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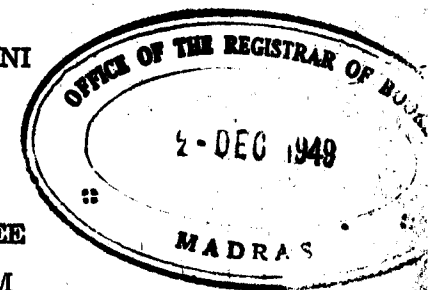
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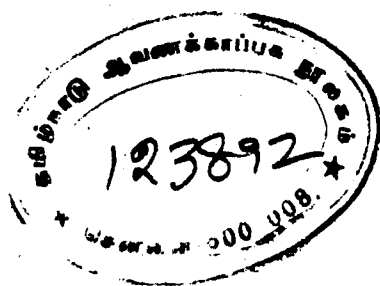
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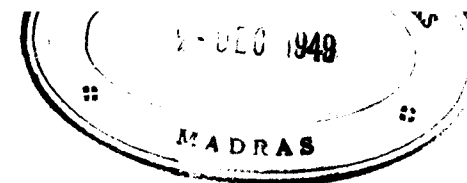
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THE PHILOSOPHICAL QUARTERLY

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[July 1949

Knowledge and Truth *

BY

G. R. MALKANI

1. We speak of false and true knowledge. But are true and characters of knowledge? If they are, there should be such a thing as false knowledge; i.e., we can know the false. But since the false is not only non-existent, but the non-existent appearing as existent, it is in a different category from logical negation and even pure negation. Logical negation is significant. Pure negation is tautologous, as when we say the possible does not exist. We can be said to know both these. We cannot be said to know the false. If we knew the falsity, then falsity would be regarded as a truth. We are aware of the falsity, i.e., we only disbelieve the content without knowing its non-existence. The non-existence of the false is meaningless. The possible can be; and it may not be. It is not meaningless to say that it is not. But the false cannot be, because it is false. It is therefore meaningless to say that it is non-existent. While therefore false knowledge is no knowledge at all, there remains only one species of knowledge, namely knowledge that is true. Prof. Bhattacharyya in fact defines knowledge in terms of truth, and truth in terms of knowledge. It is for him not merely a question of definition. We can all define knowledge as awareness of reality, and therefore all knowledge is necessarily true. Similarly, truth belongs to knowledge. Knowledge alone is true. Thus, knowledge is of the truth, and truth coincides with reality. But this is simply an analysis of the concept of knowledge

* This paper is primarily a presentation of Prof. K. C. Bhattacharyya's Presidential Address for the metaphysics section of the Indian Philosophical Congress, Bombay session, 1927.

and of the concept of truth,—i.e., how we use those terms. Prof. Bhattacharyya's argument goes beyond this formal definition of the concepts. He argues that *we do not know knowledge except as the implication of truth*. Truth is a value. This value belongs to a certain content. A certain content is said to be true. When, we know the content as true, we know it *as known*, i.e. we have knowledge of knowing the content. If the question of truth does not arise about the content, we have no knowledge of the psychical function of knowing it. This can be verified in our experience. Ordinarily, we know without knowing that we know. It is only when a doubt arises about the truth of the content (is this true?), and there is confirmatory knowledge which makes the truth of the content more or less certain, that there is awareness of having known the content or awareness of knowing. Mere psychological introspection cannot reveal knowing as such, as we shall see more fully later on. Knowledge is a function of truth, so that the awareness of truth is the awareness of knowing the truth; or in other words, knowledge is the implicate of truth. 'This is true' implies 'I have known it'. If the content is doubtful, the knowledge of it is doubtful. If the content is false, knowledge is impossible. "Knowing is known only as implied in the explicit awareness of truth, and truth is asserted only of a content that is known. Knowledge and truth have to be defined in terms of each other, the former as what alone is true and the latter as what alone is known." p. 5

2. We said there is awareness of the false. This awareness is not *knowledge* of the false. Knowledge is of the existent only, and the false is not an existent. For the same reason, the merely subsistent, that which is proposed to thought (i.e. proposition as distinct from judgment), the merely suggested possible content, an idea or mere meaning, is never known. The awareness of the false, however, is in a class by itself. It is not a logical function of thought which deals with objective contents in general including principally meanings, or subsistents or ideas. It is also not an epistemological function of thought which refers to the actual. In both these cases, we deal with accomplished meanings. The false has no accomplished meaning. It is only a problem in meaning. The same can be said about the consciously unknown (e.g. ignorance of a thing) or the unknowable. "We have no knowledge of the absence of known-ness; we speak of it and are aware of it variously in respect of the abstractly possible (gold mountain), of the impossible (son of a barren woman) or the unnameable, or of what is only willed or felt; but such awareness is not knowledge. Half

thoughts like these should find place in a new philosophical subject though they are as a matter of fact admitted in epistemology or logic. The doctrine of truth and error would really belong to this subject." p. 2

3. The false will really belong here. But why the true? If to know anything is to know it as implicitly true, there is a sense in which truth is known at the ordinary level of consciousness which is the subject-matter of epistemology. But do we really know the truth at this level? Evidently, we have no explicit consciousness of it. We have this consciousness only when something is cancelled as false. In other words, the awareness of the true is correlative to and simultaneous with the awareness of the false. In fact, it is one and the same awareness which reveals the true and the false simultaneously. This awareness is not knowledge in the ordinary sense. It does not arise through any empirical sources of knowledge, called *pramāṇās*. *Pramāṇās* give us supposed knowledge. But they do not give us the consciousness of truth itself. This consciousness arises only through *bādha* or cancellation, or through the process of confirmation. Confirmation is a spiritual or subjective process, not a logical process. When doubt is eliminated and truth is confirmed, we have the explicit consciousness of truth. This consciousness is simultaneous with the consciousness of doubt eliminated. Thus truth is not known in the ordinary sense, in which a content is said to be known.

4. What is the character of the new subject which is concerned with truth and falsehood as such? Logic understood in a very wide sense and epistemology are clearly not concerned with it. There is psychology. The method of psychology, let us say, is introspection. But psychological introspection is really retrospection. It is incapable of knowing even mental realities. We cannot introspectively know a knowing. Prof. Bhattacharyya says, "Nor can the past perception be said to be now internally or introspectively perceived, for the object of perception is ordinarily understood to be synchronous with the perception." Again he says, "All that psychology claims to know about cognition, it gets either through this unconfessed epistemological reflection or through a blend of imagination and verbal interpretation which yields only the appearance of knowledge. This blend is what passes by the name of psychological introspection which can never know a psychic process as a fact as distinct from fancy or mere meaning. Belief in psychic reality emerges only as the implication of belief in a spiritual value like truth or beauty or obligatoriness." Psychologically, we cannot know a knowing. Can we do so through epistemological reflec-

tion? Here knowledge is treated as a sort of datum to be analysed and interpreted. But how is this done? It is not literal or logical analysis. It is not as though knowledge were given and then analysed. No epistemological reflection could proceed on that basis. It involves a jump in consciousness to a higher level. Kant did not arrive at his transcendental constants through any logical process or through any psychological criticism. "The transcendental method is a self-evident transition, a process in self-consciousness and not in consciousness, and, as such, should be taken as a kind of introspection which is neither logical mediation nor mere internal perception. To be necessarily implied or presupposed by the logical content is no logical relation at all nor is it a name for the mere psychological mode of knowing the content." p. 3 In other words, the transcendental scheme was not a matter of logic or psychology. It was visualised at a level of consciousness higher than that of ordinary consciousness which itself is criticised, and which appeared, in contrast with the latter, as self-evidently true. Accordingly, this epistemological reflection claims a special quality of certitude, deeper than that claimed by mere objective or logical cognition,—the cognition through the uncritical employment of reason. But there have been rival theories of epistemology equally claiming truth. "The conflict of these assured theories of knowledge has brought to the fore the importance of a doctrine of truth and error competent to adjudicate between them and therefore based on a still deeper assurance of finality." p. 3 How is this possible? "There is a hint in the Kantian critiques of a transcendental psychology behind the general theory of knowledge... The systematic doctrine of truth and error would be the same as, or a part of, this transcendental psychology." p. 4 Here truth cannot be decided through any external test. It must be self-evidently true. It is only when we know truth in this sense that we can have a real differentiation of truth from error. And so Prof. Bhattacharyya says, "An epistemology must itself be a body of knowledge; there is no room for a hypothesis or a mere conceivability in this region where finality is claimed for every assertion." We have scope for error in ordinary knowledge. We have scope for error in a critical or epistemological interpretation of this knowledge. The higher rung of the ladder demanded is one where there should be no further scope for error. It is the level where we see the truth and we see the error, and we have no problem left about truth and error. In other words, we know the truth as self-evidently true, and we know the false as what is cancelled by the truth. If there is a higher philosophical subject called transcendental psychology, it must deal with truth

and falsehood in this ultimate and final sense. It is possible that transcendental psychology has to do with that level of self-consciousness where the function of a pure and non-mental awareness or what is called *sākṣi* is recognised and realised.

5. The question arises, how is truth related to knowledge? It is contended by Prof. Bhattacharyya that we have no direct or indirect knowledge of knowing, except as the implicate of truth. We do not remember past perception, for the past perception was not perceived in the past. (*Sākṣi*—knowledge is not a *factual* thing). We do not introspectively perceive it. We do not infer it, because this presupposes the cognition of knowledge and of objects as being together. The past perception is not known by any method in fact by which an object is known. ".....The awareness of the past cognition is at the same time awareness of the confirmation or the rejected doubt that is involved in the explicit assertion of the objective content as true." p. 7 This is true implies that it is known. It is not inference. It is implication. To say the one thing is to say the other. The latter follows from the former,—and this following is self-evidently true.

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6. Prof. Bhattacharyya has something interesting to say about the awareness of the past cognition. "Properly speaking, the knowledge of cognition does not emerge in time as the cognition itself emerges and so does not demand explanation.....The time-position of the content determines, not the time-position, but only a differential quality of its cognition, a quality however which does not appear to affect the knowledge of the cognition at all. There is therefore no question at all of the cognition and the knowledge of it being temporally related." In other words, knowledge of cognition does not emerge. It is a kind of pure and timeless awareness which simply reveals without taking on the character of what it reveals. The knowledge that emerges is the knowledge that is produced through the operation of some *pramāṇa* or method of knowledge. Such emergent knowledge is also qualitatively distinct. The knowledge of cognition, however, as we have seen, is not produced through the application of any method,—it is not perception, or inference, or memory. It is not a psychosis or *vriddhi*—knowledge. It is a non-psychical eternal awareness. A psychosis may have a time-position in the mental series correlative to an objective series in objective time, not so the awareness of cognition itself. This awareness is not knowledge in the literal sense. We only speak of it as knowledge.

7. Again Prof. Bhattacharyya says, "In the awareness of the cognition, the cognition is distinguished from its object which then

as not appearing distinct from it becomes indefinite.....The psychic fact and its object are in neither case presented as mutually distinct: the cognitive fact is only distinguished, and the non-cognitive fact is only distinguished from. This is apparent from the nature of the value in the apprehension of which the awareness of the psychic fact is implied. Truth does not appear as a character of the object while beauty or sacredness appear as such." It is easy to understand that the object is beautiful and the object is sacred. In both these cases, the object is distinguished from the mental fact. Value belongs to the object. Can we say the same thing about truth? Is truth a character of the object? If truth were a character of the object, known-ness would be a character of it also; for known-ness defines truth. But evidently known-ness cannot be a character of the object. It has a necessary reference to the mental fact of knowing, which may be said to bestow known-ness upon the object. While therefore beauty and sacredness belong to the object, truth belongs to knowing. This however must not be understood to prejudice the view that in any awareness of knowing, it is the object known that defines the particular knowing. When an object is known, it is distinguished or manifested. It is not distinguished from the knowing of it. But when we seek to know this knowing, we can only know it as defined by its own particular object. If anything is definite, it is the object, not the knowing as such. Accordingly, we never can know knowing. It is not object of any kind. It has only a transferred and illusory objectivity; and it is only when it is so taken, together with its content, and so objective, that it can be distinguished from the content which is known. Knowing, taken by itself, is something that is self-evidently true. The self-evident is never known. It is only spoken of as known, and as immediate. There is no literal knowledge of it possible. It is only with this modification that we must understand Prof. Bhattacharyya's view that knowing is distinguished from its object, but not vice-versa. It is not pure and real knowing that is so distinguished, but only a knowing that has a kind of transferred and illusory objectivity.

8. If knowledge is the implicate of truth, the question naturally arises, when do we know truth? Prof. Bhattacharyya suggests a kind of coherence theory of truth. He says, "This knowing is also known, known only when confirmed by other cognitions and as so confirmed.....Since a cognition is not known except when confirmed, there emerges the paradox of the confirming relation constituting it and yet falling beyond it.....The cognition that is said to be confirmed by others without prejudice to its completeness does not get modified in the confirmation: it only gets

to be known through it.....The given cognition is known only in the assertion of truth in respect of it, truth that is manifested in conscious confirmation symbolised as a relation. It is this pseudo-relation that has been elaborated into the objective symbolism of a system of relations, the system that is said to constitute the known object and which may be regarded as a shadow of truth, an imaginary projection of the knowing of knowing or self-consciousness. It is important to recognise that system is but a symbolism." p. 16

We admit that truth can only be *revealed* through confirmation, not *constituted* by it. Confirmation is a subjective or spiritual process which does not affect or modify what is known. But there is here a practical problem as well as a theoretical problem. In practice, doubt is removed through confirmation, and there is explicit consciousness of truth. But confirmation can never wholly remove doubt theoretically. The content of each knowing stands by itself, and ultimately its truth-value depends upon that particular knowing only. If truth is not self-evidently true, it can never be proved true or known as true through any amount of confirmation. All that we can say is that confirmation does, in actual fact, produce the consciousness of truth, when we are dealing with empirical knowledge. But the whole question of the truth of this knowledge is not solved by the theory of confirmation.

9. Idealists speak of the object as being a system. It is here suggested that the system is only a symbolism for the subjective process of confirmation. That may be so. But if absolute truth is not attainable through confirmation, and if confirmation is an indefinitely progressive affair, is it quite unreasonable on the part of idealists to suppose that the range of confirming cognitions, or the progressively wider context, can make a difference to the truth-value of a known content? Indeed, Prof. Bhattacharyya holds that the notion of degrees of truth and of falsity, advocated by certain idealists, is opposed to common-sense, which makes a radical distinction between them and holds them to be incompatible with each other. But then such truth must be ultimate and absolute truth, and this truth should be capable of being cognised without confirming cognitions, which themselves require to be confirmed. In other words, it should be self-evident truth. Prof. Bhattacharyya however does not go so far in this paper, although he does so elsewhere. Here he simply says, "The particular known content is not known as the truth but is only demanded to be so known, by the process of confirmation and the consequent or independent

process of dissipation of error inherent in it." p. 17 But we make bold to assert that no particular known content can ever be known as the truth, except in the complete rejection or sublation of it. Error simply cannot be dissipated with regard to it.

10. An important point is made by Prof. Bhattacharyya when he says that knowledge is not a relation. "When it is held that knowledge is the relation to the object, what is really meant is that knowledge is distinct from its object but not reversely. Our contention is that such one-sided distinction is not relation at all. There is no relation without *mutual* distinction which implies some form of objective togetherness. Knowing and its object are not objectively together and therefore even the known distinction of knowing from its object, which we admit, is not a relation. Yet such one-sided distinction has to be necessarily symbolised as a relation.....The awareness of the distinction as one-sided is the awareness of the evidentness, manifestation or *prakāṣa* of the object, which is no relation but is only symbolised by it. The evidentness of the known content is a category utterly distinct from relation, to recognise which is to appreciate the differential character of knowing.....The object is known simply as evident and it is *not* known as related to knowing. There is no knowledge of the circumstance of unrelatedness but only an extra-cognitive awareness of it." Now it is often held that knowledge is a relation in the sense that when we know an object, the object is related to knowing. This knowing may be a pure awareness, diaphanous and all that; or it may be a modified awareness, a psychosis (*vritti*) as it may be called. But in any case, there are two entities here, and a relation. It is undeniable that a relation must exist between two entities which are mutually distinct and so independent. Both must be objective, and therefore belong to the same order of reality. All relation is between objects as we say,—there can be no relation between an object and a no-object. But we are here confronted with a different situation. Knowing itself is never objectified. As we have already said, there is no knowing of knowing. But if that is so, the matter cannot rest there. We cannot simply deny all relation. For one thing, we have to admit that the *evidentness* of the object or *prakāṣa* is not something inherent in the object, but a quality which it has achieved through being known. This forces us to conceive some other thing, called knowing, which lends this evidentness to the object. There is evidently not one thing here, say the object only. We have to speak of two things, though we may not *know them as together*.

Also we must speak of some kind of relation between them, although it may not be a real relation or an objective relation. The object cannot be distinguished *from* knowing as such, for then it would dwindle into nothing, and be nothing; but it can be distinguished *within* knowing as what has known-ness or evidentness through its relation to knowing. It is a peculiar kind of relation. Instead therefore of denying the relation altogether, we may simply define further the kind of relation it is. We may say that it is not a *real* relation, since a real relation is understood to subsist between two mutually distinct and independent entities. In the present case, the terms are not thus given. Knowing is never given. And the object is distinct only *as known* or as related to knowing. In other words, knowing is fundamental to the distinction and so to the appearance of a relation. Or what is the same thing, distinction is subordinate to the unity. Unity is real and cannot be denied. It is the unity of knowing. Distinction is false and illusory; for it is not a distinction *from* knowing, but *within* it. It is a kind of relation which we find in all cases of illusory objects. An illusory object does not stand in any real relation to the underlying reality, for it has no reality of *its own* which it can bring into relation. It has a derived reality only, and this reality is derived through the relation of "false identity" or "super-imposition." One thing is taken for another. Similarly here, knowing is taken as the object known or evident. The evidentness shows itself through the object, and it is but the evidentness of the ground, which is here knowing as such. The objects are what they are only as known, or as related to a knowing or *prakāṣa*. As Prof. Bhattacharyya has said, the circumstance of their unrelatedness is not known. It is a non-cognitive belief only. This is in marked contrast to the view that to know a thing is to know it as independent of knowledge and as externally related to it. In fact, the independence is sought to be proved on the basis of knowledge itself. But this is due to a wrong analysis of knowledge, where knowing and its object are conceived as two equally given and co-ordinate terms, which they are not.

11. In this connection, Prof. Bhattacharyya finds fault both with realism and idealism. Realism starts with the unrelatedness and the independence of the object, which it can never prove. It takes the willed distinction as though it were the known distinction of the object from the knowing of it. "...Unrelatedness is a believed quasi-relation which is by confusion taken to be a known relation." Idealism again takes the object to be one with the knowing of it,

It interprets knowledge in terms of feeling. The felt identity in difference is taken as though it were the known identity of the object with the knowing of it. "It is only in the awareness of willing or feeling, as distinct from that of knowing, that the object referred to is distinguished from the psychic fact. This distinguishing is not the knowledge of distinction or relation but only a direction or phase of willing or feeling." In other words, the distinction of the object from knowledge on which the two theories of knowledge are based is due to confusing either willing or feeling with knowing. For knowledge, the object is not distinct from *knowing* and does not therefore stand in any real relation to it.

12. What is Prof. Bhattacharyya's own theory of knowledge? The answer to this question is not very clear. But we can surmise. When are we aware of knowing? We are aware of knowing not directly or through any psychological introspection. We are aware of knowing when we are aware of the truth of the content. Every known content has known-ness or evidentness. This is the truth-value of the content. But this kind of truth-value is common to every kind of content, which is empirically known to be either true or false. The specific truth-value attaching to a content is dependent upon confirming cognitions. If I am simply aware of a content, I am not aware of its truth. All I can say is that I do not question its truth. But it may quite well be false, or even true. It is the later and other cognitions that will show which it is. These cognitions may be incompatible with it and cancel it. In that case, it will be rejected as false. Or alternatively, they may be quite consistent with it and even confirm it. It is in this case that there is a specific awareness of the truth of a content. When there is this awareness, there is the awareness of knowing the content. But evidently, the truth-value of a content which is the result of confirmation cannot be absolute. Confirmation is progressive. The limit can only be reached when there is no further confirmation demanded. This is only possible when truth is self-evident. But then will any content be left? Can any content be known as self-evidently true? If it could be so known, then this truth would not be a matter of confirmation; and yet no content could be known as true except as confirmed. If that is so, it is an open question whether any content of knowledge whatsoever is really true, and so really known. If it does not represent literal truth (and no content can really do so), then it is not really known. It may be said to be only imagined or willed. The theories of realism and idealism are based upon the hypothesis that a content is really

known. If this hypothesis cannot hold, we must have a new epistemology which is neither realistic nor idealistic. In other words, we must know the absolute truth or truth which is self-evident. Is there anything in our experience which claims self-evidence and which can therefore provide the way to absolutely true knowledge. We suggest that the reality of the Self is such a reality. Prof. Bhattacharyya however does not go so far in this paper, and does not provide us with a positive theory of knowledge. But such a theory is bound to go beyond the traditional theories of Idealism and Realism. In fact, it will come under no kind of 'ism'. When Truth is realised, theories have to be transcended; for all theories are one-sided. Truth requires to be seen and known through self-reflection, not theorised about.

The Notion of Svaprakāśa

BY

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The sanskrit word *svaprakāśa* literally means 'self-luminous'. Certain schools of Indian philosophy employ this word for characterising knowledge or consciousness. Roughly speaking, they mean, by this, to say that knowledge is self-conscious. Advaitism, too, maintains a similar view. But its position is rather unique both in respect of the exact connotation of the term 'self-luminous' and also in respect of the precise nature of that knowledge to which it applies. Before considering the advaitic position, we shall briefly state the reason on account of which knowledge is considered to be self-illuminating at all.

In so far as I see a table, there is knowledge. But how do I become aware of this knowledge? Some philosophers hold that we can have a direct awareness of such an act of knowledge, but this direct awareness is a separate act which occurs immediately after the first act of knowledge. As I am engaged in visually perceiving the table, what is before my mind is the table and not also its perception; but at the next moment (and before the act of perception disappears), my attention can be drawn to the act of perception too. It is with the help of such an after-cognition (*anuvyavasāya*) or apperception that we primarily become aware of our acts of knowledge.¹ But there are difficulties in the way of accepting this view. It would appear that such an act of after-cognition does not follow every act of knowledge. For instance, I now remember that my flower-vase had a rose in it in the morning, and even that I actually saw the rose to be there at that time. But I do not further call to mind that I was also then apperceiving the visual experience itself. On the contrary, the evidence of memory seems to be in favour of there being no such act of apperception. Now except where I definitely recollect to have performed an apperceptive act, it is doubtful whether a past act of knowledge which is now remembered by me was also apperceived immediately

1. This is the view of the Nyāya-Vaiśeṣika system.

after it occurred. To contend, therefore, that every cognitive act is invariably apprehended by an immediately following act of apperception, although memory does not support this contention, would not be reasonable. Moreover, the apperception being itself a cognitive act would also, in its turn, be apperceived by a second act of apperception, and so on *ad infinitum*; but if this be true, we should always be aware of merely an inner life consisting mostly of a series of successive acts of apperception — we could hardly come to know external objects or even mental acts and states, other than those of apperception. Of course, where the apperceptive act is actually remembered or known in some other way, we have every reason to assert it. But not elsewhere. We should, therefore, admit that there may be cognitive and apperceptive acts which are not themselves apperceived. But if this be a fact and if, again, apperception be the only way by which we primarily become aware of an act of knowledge, then, there would be no ground for asserting that such cognitive and apperceptive acts existed at all. Nor could such acts be ever remembered afterwards. For in order that something may be remembered, it is necessary that it should already be primarily known in a non-mnemic way; but these acts, not being apperceived, could not, on this theory, be supposed to have been primarily known in a non-mnemic way. But this is a consequence which cannot be accepted. For although every act of cognition may not be actually remembered, still the possibility of its being remembered with more or less precision, under favourable circumstances, cannot be denied; but the hypothesis that the only way in which we can be primarily aware of a cognitive act is by an after-cognition precludes this possibility. Besides, there are certain instances which would seem to prove that although an act of knowledge is now remembered, yet it must not originally have been apperceived by an after-cognition. For instance, occasionally my attention is riveted on some extremely interesting object; and when the spell of this absorbed state of mind is over, memory reveals that during that period I was wholly occupied with a continuous succession of thoughts directed upon the self-same object. If such an uninterrupted state of mind, vouched for by memory, be a fact, it would imply that no apperceptive act could occur in my mind, then. For that would disturb the concentration of attention on the self-same object.

I can, therefore, reasonably assert the past existence of certain acts of knowledge, which can be remembered and yet were not apperceived when they existed. Not only that. Even if we grant that they were apperceived, this would not account for all that their memory can reveal about them. An act of apperception, since

it is a kind of immediate knowledge, must be supposed to occur at some moment during the time in which the apperceived act continues.² If so, the act of apperception cannot possibly apprehend the birth of the apperceived cognition. But it is necessary that I should somehow become aware of its birth at the very time it comes into being. For in remembering a past mental event, I also remember that it had originated and was not a constant feature of my mind. Similar considerations would show that the act of apperception must also witness the death of the apperceived cognition. Else I could not remember that this particular act yielded place to some other act or state of mind. Moreover, the apperception itself, being an occurrent act, should be capable of being remembered afterwards and would thus call for another act of apperception which is directed towards it and exists simultaneously with both it and the original cognition which it apprehends; and so on *ad infinitum*. But this leads to the impossible position that, during the short span of time in which a cognitive act continues, there can be an infinite number of apperceptive acts existing simultaneously with it.

Now the theory that a cognitive act is essentially self-conscious or self-luminous is naturally suggested as a way out of these difficulties. It holds that the original awareness of a cognition is not only simultaneous, but also identical, with that cognition. Every cognition knows its object and also itself, at the same time. The so-called primary awareness of a cognition is no separate and distinct act which differs from the cognition, but is only the self-conscious aspect of that very cognition. The light of a lamp illumines both itself and the object on which it falls. It does not require some other light for its own revelation. The case of knowledge, too, is quite analogous. An act of cognition does not, like the eye, function merely as a means to reveal an object, while itself remaining unrevealed. On the contrary, the cognition is the revelation of the object. And a revelation must, merely on account of the fact of its being, reveal also its own existence. That this is so would seem to be what is naturally taken for granted by all unsophisticated persons. If it were possible for a cognitive act to exist in my mind without my being aware of it, I would hardly care to exert myself for knowing anything. Suppose that I intend to

2. The actual Nyāya-Vaiśeṣika view is that a cognition comes into existence at one moment, stays for another, and then dies at the third moment; and its apperception occurs at the second of these three moments, when the apperceived cognition is still in existence.

see a thing about which I have heard a good deal from others. If now it be possible that I may not appreciate the fact that I am perceiving that thing visually even when its perception is actually taking place, I should not feel inclined to make any attempt to see it. We must, therefore, grant that a cognition is intrinsically self-conscious, i.e., we are immediately aware of a cognitive act (when it exists in our mind) by virtue of the simple fact that it is an existing cognition.³

Superficially considered, the above view would appear to be very similar to what an advaitist maintains in this matter. Really speaking, however, his position is very different from this. No doubt, he would grant that every cognition (or, for the matter of that, every particular experience) is somehow directly apprehended at the very time it occurs and exists. But he would also maintain that this direct apprehension of the cognitive act is not an aspect of the act, nor indissolubly connected with, and exhausted in that act. On the contrary, it is the very ground of the cognitive act, the very principle on account of which alone the cognitive act can reveal its object. The cognitive act is not self-conscious; instead, it itself is revealed by that primary principle of revelation, on which it is grounded, and with which it is identified. Besides, this primary apprehension of an act of knowledge is not exhausted in knowing that particular act alone; but it precedes, succeeds and thus transcends that act in existence, revealing other cognitive acts too, and enabling them to reveal their respective objects. This ultimate principle of all revelation is a permanent and immutable consciousness. It is only by borrowing its light that all particular acts of cognition, such as those of tables, chairs, etc., perform the work of revealing their objects. Apart from the light of this standing principle of illumination, any particular act of knowledge would be a dead and inert thing which could neither reveal an object nor be itself revealed. Hence the epithet 'self-luminous' is not rightly applicable to them, but only to this permanent and immutable consciousness.

To justify the above view. The notion that an act of knowledge is capable of being directed upon itself cannot be true literally. How can the act of burning burn itself? So also, the act of cutting does not cut itself, but something else such as a piece of wood; nor does the act of cooking cook itself, but something

3. Prabhākara, a mīmāṃsā philosopher, and also the Buddhists maintain this doctrine with slight variations to suit their respective positions in ontology.

different such as rice.⁴ Similarly an act of knowledge cannot possibly know itself. Moreover, the hypothesis that a cognitive act is known by itself cannot account for the fact that we can be aware not only of the act, but also of its birth and death, its distinction from other acts and states occurring in the same mind, as also its temporal position in relation to them. The explicit memory of my having seen a table is found to take the form, "I was *then* perceiving the table." The word 'then' in this context indicates the pastness of the act of perception, the fact that it originated, stayed for a while and then vanished, and the fact that it was preceded by another experience and succeeded by still another—experiences which, too can often be recollected. Now this fact that I can remember, at a stretch, two or three consecutive experiences of my past mental life, together with their mutual distinction and order of sequence shows that there must be a single direct awareness which originally apprehended not only the experiences themselves, but also their birth and death precisely at the time at which these occurred. No particular act of knowledge, even if it be supposed to be self-conscious, can possibly grasp all these facts. For, of any two cognitions, granting that they are self-conscious, the function of each must be considered to be completely exhausted in knowing itself (or itself and its object). No one of them can be supposed to know the other, or the birth and death of either, or the relation of sequence which obtains between the two.⁵ So the theory that a cognitive act is primarily apprehended by reason of its being self-conscious fails to account for our awareness of certain facts about our inner life, of which we can be aware.

Can psychological introspection yield such direct awareness of the course of our mental life? No. For the word 'introspection' would seem to stand for a specific act of inner perception which occurs at a certain moment, continues for a while and then ceases to be. It itself would seem to be capable of being introspected into. As such, it would appear to be a kind of apperceptive act which is of a specially discriminating type and is directed to some mental act or state which occurs either simultaneously with it or immediately before it. If, however, introspection be considered to be an inseparable aspect of every experience, it would imply a theory which is the same as, or similar to, what we have just now examined, namely, the theory that an experience is intrinsically self-conscious. But we have found that this theory is both contradictory and inadequate. So introspection, too, cannot be regarded

4. Br. Sut. Śāṅkara Bhāṣya, II, ii, 28. Bhamatī.

5. Ibid.

as the way in which we primarily know an act of knowledge. In fact, it is often suggested that introspection is really retrospection. If this be so, it would only be a kind of memory; but memory differs from, and presupposes, our primary awareness of a thing.

It would appear that no occurrent act of apprehension has the capacity of knowing directly all that we can actually know about a cognitive act. One chief reason for this is that no occurrent apprehension can be supposed to be directly aware of all these facts together, namely, the birth and death of the cognitive act and the mental states which immediately precede and succeed the cognitive act. So the primary awareness of a cognitive act must not be an occurrent, but a continuant. Since it has to apprehend not only the cognitive act in question, but also its temporal position among other contiguous experiences, this primary apprehension must exist both before and after the cognitive act, besides being contemporaneous with it. While witnessing the rise and fall of the act, it must not itself suffer any such transformation. A little reflection would show that what we have said about the primary awareness of a single cognitive act is true also of the primary awareness of the entire course of our mental life. This implies the existence of a single, continuous and unchanging consciousness which immediately reveals all our acts and states of mind, as they occur, continue and cease, one after another.

Now advaitism maintains that the word *svaprakāśa* or self-luminous is rightly applied only to this continuous and unchanging consciousness. But, then, this consciousness is not self-luminous in the sense in which it could be said to turn back on, and thus reveal, itself as an object. For, as has already been shown, it is impossible for an apprehension, whatever be its kind, to know itself in that reflexive manner. An apprehension can only know something which is other than itself. In what sense, then, is our primary awareness of a mental act or state, self-luminous? It is self-luminous in the sense that being the ultimate principle of all revelation, it need not, nor can it, be again revealed. For one cannot legitimately entertain any doubt about its existence, since it has necessarily to be accepted as the precondition of the knowledge or revelation of any object whatsoever. It may be objected, "Is anybody in any way ever aware of this permanent consciousness? If he is not, he cannot justifiably assert its existence. If he is, then his awareness of it would be different from it; and this will lead either to an infinite process or to the position that a consciousness can know itself as an object." The answer is that although there is no awareness of this permanent consciousness, nor does this consciousness apprehend itself as an object, still it would not be correct

to say that it, therefore, remains altogether unknown and therefore cannot be asserted. For there can be none but an artificially induced doubt about its existence. As the Bhāmatī says, "This ultimate subject (which is) in all living creatures, even when it doubts something, itself remains undoubted, even when it commits a mistake, it itself remains unmistaken; even when it postulates or infers things which are not immediately present, it itself remains immediate; and even when it recollects something, it itself is a direct experience. Nor is all this due to the light of something which is different from itself. . . . So in spite of one's desire to deny it, it remains utterly undeniable."⁶ And by saying that this ultimate subject is self-luminous, what is meant to be conveyed is that it is the very quintessence of all revelation, and, as such, cannot and need not be revealed by anything else; and still it would be wrong to think that it is completely hidden from us; on the contrary, it would be quite correct to say that it is evident to us constantly and immediately in every act of knowledge, although not through any act of knowledge but solely by reason of its mere existence. Thus the self-luminosity of consciousness is constituted by the fact that although consciousness is incapable of being the object of either itself or of some other consciousness, yet it is essentially and always *evident* to us in the sense that doubts and wrong knowledge as to whether it exists or is of conscious nature cannot be rationally entertained.⁷ As Maṇḍana Miśra remarks: "Consciousness can be said to be known, in that it itself is knowledge; it can also be said to be not known, since it is not the object of any knowledge."⁸ As already stated, this fundamental consciousness, although it cannot be apprehended by any other consciousness nor by itself as an object, has still to be accepted as constantly existing in us in the most immediate manner. It is to express this peculiar trait of this foundational consciousness of our acts of mind that it has been designated as self-illuminating.

It has already been shown that to conceive the self-revelation of knowledge as a sort of reflexive action, i.e., as a kind of turning back upon itself, is contradictory. The analogy of light cannot make such a conception intelligible. For light does not reveal itself, but things other than light. In fact, in the sense in which we say that light reveals a thing such as a table, it is meaningless to speak of light being revealed. If this is so, it would appear

6. Bhāmatī on Br. Sut. Śāṅkara Bhāṣya, II, ii, 28.

7. "Advaita-Siddhānta-Sārasaṅgraha" by Nārāyaṇaśrama, p. 18.

8. Brahma-Śiddhi, p. 4.

that the analogy of light rather supports the advaitist's conception of *svaprakāśa*. Thus although things like tables and chairs are in need of light for their visual perception, still light itself is not in need of another light for its own visual perception, since it itself is light. Similarly although all objects of the world stand in need of consciousness for their revelation, still consciousness is not in need of any other consciousness for its own revelation, since it itself is what constitutes revelation or knowledge. That which is different from salt may indeed be salted. But it is not sensible to speak of salting a lump of salt. That which is not revelation may be brought into connection with it, i.e. made its object and thus revealed or known. But it would seem to be an impossible task to reveal revelation itself. And yet there is no need of doing so. It is in this sense that consciousness is self-revealing.

It is also self-revealing in a slightly different sense, namely in the sense that it is self-evidencing. The final evidence for asserting things like tables and chairs is, as we all know, perception. But what is the evidence that there is perception? Let us say that it is an act of apperception or memory. But what is the evidence for the apperception or the memory? It would appear now that we must have recourse to an infinite series of such evidences or to a self-evident principle in order that we may assert the existence of anything whatsoever. But an infinite series can never be obtained in its completeness. Therefore, we must have recourse to a self-evidencing principle, if we are to assert anything at all. But as a matter of fact, we do assert things. Hence we must be having at our disposal some self-evidencing principle. It may be thought that although we assert the existence of many things, still it is possible that we do so without complete evidence. But this is to raise a different issue altogether—the question of the validity of an evidence. The mere existence of a table is not what makes us assert it. We must first perceive it or know it in some other way, before asserting it. Of course, the perception on the basis of which we make such an assertion may not be a valid evidence; and in that case, the assertion may be unjustified. But this does not imply that an assertion of this kind is possible without any evidence whatsoever, valid or invalid. For it is not true that in asserting things like tables and chairs, we ever exercise any arbitrary fiat of our will. And what we are urging here is that in making an assertion of this kind, we must have some evidence which, even if it be invalid, is self-evident so far as its own existence is concerned. When I wrongly assert the existence of a snake where really there is only a piece of rope, I do so on the evidence of some consciousness. This consciousness, although its

evidence is invalid so far as the snake is concerned, is nevertheless quite valid in respect of its own existence, since no legitimate doubt can be entertained about its own existence, without landing us into a vicious infinite process. However, its evidence in respect of anything other than its own existence may be (and, as advaitism maintains, is) invalid. With this reservation about its validity, it would appear that an ultimate self-evident principle must necessarily be accepted as the precondition of all significant speech, since all significant speech is, or involves, the assertion of something or other; and a little reflection would make it evident that this self-evident principle is consciousness in general. Except on the evidence of consciousness, ultimately speaking, no assertion is possible. But in order to assert consciousness, we do not require any further evidence. If we did, it would, as shown above, lead to an infinite process. In this sense, then, consciousness is self-evidencing. This, however, does not imply that consciousness can, by a sort of self-diremption, pass out of, and then point to, its own existence. The true subject must ever remain in the background. It cannot be revealed; it cannot be evidenced; but it is not in need of being revealed and evidenced. For it itself is the principle of all revelation and evidence.

In short, this peculiar nature of consciousness that it has to be accepted as the presupposition of all acts of cognizing and asserting objects, and nevertheless it itself cannot and need not become the object of consciousness in order that it may be asserted, is what is expressed by the term *svaprakāśa* or self-luminous.

Similar considerations as the above would show that the term self-luminous, as thus understood, is applicable even to the self of a person, i.e., to that in him which may be called the knower whenever he knows something. For in the first place we have to admit that the self is somehow and in some sense known to us. If the knower were not known, there would be no awareness of knowledge at all, since all knowledge is cognized in the form "This is known by me." If the self remained wholly in the dark, the phrase 'by me' in this statement would be meaningless. The words of this statement indicate that the self is connected with both an act of cognition (which is expressed by the word "known") and also a cognized object (which is here expressed by the word "this"). A self which is altogether unknown cannot in this way be referred to as being connected with an act of cognition and a cognized object. If it be held that in knowing an object, no such connection of the self with either the act of knowing or the known object need be involved, then there would be no distinction be-

tween the fact that something is known by Smith and the fact that it is known by Jones. In other words, this would undermine what is called the centrality of a thought. It would therefore not be proper to think that the self of a person is altogether unknown to him. But again it would also not be proper to think that the self is ever known by him. For if a self could ever be known, it would, by becoming an object of knowledge, cease to be a knower, since a knower is he to whom the act of knowing belongs, and it is impossible for the same thing to be both that to which a cognitive act belongs and also that which is the object of the cognitive act. If it be said that a present knower can very well be supposed to be known by a second knower, thus avoiding the difficulty of making the knower his own object, then we should be introducing an infinite process for knowing the ultimate knower; and he would remain always unknown. But none except the ultimate knower can be regarded as the true self.

Reflection would show that the subject must essentially be spirit, and spirit can never become an object, since the latter is necessarily different from spirit. The relation between subject and object is the same as that between spirit and matter; and the two are so disparate in nature that it is impossible for the one to take the place of the other. It may be objected that that there is no reason why the self should cease to be spirit, if it becomes the object of knowledge. For there is a clear distinction between the forms in which the self and the not-self are known: the latter is apprehended as a 'this', and the former as an "I". No doubt, 'knowing' is a transitive act; and ordinarily the locus and the object of a transitive function are different. Still in the case of a knowing act, we have to accept their identity, since this is what actual experience supports. But this objection is not tenable. The experience which is represented by the word 'I' is no cognitive act which makes the self its object; on the contrary, the representation 'I' would have been impossible if the self were known as an object; for in that case, it would have found expression in the form of 'this' and not of 'I'. Hence on the strength of the experience represented by the word 'I', it cannot be established that the self can at once be both the knower and the known. Of course, it cannot be denied that the word 'I' somehow refers to the self or the knower. Still the representation 'I' is not a cognitive act which is directed upon the self in the way in which the cognition of the table is directed upon the table. How, then, does the term 'I' indicate the self at all? Briefly put, the answer is as follows. The expression 'I', no doubt, whenever it occurs in a statement like "I see the table", asserts the self, just as in the

statement "The table is brown" the word 'table' asserts the existence of the table. But while the latter assertion depends upon an act of knowledge which makes the table its object, the former does not require any such act of knowledge which differs from the self and makes it its object—it depends on the bare fact that the self exists. The self is asserted as 'I', but in order that this assertion may be possible, it is not necessary that the self should be *given* through an act of knowledge. The self can be asserted simply on the ground that it is the self of the person who makes such an assertion, and not because it is in any way *given* to him through an act of cognition. The self is absolutely *ungiven* in that way; and still it is the most immediately evident reality to a person. That is, it, too, like consciousness, is self-illuminating. It is only by conceiving the self as self-luminous in this sense that we can avoid the absurdity of thinking that the knower and the known are sometimes identical.

Are we then to think that there are, in a person, two self-illuminating entities, namely a permanent consciousness and his self? That is not acceptable to advaitism, and for the following reason. Differences of every type belong necessarily to the object and therefore fall outside the subject, whether the subject be considered to be the consciousness which reveals the object or the knower to whom this consciousness may be attributed. That is to say, neither consciousness nor the self can have any distinction. Even if we suppose that the self is different from consciousness, by what could this distinction be revealed? Not by the self. For, then, the self that would reveal "this distinction from consciousness" would be different from the self to which this distinction is to belong; and thus the revealing self's distinction from consciousness would still remain unrevealed. The same sort of reasoning would show that consciousness, too, cannot be supposed to know its distinction from the self. But that which can, by no means, be revealed by anything at all must be rejected as a non-entity. The self and consciousness must, therefore, be one and the same thing. Even if we suppose that the two are different from each other, the relation between the two must be that which obtains between a substance and its quality. It would appear, however, that the distinction between substance and quality is significant only when different attributes (simultaneous or successive or both) are ascribed to the same thing. But in the present case, the self is supposed to be that to which a permanent consciousness belongs. To say, therefore, that the first is a substance, of which the second is a quality would not be quite proper. The force of this remark would be weakened if the self to which a

permanent consciousness is said to belong possesses also other attributes such as willing and feeling. But, as advaitism points out, these latter being objects of consciousness cannot be regarded as characterizing the self—willing and feeling are but modes of the psche (*antahkaraṇa*) which is external to both consciousness and the self. Ordinarily no doubt we believe that whatever forms part of the mind is also included within the self. But philosophical reflection shows that this belief is wrong. That the self and consciousness are identical with each other is supported also by the consideration that if the self be really self-luminous in the sense in which advaitism understands this term, then the very essence of the self must be illumination—it must be, as advaitism puts it, a uniform substance of mere intelligence just as a lump of salt consists of only one substance namely salt and of no other thing. (*Saindha vaghanavad vijñanaghanaikasvabhāvah*). Else, the self could not be evident to us without being revealed by some cognitive act.

We have till now tried to clear the ground for a proper understanding of what should really be characterized as *svaprakāśa* and why. We will now give an exact definition of *svaprakāśa*.

Chitsukha defines it thus: Self-luminous is that which without being the object of any revelation is still capable of being referred to as 'immediate' or is not incapable of being referred to thus. Evidently this definition applies to the self. For every person thinks that his self is, of all things, the most immediate to him; moreover, as we have tried to make out, the self is never the object of any consciousness. Now although this is the most widely known definition of *svaprakāśa* suggested by advaitists, and although it brings out the salient features of the advaitic conception of it in clear contrast to other conceptions of it, still we will not discuss it here. For, in the first place, most of the points which this definition emphasizes have already been brought out in the fore-going discussion; secondly anything like a full exposition of it is not possible in this short paper; and thirdly, as writers on advaitism have pointed out, this is a definition *per accidens*, although it correctly demarcates what is *svaprakāśa* from everything else. We shall, here, explain a shorter and simpler definition which is suggested by Nṛsiṅhaśrama in his *Advaita Dipikā* and which claims to state what *svaprakāśa*, in its essence, is.

To start with, *svaprakāśa* is defined as "that which is not the object of consciousness." (*svaprakāśatvam nāma sañvidaviśayatvam*). Obviously, this definition applies to the self. For, as we have already seen, the self is of the nature of consciousness

and is not its own object, nor the object of any other consciousness. The definition is also not too wide. For everything else is necessarily an object of consciousness. It is, of course, true that extramental things such as tables and chairs are objects, not directly of that permanent consciousness which constitutes the self, but of particular acts of cognition which form part of the mind. Still the revelatory character of these acts is solely derived from this very permanent consciousness. In the absence of the latter, neither the acts nor their objects such as tables and chairs could ever be revealed. Moreover, if extramental things were objects of merely cognitive psychoses, they could not be referred to as not-selves. For the fact that they are objects of particular cognitive acts could only account for their being spoken of as different from such acts, but not also for their being spoken of as different from the self. Hence all things other than the self are also objects of the self, i.e., of consciousness, irrespective of the question whether they are objects of certain psychical acts or not; and so these things cannot be considered to be self-luminous.

It may be contended that there may be some entity (e.g., a hitherto undiscovered element of matter which is destined to lie hidden in some unfathomed ocean-cave) which is different from the self and still not the object of consciousness; and such an entity would, according to our definition, have to be regarded as self-luminous. Against this contention, we would point out that such a merely hypothetical entity is not evident to us either by its own light or by the light of anything else; and our definition of *svaprakāśa* does not certainly take into consideration such merely hypothetical and suppositious objects. If it be insisted that these, too, must be taken into account, the definition of *svaprakāśa* should be amended thus: "*svaprakāśa* or self-luminous is that which is not the object of consciousness, but is nevertheless evident (*prakāśamāna*)." By "a thing's being evident" is meant its "not being the object of any doubt, error, etc., in regard to its own existence." (*Prakāśamānatvam nāma svasattāyām svaprakāraka sandēhādyaviśayatvam*). Now although the hypothetical thing which possibly exists hidden in an unexplored region is not the object of any consciousness, still it cannot be considered to be evident in the sense explained just now. It would of course, become evident when it would be known by perception or inference; but, then, it could no longer be described as 'what is not the object of consciousness.' Hence the amended definition of self-luminosity would, in no case, apply to it. Things such as the

table on which I am writing now are, of course, *evident*. But they are objects of consciousness and so not self-luminous.

It may be objected that if self-luminosity, as defined above, be a real character of the self, then the strict monism of the advaitic philosophy which maintains that nothing exists except the self which is an absolutely simple and distinctionless entity would be at stake; and if self-luminosity be an illusory character, then it would not be true to say that the self is self-luminous, since that to which we wrongly ascribe a false character is opposed in nature to that false character. But this objection is not tenable. Consideration would show that self-luminosity is just identical with, and not different from, what constitutes the essence or "own nature" (*svarūpa*) of the self. Non-objectiveness or 'the character of not being the object of consciousness' which constitutes self-luminosity is just the absence of objectiveness or of 'the character of being the object of consciousness.' Now objectiveness, as ascribed to the self, is a false character. Hence to attribute non-objectiveness to the self is merely to deny an illusory character of it. But to deny an illusory character of a thing does not involve any assertion other than the assertion of that thing itself—it does not amount to affirming a character which is distinct from and qualifies, the thing. For instance, the absence of an illusory serpent is not a character which differs from, and inheres in, the piece of rope in which the serpent falsely appears, although the absence of a real snake existing elsewhere may be considered to be a real character of the rope. Similarly, since the self-luminosity of the self is but the absence of 'the illusory character of the self's being an object', this character is just identical with what constitutes the self, and does not affect the rigour of the advaitic monism.

To consider now a more serious difficulty in the way of accepting the doctrine that the self is self-luminous. It would appear that any assertion is an occurrent act and hence presupposes an occurrent act of consciousness. The assertion "Here is a table" is an event which occurs in time. Hence the knowledge which serves as its ground is also an occurrent act of mind, such as an act of perception. Now the self, too, is asserted. But we do not assert it always. So when we assert it, the ground of such assertion must be sought in an occurrent act of knowledge and not in that permanent consciousness which constitutes the self. Every assertion of the self, therefore, implies that it is the object of a cognitive psychosis and hence just as non-self-luminous as things like tables and chairs.

But this objection, too, cannot stand. That the self cannot be the object of any revelation whatsoever simply because it is the ultimate knower or the principle of revelation itself has been repeatedly pointed out. As we have it in the *upaniṣads*, "How can the knower be known?" We have, therefore, no other alternative here, than to grant that the ground on which the self is asserted is just the fact that the self is non-different from revelation. But why is not the self asserted at every moment, seeing that this 'non-difference of the self from revelation' is not a fact which merely occurs from time to time, but is a permanent feature of the self? The reason is that knowledge or revelation is not the only precondition for asserting the existence of a thing, although it is the most important of all the preconditions which are necessary for an act of assertion. For instance, the desire to assert is also a pre-requisite for it. So we can very well think that it is the absence of this latter precondition which accounts for the fact that the self is not asserted constantly. At any rate, as long as the mind is active, so that there can arise in it a desire, the assertion of the self would seem to be always possible, although no act of knowledge can ever make the self its object. It would be reasonable, therefore, to maintain that the ground for an assertion in general is "knowledge or consciousness" and not "the knowledge or consciousness of an object." Hence whenever we have a desire to assert the self, we can do so, because the ground for such assertion is always available, namely consciousness which is non-different from the self. But the ground for asserting a thing other than the self, such as a table, is not knowledge as such, but the knowledge of that thing. Now the knowledge or consciousness of a table is not always present. That is why we cannot always assert a table merely by having a desire to do so.

It may be thought that consciousness *simpliciter*, since it can account for an assertion in one case, namely in the case of the self, should be a sufficient ground for the assertion of even a not-self—in order that a not-self be asserted, it should not be necessary that there must be an object to this consciousness. But this would not be proper. For in that case, even a non-entity such as the horn of a hare or the son of a barren woman could be asserted, since consciousness in general is ever available as long as the self is there. The reason why a non-entity like the horn of a hare is never asserted, while a table, on occasions, is asserted, is that while the former is never the object of, nor non-different from, consciousness, the latter is, on occasions, the object of consciousness.

It may be objected that since any assertion about the self must refer to the self and in this way make it its object, it is not true that the self is never an object and hence it would not be proper to say that the self is self-luminous. But this objection is based on the misunderstanding that, according to Advaitism, the self is not the object of any transitive act whatsoever. Certainly, an Advaitist grants that the self can be the object of our desire to know it. It is also the object of that philosophical knowledge which emancipates the self from all its bondage. And it need hardly be mentioned that it is the object of such assertions as "The self exists", "The self is self-luminous", etc. But, then, these assertions as also our "desire to know" and "the philosophical knowledge which liberates the self" are but psychical acts or states, which, although they are not possible without consciousness, are not, literally speaking, consciousness itself, and an Advaitist maintains merely this that the self is never the object of consciousness, and not that it is not the object of anything at all.

Still another objection that may be raised is as follows. What, it may be asked, is the principal ground for asserting that the self is *svaprakāśa* in a sense in which nothing else is? The fact that there never arises in our mind any doubt about the existence of the self cannot be considered to be a sufficient ground for this. For there are other entities which fulfil this condition. For instance, no body is ever in doubt about the existence of such concrete experiences of his, as pleasure, pain, etc., when these are actually present in his mind. How, then, can the fact that no body ever doubts the existence of his self be a sufficient ground for maintaining that the self is self-luminous in a sense in which nothing else is so?

To this, the reply is that the essential condition which must be fulfilled in order that there may be no doubt, error, etc., in regard to the existence of a thing is not that it must be *self-evident*, but only that it should be *evident*. And in regard to the self, we find that this "character of being evident" is due to its "*being identical with consciousness*," while in regard to entities like pleasure, pain, etc., this "character of being evident" is due to their "*being in*⁹ consciousness." And it is this particular difference in the grounds of "their being evident," which is expressed by the statement that the self is self-luminous, but the not-self is not so.

9. The word 'in', here, stands for the relation which obtains between an object and its knowledge. Advaitism holds that, on examination, this relation is found to be one of "false identity".

Indeterminacy and Freewill

BY

P. J. CHAUDHURY

The object of this essay is to show how a certain indeterminacy in the behaviour of the ultimate constituents of matter makes free-will from a scientific point of view quite possible and even plausible. An objection raised against such an attempt is this. "The fact is that the principle of causality on the one hand and free-will on the other refer to totally different matters. The question of free-will is one for the individual consciousness to answer, it can be determined only by the ego. The notion of human free-will means only that the individual feels himself to be free, and whether he does so in fact can be known only to himself." Thus writes Planck.¹ We reply to the first part of the objection. It is true the principle of causality refers to the physical world and free-will to the psychical, but in a free action the two worlds meet somewhere (in the brain) and at the point of contact there must be a break in the rigid causality followed by the physical world if the will is free. So that the two questions are not wholly independent of each other. The second part of Planck's objection is met by plainly asserting that our individual feelings cannot be depended upon for giving us the truth about free-will. In fact we know that our feelings tell us that we are free and also know that they deceive us. I feel to be free while moved by some passion and realise afterwards that I was but bound by the necessity of my egotistic or affective self. A sense of freedom enjoyed by a drunkard is not the thing we want. In spite of our general feeling of freedom we ask "Are we free?" Planck says elsewhere² that "it is not derogatory if we are regarded as automatons by super-human spirits, we ourselves can never feel ourselves bound by causal laws and it does not go against our moral dignity at all." But this obviously is a mistaken view; we do feel dampened if we are told that our freedom is but what we *feel*, that it is apparent and not real. We have a suspicion that in our ordinary life we may be but at the mercy of our passions, mere psychological objects (of empirical psychology), resultants of many

1. Philosophy of Physics, p. 73.

2. Where is Science Going? p. 156.

motives which move us and make us slaves of circumstances, passive fields of stimuli and reactions. We, therefore, do not give ear to our feelings but appeal to our reason. That is, we try to find out that theory of will which best fits with facts and theories correlating them. The layman will consult philosophy and science and not his private feelings in deciding the question of free-will. Now Planck may also mean by feeling some kind of philosophical intuition different from a subjective mood. But then we have only to point out that this intuition is but an insight into truth developed through much reasoning on objective facts. This intuition is not denied, rather we admit that in mystics and great philosophers it worked to give them knowledge (which appeared to be immediate) of the freedom of the will. But as this intuition is possessed by a few, it need not be brought in to settle the issue here.

So that Planck's objection against philosophizing on the basis of Science in order to solve the problem of free-will is untenable. One point, however, has to be made clear. We have held in the above discussion that our egotistic will is not free; a man, while he indulges in self-regarding passions, only *feels* to be free but is not really so. The view of free-will implied by such statements is that it is a will guided by the disinterested rational Self (not by self-interested ego), Kant's autonomous will that expresses the noumenal Self or the transcendental Self of Vedanta Philosophy. It is the moral will, and moral action is really free action. Now, some philosophers do not consider this view to be a correct one. For instance Stebbing feels that there is no meaning in our regarding that we are bound by our passions; when we are indulging in them we are freely doing so and the image of motives as compelling forces is due to an 'unwarranted duality'.³ To this we can only say that this duality is really experienced by us, that in lucid moments we feel that we have been slaves of our passions and that what we considered to be our freedom was but bondage. And we should give more importance to our lucid moments, when we are disinterested and contemplative, than to our confused moments, when we are self-interested and affected with passions. The conflict between the rational Self and the desiring Self is a real one. Apart from the fact that mystics and prophets have affirmed the non-attached, active and contemplative Self and its conflict with the attached, suffering and blind self, we have some experience of this higher and free Self and of its conflict with the

3. Philosophy and the Physicists, p. 241.

lower affective self. (Of course, here we do not use either the mystic's intuition or our partial experience of this free Self to prove its existence, and, the existence of free-will. We only mention these to strengthen our *conception* of free-will as a selfless disinterested will. The existence of it is taken as a hypothesis which will be shown to be a plausible one in the light of the philosophy of modern Indeterminist physics).

The *second* objection against using the results of new physics to solve the problem of free-will is more specific than the first one. It is that the freedom actually allowed in case of polyatomic bodies (such as human bodies) is too small. Eddington had to admit this difficulty.⁴ He found that a mass of .001 gram is allowed to stray 1/5000 millimetres in a thousand years. This is not much to boast of. Thus Heisenberg's indeterminacy principle, when applied to human actions, does not warrant us to change our view that these actions are determined. So argue many thinkers, for instance, S. Stebbing⁵ and C. G. Darwin.⁶ Eddington tried to solve this difficulty by a hypothesis that the Self, as a unit, could affect not only the individual atoms but also large groups of them. But as Stebbing⁷ has rightly pointed out, this hypothesis has nothing to do with electrons, and even this does not solve the problem; for it is hard to conceive how large groups of correlated atoms could be handled by our will.

We make an attempt here in a different direction to show that Heisenberg's principle can be used to suggest some sort of human free-will. We accept one hypothesis of Eddington,⁸ viz., that there is in our brain a region in which the physical effects of our volitions start and from which they are propagated to the nerves and muscles which translate our volitions into actions. This we will call, after Eddington, 'conscious matter'. Now it may be further assumed that the active particles in this region are electrons for which Heisenberg's indeterminacy is quite appreciable. (In fact the active particles in 'conscious matter' may be regarded as even finer than electrons which are, after all, the finest particles which we have so far discovered; the ultimate particles may be finer and so having wider limits of indeterminacy than what Heisenberg's formula allows for electrons). Now, muscular movements in the body may be ultimately set up by

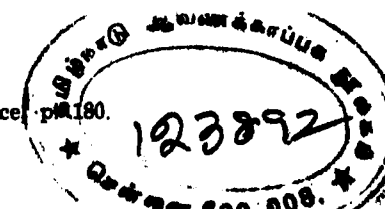
4. New Pathways of Science, p. 88.

5. Op. Cit., p. 215.

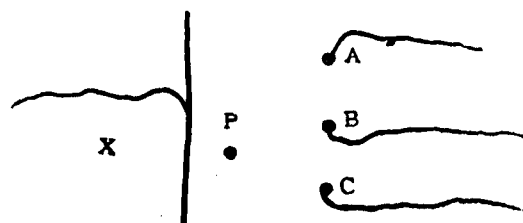
6. New Conceptions of matter, pp. 101-102.

7. Op. Cit., p. 216.

8. See Eddington: Philosophy of Physical Science, p. 180.



the movements of individual particles in 'conscious matter' of brain. There may be alternative neurone connections to be made between the receiving side of the brain and the transmitting side, and this ultimately resting on our free-will, the latter may express itself through the pliable medium of some ultimate particles each enjoying large latitudes of freedom and acting as moveable connecting links. We need not have large groups of atoms to be moved by our will just as we need not move an electric gate ourselves but simply switch on the connection for it. A simple though crude illustration will make our point clear.



Suppose X is a receptor nerve bringing some kind of stimulus to the mind. A, B, C are three starting points of three effectors. Now a process starting from A, B or C and ending in a specific external action is admittedly a process involving large multitudes of particles whose movements are not random but correlated in which case Heisenberg's uncertainty is negligible. But we can conceive an ultimate particle 'p' situated somewhere between X and A, B, C; and the movement of this is quite appreciably undetermined by physical causality. This may be moving in accordance with our free-will and coming near A, B or C, just as we chose, and connecting one of these with X, may start the corresponding nerve current. The reaction corresponding to A, B or C will then occur. A process of this kind may be occurring in the association centres in the cortex and this is a rough supposition of the mechanism for our free action. Our freedom in such free actions consists in choosing one line of action out of a few alternatives presented before us and not in doing an action in its every detail with free deliberation. That much of our detail work is done almost mechanically once it is assented to and started is well known and it is good for us as it saves so much of our deliberation. When I have deliberately chosen to give my food to a beggar instead of eating it myself, the rest of the action is simple and almost mechanically performed. Our free-will is brought to act in the case of what is known as a 'complex voluntary action' where there arises the need to decide amongst a number of conflicting impulses. In fact at the moment when the free-will acts there is a temporary withholding of action while the higher centres of the brain are active; one is then contemplative,

his Self is at the moment active while his body is waiting for orders from the Self. In case of impulsive actions the arcs of nerve currents are switched more or less automatically, the connecting links being polyatomic nerve substances governed by physical determination. In case of reflex and automatic actions similar processes,—only the connections made a little more automatically,—may be imagined. Free-will is not exercised in these cases and the actions rightly fall outside ethics, being but determined. It is only when many lines of action are presented before us all at once that we are really conscious of ourselves as free agents and responsible moral subjects.

Thus we have tried to meet the second objection to using the result of new physics (Heisenberg's Indeterminacy principle) to solve the philosophical problem of free-will. An assumption in our foregoing discussion has to be elucidated. The affections of the heart, the inclinations or passions, are but physical in character arising from some bodily want or the other; so that they must follow strict determinism. But they can be controlled by the Self; this control is exercised in the region of 'conscious matter' in the brain where there is a gap in the nerve circuit and where this gap is bridged by means of moveable switches (individual and appreciably indeterminate electrons) by our free-will. The receptors may not be connected to those effectors which only feed and water the passions but to those which augment the interests of the contemplative Self. Thus the free-will may be conceived to interfere with the passions and inclinations which otherwise blindly follow causality.

Two more assumptions are made in the thesis presented here. First, that free-will can act on matter. It is a fact, though it becomes inexplicable if this will and matter are held (as did Descartes) to be substances of two entirely different kinds. We here do not hold any metaphysical notion of mind and matter, either materialism or idealism, which may solve the riddle of a dualistic philosophy. We have simply maintained that there must be some meeting ground between the two; it is inconceivable that a man is allowed to think whatever he likes while he can say only that which the laws of physics ordain. (So says Stebbing,⁹ quite correctly). We have accepted the fact of an action of free-will on our body through the brain. We have tried to conceive the mechanism of this action (or influence). And it is here that we have found a place for Heisenberg's principle of indeterminacy which allows some freedom of movement to individual electrons. We have simply sought to answer the question, "How can matter

9. *Op. Cit.*, p. 214.

which is predetermined be interfered with by a free-will? Since we know of an indeterminacy in movements of finer particles, it is not difficult to conceive a deflection by our free-will of some individual particles acting as switches between our receptors and effectors in the higher centres of our brain. Since such a deflection is possible (physics allows it) freedom of the will is not impossible. Our second assumption has been that there may be some fine individual particles (uncorrelated or random electrons) in the higher centres of the brain i.e. in 'conscious matter'. This, we believe, is not at all inconceivable, for in ordinary matter too there are such uncorrelated individual electrons to be found.

Our conception of the human Self and free-will (which is moral will) incidentally solves many problems of ethics. Only one of them may be mentioned here. Stebbing¹⁰ asks the question "Whom am I responsible to?" and finds that there are these answers;—myself, fellow-beings and God. Which is the correct one could not be satisfactorily settled. Our view of free-will leads to the answer that myself, the Selves of my fellow-beings and God are really the one and the same Spirit. This is the Vedantic standpoint and has been affirmed more or less by the mystics and prophets all over the world. Kant and Hegel virtually adopted this standpoint.

To summarise the main argument of this essay. Human freedom is first taken as a hypothesis, it is conceived as the freedom of the Self of which Kant and Indian philosophers have spoken with conviction. The problem now is how can we conceive ourselves to be free when we are bound by physiological and psychological (meaning the affections which are essentially physiological) forces which follow a rigid law of causality. Here new physics helps us. For now, regarding all these forces to be material, we can think of some indeterminacy existing in the finer parts of matter which constitute our mind, and we can then think of our free-will acting on the indeterminate portion of the behaviour of the particles in 'conscious matter'. Thus we can conceive that we can act as we really wish; the real wish is that of the higher Self that is free, while the wishes of the lower (desiring) self are only apparently free. When we can control the wishes of the desiring self we are free, when we indulge in them indiscriminately we are but bound by causality; the sense of freedom we then have is an illusion which breaks up later when good sense prevails. Thus true freedom is also true goodness and it is this quality which characterises the true Self. This Self is spoken of in Vedanta as 'the eternal, the free, the pure, the intelligent and the blissful'.

An Outline of Taoism

BY

TAN CHENG LOCK

All Chinese philosophy is essentially the study of how men can best be helped to live together in harmony and good order. The system of transcendental, monistic and mystical philosophy called Taoism is said to have been founded by Lao-Tzu born in B.C. 604 in the Eastern part of the modern province of Honan, and is embodied in the famous Chinese classic known as "Tao Te Ching."

Among the marvellous stories told about Lao-Tsu is the statement that at his birth he had the appearance of an old man, and hence he was called Lao-Tzu, which, literally translated, means "The Venerable Gentleman or Teacher." He held the position of keeper of the archives at the Imperial Court of the Chou Dynasty, but becoming disheartened by the disorder and lawlessness of his times, retired from office and led the life of a recluse, giving himself up to philosophical speculation.

For 2,000 years the name of Lao-Tan or Lao-Tzu was connected with the Tao Te Ching, but later researches tend to show that we do not know, and it is unlikely that we shall ever know, who wrote this book, and that the Tao Te Ching was produced by an anonymous Quietist in about the year B.C. 240.

Chinese philosophy first came to birth at the breakdown of the feudal order during the Chou Dynasty, which lasted from B.C. 1122 to B.C. 255 and during which there flourished the trio of famous philosophers, viz. Lao-Tzu, Confucius and Mencius. During this period of chaos and confusion when China was split up into a number of feudal states waging internecine warfare against one another, there arose what is known in Chinese history as "the hundred schools" of thought or philosophy attempting to find a radical remedy for the ills of China.

"Tao" or "Way" is the cosmic Force or fundamental vital principle, underlying or operating as a natural process throughout the Universe, which permeates all things and from which all things are evolved. "Tao", as applied to doctrines, may be interpreted to mean the mystic Path of Righteousness, or the Right Way or Path of moral conduct, which lies at the core of the teaching embodied in the Tao Te Ching, and in which mankind should

tread so as to lead correct and virtuous lives. "Te" means "Power or Virtue", and "Ching" means "Authoritative or Sacred Book". "Tao Te Ching" may be rendered as "The Sacred Book of the Way and its Power".

The conception of Tao in Taoism, which is a natural process, an unfolding, is incompatible with the idea of a personal God or with design in the creation or ordering of the universe. It is by reason of Tao that nature unfolds without plan and without fail, and it is by reason of Tao that God is God, and has divine attributes. Everything, animate and inanimate, including God, has a Tao, which is natural to it and to which it must conform. If everything lived according to Tao there would be no strife, but any activity on the part of a Ruler, any attempt to impose control or management, merely thwarted the natural operation of Tao and helped to spread disorder. There should be a complete return to nature, complete freedom, no laws, no government. Though everyone has a Tao—a Way—that is natural to him, yet both nature and the social order are parts of the universal order, so that in a mystic sense the Tao is one. To depart from the Tao means death, and knowledge of the Way, which by normal channels is inaccessible to human understanding, can be attained by meditation, by asceticism and by ecstatic contemplation.

Taoist philosophy of naturalism with its mystic doctrine of the Way made a strong appeal to many Chinese intellectuals, who were attracted by the idea that spiritual enlightenment and access to the secrets of the universal order could be gained through mysticism.

One of the greatest Taoist thinkers was Chuang-Tzu (286-275 B.C.), whose doctrines are expounded in the "Chuang-Tzu Book". He was a philosophical anarchist, not only discounting civilization and its arts, but also willing for all society to go, so that the soul and the body of the individual might be free.

According to Taoism, true peace comes from ceasing to strive and by living in harmony with the leadings of Tao. The cause of disorder in the world is the development by man of what is artificial and unnatural, and the only remedy is a return to Tao. The visible world and all it contains are phantoms, which will pass away: only Tao remains eternal and changeless.

In the Tao Te Ching, Tao is described somewhat in these terms.

"The reason that can be reasoned is not the eternal reason;
The name that can be named is not the eternal name.
The unnamable is the beginning of Heaven and Earth;

The namable is the mother of all things.

Therefore in eternal non-being can be seen the spirituality of things, and in eternal being can be seen the limitation of things.

• These two entities—the spiritual and the material—are same in source but different in name.

This sameness is a mystery; it is a mystery of mysteries; it is a doorway of all speculation.

Only one who is eternally free from earthly passions can comprehend the spiritual essence of Tao;

He who is ever clogged by passions can see no more than its outward form.

Every form of existence carries with it its opposite in reality as well as in thought.

The recognition of beauty suggests the existence of ugliness.

Equally the recognition of goodness creates the conception of wickedness.

Thus it is that existence and non-existence give birth to each other.

Front and back give sequence to one another.

Therefore the Sage relies on actionless activity, and puts into practice wordless teaching."

The Tao Te Ching is a composite work. Among the quaint sayings and cryptic allusions contained in it are found injunctions, maxims and doctrines of a heterogeneous character such as those given below:—

1. "All things in nature work silently; they come into being and possess nothing.
When success is achieved, do not claim merit for it;
If merit is not claimed, merit cannot be taken away from one."
2. "The Highest good is like that of water;
For water has the skill of profiting all creatures without striving with them.
It puts itself in the lowly place which everybody hates.
So near Tao it is."
3. "Heaven's net is wide; coarse are the meshes, yet nothing slips through."
4. "Nothing under Heaven is softer and more yielding than water, but when it attacks things hard and resistant there is not one of them that can prevail."
5. "To know when one does not know is best; to think one knows when one does not know is a dire disease.
Only he who recognises this disease as a disease can cure himself of the disease; the Sage's Way of curing disease also

consists in making people recognise their diseases as diseases and thus ceasing to be diseased".

6. "For only he that pities is truly able to be brave.
Only he that is frugal is truly able to be liberal.
Only he that refuses to be foremost of all things is truly able to be a leader among men".
7. "To the good I will be good; to the not-good too I will be good, in order to make them good."
8. "Leave things well alone; let all things take their natural course without interference, and all will be well in the end".

To do nothing is a cardinal principle of Taoism. "Govern a great kingdom as you would cook a small fish; don't overdo it", says the author of Tao Te Ching. Again he declares, "Nothing" is the mother of countless useful things. When you have an empty hoop you can put thirty spokes into it, and behold! the chariot will move on! If you have made an empty earthenware bowl, you can fill it with any kind of food. When you have carved the door and window of an empty room you can go to live in it. When your mind is not filled with wordly desires, you have room for wisdom. Chapter XI of the Tao Te Ching says, "We put thirty spokes together and call it a wheel;

But it is on the space where there is nothing that the utility of the wheel depends.

We turn clay to make a vessel;

But it is on the space where there is nothing that the utility of the vessel depends.

We pierce doors and windows to make a house.

And it is on these spaces where there is nothing that the utility of the house depends.

Therefore just as we take advantage of what is, we should recognise the utility of what is not".

In its practical application Taoism taught people to live more in harmony with Nature—to throw off the shackles of society, the bonds of artificial manners. And this in turn contributed to China's rich abundance of Nature poetry and poetic or mystic landscape painting. It permeated the lives of people of all classes, encouraged them to practise the doctrine of laissez-faire and to be content with what they had. The finest summary of Chinese civilization is the desire to live in tune with Nature.

The Tao Te Ching was an extremely polemical work, directed in the main against the Realists, but at the same time siding with them in their condemnation of the moralism of Confucianism and of the individualism of Yang Chu. The Realists, viz., Shang Yang,

Han Fei and other philosophers of their school of thought, claimed that their fundamental principles, based on the doctrine of Pa Tao—the Way of Force—are inherent in the nature of life itself and are opposed to Confusian idealism, the doctrine of Wang Tao—the Kingly Way—which advocates government not by force but by "Hua"—the transforming influence of the character and example of a benign ruler.

In contradistinction to Confucius and Mencius, who said that man is born good, the Realists believed with Hsun-Tzu that man's nature is bad. He is born greedy, jealous, lustful, and improvident. Goodness is a thing that must be imposed upon him from without through the instrumentality of the doctrines of legalism and militarism. The Realists maintained that a polity that does not involve hardship, national achievements that do not entail suffering, have never yet existed under heaven. Life in its essence is stern and hard. Soldiering must be the profession that holds the highest status in the whole corporate life; and next to it must come agriculture. A vast legal system of punishments and awards is indeed needed to take the place of any appeal to public feeling, decency or morality.

The efficiency of Realism was triumphantly demonstrated by the phenomenal success of Chin Shih Huang Ti when in 221 B.C. he became the First Emperor of a united China after a series of wars, whereby he absorbed all the other independent states of feudal China. He united China under the one sovereign government with an administration which displaced feudalism by introducing bureaucracy. The success of that unification was extraordinary, because since then nothing has been heard of the original separate states with their rivalries into which China was split and which were constantly and fatally at war with each other.

However the downfall of the Chin Dynasty of Chin Shih Huang Ti ten years after the death of the great Emperor, when it was succeeded by the glorious Han Dynasty (B.C. 221 to B.C. 206), has convinced the Chinese that Idealism is as essential in human life as Realism.

The inactionism and naturalism of Lao-Tzu, the gospel of moralism and familism of Confucius, the altruism and utilitarianism of Mo-Tzu, the fatalism, egoism and epicureanism of Yang Chu, and the legalism and militarism of Han-Fei, the five prophets of ancient China, still largely form the substance of Chinese consciousness, the race mould and type.

Our Knowledge of Nature

(A critical examination of some of the points raised in B. Russell's
"Human Knowledge, Its Scope and Limits")

BY

G. R. MALKANI

1. The problem raised by Russell is similar to the problem raised by Kant,—how far can we know? Both are inspired by the same ideal of knowledge, namely scientific knowledge, particularly physics which is undoubtedly the most exact of physical sciences. Both seek to restrict knowledge to it alone and to justify it against the attacks of scepticism. At the same time, they show the limits of this knowledge; only they draw the line differently. For Kant, it is knowledge of the phenomena as opposed to the things-in-themselves, which we can never know. For Russell, it is knowledge of objective physical reality in physical space as opposed to what is sensible to us. Thus physical reality takes the place of things-in-themselves, with the difference that we cannot know the latter, while we ought to know the former if scientific knowledge is to be justified. For Kant, subjectivity was ultimate and inherent in all knowledge as such. For Russell, "subjectivity is a vice" which must be eliminated in describing the world. For Kant, the epistemological problem consisted in showing that scientific knowledge was grounded in reason or in the *apriori* forms of the understanding. It was therefore the only rational form of knowledge. He showed the middle way which combined empiricity with rationality. Russell does not go so far in his search for rationality; but he has this much in common with Kant that, according to him, we must find out and define certain synthetic principles, which are *not* derived from experience, but which we must be supposed to know, if scientific knowledge is to become possible. But they are principles of inference, not *apriori* synthetic principles derived from reason and somehow innate to the mind and its constitution. There must be a law or laws, allowing us "to make inferences from matters of fact; and such law or laws must, unlike the principles of deductive logic, be synthetic, i.e., not proved true by their falsehood being self-contradictory. The only alternative to this hypothesis is complete scepticism as to all the inferences of science and common-sense...." p. 189-90.

He has formulated these laws as follows:—(a) The postulate of quasi-permanence. (It takes the place of the category of substance); (b) the postulate of quasi separable causal lines; (c) the postulate of spatio-temporal continuity in causal lines. (These two postulates are evidently a substitute for the category of causality); (d) the postulate of the common causal origin of similar structures ranged about a centre, or more simply, the structural postulate; and (e) the postulate of analogy. "The inferences made in accordance with these canons are self-confirmatory and are not found to contradict experience." p. 494.

Lastly, for Kant, the problem of knowledge gave rise to another problem, which could not be solved by theoretical reason, but which could only be solved on the ground of practical reason. This was the problem of the ultimate validity of certain transcendental entities or ideas of reason, such as freedom, immortality and God. Thus the limitations of knowledge were made good by faith. Knowledge and faith were in a way complementary. For Russell, the limitations of knowledge give rise to no further problem. He rejects empiricism, for it cannot account for scientific knowledge. But he enthusiastically accepts it for its general attitude towards things. He says, "Empiricism as a theory of knowledge has been inspired by the doctrine that all human knowledge is uncertain, inexact and partial. To this doctrine we have not found any limitation whatsoever." p. 526.

2. It is evident that all knowledge of the physical world is based upon sensation. But sensation is not knowledge. It is not knowledge, because in sensation, there is no distinction between the knowing and the known. Knowledge begins with perception. But this knowledge is already impure. Something is added to sensation through "congenital dispositions, etc."—Russell's equivalent for Kant's *a priori* element. In any case, perception is "the complex and inaccurate mixture of sensation, habit, and physical causation." pp. 447-48. It "might not be veridical as regards what it adds to sensation." p. 440. But if that is so, what is the value of all those matters of fact with which science has to start? All that Russell has to say is, "Only in so far as the initial perceptual datum is trustworthy can there be any reason for accepting the vast cosmic edifice of inference which is based upon it." p. 22. What science needs are certain matters of fact or data of perception, and certain principles of inference which enable us to go beyond them. Russell puts the problem of knowledge in the form of a disjunction: Either we must accept solipsism of the moment and refuse to believe in anything not directly and immediately

given, a position which cannot be logically refuted, but which is opposed to common-sense and our actual behaviour in life; or we must admit, in addition to facts of perception, certain principles of inference which are not derived from experience, but which enable us to go beyond it.

3. The data of perception must be trustworthy. But can they really be so? According to Russell, not only perception, but the percept too is mental. One man cannot have another man's percepts, as one man cannot exactly think another man's thoughts. Each man's internal biography is different. We can only infer another man's thoughts, emotions, etc. The same is true about his percepts. The data of science are accordingly psychological. He says, ".....all the raw material of our knowledge consists of mental events in the lives of separate people. In this region, therefore, psychology is supreme." p. 69. We know psychological entities through introspection. Russell accepts introspection as a method of knowledge. If I have tooth-ache, I know directly that I have it. Like tooth-ache, I know my percepts directly. But introspection here does not mean looking into the mind or into its processes. It means only knowing what is private to myself, and knowing it directly. Thus the data of science are private data. We cannot point to anything and say, "We all perceive *this*." This publicity of the percept "is in part delusive and in part inferential." p. 67. It is inferential, because we proceed from our perception to the cause of it in physical space. This cause is truly objective. It is the desideratum of scientific knowledge. Russell says, "The electrons and protons have the merit that they *may* be what actually exists where there are no sense organs, whereas our immediate visual data, owing to their subjectivity, are almost certainly not what takes place in the physical objects that we are said to see." p. 21.

4. We start with perception, because it is a species of knowledge, and one that is most reliable. But no. Russell rejects the dualism of knowledge even here. He says, "The dualistic view of perception as a relation of a subject to an object, is one, which, following the leadership of W. James, empiricists have now for the most part abandoned. The distinction between 'seeing the sun' as a mental event, and the immediate object of my seeing, is now generally rejected as invalid, and in this view I concur." pp. 220-21. The sun which I see is not the astronomer's sun. The latter is only an inference from the former. The physical sun in physical space stimulates the optic nerve, and this stimulus transforms itself into a percept in the brain. The percept is essentially something

mental. And yet there is causal continuity between this mental sun and the physical sun. Mind and matter are thus related entities. There is no gulf between them, as common-sense supposes. The real difference between them is that the physical sun is a matter of inference only, never of perception; while the perceived sun is a matter of perception only and never of inference.

Some-body might argue that the distinction between mind and matter is ultimate. The physiologist, for example, under ideal conditions, might be able to follow all the physical excitations in the brain, but he would not be able to get at the end-product, which is something mental. Russell answers that no physiologist could have a peep into the physical brain, as he could not have a peep at the physical sun. Physicality is not a matter of perception at all. The physiologist would only know the percepts induced by the physical brain he was examining. We wrongly think that it is matter that is directly given and known. In point of fact, it is only inferred. For the same reason, the noise I hear is not directly connected with the physical source of the sound, but only with the state of my brain. "The tables and chairs that I see, if they are identical with my seeing of them, are not located where physics says they are, but where my seeing is,—and this is the region of space-time with which my seeing is always causally bound up, i.e., the brain." p. 221. The flash of lightening that I am supposed to "perceive" does not really occur in the sky, but only in my brain. What occurs in the sky is a physical event, a release of energy, which we do not perceive, and which has little in common with the flash.

5. The question may be asked, can a perception be mistaken? According to Russell, it is never mistaken as to the percept itself, which is just as it is perceived. It can only be mistaken "as to its causal correlates, and antecedents and consequents; frequently the mistake is in an animal inference." p. 343. When the animal sees water where there is only sand in the desert, he is not really seeing water, but only inferring it. Nobody could therefore see the illusory or the non-existent; for there is simply no error in perception as such. Error lies only in inference. We say, things are coloured. In reality, they are nothing of the sort. Colour is entirely subjective. We wrongly infer that things are coloured. Things merely absorb certain wave-lengths and reflect others from the light of the sun. All that we can perhaps say is that our perceptive apparatus acts as a source of a constant error in the above-mentioned way. We confuse what we perceive with what we wrongly infer about the physical source of the perception.

6. Is this theory of perception tenable? Certain points in it appear eminently reasonable. (a) Our perceptions are not arbitrary, eccentric and self-initiated. They have a cause in the external physical world, which in some sense determines what our perception is going to be. Different cause, different effect. (b) We do not directly know the cause, because it is not just presented in its nakedness to our awareness. It acts upon our nervous system, and this leads to a perception. We have to infer the cause from its effects in us. The order of knowledge is thus the reverse of the real order. Instead of knowing the cause first and the effect afterwards, we go from the effect to the cause. (c) What we directly know is the percept in perceptual space. This percept has every character of being mental just like our private thoughts and feelings. (d) The percept occurs in the brain, if anywhere at all. (e) There is *prima facie* a difference between our percept and what is believed to be true about the physical cause. Our perceptual apparatus seems to dress up physicality in its own way, and it often confuses this dress with the naked reality.

7. If we accept this account of perception, perception ceases to be a species of knowledge. It does not put us in contact with any kind of reality; or if it does, it changes it completely, so that our knowledge has nothing corresponding to it in reality. It is of the essence of knowledge that it should merely uncover or discover reality to us. This is not possible in perceptual knowledge as understood by Russell. It is a misnomer to call it knowledge at all. We shall go further. Any causal theory of perception is bound to meet the same fate. For once causality is admitted here, and there is a process in which the cause transforms itself into the effect, the original cause is unavailable, and cannot be perceived or known directly. What is known directly figures nowhere in the causal series. It is not even the last state of the physical brain. The percept does not represent to us anything in the physical world, which is the only reality given for knowledge. Instead of knowing this reality, we know only our own creation. But to know is not to create, and to that extent perception is not a species of knowledge at all. It is true that we do not create the percept consciously. But that is a matter of no consequence. It is enough that it neither forms part of objective physical reality, nor is it a true mental copy of it. It is something essentially subjective.

We are told that we can infer the physical event from the percept. But it is not a question of two distinct entities, the one

mental and the other physical, related in a certain way, so that we can proceed from the one to the other through normal and legitimate inference. The mental overlaps the physical completely and is indistinguishable from it. The sun that I see may not be the astronomer's sun. It may be the sun in the brain. But I do not see the sun in the brain, but *where the astronomer says it is*, millions of miles away from my physical body. It may be that this place, being perceived, is part of perceptual space, not physical space? But then where is physical space? How can we distinguish it from perceptual space? The moment we distinguish it, *we place it somewhere*, and bring it within our perceptual space. Again, all distinctions of *here* and *there* are perceived distinctions; so also the distinction of *inside* and *outside*. If the physical space has these distinctions, it is a perceived space; if it does not have them, it is space in no sense. The truth is that there is only one space that we know, and that is perceptual space. We cannot get out of it, and know *another space*, even by inference. If the physical space has relations within it *corresponding* to relations in the perceptual space, it has ceased to be physical. Its prototype is the perceptual space. Go where we would, we carry the perceptual space with us. There is no other. We lay it over all physicality. But if that is so, we have superimposed a mental sun in mental space upon a reality that is utterly distinct from it; for it contains none of the characteristics of the perceived object in perceived space. Perception becomes either an erroneous form of knowledge, or it ceases to be knowledge at all. In the former case, the mental, instead of being caused by the physical, as Russell would have it, has really caused the physical to exist, and is wholly responsible for it. While I only see the perceptual sun, I proceed, on the basis of it, to *posit* a physical sun which I do not see. My perception has put the so-called physical sun in the so-called physical space and given it a causal function, which is on the face of it reversed and so unreal. For we start with the mental, and construct the physical out of it through a process of abstraction. The real causality resides in the mind, not in a creature of the mind.

8. Let us now suppose that perception is what Russell says it is. Can we really go beyond it? According to him, we must accept the physical causality of our sensations, if science is to be at all possible. This will enable us to go from the percepts to their cause in the physical world. It is the knowledge of this world that constitutes science. But how far can this knowledge go? Russell admits that it is indeed very little that we can know of the physical world. "Physical events are known only as regards their

space-time structure. The qualities that compose such events are unknown—so completely unknown that we cannot say either that they are, or that they are not, different from the qualities that we know as belonging to mental events (i.e. our percepts)". p. 247. Again he says, "There are certain elements that are carried over unchanged from the world of sense to the world of physics. These are: The relation of compresence, the relation of earlier and later, some elements of structure, and differences in certain circumstances—i.e. when we experience different sensations, we may assume that their causes differ. This is the residue of naive realism that survives in physics." p. 349.

9. The question arises, is the inference from the percept to its physical cause valid? There is a certain kind of inference which is based upon experience, and which is quite legitimate. This is when a causal connection has been established between two known entities, and generalised into a law of nature. This is not possible between a percept and its supposed physical cause, which is never known. Russell is quite conscious of this difficulty, and so he says, "It is logically possible to suppose that the world consists only of my percepts, and the inference to the common-sense world, as to that of physics, is non-demonstrative." p. 340. He says further, "From a practical point of view, an inference from a percept is justified if it gives rise to expectations that are verified. This, however, is all within the realm of percepts. All that strictly follows is that our inferences as to physical objects are consistent with experience, but there may be other hypotheses that are equally consistent." p. 342. But what is the value of a hypothesis which is not verifiable? In fact, there is a sense in which the above-mentioned hypothesis has no *meaning* for us. All our meanings are derived from facts of perception. Physical objects are no such facts. In truth, if by 'fact' we mean that which can be defined ostensively, or that which can make our statements true or false, then physical objects are no facts of any kind.

10. Let us suppose that here is a fact which lies outside our experience. Can we not make an inference from matters of fact within our experience to matters of fact outside our experience? Russell says that we can. But his justification of it, as it appears to us, is wholly negative. If we cannot make this inference, if our knowledge is restricted to our actual experience up to the present moment, if empiricism is to be taken literally, then we must admit "complete scepticism as to all the inferences of science and common-sense, including those which I have called *animal inferences*." pp. 189-90. But is this true? Do we ever infer *any facts* outside

our experience? We cannot agree that physical objects are such facts, and that they are only known through inference. If they were known only through inference, the inference would not be legitimate. The more plausible view would be that they form part of our perceptual experience, and have meaning only in this experience. May be, that this experience is wholly mental or subjective, and that the reference to an outside non-mental and physical reality cannot be substantiated. In that case, physical objects would be mental too, being parts of, or constructs from, perceptual experience. Legitimate inferences from our experience are those which are in principle verifiable.

11. It may now be said that an inference may be valid without being verifiable: "In what circumstances is induction valid? It is futile to say 'induction is valid, when it infers something which subsequent experience will verify? This is futile, because it would confine induction to cases in which it is useless. We must have reasons, in advance of experience, for expecting something, and exactly similar reasons may lead us to believe in some thing that we cannot experience.....The plain fact is that too much fuss is made about 'experience'." Again Russell says, "We must, therefore, find grounds for trusting the inference *before* it is verified. And I defy the world to find any such grounds for trusting inferences which will be verified, which are not equally grounds for trusting certain inferences which will be neither verified nor falsified." pp. 469-70. He goes further and says, "Induction does not validate many of the inferences in which science feels most confidence.... There cannot be inductive evidence (unless in some extended sense) for something outside human experience, such as sound-waves. Our experience will be the same whether there really are sound-waves, or though there are none, auditory sensations occur as they would if there were sound-waves; no inductive evidence can ever favour one of these hypotheses rather than the other." p. 331.

12. It is evident that an inference to matters of fact outside our experience cannot be verified. An unverifiable hypothesis may claim truth; but it is truth in the pragmatic sense. We find it helpful in understanding and explaining our experience. This is the nature of the scientific concepts of electrons and protons, sound-waves, electro-magnetic waves, etc. But we shall go further. These concepts explain, because they are a transcript from our experience and constitute merely an extension of it to the sub-atomic level. If they did not have this character, they would not have any theoretic value. If, for example, the cause of our percept

has no perceptible quality, it cannot have any causal continuity with the latter, and any inference from the latter to the former becomes illegitimate. Do the physical objects, which we infer, have any perceptual quality? If not, they might be anything, such as 'spirit', 'God', 'things-in themselves,' etc. None of these entities can explain our percepts, because they can have no conceivable causal continuity with the latter. The physical entities called electrons, protons, etc., which are supposed to enter into the constitution of matter, appear to explain, just because they are not divested of all perceptible characteristics. They are conceived imaginatively, and have all the imaginative continuity with what is perceived. When we go from the latter to the former, we not only go from the knowledge of the effect to the knowledge of the cause, but we go, metaphysically speaking, from the primary reality of the effect to the derived reality of the cause. It is the effect that gives meaning and so reality to the cause. Electrons and protons are conceived as "sensible entities" too minute for our perception. They are not too minute for an omniscient God, who is not bound by our limitations. He can perceive their movements in their orbits. The waves of sound are like waves as we know them in other media, such as water. In short, we cannot get out of sensible reality, and have any science. This was the conclusion of Kant. Russell has not improved upon it. Under the guise of scientific common-sense, he has introduced certain metaphysical or super-sensible entities into science, and discredited both science and metaphysics. Science is certainly not knowledge of physical reality understood as something outside our sensible experience.

Certain admissions made by Russell are significant in this connection. He says that certain elements of naive realism are retained in physics, i.e. physical reality does not altogether transcend our sensible experience and has elements in it which are intelligible only in terms of that experience. Again he says, "Considerations derived from the importance of structure show that our knowledge, especially in physics, is much more abstract and much more infected with logic than it used to seem. There is however a very definite limit to the process of turning physics into logic and mathematics; it is set by the fact that physics is an empirical science, depending for its credibility upon relations to our perceptive experiences." p. 273. This is a quite modest statement showing that our perceptual experience sets the limit to what we can know about physical reality. We shall however go further. What we know in physics is an ideal world constructed out of our sensible experience and set up as an explanation of it.

The very notion of spatio-temporal structure is derived from our sensible experience. We claim that the physical sun in physical space is round. How is this roundness of the physical sun to be distinguished from the visual datum of the same variety? Is not all our language about structure significant only within our sensible experience, and then extended, for convenience, to its supposed physical cause? We never know the cause as such. We conceive the cause on the analogy of the effect; and where we give to the cause certain characteristics not found in the effect, those characteristics are still derived from our sensible experience in other spheres. The only cause that has no such analogous characteristics, is the transcendent cause; and this we can never know to any extent or degree, and is a scientific monstrosity.

13. When we distinguish the physical from the perceptual, are we dealing with meanings at all? When Kant accepted things-in-themselves, the criticism was levelled against him that they had no meaning for us, in-as-much as they were never known. If they had a quasi-meaning, that meaning was derived from the sensible objects that we actually knew. We conceive things-in-themselves as being "outside," "in physical space," "sustaining the objects of perception," "causing sensation to occur in us," etc. All this gives them a derived meaning. A similar criticism can be advanced against Russell, with more justice; because his physical world is intimately connected with our perception, has some of the characteristics, namely those which refer to spatio-temporal structure, which *correspond* to perceived structures, and is in a sense known for what it is. The truth is that all our meanings are derived from perceptual experience, and it is absurd for science to seek to know anything that falls outside this experience. All that we can say is that science conceptually extends this experience to include certain entities, which cannot be themselves perceived, but which are convenient in explaining that which is perceived. If we do not admit this limitation of all scientific knowledge, which avoids all metaphysical issues, we have complete transcendence of reality on the one hand and "illusions of sense" on the other,—a conclusion which is not repugnant to a form of extreme idealism as that of Vedanta, but which will certainly detract from what faith we have in science.

14. The question may be asked, does physical reality, the object of study for science, form part of our perceptual experience? Do we know the object as such, as naive realism claims? If that were possible, there would be no distinction between the percept and the thing which caused the percept in us. We should perceive the cause itself which is the only objective reality. Where

this is perhaps possible, namely in sensation pure and simple, there is no duality of knowledge, and in fact no knowledge. The moment we have knowledge, we are conscious of the subjectivity of it, and we distinguish our knowledge from the reality itself. How, and in what respect, the reality is distinct from our knowledge of it, we cannot know. But the distinction is inevitable, and naive realism has definitely to be rejected on reflection. Science too accepts the distinction. But it has a *faith*. No faith is ever rationally justifiable, except negatively. "It may be so, but it need not be so." The only justification for faith is practical, not theoretical. The faith of science is that what we know perceptually, i.e. the percept, has definite relations to reality, so that we can know something about the latter from the former. The cause of our knowledge has certain characteristics which can be inferred from its effect in us. This faith is not wholly foreign to naive realism. Because we can know something about reality itself, though only indirectly, from our knowledge of it.

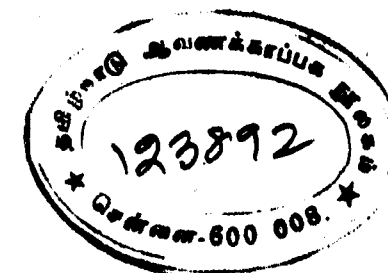
We do not accept naive realism in any form. Once a distinction is made between reality and our knowledge of reality, there is simply no way of getting beyond the latter to the former and knowing anything about reality itself. If reality is to be appropriately known, the dualistic form of knowledge must somehow be transcended. There must be a higher form of knowledge, which does not involve any dualism. Short of this, and at the perceptual level, all that we can say is that our perceptive apparatus puts us *in contact* with reality. There is no possibility of error here, till thought has intervened. It is only when we think and determine reality in thought, that reality becomes estranged from us, and we become conscious of the subjectivity of our knowledge. But at the basis of this knowledge, there is a direct intuition of reality in which there is no dualism of any kind, and no error. Reality and intuition do not fall apart. They coincide. This knowledge is not knowledge *about* reality; for all descriptive knowledge involves thought.

What then is the status of perceptual knowledge? It is knowledge of reality in which thought has super-imposed a character upon reality which cannot possibly belong to it, being wholly subjective and ideal. Reality stands in contradistinction with what is subjective. The alternative to naive realism is not idealism of any particular stamp. All idealism is self-condemned as an explanation of knowledge. It starts with the dualism of "reality that is in itself" and our idea, and it vainly seeks to reduce the former to the latter. The alternative to naive realism is also not any kind

of partial knowledge of reality through inference. The cause of our knowledge either propagates itself to us unchanged, in which case we should be able to know it wholly and as it is; or it undergoes a change in the process, and it is no longer *the cause*. If our perception is to be conceived on the analogy of a chemical process in which several causes enter, how should we ever be able to infer anything about one of those causes only? How should we know what are the several causes and what are their respective contributions to the final result, since we are confined to this result and cannot look at the separate causes? In fact, we cannot get behind perception, and reconstruct it out of non-perceptual elements. Perception is an ultimate fact of knowledge, with which we must begin, but which we must not seek to explain through causes other than itself. Accordingly the only alternative to naive realism is erroneous knowledge of reality or misperception, in which reality as such is contacted or intuited but wrongly characterised or misinterpreted. All science is based upon this error, this original sin of knowledge. The data of science are "illusions of sense." All that we can say with certainty is that there is a reality behind the data, a reality which itself is not sensible, but truly metaphysical. It need not be a thing-in-itself, unknown and unknowable. It is unknowable only in the objective attitude, where thought determines its object and thereby creates the dualism of knowledge. It offers a problem for knowledge which demands solution.

15. Science starts with sense-data, whatever they are worth. It cannot go outside of them or beyond them. But it is not interested in them in their isolation. It is interested only in their interconnections and the patterns in which they present themselves to us. These patterns appear quite as objective as the sense-data themselves. But they are no less subjective. There is no formula by which we seek to interpret the behaviour of things that is not essentially subjective. There is no relationship between things or between classes which we can formulate in a way that is objectively certain. This is expressed by saying that all inductive knowledge is probable only, and that laws of nature are statistical averages. In other words, the limitations of scientific knowledge are inherent in the subjectivity of that knowledge. There is no conceivable situation in which we could shed this subjectivity, and know a law of nature in its pure objective validity. Indeed, it appears as though there is an objective truth in the literal sense, and that we approximate to it more and more through the progressive study of the pattern of things. But this is only an illusion.

It is the "illusion of pattern". The pattern is ours, not of the things. It would be of the things, if there was the remotest possibility, at least as an ideal, of knowing the pattern or the law in a pure intuitive awareness without any subjective interpretation about it, and without therefore the hypothetical character which all scientific knowledge possesses. Every generalisation is a subjective device. That it can be substantiated or verified is only a relative or practical matter. For verification notwithstanding, the subjectivity of the law is not eliminated. Another hypothesis may be equally possible, and in course of time may even be necessitated. The course of science is full of the debris of once-respectable theories that seemed to hold good for all time. The truth is that if we could look at reality without any subjective device, what we should know would not be scientific in any sense. It would not need a rational method. For reason has its limitations. It would be the method of direct intuition in some sense, leaving no room for doubt or uncertainty, which is part and parcel of any purely rational approach. We exalt reason as a method of emancipation from subjectivity. We little realise its limitations and its subjective anchorage. Reason *minus* its limitations would be intuition pure and simple. Scientific knowledge, as a rational method of knowledge, only extends the original illusion of sense to another level, namely the illusion of pattern or order. It is a delusion to suppose that science unravels the mystery of reality step by step. The proper analogy would be that it substitutes one form of mystery for another. It never explains anything. It postpones explanation while seeming to explain. The limitations of all scientific knowledge compel us to transfer the problem of knowledge from science to philosophy, and to a possible new approach which reflection upon scientific method can suggest.



Handwritten notes and signatures:

- A large, stylized signature or mark, possibly "D. M. P.", written vertically.
- Handwritten text "2000 2, 6/22/25" written vertically.
- Handwritten text "149,222-2" written vertically.