truth they seek, they can perceive only the speaker of truth, the inspired speaker who articulates his vision in ecstasy. ... only he who has, like Odysseus visited the world of the dead can know the secret unknown to mortals that would cling to life. Only he can reconcile life and death, not men like Kubla Khan or the poet himself. Our Upaniṣad would concur with the poet on this point. It is only when man dies into breath to become breath, when the knows the secret of life and of death, when he knows how life becomes death and death life that he becomes the yogin, the prophet ... . Such a man alone lives, lives fully because he lives death.

It is impossible to read this and not to be reminded of that soul stirring account of 'the utterer who utters without knowing that he utters', who had inspired a holy dread in his devotee-witness because the utterer's (that is, Guru Sri Mangatram's) body had come to embody for the witnessing disciple the mysterious, the awesome, the unknown. The last sentence of the passage quoted above is crucial to the understanding of not only the text under discussion, but, in fact, of every other text and context dealt with in this work. Along with the key concepts, or rather keywords like word, death, samatva, innocence, mortality, narcissism, tragedy, truth and untruth, it forms the axis around which the whole argument of the author keeps revolving throughout this long drawn out symphony of meditations and cogitations. For instance there is the commentary on the fourth verse of the second chapter of Aitereya Upaniṣad:

> One's being is a being-in-displacement, to be ever to be someone else. This the fallen man is not ready to accept, despite the force of waters in him, the force of sex drive ... . Not until man lives as a mortal will he regain his primordial manhood. This brings us to death as a guardian spirit.

The recurrence of this key concept of death as the guardian spirit brings a fresh reinforcement to the central concern of these volumes on every occasion. Read for instance, the author's commentary on chapter five of Taittiriya Upaniṣad, where the theme is internal meditation of Brahman as identified with 'vyahriti' (that is, utterances):

> As long as man is self-centred, as long as he imagines himself as confined within the narrow walls of the body, the divine will appear fierce and destructive. When he offers himself to that fire as oblation, man will not die into what is called nothingness, he will turn into air and freely move with it. He will lose his personal identity, to become all others—one after the other. He will be all because he himself will be (a) nothing.

Another key-concept informing this work is 'word'. Listen for instance, to the author's commentary on chapter two of the Taittiriya Upaniṣad, which, by the way, deals with the pronunciation of words themselves. Mark how this explication of 'the word that speaks' is indissolubly linked with the author's understanding of 'death'.

> Occasions may arise when a thing before me may refuse to be a part of my world ... . It may disclose a darkness ... threatening to engulf me and what I call the world. If I have the courage to allow myself to be swallowed by the waves of that darkness, I shall become that darkness, that mystery. When I come out of that dark unknowing—as I must, for to be redeemed I have to find that darkness and our common light as one—I shall come out as words. My being and the world's being and of what lies beyond me and the world will come out as these words. They will not be mere human words. For him, who will speak them, they will be the Absolute itself. The word that I speak as me is spoken through the other but never becomes that other; the speaking word has no other because it itself is the other as it is me. And it has nothing beyond itself because it is the beyond too. This word is the Vedic word, the word that speaks but is never spoken.

The modern world, our author makes it clear again and again, has disinherited itself of the mystery of death as well as the word. The Vedic culture did not imagine man without language; but it, unlike many a

modern thinker, did believe that the word preceded man. The word that preceded man was not, however, the word that he could use or utter. When that word, the word that was more primordial than man became the tool of man, it underwent a process of concealment. Revelation can occur only at rare moments through the medium of the rarest personalities—a Kabir, a Sri Mangatram, a Sri Ramakrishna, or a Raman Maharshi; and even there, few would be vouchsafed the opportunity to bear witness to such a phenomenon. One of the most poignant and moving comments in his volume is occasioned by the 'Death of Socrates' as described by Plato. Let us listen to what the author himself says:

> One proof of the existence of Brahman is the fearlessness of the seers of Brahman ... . For a thinker, who would be rigorous, this kind of thinking is an exercise in naivete ... . Such rigorous thinkers forget the historical roots of their own mode of thinking, they do not see the moment of the birth of rigorous philosophy. That moment is the moment of the death of Socrates which Plato describes in words so vivid as to constitute an absolute literary masterpiece. Yet what the literary artist in Plato saw so lucidly, the philosopher in him could not comprehend. I may be excused if I say that Plato's philosophy is an exercise in grand misinterpretation of the vision of the artist in him and those who would allow themselves to be guided by Plato, the interpreter of that vision are, in every truth, the partakers of the same blindness.

This comment is followed by the author's own interpretation of Plato's description. Speaking of Plato's curious inability to take in conceptually what he perceives with Crito, he comes to the conclusion that, 'for Plato, death remained an evil ... . Even the form of good, as a negation of phenomena, remains relational. It is not absolute untruth or non-being, it has no being of its own. It is not death that Socrates had come to be.' Why, why should it be so, the reader may wonder. Here the author goes on to appeal to the description of Socrates's trance in Plato's 'Symposium', the trance which to Plato was merely 'thinking'. Somarajji is very forthright about this deficiency in Plato. 'But neither Plato nor the majority of philosophers after him had the power of Tapas or ardent contemplation to look into the so-called trances of Socrates, trances which most people in India would equate with the state of Samadhi ... .'

Obviously, death is for our author, the sacrifice of the ego self, the redemptive loss of oneself. He knows it to be so from his own participation

in the life of his mentor and claims the same wisdom for Sankara whose work he has been inspired to translate and interpret. Hence the conviction behind his observation that, 'the mainstream of western philosophy is not a meditation on death; it is despite its impressive complexity, an insult to death.'

The Upaniṣads, however, according to this commentator, derive their wisdom precisely from this meditation on death which leads one to detachment from the narcissistic concerns of the ego-personality. It makes one a serene witness of ones own thoughts, desires and passions, turns one into a calm passivity, a nothingness (a white screen for Raman Maharshi) against which thoughts appear and disappear like shadows. According to our author, Brahman makes its presence felt in our life in two ways: as death for the body-ego and as eternal frustration, as the all-negating transcendental thrust for the mind-ego.

What is the promise then, the reader wonders, in this apparently bleak landscape, that the Upaniṣads make to man? 'Man's life is haunted by nothingness'—we are told. 'But if he dives deep into that nothingness, he will come to know the true secret of death that is the fount and in-being of life.'

'There are only two pathways to looking at the world'—says Raja Rao, the novelist and an avowed Advaitin. One is the causal or the horizontal way and the other is the unpredictable or the vertical way. He then links the first to the theory of general relativity and the second to the quantum theory and finds them mutually irreconcilable except in a framework of concepts that does away with both, does away with two. That framework of concepts, he implies, has been provided by Sankara. But, as the very beginning of Sankara's commentary on Taittiriya Upaniṣad proclaims, and his translator too asserts, 'our concepts and categories are hopelessly inadequate to encompass the word. One has to outlive them and let what *is* do what it will. Before this passive opening out, consciousness would emerge as witness to this dance of coming to be and ceasing to be ... . Our way to that absolute truth lies through consciousness alone; there is no sudden leap into it.' 'It is the undivided consciousness alone'—says Raja Rao, in *The Meaning of India*—'that the mind and senses seem to divide into subject and object, superimposing on the indivisible, timeless and spaceless, division, time and form. Therefore, when mind and senses are

sacrificed, one lives in the undivided and pure consciousness, which is one's true nature.'

This is what the Upaniṣads reveal to us and this is how Sankara appears to explain the truth to us. As our author, the translator and commentator observes, 'Sankara's exposition has behind it the massive authority of a tradition, the tradition of a truth realized and experienced. It is no theory or hypothesis. It is an invitation to the death of our human thought, its categories and frameworks, an invitation to an absolute opening out.'

'The ethic of knowledge,' as Raja Rao, the Advaitin novelist also says, 'leads us to its own destiny—Prajñā Paramita and Vedantic Jñāna. Objectivity leads to its own death. The I alone is the unassailable reality.' It is no mere coincidence, one feels, that even this Advaitin finds it helpful to invoke the testimony of a poet to reinforce his point. He quotes Valery, the symbolist poet, who confesses, 'I have never referred to anything except to my pure "I", by which I mean the absolute of consciousness, which is the unique and uniform operation to distinguish itself automatically of all, and in this all, figures, the person himself, his singularity, his diverse powers and his own complaisance.'

Valery's testimony as a poet does appear to link up with our author's commentary. 'The non-referential word alone is truth, the referential word is a concealment of it'—he says while concluding in the course of his exegesis a very interesting discussion of how Dionysus refuses to be tamed by Apollo and how modern civilization has come to choose the suicidal path of exclusive devotion to Apollo. 'All creativity,' he says, 'is dependent on my organism which will disintegrate one day to expose the futility of my creativity.' Doesn't that sound a bit strange and disconcerting to our human ears? Even if poets are bound to stop short of the ultimate truth of self-realization, isn't their evidence, the evidence of their own sort of 'adventure of consciousness'—to borrow a phrase from Sri Aurobindo's 'Savitri'—relevant to their fellow mortals? Creativity is one of the favourite words for our author: most of the time in these volumes, he seems to attach real value to it. But at times his analysis seems to rob this world of all its significance and leave it all denuded to shiver in the void. One can understand and appreciate the gulf he discovers between Plato the artist and Plato the philosopher; it will be dangerous to disagree with his verdict that Plato, the philosopher failed to come to terms with not only the death of Socrates, but also his 'trances'. But, wasn't it Plato who said that 'madness is superior to temperance because the latter has a

merely human origin while the former belongs to the divine'[1] Perhaps that's why the poet has to be banished from the ideal republic—isn't it? But, if it is so, it can only mean that poets have to pay as heavy a price for being true to their vocation as the born saints or spiritual giants and, therefore they both belong to the same no man's land or forest, or asylum for the fugitive gods. Somraj Gupta himself not only concedes, but fully acknowledges the vital role that literary creativity has to play in our destitute times. Here, in this volume itself, he has underlined for us the significance of 'The Lighthouse' with a stunningly original insight. He says: 'This Self, this me cannot be reduced to relationality. When philosophy in England was trying to replace consciousness with language, literature was becoming more conscious of consciousness.'

Even a pure aesthete—product of agnosticism at its most intense—turns out to be a close relative of spirituality. Take the case of Mallarme, for example, who says, 'There must be something occult in the ground of everyone; I firmly believe in something hidden away, a closed and secret signifier, that inhabits the ordinary.' But, before gaining access to that closed and secret signifier, Mallarme was to go through a ferocious, silent and protracted mental drama that culminates in 'a terrible struggle with the old and the evil plumage, happily brought to earth, God.' What was the sequel to this drama? Mallarme himself tells us:

> I had just drawn up the plan of my entire life's work, having found the key to myself—the centre of myself, where I dwell like a sacred spider on the principal threads already spun from my mind and with the help of which, I'll weave at the crossing points some marvellous laces, which I can foresee and which already exist in the bosom of beauty.

Is it a mere coincidence—this image of the spider making its intrusion into such an aesthetic context—the sacred spider, which has served the Upaniṣadic vision so well? May be that's why Roberto Calasso found it useful to cite and comment upon it. 'Mallarme,' he says, 'was performing his function as a poet which is first of all that of being precise. What he couldn't know was that he wasn't speaking of himself, but of the Self, the Ātman. He was clearing a path towards something that had no name in the lexicon of his times, but within which he would always live and work.'

'I really have decomposed', wrote Mallarme about his own adventure of consciousness to the same friend, 'and to think that this is what it takes to have a vision of the universe that is really whole! Otherwise the only

wholeness one feels is that of one's own life.' It wouldn't be irrelevant, I hope, to conclude this review with the comment of Roberto Calasso—the author of *Ka* and *Literature & the Gods*—on this experience of Mallarme:

> Prajapati appears on the scene, shrugging off the fog of centuries. Prajapati finds himself transposed into the golden age of positivism, when man is no more than physics plus chemistry, and consciousness but a vague by-product of the higher functions, something nobody has time to be bothered with. But why did Mallarme seek Prajapati without knowing him? Here modern and primordial meet and a spark is struck to create a work of absolute literature. One must reunite with the time before gods were born—when Prajapati began doing tapas desiring an outward existence that would be visible and palpable. Who led Mallarme? 'Destruction was my Beatrice'—Mallarme wrote to his friend—'I am no longer the Stephen you know but a disposition of the spiritual universe to see itself and develop itself through what I was.'

Notes and References

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Diacritical Marks

Vowels

आ ā
ई ī
ऊ ū
ए,ऐ ē } (long)
ओ ō } (N.B. long ē and ō are for the particular syllables in Dravidic languages.)
ऋ ṛ and not ṛi; (long ॠ, which rarely figures, may be rendered as ṝ)

Nasals

Anusvāra

(ं) ṁ and not ṃ

anunāsikas

ङ् ṅ
ञ् ñ
ण् ṇ (or ṇa as the case may be)

Hard aspirate

Visarga

(ः) ḥ

Consonants

Palatals

च ca and not cha
छ cha and not chha

Linguals

ट ṭa
ठ ṭha
ड ḍa
ढ ḍha and not ḷha

Sibilants

श śa
ष ṣa
स sa

Unclassified

ळ ḷa
क्ष kṣa and not ksha
ज्ञ jña and not djña
ऌ ḷṛ and not ḷṛi

General Examples

kṣamā and not *kshamā*, *jñāna* and not *djñāna*, *Kṛṣṇa* and not *Krishṇa*, *sucāru chatra* and not *suchāru chhatra* etc. etc., *gaḍha* and not *gaḷha* or *garha*. (except in Hindi)

Dravidic (conjuncts and *specific) characters*

ൽ ḷ
ഴ ḷ.
ൺ ṇ
ർ ṛ.

Examples

Ilaṅ-Gautaman, Cōḷa (and not Chola), Munnuṟṟuvamaṅgalam, Māraṇ etc.

Miscellaneous

Where the second vowel in juxtaposition is clearly pronounced:
e.g. *jāṇaï* and not jāṇai
Seūṇa and not Seuṇa

Also, for English words showing similar or parallel situations:
e.g. Preëminence and not preeminence or pre-eminence
coöperation and not cooperation or co-operation

For the Simhalese, excepting where the words are in Sanskrit, the con-ventions of rendering Simhalese in Roman are to be followed:
e.g. *dägaba* and not *dagaba*
veve or *véve* and not *vev*

Quotations from old Indian sources involving long passages, complete verses etc., should be rendered in Nāgarī script.
(The western writers, however, may render these in Roman script if they wish; these will be re-rendered in Nāgarī if necessary, by the editors.) Sanskrit quotations rendered in Roman are to be transliterated with *sandhi-viccheda* (disjoining), following the conventions of the *Epigraphia Indica*, but the signs for
laghu-guru of the syllables in a meter (when the citation is in verse) are not to be used.

Place Names

These are to be diacriticised, excepting the anglicised modern:
Examples: Mathurā, Kauśāmbī, Valabhī, Kāñcī, Uraiyūr, Tiḷevalli etc., but Allahabad (not Allāhābād), Calcutta (not Calcaṭṭā), Madras (and not Madrāsa).

Annotations

There will not be footnotes; but annotations (or notes and references), serially arranged, will appear *en masse* at the end of the text in each article.

References to published works

Those pertaining to articles, books etc., appearing in the main body of the text, or annotations, or otherwise:
Title of Book, Author's name (beginning with his initials) title, edition (if any) used, the name of the series (if it appears within it); next the place of publication along with year of publication, but without a comma in between; finally the page (or pages) from where the citation is taken or to which a reference is made.