RANDOM INCURSIONS INTO PHILOSOPHY

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Some papers presented to the Philosophical
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For
R.K.G.

PREFACE

This collection of essays contains some of the papers I wrote to introduce or provoke discussion in some meetings of the Philosophical Society of St. Stephen's College at Delhi. Some of the papers were written by way of comments on, or criticism of, papers written by other members of the Society.

As these papers were written at more or less long intervals, and without reference to one other, they would be found to be repetitive in some places. Except for minor verbal changes, I am reproducing the papers as they were written.

For me, then, Random Incursions into Philosophy is a momento of the weekly meetings of the St. Stephen's College Philosophical Society which I attended regularly until I was incapacitated by ill-health some three years ago.

I am deeply indebted to members of the Society for much that I learnt of Philosophy from them, both during its meetings and elsewhere.

I am very grateful to Shekhar Singh and Rajender Gupta for correcting the proofs and suggesting some important points about the get-up of Random Incursions into Philosophy.

May the Philosophical Society of St. Stephen's College always flourish and go from strength to strength!

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S.K.Bose

CONTENTS

WHAT IS A "FACT"?

I would begin by making two preliminary observations. (1) Human speculation generally, and philosophical discourse, in particular, never have what may be regarded as an "absolute" starting point. A deductive system may indeed lay claims to such a beginning; but a little reflection would generally show that it is a presupposition that a deductive system has this or that "first beginning". And the presuppositions, too, may rest upon other presuppositions, and so on indefinitely. This is a point to be remembered as one investigates the question, 'What is a "fact"?'

(2) Again, this question may well be intractable. Then, all that one can do is to look for 'clues'; and, having found some to follow them up hopefully and relentlessly. One should never abandon a clue unless it has demonstrably failed to solve the problem or at least, to throw some light on its solution. Then, again, our question may be one of those which invite a many-pronged attack: several clues may have to be followed up conjointly if we are to get anywhere near a solution of the problem.

An important clue in the investigation of the question, 'What is a "fact"?', seems to have been lost since philosophy was "sentenced" by some latter-day

philosophers.

"Sentences" do indeed exist, palpably. Whether spoken, written or articulated through gestures or in signals (semaphore, radar, etc.) sentences actually exist. They have a locale in space and time. Not so, however, "propositions". A proposition does not have a locale in space and/or time. It cannot, therefore, be said to exist. The sphere of being, as Plato declared, is larger than that of existence; and "propositions" - like "class", "number", etc. - have being without existing.

A "proposition" is what an indicative sentence means. So, if two or more such sentences (in the same language or in different languages) have the same meaning, then we have but one proposition for all the plurality of sentences.

In the order of knowing, indicative sentences may be, and usually are, prior to the "propositions" that they express; but, in the order of being, both logically and ontologically, it is the proposition which is prior to the (indicative) sentence which expresses it. Paradoxical as it may seem, there would be no indicative sentences if there were no propositions.

But, an object (say, a certain book placed on the mantelpiece) could be a substitute for an indicative sentence (say, 'I shall be out for the evening'). This is to say that the object means to cognoscenti precisely what the sentence means. This also shows, incidentally, that propositions as such are logically and ontologically independent of sentences and, by the same token, of objects too.

A 'proposition', then, is a tertium quid between (a) an indicative sentence and (b) a person who uses that sentence. A person who uses an indicative sentence can clearly distinguish between (i) himself and the sentence and (ii) the sentence and the meaning of the sentence (i.e. the proposition). The proposition is, then, a third something between the person who uses an indicative sentence and that sentence.

We have considered what a "proposition" is vis-a-vis an indicative sentence, or an object which is a substitute for an indicative sentence. Let us now consider what a "proposition" is vis-a-vis a "fact".

A "proposition" refers to, points to or indicates a "fact". A false proposition does this as

well as a true proposition - only the latter must satisfy some conditions or criteria, additionally. It is nonsensical propositions - if they be propositions, at all - which do not even refer to, point to, or indicate facts.

But why should we not simply believe that an indicative sentence itself refers to, points to or indicates a "fact"? Why, after all, is an "indicative" sentence so called? Why should not indicative sentences themselves be true or false? I should accept the position that an indicative sentence itself may be true or false provided only that the sentence is used meaningfully. But to believe this would be to concede that what is true or false is not the indicative sentence but what the indicative sentence means; in other words, what is "true" or "false" is always a "proposition". The sentence only embodies the proposition, so to say. When we talk of "indicative" sentences, then, it is only a case of transferring an epithet. Not the indicative sentence, but the proposition contained in it, indicates, points to a fact. This essential nature of a proposition rubs off on the "indicative" sentence which embodies, and so expresses, the proposition.

If the World were "private" to me - like my dreams and day-dreams - it would contain only "propositions", "objects" (substituting for sentences) and "sentences" that I utter, hear or see. (I am thinking, here, not only of verbal language but also of gesture language and language of signals).

But the World is undeniably "public". I have evidence of this every time I wake up from dreaming or day-dreaming. There is further evidence that this World is "public" when we enter into any kind of discourse with other people - whether or not we can fully agree with them - and watch the behaviour of animals and birds, of all living and sentient beings.

At the Common Sense level, we believe that the World contains things which exist and even which happen in Space and/or Time. Philosophers may recognise that a clear line of demarcation cannot be drawn between "thing" and "event"; and so they would say that the World contains either things or events. Be that as it may, a thing or an event will be seen to exist and have a locale in Space and Time or Space-time.

The World, some would have it, is the totality of "facts", and a "fact" is 'what is the case'.

Does the World that is "public" contain only facts, and naught else? Can we write off things and events, and their attributes and properties, as simply "mental constructs" in terms of which it is convenient to describe "facts"?

I think that in the reality of propositions and their anatomy we have the key to answering these two puzzling questions. Not, let it be noted, in the existence and the anatomy of indicative sentences!

Fundamentally, there are two types of propositions : (1) Adjectival propositions of the form S - P ('That wall is pale blue') and (2) Relational propositions of the form a R b ('A fly is crawling up that wall at an angle of 60 degrees'). Now, the relata in a relational proposition, and the subject and predicate in an adjectival proposition, denote real (or, unreal, i.e. imaginary or fictional) things and/or events, or "attributes" of such things and/or events. But, the proposition as a whole refers to a "fact"- and a "fact" is, in all cases, a relation between (a) one thing and/or event and another thing and/or event, (b) one thing and/or event and an attribute or (c) one attribute and

Put it another way, the components of a proposition must only denote things/events/attributes of things or events, be these real or otherwise - they cannot refer to a "fact" - and the proposition as a whole must only refer to a "fact" - it cannot refer to a thing/event/attribute of a thing or event.

But, does the World contain only things and/or events, and their attributes, and naught else?

When we say the World is the totality of facts, and a fact is what is the case, we are, of course, thinking only of the counterparts of true propositions - whatever may be our criterion of "truth". Whatever may be suggested as the criterion of truth, some unanswerable objection(s) can always be levelled against it. The way out of this impasse, it seems to me, lies in seeing how we may distinguish between the "public" world that is common to all human beings and sentient creatures and the "private" worlds of our dreams and day-dreams. The World with all its things and events and their attributes, and its facts, is something that we can in some measure share with other human beings, even with all sentient beings.

More specifically, a "fact" is a part of the "public" world, answering to a proposition, which may be known by all human beings in common. Scientists, ordinary people, philosophers, religious people, historians and what have you are perpetually engaged in the quest of "facts".

It is a mistake to think that there are different kinds of fact - scientific facts, historical facts, facts of everyday life, etc. Different methodologies may be required or employed in discovering facts; but a 'fact', as such, is always what is the case - viz., a relation between one thing/person/event and another person/thing/event or between a thing/person/event and an attribute, or between one attribute and another, and so on.

There is coherence in the World in the sense that the "facts" in it cohere, are not logically incompetible. The World is a totality, not merely a plurality, of facts - it is a uni-, not a pluri verse. The coherence of "facts" in the actual, "public" world is but a counter-part of coherence (comprising logical relations like absence of contradiction, entailment, etc.) among the "propositions" which refer to the "facts". Hence, though

the World contains things, persons, events, attributes of things/events/persons as well as "facts", there is sense in talking about coherence among the "facts" and no sense in talking about coherence among things, events, persons and attributes of things/events/persons in the World.

The apparent incoherence in a dream world may have a coherence requiring a deeper logic to grasp it - it is a possible world, even though it is not the actual world. What makes a dream world only a possible, not the actual, world is the fact that it cannot be shared in any measure with other sentient beings.

Things, persons, events and - stretching a point - even their attributes may well be said to exist: they have a locale in Space and/or Time, or in Space-time. But, "facts", like "propositions" do not exist; they simply are or have being. And, while a "proposition" may be true or false, it cannot be said that a "fact" is true. "Facts" are, simply are, that is, have being : they neither exist nor are they true.

I shall now summarize what I have tried to maintain in this paper. The points I have tried

to establish are as follows :

(1) There are indicative sentences only because there are "propositions" - the sentences exist, but the propositions are real or have being, without existing. In this respect, propositions are like "class", "number", etc.

(2) The World contains, not only sentences, things, events, persons, and their attributes (which all may be said to exist), but also "propositions" and "facts" (which are or have being without existing).

(3) A consideration of the anatomy of "proposition" will help us establish the thesis (2) above. It will also throw some light on the nature of a "fact".

CONVENTIONS AND PRINCIPLES OF SPEECH *

1. "Dirty stories" or "dirty jokes"? Commonly, of course, these two expressions are used interchangeably; but there is a clear distinction between a dirty story and a dirty joke. Watergate and reports of certain incidents with Christine Keeler are, no doubt, "dirty stories"; but, even though some people may be highly amused by them, who would call them "dirty jokes", even bad ones? I think Dr. Gandhi has "dirty jokes", not "dirty stories", in mind.

A "dirty story" is usually lacking in both wit and humour, while both these are of the essence of a "dirty joke". Again, a "dirty story" is nearly always malicious-maliciously directed against an individual, a group, a community, a nation or a people, a race; but a "dirty joke" seldom is malicious. There are, of course, border-line cases where it may be difficult to decide whether what we have

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* Professor Gandhi, who occupies a Chair of Philosophy in the University of Hyderabad, presented a paper on the above subject for discussion in a meeting of St. Stephen's College Philosophy Society. I had the temerity to question some of the theses in his paper.

partakes of the nature of a "dirty joke" or of a "dirty story". Quintessentially, a "dirty joke" is pure fun and games.

I am, of course, not denying that there are some jokes which are not "dirty"; but qua jokes they are of an inferior quality, for usually they are less witty and produce less delight and mirth among hearers generally.

To savour and enjoy a "dirty joke" properly and fully one must also have a "pure" mind - a mind that is neither lecherous nor inhibited. A very good friend and colleague of mine used to maintain a Book of Words in which he inscribed the best dirty jokes that he came by or invented. It bore the motto of the Order of the Garter - honi soit qui mal y pense - which freely rendered into English means, 'he who thinks these to be dirty has a dirty mind'.

A philosopher, and a linguistic philosopher in particular, should be concerned, I imagine, with the place and significance of dirty jokes in our social life - the lives of those who tell and hear them.

And, here, I would join issue with Dr. Gandhi on the only point he seems to have made in his phi-

losophy of dirty jokes. I think that if there is any kind of obligation - felt or otherwise - on the part of the retailer of a "dirty joke" it can never be the "obligation to try very hard to ... ... hurt the feeling" of the hearer or anybody. On the other hand, the obligation, if any, is the obligation (a) to produce "delight and mirth" among hearers and/or (b) to produce "shock" and thus induce a "spiritual catharsis" among prudes and suchlike people.

2. Dr. Gandhi has discussed some tacit conventions of all indicative talk.

(1) Is there a difference between (a) boldly asserting that p, and (b) asserting (but not so boldly) that p ? I think there is a difference - and a big difference, at that. Both an astronomer and a layman may assert that the earth goes round the sun (not, vice versa). The astronomer, it may be said, knows that p. The layman only believes that p. "Believing" is some - thing less than "knowing". The layman has some grounds - reliable grounds, if you will - for believing that p. The astronomer has more than this - a sufficient or, as nearly as possible, a perfect ground for believing that p. Put it another way, while the layman has more or less uncritically

accepted his belief from the Objective Mind - contemporary culture, or the part thereof that may be called "popular science" - the astronomer, while still largely dependent on the Objective Mind, has worked out for himself the reasons behind the present-day view of the scientists, and even possibly corrected that view. The layman's assertion that p implies that he believes that p: the astronomer's assertion that p implies that he has seen or realised for himself that p.

(2) I could agree with Dr. Gandhi if he only said that there is a great deal of "consolatory" talk in our ordinary lives which is, in fact, hollow and cruelly insincere. But he fails to see perhaps: (a) that it is precisely this kind of "consolatory" talk which almost always fails to console; (b) that this is equally true of bad theology and bad metaphysics; (c) that if the saintly person's talk or silence makes any impression on the bereaved it is precisely because the former not merely "believes" but perhaps also "knows" and "realises" that p, and the latter is convinced of it; (d) that the alternatives to bad theology and bad metaphysics can never be no theology and no metaphysics but always a better theology and a better metaphysics.

And if you are, say, a rank materialist or a humanist or agnostic you would just grasp and hold the other fellow's hand or embrace him and say nothing and that would be consolation a thousand times better than the hollow and insincere consolatory talk; (e) that for all we know that saintly person may indeed only believe that p and have intuitive and/or other kinds of grounds for believing that p, and this fact in and by itself, when communicated to or sensed by the bereaved, may also have the effect of consoling him.

3. Imperatival talk I am not at all sure that imperatival talk is based on a tacitly accepted fundamental convention that human beings as speakers and as hearers have "unequal" social and other kinds of status: 'I command you to do X', 'I request you to do X', 'I beseech you to do X', and so on. Suppose, now, that we openly believe in the dignity of human personality, as such, or tacitly accepted the convention that all human beings, speakers and hearers, irrespective of what their respective status may be, are "equal" qua human beings, then wouldn't all imperatives have, fundamentally, the one and the same form,

say, 'Please do X'. This is neither a "command", nor an "entreaty". It is, perhaps, just a "request" that a speaker (whether a parent or a child, a teacher or a pupil, a master or a servant, a "sentencing" judge or a criminal "sentenced") can, as a human being, make of a hearer (whether a child or a parent, a pupil or a teacher, a servant or a master, a criminal "sentenced" or a "sentencing" judge), as a human being.

4. Quasi-imperatival forms of speech According to Dr. Gandhi, all imperatival talk is based on the tacit acceptance of the convention that human beings as speakers and as hearers have "unequal" social and other kinds of relationships. I have questioned this view and tried to maintain that imperatival speech can also be equally cogently based on the opposite convention that hearers and speakers, qua human beings, are "equal", however different may be the circumstances in which they may be placed.

It seems to me, then, that there is no need whatsoever to recognise quasi-imperatival forms of speech as something distinct, on the one hand, from imperatival speech and, on the other hand, from moral utterances or the language of morals.

Dr. Gandhi gives "You ought to stop telling lies" as a specimen of quasi-imperative speech. It has, according to him, only the appearance of imperatival talk (based on a tacit acceptance of the convention of "inequality" of hearer and speaker), without being really so (for it is based on a tacit acceptance of the opposite convention).

I do not really see why we should have to resort to any sort of subterfuge to try and make a possibly unpleasant bit of imperatival talk a little more palatable generally and to the hearer in particular. It seems to me that when you say, "You ought to stop telling lies", you are only wrapping it up a bit to deliver the straightforward imperatival speech, "please don't prevaricate", which put more explicitly is: "I (as a human being) request you (as a human being) to stop telling lies".

Again, I doubt if "You ought to do X" or "He ought to do X" is, strictly speaking, a moral utterance or the language of morals. Surely, the language of morals is only either "I ought to do X" or "We ought to do X". And, this is an

<u>imperative</u> all right, but uniquely different from other sorts of imperatives. For one thing, it is a categorical imperative, and all other kinds of imperatives are only hypothetical.

In any case, I don't think that Dr. Gandhi has made out a case for there being such a thing as a quasi-imperative.

"SUBJECT" AND "OBJECT" IN "KNOWLEDGE" *

1. As used in modern Western philosophy, the terms "Subject" and "Object" are highly loaded. Since Bishop Berkeley set the fashion, philosophers have tended to regard an "Object" as all but entirely constituted by a "Subject" or, rather by the activities of a "Subject".

These philosophers have generally stopped short of declaring that "Subject" is all but entirely constituted by the "objects" which it apprehends or comprehends, i.e. knows. In one place in his Commonplace Book, Berkeley however says something like this : in a profound, dreamless sleep (wherein there are no ideas), we simply are not. This is to say that the "subject" is no less dependent on its "objects" than the "objects" are on the "subject".

The way out of what would seem to be a philosophical morass is to substitute a pair of neutral terms

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* Rakesh Varma wrote his paper on ' "Subject" and "Object" in "Knowledge" ', for discussion in the Philosophical Society, while he was reading in St. Stephen's College for his Master's degree in Philosophy.

The above paper is a caveat to Rakesh Varma's paper.

for the pair of highly tendentious terms "Subject" and "Object". This pair of neutral terms, I suggest, would be simply "knower" and "known", where no theories whatsoever are involved as to what might constitute the nature of the "known" and the nature of the "knower".

Rakesh Varma's essential point about the necessary duality of "knower" and "known" in all "knowledge" remains; Knowledge is not a substance nor a quality, but a relation. Since a relation logically presupposes relata, if there is any such thing as knowledge then there must be a knower and a known. This is unexceptionable as a formal or a verbal inference.

2. I would suggest that an independent philosophical investigation might show (1) that the "known" is not in the least constituted by any activity of the "knower" (the realist view) : (2) that there is no adequate ground for believing that there must be any kind of unity between "knower" and "known".

3. There is also a facile tendency to use the term "Subject" synonymously with the term "individual mind". What is the state of play when an individual "knows" what is in his own mind ?

SOME REFLECTIONS CONCERNING EPISTEMOLOGY*

Part 1

In sections 1 to 4 of his paper Rakesh Varma has raised and tried to answer the following 3 questions:

(1) What is the difference between "knowing" and "thinking" - between saying, 'I am thinking about X' and saying, 'I know X'?

(2) What is the difference between "knowledge" and "knowing" - between saying, 'I know X' and saying, 'I have knowledge of X'?

(3) What sort of a justification is required for a "knowing-claim" to be converted into "knowledge"?

2. Varma's answers to these questions would appear to be as follows:

(1) "Thinking" is "would-be knowing". My "thinking about X" is a cognitive activity which might culminate in my "knowing X", "knowing" is, so to say, the goal of "thinking". And we reach this goal when

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* Here I offer a critique of Rakesh Varma's paper on the above subject which he wrote for the Philosophical Society of St. Stephen's College.

we have "arrived at a certain kind of certainty". But Rakesh Varma leaves it at that, he does not say what he means by "certainty" or by "a certain kind" of cer-

it a "subjective feeling" in a "thinker". I think that it is also <u>implied</u> in his position that "thinking about X" <u>itself</u> becomes "knowing X" under a certain condition, i.e., when it acquires "a certain kind of certainty" - in other words, that there is no "category difference" between the latter and the former. I don't think I can accept this view.

(2).(3) Varma's answers to the second and the third questions are closely inter-linked. One should, therefore, not present them separately. His position with regard to these questions may be summarized as follows :

(a) "Knowing X" is something <u>less</u> than "knowledge of X";

(b) in fact, to say 'I know X' is <u>only</u> to make a "knowing-claim";

(c) something - let us call it K - has to be <u>super-added</u> to the "knowing-claim", if this be at all possible, before I have "knowledge of X" - before I can say, 'I have knowledge of X'.

(d) About what this K might be Varma does not

seem to be very clear. He seems to have two different views on this question ; but since these views are not incompatible with one another he has two options - to choose between them or to accept both of them as a definition or description of K. His two views of what K is are :

(i) K=characterestic(s) which a "knowing-claim" must have - such as "X" being "true" - before it (the "knowing-claim", 'I know X') can become "knowledge of X", i.e., before I can say, 'I have knowledge of X'. This Varma would, perhaps, regard as the justification of the "knowing-claim" on epistemological grounds.

(ii) Alternatively, K=explication, by logical analysis, of all the elements involved in "X" and their inter-relations, and a clear understanding of all these elements and their inter-relations. This, perhaps, Varma would agree to regard as the justification of the "knowing-claim", not on "epistemological" but rather on "logical" grounds.

(e) What Rakesh Varma says in sec.3 of his paperr now seems to be not only quite different from, but also incompatible with, what he says in para 2 of sec. 2. In sec.3, he says one's "knowing-claim" of a particular truth (t) is justified if, and only if, one's "knowing-claim" of the universals or principles (Ti, Tii, Tiii.....) underlying that particular truth

are justified - on epistemological/logical/both epistemological & logical grounds, I suppose. But the difficulty in such a view is either that it would involve us in an infinite regress or commit us to a Platonic view that there is some sort of an Idea of the Good which we can reach by a dialectical or some kind of process at the apex of the pyramid of universals.

Part II

3. In this part of my paper I shall offer some reflections of my own on Rakesh Varma's "Reflections". Mine will be an essay independent of his views - areas of agreement and difference that may emerge will only be accidental.

4. I take "thinking", "knowing" and "knowledge" seriously, and I am not inclined to fall for new-fangled, facile distinctions that are sought to be made between a "knowing-claim" and "knowledge" - between such statements as, 'I know X' and 'I have knowledge of X'.

5. Sometimes by the same philosopher (e.g. Descartes), the word "thinking" is used either, widely and loosely, to denote any mental process or state of consciousness, or, narrowly and specifically, to denote a cognitive process or activity (of the mind) with a theoretical or practical bias.

"Thinking" (in the narrower sense), then, is essentially exploratory. One stops thinking, for the nonce at least, only when either one has reached the present goal of one's thinking, or when one is completely frustrated in reaching the goal or is "dead-beat". But there is evidence that one may resume the thinking from where one left off or from scratch when one is "sound asleep", and that one may succeed better then than when one was "wide awake". All that I have said in this and in the preceding paragraph we learn from the psychologist.

In what I have said so far on the nature of "thinking" I do not seem to differ very much from Varma - except on one important point. He seems to suggest that there is no "category difference between "thinking" and "knowing", and I definitely hold the view that there is such a difference between the two. And this is where we pass from the field of psychology to the field of epistemology.

6. I cannot claim that I can say what "knowing" is. I may be able to say something about "knowledge"- but this may amount to next to nothing. But this does not prevent me from seeing some serious confusions in which some epistemologists have got involved when discussing the nature of "knowing" and of "knowledge". The confusions, in my opinion, have been caused by some

questionable assumptions with which they started in their investigations.

7. 'I know X' could mean one of several things depending on what X is. And, in only one of these cases 'I know X' implies that 'X is true'. Let us first consider the four commonest types of "knowing X".

(1) When X is a simple object - such as, a sense-datum (like a patch of colour, a sound, a smell) or aesthetic/ethical quality of an object, then ones' "knowing X" may be called "intuitive cognition of the first order". It may also be called "acquaintance" or "bare acquaintance".

First-order intuitive cognition is not "true" or "false": it simply is (exists) or is not (does not exist).

(2) When X is a complex object - natural object or artefact - one's "knowing X" may be called "intuitive cognition of the second order". In this, one or more first-order intuitive cognitions are impregnated and modified by the totality of one's past experience, giving the object of such intuitive cognition a more or less rich "meaning" - as for example, in our perceptions of this table or of the dog Shera. The "meaning", however, is implicit in, or tied to,

the intuitive cognitions - not separable from them.

Again, second-order intuitive cognition is not "true" or "false". It is, however, "veridical" or "not veridical". Thus, illusions and hallucinations are not veridical (they are "inveridical" - shades of Austin!).

But, there may be an "assertion" or "judgement" based on one or more-than-one first-order/second-order intuitive cognitions - as in a "perceptual judgement" like 'This cushion is light blue' or 'the dog Shera is on the other side of this table'.

Here, then, we have "discursive cognition" - based, albeit, on "intuitive cognitions", and discursive cognition is "true" or "false". What bits of discursive cognition are "true" and what bits "false" can only be determined by application of a theory of truth. (Theories of truth are not our concern here, but one may say that the Concordance theory of truth, popularly described as the Correspondence theory of truth, with all its limitations, is to be preferred to the other theories).

(3) Generalising, then, we can say that when one has discursive cognition of a fact (of a truth, of what is the case), one may say, 'I know X'; and in all such cases, 'I know X' implies 'X is true'.

I see no reason whatsoever for saying that only in type (3) above we have "knowing", and that types (1) and (2) above do not represent "knowing" at all. In fact, but for types (1) and (2) there would be no "knowing" of type (3).

8. It may be interesting to note that though based on "veridical" second-order intuitive cognition, a "perceptual judgement" may yet be "false". Thus, on the basis of a "veridical" preception of the hands on the dial, I may assert, 'That clock is fast/slow' - which is palpably "false", if, in point of fact, it stopped with the hands in those positions 12-,24-, 36-, 48-, ... hours ago.

9. (4) What is meant by saying 'I know X', when "X" is a human being? Or, for that matter, any living creature, particularly one that is "close" to us? Such as a particular horse or a particular dog. One may have a lot of "true" discursive cognition of "X", one may know all the "facts" about that person or that animal - and yet fail to really know the person or the animal. May it not be the case that in order to "know" a human being or an animal one should have a "veridical" perception - second-order intuitive congnition of the person or the animal as a whole? And this "veridical" perception may or may not be based on "knowing" some or all the "facts" about

the person or the animal. Rare as they may be, there are individuals who have the gift to "know" a human being straightway when they hardly know any "facts" about him or her. Women, they say, are generally better than men in "intuitively" understanding what a particular human being (of the opposite sex) really is as an individual. So, too, a bedouin with his horse or a dog-lover with his dog-they "know" their companion, and this with them is more than "counting their points".

((I am not taking note of the cases where one says, 'I know X (a human being, a horse, a dog)' meaning by this assertion nothing more than 'I have encountered him or it on one or more occasions and should be able to recognise him or it'))

10 "Mystical experience" is yet another thing. It is, perhaps, something like what I have called "intuitive cognition of the first order" - only, more so. In first-order intuitive cognition, the "knower" is able to distinguish himself clearly from "the known". If we go by popular, second-hand accounts of "mystical experience" this distinction entirely vanishes in mystical experience. How can there be any "knowing", then, if the identity of the "knower" (the lover) is entirely lost in the "known" (the beloved) ? And if we say that the mystic knows the "mystical experience" itself, then is not this

a self-stultifying position ?

11. Attempts have been made by epistemologists to reveal or expose the anatomy of "knowing". Their investigations have generally failed based as they have been on one set of assumptions or another - and some assumptions in each set have been questionable. Without going into details here, I would say that "knowing" is a unique relation which cannot be understood or defined in terms of any other kinds of relation. Even to say that it is our "mind" which "knows" may be a big, unwarrantable assumption. For, what we are pleased to call our "mind" may itself be nothing more than a reductive or emergent property of our "body"; alternatively, both our "body" and "mind" may function only as instruments to make us "know".

12. I have distinguished between 3 types of "cognising" - "first-order intuitive cognition", "second-order intuitive cognition" and "discursive cognition" based on "first-order/second-order intuitive cognitions". There is no difference, as I think, between "knowing" and (a) having a first-order intuitive cognition, or (b) having a "veridical" second-order intuitive cognition, or (c) having discursive cognition which is "true", i.e., "concords with fact or what is the case".

"Certainty" must indeed go with any case of

"knowing", but it is not a characteristic of the process or activity of "cognising" itself - it is, to say the least, a characteristic of "cognising-in-relation-to-its object (that which is cognised)". I would not go so far as to say (as some philosophers seem to have said) that "certainty" is a characteristic, not of our apprehension and comprehension at all but rather that of what we apprehend and comprehend.

13. For reasons that I have already hinted at in this paper, I cannot subscribe to Varma's view of the distinction between "knowing X" and "having knowledge of X". In my opinion, "knowledge" is simply "what is known" - known when one has (a) a bit of first-order intuitive cognition, or (b) a bit of "veridical" second-order intuitive cognition, or (c) a bit of "true" discursive cognition.

14. But, one's "knowledge" is by no means just the sum or aggregate of one's "knowing". Or, to put it more accurately, the sphere of one's own "knowing". This is because what one "knows" himself (off his own bat, so to speak) is but one source of one's "knowledge". For, unless and until we have grounds for believing that there is something that we "know better", it is only reasonable that some "knowledge" we should accept on grounds of authority, reliable testimony and such like.

THEORY OF AN ALTERNATIVE SCIENCE *

A

1. There are three types of Science: (A) Natural sciences (physics, chemistry, biology, psychology, sociology, etc.); (B) Ideal sciences (branches of Pure Mathematics, viz., arithmetic, algebra and geometry); (C) Normative Sciences (ethics, aesthetics).

2. Under each type of Science there is a variety of sciences: this can be explained by the differences in their subject-matter. Each special science is concerned with a particular part or aspect ("segment", as Professor Uberoi would have it) of Nature/Reality in isolation as far as possible from other segments of Nature/Reality. What is common to all sciences of a given type-(A) or (B) or (C) - is the distinctive method they use to obtain "knowledge" within their respective spheres. (Pure Mathematics uses the deductive method; the normative sciences use one or more of the philosophical methods, the deductive method being one of these; the natural

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* Professor J.P.S. Uberoi, who occupies the Chair in the Centre of Advanced Study in Sociology, Delhi University, presented a paper on the above subject for discussion in a meeting of St. Stephen's College Philosophical Society. Here we have a critical appraisal of Professor Uberoi's paper.

sciences use a combination of induction and deduction and a host of subsidiary techniques, such as statistics, calculation of probabilities, etc.)

3. When the term "Science" is used without any qualification the reference usually is to Natural Science. Likewise, when we talk of "scientific method" we generally mean"the method(s) of Natural Science".

4. Professor Uberoi's position, especially when he discusses "positivism" in relation to "science", seems to me to be ambivalent and somewhat misleading. Would it be fair to assume that he is really thinking only of natural sciences? Positivism, as far as I can see, is just irrelevant to ideal sciences and normative sciences.

B

5. "Positivism" cannot, I think, be regarded as a method at all of any natural science, much less of Sciences in general. It is rather an intellectual attitude which would have us scrupulously to eschew "superstition" (in any form) instead of making it serve as a substitute for "knowledge". If it be a sin or failing to be "ignorant", then we are double -dyed in sin and failing if we are "superstitious". (If "knowing"

be the positive term and "not-knowing" the negative, then "ignorance" would be a privative term; and "superstition" a sort of doubly privative term!)

"Positivism" is, in fact, a counter-part of "empiricism". If sense-experience is the only source of all our knowledge, then what lies beyond sense-experience cannot possibly be known; and to posit any putative or hypothetical supersensible entity would be not merely "ignorance" but something worse : it would be "superstition" - a sort of bluff to cover our ignorance. Who would then say that Newton, with all his talk about "force" moving bodies and "gravitation", was a positivist? No, it was the "empirical Hume" who was a true positivist!

6. It is doubtful if even natural sciences are always strictly "positivistic", except only in spirit and intention. What about natural science as a deductive system? What direct empirical evidence can we ever have for entities such as atoms, electrons, protons or complexes? We do have such evidence for macroscopic properties and behaviour of material bodies and for "symptoms" but if these can be better explained in terms of a deductive system than otherwise, why, then, we must accept that deductive system and all that it

implies.

7. Could Professor Uberoi simply mean that by using different methods of study in the same field we can have, say, a "normative" as well as a "natural" science; that, by studying beliefs and conduct in one way, we have the "natural" science of sociology and, by studying conduct and beliefs in another way, we have the "normative" science of ethics or politics? I don't think that it could be the intention of Professor Uberoi to labour such an evident truth. Does Professor Uberoi claim, perchance, that depending on the method used, there can be two different types of "natural" science? If this is his claim, then I think that it cannot be sustained. But if Professor Uberoi is interested in showing that there are significant differences in the methodologies of a natural science and the philosophy of that natural science, then there can be plenty of common ground between us. The philosophy of a natural (or any other type of) science cannot obviously be restricted to using only the method(s) of that science. It would, on the other hand, use the methods of philosophy in some combination or another.

8. In principle, if not always in fact, there is a "philosophy of science" corresponding to each science or two or more sciences of the same type. Besides a

low-brow and a high-brow physics, there is also such a thing as 'philosophy of physics" which may concern itself with one or more questions about the general nature (shades of Eddington!) of the physical world. Thus, one could be led to hold this view or that view of the nature of cosmic evolution : or, in the context of the ultimate constitution of matter, consider the validity of the concept of "determinism". Again, the philosophy of biology takes us through the whole gmaut of vitalism, mechanistic biology, neo-vitalism, emergent materialism and interpretation of the phenomena of birth, growth, decay, death and resurrection in terms of a monadistic metaphysics.

C

9. It is not at all clear to me what Professor Uberoi means by the "semiological" method or a "semiological" science. I shall, therefore, make but a few general remarks on this subject.

(i) I should have thought that grammar is a "normative" science of some sort concerned with the right use of a language. The "rules" of grammar are not at all like the laws of nature. Again, they are not like moral laws. They are more like laws of aesthetics than moral laws. But, I do not see what is gained by calling

grammar and syntax a "semiological" science.

(2) As far as I can make out, Professor Uberoi's "semiological" science is not what I have called, in section 8 above, a "philosophy of science", but something much more than this.

(3) In fact, Professor Uberoi seems to be approaching the view that "semiology" or "semiological science" is a synthesis of all the sciences, which also finds a place in it for the semiologist. As such, Professor Uberoi's "semiology" is indistinguishable from "philosophy" or "speculative philosophy". In the ultimate analysis, it is also an abrogation of Science.

(4) Instead of arguing for a modification of each science by Philosophy-the mother of all sciences - should not we rather see the benefits of permitting and encouraging "specialization" in the various fields of study, and at the same time allow an independent scope and function to Philosophy?

D

10. One can, I think, go along with Professor Uberoi part of the way if he would concede (1) that he is using the term "positivism" in only a Pickwickian Sense (and not in the strict sense in which it is used in science and philosophy), and (2) that "semiology" is yet not

a viable alternative to it, but only a strong tendency of the human spirit to correct the imbalances of "positivism" (as understood by him).

11. Side by side with the strict, narrower view of "positivism", acceptable to philosophy and science, which I have given in section 5 of my paper, we should consider an entirely different view of "positivism", which would, in effect, identify it with "specialization", "departmentalization", "parochialism". The thrust of Professor Uberoi's paper is against this parochialism that characterizes sciences of every type and variety, not against "positivism", in the strict sense.

12. Instances are not lacking in the fields of science and philosophy of movements against the parochialism of the sciences. Apart from the emergence of ecological sciences, of the concept of symbiosis, etc., we may also note what I would call a few classical instances of synthesis of sciences - sciences of different types as well as those of the same type. The "synthesis" is, no doubt, often no better than an incipient movement towards synthesis.

(1) The ethical theory of Aesthetic Intuitionism would maintain that the moral value of actions depends on their aesthetic quality.

(2) All is fair in war and politics. Is it, though? Should (and do) moral considerations trouble military people? If they do (and if they should), then there is scope for synthesis here.

(3) Dr. Gobind Behari Lal, a past alumnus of St. Stephen's College, and at present Emeritus Science Editor of Hearst newspapers and journals in USA, was commissioned some 25 years ago by Harvard University to help formulate the methodology and techniques for synthesising the social sciences. The more these social sciences - psychology, sociology, economics, ethics - develop the more abstract they become and the farther away they are from the concrete facts and experiences of human life. There is, therefore, a practical and urgent need for discovering and developing a methodology and techniques for correlating and sythesising the results of these sciences. This has been attempted - how far successfully, I do not know.

(4) A good friend of mine who spent six months in Delhi and the Delhi University campus, while her husband was Visiting Professor here, told me bluntly (as only a friend can) that she and her husband had found many eminent and distinguished physicists, mathematicians, economists, historians, etc. here, but

very few "educated" persons. Let us ponder in what way an "educated" person is different from and more than an eminent and distinguished physicist, mathematician, economist, etc.

(5) Professor P.M.S.(later, Lord) Blackett began as a physicist, became one of the pioneers of the new-fangled science "Operational Research", dabbled in other sciences, but ended up as a "generalist". Be it noted that no one is born a "generalist"; he has, to begin with, a good grounding in one or more sciences.

13. One may grant that there is a strong tendency of the human spirit to correct imbalances of or in departmentalized or specialized studies known as the "sciences". Call this tendency of the human spirit "semiology", if you like, but this "semiology" itself would be far from being a science. For one thing, it has yet to discover its own methodology. This is the thrust of my criticism of Professor Uberoi's position.

Again, is not "semiology", on this view, nothing but a system of Speculative Philosophy "on the make" - as the Americans would say. Put it another way, the goal of "semiology", in the last analysis, is a complete World-theory, a synoptic view of Reality as a whole.

But, while a systematic Speculative Philosophy has a methodology of its own - be it only a trained intuition

the "semiology" of Professor Uberoi's conception seems to have none.

THE ANATOMY OF PHENOMENON

In the early 1930's, Mr. (later Sir) Charles Chaplin had a brief interview with Mahatma Gandhi in London. When asked by a journalist what he thought of the great man, Charlie Chaplin said, 'Don't ask me! He is not a man. He is a phenomenon.' Philosophers do not use the word "phenomenon" in this popular sense in which Charlie Chaplin used it on this occasion.

Historically speaking, several philosophers-like Berkeley and Hume, Plato and Kant, and Husserl-have held different views about the nature and ontological status of "phenomenon". But, basically, there are only two different, yet equally viable, senses in which this term may ordinarily be used by a thinker.

1

What exists, but exists not in its own right as it were, is phenomenon. A phenomenon depends for its existence on the existence - prior or simultaneous existence - of something else. Thus, a shadow is a phenomenon depending for its existence on the existence of a physical object and some light. Likewise, one might say that cheese, curd, whey are phenomena depending for their existence on milk and some catalyst.

The opposite of "phenomenon", in this sense, may be called "substance". It may be defined as something that exists in its own right; that is, it does not depend for its existence on some other things that exist. But it is almost impossible to identify, in the physical world at least, anything which does not depend for its existence on the existence of something else. So, after all, is not everything that exists, in the physical world at least, only "phenomenon"? It is logically useful, then, to bring in another concept- the concept of "quasi-substance".

We have, then, (1) the shadow of a tree(phenomenon), (2) the tree (quasi-substance) and (3) other things like seed, soil and moisture (substances?) which make the existence of the tree possible. But the seed, soil and moisture depend for their existence on still other things; and, so on, in an endless regress. In point of fact, then, the physical world contains but (a) "phenomena", in the sense we are using the term here, and (b) "quasi-substances" on which these phenomena depend for their existence.

The earliest of Greek thinkers were Cosmolo-

gists who tried to establish that Water, Air, or Fire was the primeval stuff or substance out of which all things in the physical world have been formed. But, this line of thought has not been pursued seriously in the history of philosophy, except by materialists, whatever might be their conception of "matter". "Matter" is the "substance" behind all "physical things" (which are all "phenomena").

Ignoring for the moment, for the sake of argument, the distinction between "substance" and "quasi-substance", it is interesting to note that some "phenomena" have more, and some less of the "substance", as it were, in them. The shadow of a tree, vis-a-vis the tree, is less substantial than, say, whey, vis-a-vis milk; and dream images are almost insubstantial as compared to the shadow of a tree. One may, then, legitimately talk about "degrees of substantiality or reality".

But, if something does not exist at all, and furthermore we can think as we please about it (for example, a mermaid), then it cannot be regarded as a phenomenon at all. But our mental image of that thing is a phenomenon all the same.

2

A perspective of an object is also a pheno-

menon. The different views, from different points of view, of (say) the College buildings are all phenomena. These phenomena are of a type different from those mentioned in section 1, above; for their existence is dependent not only on substances or quasi-subtances but also on an observer and on his point of view. Yet, in all phenomena of this type the object dominates the observer. For, all normal observers will know the same phenomenon if they have the same point of view.

The balance between the object and the observer in determining the phenomenon tends to vary, as in perception, illusion, hallucination, delusion, fancy and imagination and dreaming.

What I am suggesting is that there are many different kinds of phenomena, ranging from those which are literally parts of Nature to those which are all but pure figments of our mind.

ADDENDUM TO 'THE ANATOMY OF PHENOMENON' *

Historically speaking, two of the meanings of the term phenomenon are:- (1) What is directly apprehended by the senses or one of them, an object of sense-perception. It is in this sense that the term is used by the phenomenalists like the empiricists, e.g. Locke to Hume:- (2) appearance as opposed to the thing in itself. It is in this sense that Kant and Plato use the term.

Phenomenalists, like Barkeley and Hume, who accept the first sense of the term phenomenon, do not make a distinction between the thing and phenomenon. According to them, a thing is a phenomenon or a collection of phenomena. Kant, who accepts the second sense of the term phenomenon, obviously makes a distinction between a

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* I am indebted to Dr. R.K.Gupta for this complement to my paper on The Anatomy of Phenomenon. He has made some nice distinctions which I had failed to make or, at any rate, to express. I am grateful that he has kindly consented to the incorporation of his Note in the present collection of essays, as an addendum to my paper on The Anatomy of Phenomenon. The addendum immediately follows my paper.

thing and a phenomenon. According to him, (i) there is the world of phenomena, the world of things as they appear to consciousness, which is the world of knowledge, and (ii) there is the world of noumena, the world of things as they are in themselves, which is not the world of knowledge but of thought. Plato, who accepts a third sense of the term phenomenon, and obviously also makes the distinction between a thing and phenomenon, does not, like Kant, consider the world of phenomena to be the world of knowledge, and the world of reality (things in themselves) to be the world of thought; on the other hand, he considers the former to be the world of opinion, and the latter to be the world of knowledge.

Now, Husserl does not understand the term phenomenon in either of these two senses. According to him, phenomena, or what he calls pure phenomena, are what directly or immediately present themselves to us, what is directly or immediately accessible to us, what we intuit, in transcendental subjectivity after the phenomenological reduction. As these phenomena are given in immanent, as opposed to transcendent, knowledge or experience, and are consequently things themselves,

Husserl makes no Kantian or Platonic distinction between a phenomenon and a thing; for him, to repeat, the phenomenon is the thing.

Thus:

(a) Husserl has this in common with the phenomenalists like Berkeley and Hume that he identifies the phenomenon with the thing; but then he does not understand by phenomenon an object of sense-perception but an object of intuition after the phenomenological reduction has been performed, or simply an object of phenomenological intuition.

Both phenomenalists like Berkeley and Hume and the phenomenologist Husserl give us the science of phenomena (as the science of reality). But they differ in the meanings which they give to the term phenomenon.

(b) Husserl does not agree with Kant and Plato either in his understanding of the term phenomenon or in respect of the distinction between the phenomenon and the thing. Kant's understanding of the term phenomenon is partly similar to that of the phenomenalists like Berkeley and Hume; he may be said to mean by it an object of consciousness of which sense-experience is one, but

only one, of the (two) ingredients. And Kant makes the distinction between phenomena and noumena. Plato could be said to mean by phenomenon only the world of particular sensible things which he calls the world of appearance. And he distinguishes between the world of particular sensible things or the world of appearance and the world of Ideas or the world of reality. I have already mentioned what Husserl means by phenomenon and his thesis about the identification of the phenomenon and the thing.

REALITY and I*

By one's "environment" is meant that part of Reality other than oneself which for practical, or other, reasons becomes "significant" to one. It becomes "significant" to one when it makes a difference to one in some way or another.

The sphere of Being (Reality) is larger than the sphere of Existence. It includes not simply the aggregate or totality of things/events which exist, but much more, e.g., universals, numbers, facts, propositions, values, etc.

Who shall comprehend the entire contents, so to speak, of Reality? I am ever circumscribed only by my "environment".

A yokel is grazing cattle in a field, and a poet or a painter is looking upon the whole scene. For the cattle, the yokel and the poet or painter the "environment" is not the same; but the "environment" in each case is a part of Reality.

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* It was not always the case that some members of the Philosophical Society gave me an opportunity to offer comments or criticisms. Sometimes it was the other way round. In the two Epilogues to this paper I do what I can to meet objections raised by Dr. Harash Kumar and Dr. R.K. Gupta.

2

One's "environment" is determined by the pressure of Reality, on the one hand, and by one's percipience, on the other hand.

3

There must be limits to any violence that one can do to Reality. The alternative to a given system of geometry, for example, cannot be no geometry at all but only another system of geometry, in a nascent, if not a developed, form. So, too, the alternative to Classical Mechanics is, not no Mechanics at all, but Quantum or some other species of Mechanics. This is true about the whole gamut of natural sciences, of ideal sciences, of normative sciences and of philosophical systems. And whether it be Humanism or Marxism, it is always in answer to our prayer for another religion.

4

One's own percipience is equally important and operative in determining one's "environment". In our sensitivity, and intellectually, morally, aesthetically and spiritually, we are unequally endowed. The "environment" is,therefore, more for some and less for others, though it must always be less then Reality. We have ever to be content, and at the same time remain dissatisfied, with our "environment", regarding it as

but a part of Reality that we have discovered for ourselves.

5

One's "environment", then, is one's partial discovery of Reality. And, in this process of partially discovering Reality, one also partially discovers, through its operations, one's own percipient and comprehending Self - one has, in the Berkeleian phrase, a 'notion of one's Self'.

But, in each case, we are knowing Reality, albeit partially. It cannot be said that we are only knowing "phenomenon", something which is coloured or modified in any way by our process of knowing.

6

It cannot, of course, be denied that the point of view of the observer makes a difference to what he observes. What we see of the College buildings depends on where we are when we look at them, and on such factors as our being colour blind or not and the kind of light present at the moment. But all these perspectives of the College buildings are, after all, only parts of the reality that is the College buildings. Reality is the aggregate or totality of all its appearances or perspectives. Which of these appearances or perspectives one shall discover at a given moment

depends on the point of view of the observer at that moment.

7

My "environment" is what I partially discover of Reality. But it would be a gross over-statement to insist that it is what I partially discover of Reality. For, the cooperative efforts of all mankind are also involved in my partial discovery of Reality. The individual is helped towards his own partial discovery of Reality through "intersubjective intercourse". The "subjective mind" in its search and (partial) discovery of Reality is dependent, at almost every step, on the "Objective Mind".

REALITY and I : EPILOGUE I

1. Dr. Harsh Kumar put his finger on what would appear to be the Achilles' heel in the Realist position. His question was: How would the Realist account for error (such as we have in illusion and hallucination) if he sticks to his thesis that whatever an observer perceives from his point of view at a given moment (i.e. in a certain set of conditions, C1, or C2, or C3 .....) exists and is as it is known to be?

. It would seem that the Realist is committed to the position that there can be no error, that in having "illusions" and "hallucinations", too, we are perceiving and, therefore, knowing what exists and is what it is known to be.

2. Whether in perceiving one is acquainted with pure or bare sense-data or meaningful sense-data is a question about which there may be differences of opinion among Realists themselves. But it is common ground not only between all Realists but among all philosophers that there is a clear-cut distinction between perception and perceptual judgement based on perception.

3. Error may occur both at the perceptual level and the level of perceptual judgement. At the perceptual level, error may result from casual or careless

observation. And this error can be rectified by a more careful observation or more careful observations from the same point of view (i.e., under the same set of conditions, C1, or C2, or C3 ...).

Scientific observation is but an extension of careful observation(s) by one individual. In scientific observation, the phenomenon in question has to be observed from the same point of view (i.e., under C1, or C2, or C3 ...) by a large number of competent observers, either with unaided sense-organs or with the aid of scientific instruments, to obtain an average observation which would cancel out errors and personal equations of the individual observers.

It should be noted that once an erroneous observation has been corrected by careful observations, the error does not persist. The transitory character of error is almost the differentia of error. We tend to pass from error to veridical perception, never from veridical perception to error.

4. In illusions and hallucinations what we have is a false perceptual judgement based on one or more veridical perceptions. When in the dark one "sees" a snake where there is only a rope, or a "ghost" in a moonbeam which has imperceptibly crept into a part of the room, one perceives only what is there, what actually exists, but

from the bias of past experiences or out of fear bases a false perceptual judgement on what one perceives. The perceptions, if only liminal, are veridical; but the judgements (based on these veridical perceptions) are false.

Again, once the mistake in the perceptual judgement is rectified in such cases, the illusion or hallucination vanishes. It is impossible to go back from the true perceptual judgement to the false perceptual judgement. One can pass from false to true perceptual judgements, but not conversely.

5. In delusions of the insane (e.g., grandiose and persecutory delusions) what we have is a false judgement or belief based on images of objects which do not exist at all. And, as long as the insanity lasts, the delusion persists and is not replaced by a true perceptual judgement or belief based on veridical perceptions.

6. To recapitulate: (1) Erroneous/inaccurate perception is the product of casual or careless observation. With careful observation, it is replaced by veridical/accurate perception. Erroneous/inaccurate perception is essentially impermanent and transitory and tends to be replaced by veridical/accurate perception. Once an erroneous/inaccurate perception has been replaced by a veridical/

accurate perception we do not go back to the erroneous/ inaccurate perception. (2) As in illusion and hallucination, a false perceptual judgement may be based on some veridical perception. Again, the false perceptual judgement is essentially impermanent and transitory, and tends to be replaced by a true perceptual judgement. And, once the false perceptual judgement is replaced by a true perceptual judgement, we do not go back to the false perceptual judgement. (3) The delusions of the insane are a case apart. These are false judgements or beliefs based on more images of objects which do not exist.

7. A Postscript Consider now the case of a (straight) stick or rod dipped in water looking bent under the surface of the water. Is it a case of a casual or careless observation leading to an erroneous perception? This is not so. However persistently and carefully we observe, we see or perceive the stick or rod bent under the surface of the water.

The naive realism of Common Sense would regard the bent appearance of the stick or rod under the surface of the water as an illusion : but I do not think that any perceptual judgement is involved in seeing the stick or rod as bent under the surface of the water. (It would be another matter if, on the basis of this

experience, one were to assert or judge that the stick under the water is bent.)

A realist, who is not so naive, would, I think, maintain :

(a) that the stick "seen" as bent under the surface of the water exists, as such;

(b) that the stick "felt" as straight under the surface of the water exists, as such;

(c) that reality contains both (a) and (b) ;

(d) that, on the basis of extensive experience, we may regard (b) as corrective of (a), not (a) as corrective of (b); and, hence, the perceptual judgement "The stick is bent" is false, and the perceptual judgement "The stick is straight" is true.

REALITY and I : EPILOGUE II

A

I should begin by stating, in his own words, Dr. R. K. Gupta's objection, as follows.

'When SKB talks of an observer observing from his point of view at a given moment or under a certain set of conditions at a given moment, then I take the phrase "from his point of view at a given moment" or "under a certain set of conditions at a given moment" to mean "the totality of conditions (under which an observer observes) at a given moment". Now, if this is so, then "observing carelessly/carefully" would also be a part of the conditions under which an observer observes. And if that is the case then both the observations which an observer has, namely the one which he has when he observes carelessly and the one which he has when he observes carefully would belong to SKB's definition of "Reality". And if that is the case, SKB would not have given a satisfactory account of error at the perceptual level.'

B

1. I am most grateful to Dr. Gupta for highlighting some awful bloomers I made (in section 3 of the Epilogue I) in talking about "casual or careless observation", "a

more careful observation or more careful observations", and 'Scientific observation being but an extension of "careful observation(s) by one individual "'.

2. The very concept of "observation" is preclusive of there being "casual" or "careless" and "more careful" observation. "Observation", according to Concise O.E.D., means "accurate watching and noting of phenomena as they occur in nature (cf. experiment) with regard to cause and effect or mutual relations". Hence, "careless/casual observation" would be a contradiction in terms, and "careful observation" a redundant expression.

3. I would now give, by way of illustration, two instances in which the word "observation" has been aptly used. (a) C.B.Fry on K.S. Ranjitsinhji : 'But with far less natural quickness Ranji would have been a great cricketer for the simple reason that he is a great observer, with the faculty of digesting observations and acting upon them. He takes nothing on trust. He sees a thing, makes it his own and develops it. Many of his strokes were originally learnt from other players, but in the process of being thought out and practised have improved past recognition.' (underlinings are mine.)

(b) A.A.Thomas on W. Rhodes : 'All his thirty-odd playing years he was learning something; the foibles of batsmen are like the frailties of the larger human race. Some

we have in common and some are all our own. Wilfred Rhodes knew them all and profited by them 4,184 times. "There's more in bowling than in just turning your arm over", he said to me. "There's such a thing as observation."' (underlinings are mine.)

4. The alternatives to "observation", then, are not "careless" or "casual" observation but (a) "non-observation" and (b) "mal-observation". Of course, carelessness or casualness, or worse may be the actual or predisposing cause of "non-observation". But, it would be an unwarrantable case of transferring epithets to talk of "careless" or "casual" observation. As for "mal-observation", one's bias or prejudice may either lead to "non-observation" of what is there or to "imagination" of what is not there.

5. In the light of what I have said in sections 1 to 4 above, section 3 of the Epilogue will have to be re-written, as follows.

'Error may occur at the perceptual level and the level of perceptual judgement. At the perceptual level, error may result from "non-observation" or "mal-observation" or both "non-observation" and "mal-observation". And this error can be rectified by "observation", under natural or experimental conditions from the same point of view (i.e., under the same set of conditions, C1, or C2, or C3.....).'

'Scientific observation is but an extension of observation(s) under natural or experimental conditions, by one individual .....'

6. In section 6 of my paper, on Reality and I, I have indicated (illustratively) what all is included in the "point of view" of an observer at a certain moment.

And, I have suggested that everything that an observer "observes" from his point of view at a given moment (i.e., in a certain set of conditions, C1, C2, or C3.....) exists and is a part of Reality.

7. In section 2 of may paper, Reality and I, I have talked about an individual's "percipience" as a determinant of one's "environment". I should make it clear here that one's "percipience" determines the range, more than the quality of one's observations.

DEFINITION, CRITERION AND TEST*

Philosophers do not sometimes clearly distinguish between "definition", "criterion" and "test". Much less do they appear to be interested in investigating inter-relations, or lack of inter-relations, between these.

A possible reason why "definition", "criterion" and "test" are sometimes confused with one another is that they have a common objective. The common objective is to identify a thing or object. To offer a definition, to lay down a criterion and to apply a test are, one might say, different ways of identifying a thing or an object.

2. (a) Descartes maintained that "clearness and distinctness" is the criterion of the truth of a proposition. Perhaps he should have only said that it is the test of its truth. He, of course, used a certain criterion to discover this test. In his thinking, Cogito, ergo sum (like every proposition of mathematics) is indubitable. It, like propositions of mathematics, is a criterion (or paradigm)

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*Dr. R.K.Gupta wrote a paper on 'What is a Criterion?' for discussion in a meeting of St. Stephen's College Philosophical Society. This essay seeks to enlarge the scope of the discussion.

of truth; additionally, it is "clear and distinct". This only justifies the conclusion that "clearness and distinctness" is the test of the truth of a proposition. Descartes was, I think, wrong in regarding it as the criterion of truth. It is only a test of the truth of a proposition.

(b) Similarly, the claim of some philosophers that "coherence" - with a body of true propositions - is the definition of the "truth" of a proposition seems to be untenable. If accepted as a definition of "truth", it would involve us either in circularity or in infinite regress. But "coherence" of a proposition with some propositions, known to be true otherwise than through "coherence", is certainly a useful test of its "truth". For, given a body of true propositions, any proposition which is logically inconsistent with it must be "false", and any proposition which is entailed, or pre-supposed, by it must be "true".

(c) Dr. B.N.Ray has recently joined issue with Dr. R.K.Gupta on the question whether Kant intended his first formulation of the moral law as a definition of moral law or only as a criterion or test to ascertain the validity of moral laws or subjective principles of action.

In the light of what I have said in this section, it may be worthwhile to go into the question of the distinctions and inter-relations, or lack of inter-relations, between "definition", "criterion" and "test".

3. A "criterion" is, I should say, a paradigm to which things, more or less, actually conform or are expected to conform. (Thus, the Union Societi - es at Cambridge and Oxford may be criteria for the British House of Commons or our own Lok Sabha; Students' Unions in our Universities do not seem to satisify this criterion.)

Like the Ideas of Plato, a paradigm or criterion is real, but it is not necessary that it should exist. It is real because, like numbers, it determines all our thinking about it rather than the other way round. An Eldorado, or one's private castle-in-the-air, cannot be a criterion or paradigm; but the Kingdom of Heaven on earth, or an Utopia, certainly is.

4. A "criterion" is always concrete - a whole. By comparison, both "test" and "definition" may be said to be abstract. The property of turning blue litmus paper red is a "test"; and it is abstract because it is only an element in a concrete whole,

the complex of properties that is called "acid". Similarly, "triangle" is a concrete whole, a complex of many properties; the "definition" of triangle includes but a few of these properties, namely those which are necessary and sufficient to distinguish this kind of figure from other kinds of figures.

A "test" will help to identify a thing or object (in the sense of distinguishing it from other objects or things), but it will not tell us what its essential nature is. A "definition" helps to identify a thing or object by saying what its essential nature is, and so distinguishes it from other things or objects. A "criterion" helps in identifying (in the sense of recognising) things and objects which approximate to it, without reference to their essential nature.

5. It is perhaps unreasonable to expect that in all situations, whether practical or theoretical, for the purpose of identifying things or objects, all three - "definition", "criterion" and "test" - should be available to us.

6. Inter-relations

(a) A "test" seems to be quite unrelated to

either "criterion" or "definition" of a thing or an object.

(b) It is impossible to "define" a simple object, like "greenness". The only thing that is possible is to lay down a "criterion" of greenness to distinguish it from numerous other shades of the same colour, not to mention other colours. A "criterion" in such cases is a substitute for "definition".

(c) But, sometimes, "definition" and "criterion" may supplement one another, e.g., when one both says and shows what a "yard" as a unit of measurement is.

Since "definition" and "criterion" are not deducible from each other, the relation between them is not a necessary or logical relation. The relation is an external, contingent relation.

7. At the risk of contradicting some of the things I have said earlier, I would now boldly put forward a certain view of the relation between "definition" and "criterion".

Every indefinable concept (like "greenness") and every "definition" (say of "democracy") has in it, I am inclined to think, prescriptive (a priori) as well as descriptive (empirical) elements. I

would suggest then that the prescriptive elements in the "definition" constitute a "criterion". The "criterion", on this view, would be an essential part, but not the whole, of the "definition".

On this view, no concept - whether definable or otherwise - is purely and simply empirical and formed inductively, or purely and simply a priori and laid down by our intellect, so to speak, without any reference whatsoever to experience. Every single indefinable concept and every single definition has, I repeat, both descriptive (empirical) and prescriptive (a priori) elements in it.

The indefinable concept of "green" would commonly be regarded as an empirical concept, pure and simple, formed inductively. But, there are different shades of green, out of which one is designated "green" proper-the others being shades of the colour more or less approximating to "green" proper and to "blue" on one hand, and "yellow" on the other. The designating of the "green" proper, arbitrarily or otherwise, is the prescriptive (a priori) element. The descriptive elements in the concept are equally essential and these are derived through sense-experience of objects coloured any and every shade of "green". Be it noted

that the prescriptive element in the definition of "green" is a "criterion" of "greenness". All that has been said about the indefinable concept of "green" is equally true of the definable concept or "definition" of "democracy" or any other complex object.

The concept of "straight line" is commonly regarded as an a priori concept, pure and simple. Since nothing given in experience is absolutely straight it is claimed that this concept could not possibly have been derived from experience, and must therefore have been laid down by the intellect without reference to any experience whatsoever. The prescriptive element is certainly there in the concept of "straight line", if only as the concept of an ideal limit of a series of less and more crooked lines. But, even though one does not go so far as Hume and believe that the concept is a purely empirical one, being derived from our sense-experience of lines which are "sensibly" (apparently) straight, it cannot be denied that it has elements in it which have just such an emprical origin.

PRE-CONDITIONS OF A SOCIAL STRUCTURE*

Minor skirmishes and sniping only would be in order on some of the points in Chhatrapati Singh's paper until one knows his position in a subsequent paper on "moral rules" which he intends to write.

1. I doubt if there can be "chaotic interaction" anywhere in a universe. "Chaos" there can only be where there is an absolute plurality of things, or of the states of a thing, a complete absence of relations between the things or the states of a thing. For an instance, take Democritus' portrayal of "blind" atoms falling through Space before they fortuitously come together to form a world or cosmos. But, in the cosmos or the world, once it is formed or comes into existence, these very atoms move or are disposed, in relation to each other, according to unchanging laws (rules). This is not to say, however, that the universe could not lapse into a chaos again. It may be added that the concept of universe or cosmos is a positive concept while the concept of pluriverse or chaos is a negative or privative one, and the negative or privative idea presupposes the positive one.

2. Chhatrapati Singh has not said this, but

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* Chhatrapati Singh wrote a paper on this subject for the Philosophical Society, while reading in St. Stephen's College for his Master's degree in Philosophy. The above notes were written by way of comment on some points in Chhatrapati's paper.

it is necessary, I think, to recognise that a "rule" expresses an "uniformity". Rita, personifying observed uniformities in Nature (succession of day and night, the "movement" of the sun in the sky, the cycle of seasons, etc.), is, I believe, the earliest of the goddesses mentioned in the Rig Veda. Absence of an expected "uniformity" in Nature is then most conveniently explained by a "plurality" of rules (or a plurality of squabbling gods and goddesses). Rita is supreme when the gods and goddesses cease from squabbling - there are no "freaks" in Nature then.

3. "Conduct" is the comprehensive term we use for the voluntary actions of an individual human being. We do not speak of the "conduct", but only of the "behaviour" of an animal or a bird. Likewise, one may talk only of the "behaviour" of a social group (a crowd, or a mob).

Behaviour is instinctive, not deliberate; conduct always involves "choice", however rudimentarily. This is not to say, however, that all actions of an individual human being are voluntary - often enough we act purely instinctively. Nor need we deny the primacy of instincts in our actual life; and reason could well be only the hand-maiden of our passions and natural impulses.

Absence of locomotion is but one sign of what Bergson called "torpor" in the vegetable kingdom. I am not sure, though, that plants are impervious to bad treatment or abuse or that they do not "respond" to kindness and care.

4. The concept of "interaction" (strictly speaking, "action-and-reaction") is apposite to and applicable only in the world of inanimate things. It is one kind of

inter-relation that subsits between two or more inanimate things.

The concept of "action-and-reaction" is inapplicable in the world of plants, animals and human beings. Here we must think of "responses", more or less complex, to given stimuli or given situations. A voluntary action is the most complex of the respones that a human being, and a human being alone, can make in a (complex) situation.

A "response" is qualitatively different from a "reaction-to-action" - it is not just a complex "reaction-to-action". There is always a degree (more or less) of "spontaneity" in every response. Hence it is that, though in the purely physical world of inanimate things the movements of bodies is absolutely determined and predictable, it is not so in the case of the conduct or behaviour of a human being, the behaviour of a bird or an animal or the life and "growth" of a plant or tree, in a certain environment. The hypothesis that "choice" is but a development of "biological spontaneity" and that "biological spontaneity" is a simpler form of "choice" cannot lightly be brushed aside.

Voluntary actions are purposeful; instinctive actions are not purposeful, but they are purposive. An instinctive action subserves a highly useful end, biologically or ecologically, but the individual so acting is not conscious of the end, much less of its usefulness. The individual is so constituted that he or it acts almost mechanically in a given situation and brings about or tends to bring about highly useful results, from the biological or the ecological point of view. In performing a voluntary action, a human

being is, however, conscious of the end or the result that he wants to bring about. And this consciousness of the desired end or result is the cause of the action itself. No movement in the purely physical world of inanimate things is either purposeful or purposive - it is merely a product of action-and-reaction between bodies.

5. In the light of all that has been said above, I would question Chhattrapati Singh's assertion that what he calls "participation" of two or more individual human beings is a special case of "interaction" between them.

Again, would it not be more apposite to the case to speak about individual human beings "cooperating" or "collaborating" rather than "participating"? I am inclined to think that "communicating" is sui generis; but, if not, it could be subsumed under "collaborating" or "cooperating".

"Cooperation" or "collaboration" presupposes an end or ends accepted in common by those cooperating or collaborating. But where there are no specific ends accepted in common by two or more individuals, there may yet be a larger, more comprehensive end towards which they may be striving, albeit not consciously all the time. The bowlers and fieldsmen of one team "collaborate" to get the other team out, conceding the smallest number of runs; but both the teams also "collaborate" to declare the glory of cricket, or to make a match last 5 days, or to put up a show which may earn them a larger bonus.

6. The problem which Chhattrapati Singh, I think, would wish to tackle is: What conditions must be satisfied if individual human beings are to form a "harmonious" society, be it a College or a State or a power-bloc of States or a third world of (non-aligned!) nations or the whole of humanity itself? It may be paradoxical, but "disagreement", and even "discord", among the units may be one of the essential conditions of a greater (future) "harmony" in the whole. The history of the human race, viewed from one point of view, bears testimony to this fact.

In monastic life alone may we be said to have "participation" of individuals in a common life. "Cooperation" or "collaboration" would then be only a part of the common life. The pictures of society that we have in Hobbes' Social Contract Theory and Kant's doctrine of the Kingdom of Ends give us extremist views, and the truth about the nature of the union of individuals in a social group probably lies somewhere midway between these two extreme positions. Or, does it ?

We are members one of another - this expresses spiritual bonds between individuals in a closely knit community. This "participation" in a common life is but an outward expression of an inner reality that would appear to be mystical in character.

THE CONCEPT OF "OUGHT" AND ANALYSIS OF "OUGHT-STATEMENTS"

A

Thomas A Kempis was being optimistic when he said, 'I had rather feel compunction than understand the definition thereof'. For, in fact, there can be no real definition or concept of "compunction"; and, yet, in the moment of feeling compunction, one knows what it is to feel compunction - one has, in the Berkleian phrase, a "notion" of what this feeling is.

There is, however, definitely a concept of "ought". It is, I think, an empirical concept formed out of our personal sense of responsibility or obligation - which is a datum of moral experience. This is to say that the concept of "ought" is a concept based on one's notions (not, ideas) of personal obligation or responsibility expressed as 'I ought' or 'We ought'.

Not "ought" ("ought to be", "ought to be done"), but 'I ought' is a datum of moral experience. 'They (the Chinese, the Ugandians, the political parties in the Opposition) ought', is not a datum of moral experience. But, 'We ought' is a datum of moral experience. It is analysable, I think, into (a) 'I ought'; (b) 'You, X, my friend and comrade, and a brother and a man, ought'; (c) 'You, Y, my friend and comrade, a man and a brother, ought'; and, so on.

An analysis of the concept of "ought" may reveal that it expresses a categorical imperative. But, a more important element, as it seems to me, in this concept is a sensitive awareness of oneself and one's fellow men and women as "human beings". Put it another way, underlying the concept of "ought" is our notion of ourselves as human beings. This is also why we sometimes say to ourselves or to another person, 'Be a man !' Would we think of ever saying to a crocodile, 'Now, be a crocodile ! ' ?

B

There are several types of ethical statements: of these we shall here consider only the following three types: (A) 'P is good'; (B) 'X is right' (including 'X ought to be done'); (C) 'I/We ought to do X'. The contradictories and contraries of these statements should, of course, be also considered; but this is beyond the scope of this paper.

(A) 'P is good'. This, it seems to me, is a purely descriptive statement; or, possibly, a descriptive statement with the faintest of an imperatival overtone.

(B) 'X is right' = (1) 'X is conducive to P'. This is a descriptive (causal) statement; (2) 'P is good' - a purely descriptive statement or a descriptive statement with the faintest of an imperatival overtone; (3) therefore (implicitly), 'X ought to be done'.

But, 'X ought to be done' = (a) 'If X were done (universally, generally or on a given, single occasion), then the world would be better than when X is not done (universally, generally or on a given, single occasion). This is a purely descriptive statement, and (b) 'Therefore, a rational being (nay, a human being) ought to do X').

Now 3(b) above is imperatival in character, but not quite an "imperative". Thus, there is no logical incompatibility in the statement, 'X is right (and X ought to be done), but, in the present circumstances, one may lie low and not act in the manner X (although one would feel bad about this)'. But, there is a logical incompatability in saying, 'I/We ought to do X, but I/We need not act in the manner X'. One may say, then, that 'X is right (X ought to be done)' is only imperatival in character but falls short of being an "imperative". 3(b) could, perhaps, be expressed as 'One ought to try

to do X'.

(6) 'I/We ought to do X' = (1) 'X is conducive to P'. This is a descriptive statement; (2) 'P is good' - a purely descriptive statement or a descriptive statement with the faintest of an imperatival overtone; (3) 'I am a rational being (nay, a human being)' - a descriptive statement ; (4) therefore (explicitly), 'as a human being in a certain position (as parent, teacher, doctor, son or daughter) I ought to do X' - an imperative (a categorical imperative).

The above analysis of the statement 'I/We ought to do X' shows that the imperative, or categorical imperative it expresses, is viable only as it implies certain descriptive statements. Further, 'I/We ought to do X' is the typical "ought-statement". 'X ought to be done' or 'X is right' is not a typical "ought-statement". It has only an imperatival slant or bias - it does not express an imperative, a categorical imperative.

The questions that arise, then, are : (1) Can we show or prove that an "ought-statement" has no descriptive elements ? (2) Can we show or prove that an "ought-statement" does not contain any prescriptive element, implicitly or explicitly ? The answer to both these questions is, I think, in the negative.

The statement 'I/We ought to do X'or 'X is my/our moral duty ' is the statement 'X is right' or 'X ought to be done', with an added determinant. This added determinant is, 'I am a human being (in a certain position)' or 'We are human beings (in a certain position)'. It is the fact of a human being in a certain position that creates for him an obligation or duty to act in a certain manner, and he is faced with an imperative, a categorical imperative.

DETERMINISM AND FREE WILL

A

The Law of Causation is: (1) Any change or event (E1) must have a cause (C1); (2) The same cause (C1) must always unconditionally precede the same change or event or effect (E1); (3) The same change or event or effect (E1) must always unconditionally be preceded by the same cause (C1).

Both cause (C1) and effect (E1) usually, if not always, are complex - a sum-total of conditions - both positive and negative conditions.

Now, the Law of Causation, as stated above, is neither self-evident nor provable nor disprovable. It is of the nature of a theoretical postulate, an indispensable assumption in the interests of advancing our knowledge of Nature or the World.

The point at issue is whether the Law of Causation is universal or whether an exception to it is found when we consider choice and voluntary actions in human beings.

Determinism, or rather Causal Determinism, is the view that the Law of Causation is universal.

that choice and voluntary actions in human beings have causes, too, that in making a choice or acting voluntarily a human being is never even partially, let alone wholly, free.

Man, it is argued, is a part of Nature or the World. What is so special about him, then, that a law which is applicable to the rest of Nature or the World should not be applicable to him? No doubt, in making a choice or acting voluntarily we have a sense of freedom. In the moment of choosing and acting in the way X, we are aware that we might have instead chosen and acted in the manner Y. In the moment of choosing the puppy P1, we feel that we might have chosen the puppy P2 out of a litter. But this our sense of freedom in choosing may be illusory, for there may be causes at work, in and outside us, of which we are unaware, which made us choose P1, not P2.

There seems to be no cast-iron case for believing that human beings are in any sense "free" in making a choice or acting voluntarily.

But, apart from Causal Determinism (in one form or another), there may also be such a thing

as a non-causal, logical determinism. Is not a "property" determined by the "definition" from which it necessarily follows? Or, one property (say, of a triangle) by another property (of a triangle); or, one "fact" by another "fact"? (I would venture to suggest, here, that 'p implies q' expresses a non-causal, logical determinism, whereas 'If p, then q' expresses a causal law, a causal relation, in fact, between p and q.)

But Causal Determinism can at best yield conclusions which are only highly probabilistic. This is so whether we believe in "transeunt" causation between C1 and E1, or in "immanent" causation between the World at t1(W') and the World at t2 (W''), and so on at t3, t4,..... ...tn, (as Lotze did)'. There is nothing fatal about W' turning into W'', any more than there is about C1 eventuating into E1. But, in Spinoza's metaphysics, based on his theory of knowledge, we have what might be termed a "Non-causal" or Logical Determinism. What is more, he has tried to show how starting with Causal Determinism we have to end up in Non-Causal, Logical

Determinism, the view that Reality as a whole (God or Nature) determines every part (finite mode) of this Reality.

It may be doubted whether Causal Determinism can strictly be regarded as a "deterministic" position, at all. For, it does not exclude the possibility of events in the world being after all only "contingent" - on the other hand, it just brings this possibility to the fore. We have to concede that specific conclusions (like, if p, then q), based on this hypotheses, are only probabilities - since the relation between cause and effect can never be regarded as a necessary relation. Again, the happening of any event is, ex hypothesi, dependent or contingent upon the existence of one or more other, preceding, events; and the existence of any of the preceding events is dependent or contingent upon the existence of yet other preceding events, and so on, ad infinitum. Hence, every event in the world is "contingent", and not, strictly speaking, "determined"; or, at best, determined in a limited or, what I should call, a highly "Pickwickian" sense. This is the reason that Science can never explain why an event (E1) takes place, it can only show how it happens.

B

The simple denial of Causal Determinism is the position known as Indeterminism. It can be seen a priori, I think, that there can be no denial of Non-causal, Logical Determinism. I will, later in this essay, state Spinoza's metaphysical position of Logical Determinism and its bearing on the problem of human freedom. But, before doing this, let me discuss in outline the question of Causal Determinism versus Indeterminism (1) in the physical world, (2) in the world of human beings (considered as individuals and in mass), and (3) the world as a whole.

(1) Speaking as a layman, I should say that there is overwhelming evidence in favour of the "deterministic" position as ordinarily understood, as regards events in the physical world in their macroscopic aspect. Some doubt may, however, be entertained as to whether there is not some "indeterminism" at the very heart of "matter", so to speak - that is so far as the microscopic constitution of the physical world is concerned. The following may serve as a crude analogy to bring out this point. The course that a flight

of migratory birds takes, year after year, may be exactly predictable - hence, it is causally determined - but this cannot be said about the course which any individual bird shall take within the flight. This, I believe, is also the case with the jumping of an electron from one orbit to another.

(2) I have already indicated earlier in this essay that, appearances to the contrary notwithstanding, there is almost a cast-iron case for the "deterministic" position as regards the behaviour of individual human beings, that the "sense of freedom" in making a choice may well be illusory, based on the ignorance of all the causes at work. The discovery of the Unconcious and of the subtle ways in which it can modify our behaviour would seem to clinch the "deterministic" position with regard to the behaviour of individual human beings.

The behaviour of human beings in mass (a crowd or a group) is much more unpredictable than that of an individual, but, for all that, it is perhaps not any less "determined". It is not that the causes determining the behaviour of a crowd or group are more <u>numerous</u>, but they are

much more complex than those which determine the behaviour of individuals. Of particular importance are factors represented by possible types of interaction between any individual belonging to a group and the group to which the individual belongs. The behaviour of a group is neither an aggregate nor a product of the behaviour of the individuals belonging to the group. On the other hand, the behaviour of the individual belonging to the group may be modified, more or less, by the kind of "sense of belonging" to the group that the individual has - 'this is done' or 'this is not done', (say) 'in The Guards'. On the other hand, the behaviour of a single individual in a crowd or a group may lead to a lynching or an action of extraordinary gallantry by the crowd or group consisting mainly of ordinary individuals who are not particularly brave. The behaviour of crowds or groups may indeed be less predictable than that of individuals. But it is not, for that reason, fortuitious - it may only require a finer "perceptiveness" and a more thorough analysis on our part to discover the causes which "determine" the behaviour of human beings in mass.

(3) With regard to the World as a whole we may hold two different types of metaphysical views. One view is that of a "block universe" within which things and events are causally determined without any change in its ground-plan, so to speak. The other view is that the World is Process which may or may not involve change in the ground-plan. We may hold (1) a mechanistic view of cosmic evolution (Lamarck, Kant, Darwin or Herbert Spencer), a teleological view of development in Reality (Aristotle or Leibniz), or a "theory of emergence" in some form or another (Alexander or Whitehead); on any one of these views of the nature of Process, we must accept the essential position of Causal Determinism. But, if we went along with Bergson's account of the "evolution" we would have to say that Indeterminism characterises Process.

C

The key to Spinoza's metaphysics is to be found in his rather unique theory of knowledge. He does not make a sharp distinction between "knowledge" and "error" (or opinion). Rather, he speaks of "degrees of adequacy" in our know-

ledge, and how one may go about gradually rising from "less adequate" to "more adequate" - and, ultimately, to "completely adequate" - knowledge. There are, for practical purposes, three levels of knowledge: (1) perceptual and imaginative (imaginatio), (2) intellectual (ratio) and (3) scientific intuition (scientia intuitiva). Both imaginatio and ratio have each a lower and an upper limit; but there can be no element of imperfection in scientia intuitiva (which is, in other words, mystical experience).

Spinoza's epistemological theory, briefly, is as follows. (1) In imaginatio, we are strongly inclined to believe in a plurality of real existents acting on, and producing changes, one in another; and also in the contingency of these existents (since their existence is contingent or dependent upon the existence of other existents). This belief persists while we are still confined to the lower reaches of ratio. (2) But, as we comprehend more and more adequately and fully the ever expanding network of causal inter-relations between the plurality of real existents, we realise ultimately the Unity of the Whole underlying the plurality of the parts of the Whole.

At the same time, we comprehend that every part of the Whole, instead of being contingent is necessary, or necessitated by the Whole as its ground. (3) Scientia intuitiva or mystical experience may occur but rarely. It is not an alternative to or substitute for ratio or intellectual comprehension, but rather its acme or consumption. In it we apprehend or immediately experience the Unity and the Necessity in the universe, but this intuitive apprehension comes to us only sometimes, as a fruition of the most adequate intellectual comprehension of these characteristics in the universe.

The upshot of Spinoza's metaphysics is to replace "Causal" Determinism by a "Non-causal", Logical Determinism in the world. Instead of the relation of "cause" and "effect" between C1 and E1, we have the relation of "ground" and "consequent" between W (Reality as a Whole, God or Nature) and f1 (a part of Reality as a whole, a finite mode). A finite mode (f1) may, then, be viewed in two entirely different ways. (1) In the lower reaches of ratio as well as at the level of imaginatio, we view f1 (or E1) in communis ordo nature (in the common order of nature), we see it as a particular existent distinct and separate from other

particular existents, f2, f3, f4 ..... (E2, E3, E4 .....); regard it as "causally" determined by one or more other particular existents and so existing contingently upon the existence of its "causes". (2) But, in the higher reaches of ratio and in scientific intuition or mystical experience we view the same f1 (or E1) sub specie aeternitatis (under the form of enternity) in an altogether different light. We have an adequate comprehension or mystical experience of the Unity of Reality as a Whole underlying the distinctness and separateness of f's, the parts of the Reality; and, furthermore, the whole is clearly understood or immediately experienced as the ground of each and every one of its parts (f's); or, to put it otherwise, every f is seen to be logically necessitated by W. The contingency in the world is replaced by necessity in the Whole.

D

Spinoza's ethics (his views about what one ought to do and what his attitude in life should be) strictly follows from his metaphysics. What follows is a brief summary of his ethical position. (1) So long as we have (at the level of imaginatio

and in the lower reaches of ratio) a very inadequate knowlege, vague and confused ideas about Reality as a Whole and our position and prospects in it, we shall be assailed by "passive emotions" (like fear, joy, anger, disappointment, sorrow, hope, etc.). These passive emotions stem from the vain belief in the contingency of things and events in the world, the belief that these things and events might have turned out otherwise than they actually did - if only.....if only..... We fret and fume and try to fight against what is, in fact, inevitably, logically necessitated. This life of passive emotions and vain struggles, a product of grossly inadequate knowledge about Reality as a Whole and all that exists or happens in it, might comprehensively be termed "human bondage".

(2) But when (in the higher reaches of ratio or through mystical experience in which intellectual comprehension may somehow culminate) we have nearly complete or completely adequate knowledge of the World and of the logical necessity with which particular things or events exist or happen in the universe, we are delivered from the bondage of passive emotions. In the complete understanding of the

necessity in the World, we no longer vainly fret, fume and fight gainst the inevitable, but are led into a willing and glad acceptance of whatever exists or happens in the World. This attitude in us, a product only of knowledge at the highest level, produces in us the "active emotion" which may comprehensively be described as "the intellectual love of God", and it represents what may justly be called "human freedom".

So understood our "freedom" is not only compatible with complete (logical) determinism in the whole world - it seems to be meaningful only in terms of a perfect understanding on our part of the complete determinism in the world. We are "free" if, and only if, we are led into a complete comprehension, or an apprehension, and so acceptance, of the truth about the World and everything that is in it. This is the attitude of "active resignation", born of knowledge, not the attitude of "passive resignation" in the face of what happens by chance or the attitude of "blind obedience" to the will of Being that transcends our knowledge.

PRE-HISTORY OF LOGIC

By logic we commonly mean a certain discipline, study or science which formulates the methodology of the various sciences and any other kind of intellectual activity which would claim to yield "knowledge". But, in a larger sense, logic is rationality, which is a characteristic not only of human discourse but also, I should say, of reality itself. And logic, in this large sense, is the foundation of the discipline known as Logic.

It was Locke, I believe, who said, "God was not so sparing to man as to make him barely two-legged leaving it to Aristotle to make him rational". To Aristotle and his counterparts elsewhere may certainly go the credit of first formulating the discipline known as Logic, but the question that some speculative philosophers would be interested in is: Is logic or rationality itself, only as old as Man, or as old as the world - or, older still?

II

One should begin by clearly distinguishing between "thought" and "thinking", and between the "form" and the "matter" of thought. "Thinking" is an event that allegedly sometimes occurs

in individual human beings. The natural science of Psychology tries to describe and, if possible, explain this kind of event; but, as such, it cannot distinguish between "correct" and "incorrect", "straight" and "crooked" thinking, much less give criteria for distinguishing between them. Nor can the natural science of Psychology in any way lead up to the normative science of Logic: to claim that it can would be to commit the naturalistic fallacy.

The discipline known as Logic, obviously, is not concerned at all with "thinking", an event in an individual human being: otherwise, it would only be a part or adjunct of Psychology. Logic is concerned with "thought", not with "thinking" at all.

"Thought" is not an event in any individual person. It is "what an individual thinks", or "what two or more individuals think". Any piece of "thinking" necessarily involves (a) what an individual is thinking about, and (b) what the individual thinks. Thus, in thinking at t1 that the wall in front of me is white, and at t2 that the wall is not white, I am in both cases thinking about the same things, viz., "this wall" and "white", but what I think is in each case different.

Again, while thinking is necessarily "subjec-

tive", thought, I should say, is "trans-subjective". Two individuals "thinking" in very different ways - as, indeed, they almost certainly do, even when thinking about the same things - may yet have the same "thought". And, if A and B have the same "thought", this does not mean that exactly the same sort of event is occurring in them in relation to what they are thinking about.

Now, "thought" consists of a "proposition" or a "system of inter-connected propositions". What is meant by this "inter-connection" of propositions we shall have to consider presently.

A concrete thought, such as we may have in the various sciences, in philosophy and ordinary thinking, in religion, ethics and aesthetics, has both "matter" and "form". The "form" and "matter" of thought are inseparable in a concrete thought, that is, in a proposition or a system of inter-connected propositions. But it is possible to consider the "forms" of propositions or of "systems of inter-connected propositions" in abstraction from their "matter" or contents. The discipline called Logic does precisely this; and, further, it formulates the basis on which a distinction can be made between

"valid" or formally incorrect and "invalid" or formally incorrect thought. It is important in this connection to realise that the "validity" or "formal correctness" of thought is entirely a function of the "form" or "structure" of thought and that it is in no way dependent on its "matter" or content. This is the case with an inductive argument no less than with a deductive argument, even though the conclusion in the former is inevitably problematic.

Logic, then, is the science or study which concerns itself with "propositional forms" and their inter-relations. It is not concerned at all with the "truth" of a concrete thought. The distinction between what is "true" and what is "false" cuts right across what is "valid" and what is "invalid" in our thought.

III

I must now advert to what is meant by "inter-connection" of propositions. Inter-connection, in this context, means of course "logical" or "formal" inter-relation. Two propositions, p and q, may be said to be "inter-connected", i.e. "logically" or "formally" inter-related, if for instance one "entails" or "implies" the other. And, since in

this business we do not consider at all the "matter" or contents of the propositions, but only "forms", it would be more accurate to say that it is "propositional forms" that are inter-connected or logically inter-related or "entail" of "imply" one another. Thus, the convertend does not, strictly speaking, entail the "material converse" but only the "formal"converse". Again, if a causal law does not express a logical or necessary relation it is because: (a) both "cause" and "effect" can be given as sets of propositions, and (b) neither set of propositions entails the other.

The concept of "entailment" cries out for fuller elucidation; but any consideration of the true nature of "entailment" would plunge us deep into the problem of the structure of the world. Suffice it to say, here, that "consistency" or "self-consistency", the absence of "contradiction" (including "contrariety" and "repugnance") is part only of what is meant by "entailment".

The discipline known as Logic may well have been discovered and formulated by Aristotle and others. But logic, or rationality, in thought is the possibility of this discipline. And it

is an uncomfortable thought that the discipline itself may fall short of its own ideal. Logic may well have begun with, but it does not end with, Aristotle.

IV

Can it then be said that logic, or rationality, is as old, but only as old, as Man? It may be argued that without "thinking" there can be no "thought"- no propositions and propositional forms; hence, no implications or entailments between them. And, since "thinking" is to be found only in human beings, Logic is but as old as Man. But "thought" comprehends not merely what a particular human being thinks in the past, present or future - actually thinks but also what may possibly be thought. "Thought" is what is "thinkable"! And, there are "entailments", "implications" between the unthought but "thinkable" thoughts. In so far as "thought" comprises not merely asserta but also assertiblia, it may be maintained that logic, or rationality, is not dependent on there being human beings who think. Logic, or rationality, then is older than Man. The possibility of logic, or rationality, lies in there being propositions, whether or not any human being has asserted them, asserts them or will assert

them, and there being logical relations, like that of "entailment" between propositions.

V

But there is a much stronger ground still for believing that logic, or rationality, is older than Man, that it is in fact as old as the world itself. There may be more to the world than this, but it is, at least, the totality of facts. And while logical relations like that of "entailment" may subsist between propositional forms, we can have no grounds for denying or doubting that they also subsist between facts. Between facts, on the one hand, and we who may know the facts, on the other hand, propositions are a sort of tertium quid. The facts are not get-at-able, so to speak, except through propositions. I concede that it is extremely difficult to say what exactly is the ontological status of propositions as a tertium quid between facts and we who may know these facts. But granting that there are both "facts" and "propositions", we will have to admit, I think, that the logical relations between propositions, or between propositional forms, is but a (logical) consequence of there being logi-

cal relations between facts. On this view, then, logic or rationality is older than Man - it is, at least, as old as the world.

It is, of course, not necessary to believe that "facts" are logically related to one another. The world may be a loose aggregate of unrelated facts, or the facts may only be contingently related to one another. We have a choice of metaphysical views here about the structure of the world: and on our choice will depend what we shall believe about the pre-history of Logic.

I make no apologies for putting forward the view that there are logical relations not only between propositions but also between facts. If it be the case that facts are get-at-able only through propositions, then in the order of knowing logical relations between propositions are prior to logical relations between facts; but, in the order of being it is the other way about.

VI

I cannot here resist making a digression which may not be very relevant. On the Concordance theory of truth, we should believe that there is a one-many relation between a 'fact' and (a) "true" propositions,

and (b) "false" propositions, which correspond (i.e., refer) to that fact. This is because, (1) as Confucius pointed out 2500 years ago, 'the diversity of opinions among men illustrates, not infrequently, only the many-sidedness of 'truth', and (2) for every "true" proposition there may be a host of "false" propositions corresponding or referring to the same one fact.

I have suggested that the logical relations between "facts" is the ground for there being logical relations between "propositions". And, since logical relations between propositions are dependent, not on their "matter" or content at all, but only on their "form", there are logical relations, not only between "true" propositions, but also among "false" propositions and between "true" and "false" propositions. Thus, a good work of fiction (like Pickwick Papers) or a smart piece of propaganda may, up to a point, appear to be as credible as history.

On the Concordance theory of truth, then, it is difficult to see that there can be any sort of relation between "validity" and "truth" of thought. The Coherence theory of truth, which is generally not favoured, would however establish a close re-

lationship between "truth" and "validity" of thought.

VII

No speculative philosophy which has its feet, so to speak, on terra firma would care to go beyond the position that logic is as old as the world. To seek a ground for the rationality of the world beyond the world, say, in a transcendent Being regarded as the Creator of the world, is a venture on which none but the boldest among speculative thinkers would embark.

VIII

The discipline known as Logic governs, more or less, our ordinary discourse, besides being the methodology of the various sciences and any other disinterested intellectual activity aimed at yielding "knowledge". In our ordinary discourse, however, Logic tends to degenerate into the art of "finding reasons or evidence" for what we, in any case, would believe or like to assert. Logic-like, statistics - can be used to "prove" anything. This misuse of Logic in ordinary discourse can be remedied only by the cultivation of certain moral virtues. I had occasion, in an earlier paper, to mention no less than twenty such moral virtues that a seeker after

knowledge should try to cultivate. Take but the first of these virtues, mentioned in verses 7 to 11 of Chapter XIII of The Geetaa, "Humility". This is a virtue that is not infrequently lacking in both parties involved in an "argument". To respect the other fellow and take seriously what he may be saying - this, one imagines, is "humility" in ordinary discourse - can only be a help in a common pursuit of knowledge. The absence of this humility does not help in the common pursuit of knowledge, and it may actually result in a debasement of Logic.

Postscript

I would readily agree with Mr. Dharmendra Kumar that Logic, like Pure Mathematics, is an Ideal Science based on a set of axioms (and not a normative science). How one comes by these "axioms" is a question that we may agree not to raise here. But there are three questions that cannot be avoided: (1) What is the relation of Logic and Pure Mathematics, as Ideal Sciences, to the positive sciences and any other intellectual activity aimed at yielding "knowledge"? (2) Why is it that Logic and Pure Mathematics are applicable to the actually existing world? (3) Why is it that Logic and Pure Mathematics do not wholly describe the actually existing world? My answers to these questions,

briefly, would be as follows:

With "axioms" as starting-points, Logic and Mathematics are applicable to the actually existing world because (a) they are "deductive systems" based on logical relations of "implication", "entailment", etc., and (b) the same logical relations of "implication", "entailment" etc., obtain among the "facts" in the actually existing world. But, besides the logical relations between facts in the world, there are also the "facts" in the world; and about the "facts" themselves Logic and Mathematics can have nothing to say. So, while having a bearing on the world, the Ideal Sciences of Logic and Pure Mathematics do not wholly describe the actually existing world. The positive sciences and other intellectual activities aimed at yielding "knowledge", on the one hand, and Logic and Pure Mathematics, on the other hand, have complementary roles in our understanding the world.

A DEVELOPMENT IN PHILOSOPHICAL THOUGHT FROM DESCARTES TO LEIBNIZ

Descartes' chief mission seems to have been to provide a secure philosophical foundation for a purely mechanistic theory of Nature. He was timorous by nature. He took great care to avoid offending the Church and the State. His task, then, as a philosopher, appears to have been ingeniously to reconcile the absolute claims of Natural Science with the absolute claims of Theology. He made big contributions to Mathematics and science -- he was an innovator in both fields -- but, as a philosopher, he is usually much over-rated.

Philosophers in the Middle Ages with their exclusive preoccupation with the Realm of Grace -- with both profound and trivial questions concerning God, angels and the human soul -- took no interest whatsoever in the realm of Nature, as such. But, in the Humanistic Period of Renaissance Philosophy, interest in nature of the physical world was revived, indirectly, when scholars who had fled from Constantinople and settled, first in Italy, and then in some other European countries, began to study the philosophical systems of the ancient Greeks. In the Natural Science Period of Renaissance Philosophy, intellectuals became directly interested in Nature. This was the result of (1) a widening of intellectual

horizons with the discovery of "a new world" following upon the work of navigators and astronomers, which considerably eroded the authority of the "infallible" Church, and (2) an irresistible upsurge of the spirit of free enquiry among thinking men.

With this reborn passionate interest in the study of Nature there goes inevitably an anxious search for an adequate substitute for the method of syllogistic reasoning. A degenerate form of Aristotelianism was the official philosophy of the Church. The Church found syllogistic reasoning, favoured by Aristotle's Logic, to be most convenient for its own purposes -- for the source of the most important premisses could then only be church dogma. In the Natural Science Period, and subsequently, there is the rise of induction and of the deductive method of mathematics as alternatives to the discredited syllogistic method. It is not surprising, then, that Descartes and the other Rationalists produced elaborate doctrines of method and regarded the deductive method as the sole method of obtaining knowledge -- not only in mathematics but in philosophy, too. Knowledge is their goal -- but the goal cannot be reached unless we follow the right method to reach it.

On leaving College, at a very early age, Descartes felt a deep revulsion against all learning -- particularly against philosophy. The farther you travel here the deeper you sink into the quicksands of shifting

and conflicting "opinions". Nowhere do we seem to find a firm ground of "knowledge". Nowhere, that is, except in Pure Mathematics, so Descartes thought. The method of mathematics, the essence of all mathematical reasoning, he formulated in his four well-known maxims. If the deductive method is so successful in mathematics, why should it not be employed in philosophy, too, if we would have "knowledge" here rather than a mass of quibblings, hair-splittings and contradictory and confused "opinions"?

The aim is laudable and the deductive method, in itself, looks most impressive -- but only as far as it goes. For, though entirely successful in mathematics, and largely so in physics, does it not progressively break down as we pass successively to chemistry, the biological and the social sciences and philosophy?

A palpable flaw in using this method in philosophy shows up when in a longish chain of deductive reasoning we reach, sooner or later, a conclusion which flatly contradicts an indisputable fact of experience and it becomes necessary to bring in auxiliary hypotheses to rescue the whole philosophical system which has been laboriously built up (Cf. Leibniz's fantastic doctrine of pre-established harmony).

2

The rationalists are committed to using the deductive method in philosophy. Their general position is: (1) that a posteriori judgements (which refer to contingent truths) constitute, at best, what may be called "opinion" (which always lacks certitude and evidence), (2) that "knowledge" (which has the characteristics of certitude and evidence) consists of a priori judgements only (these refer to necessary truths) -- and these may be known intuitively, if they are simple and self-evident truths, and deductively, if they are complex, and (3) that, therefore, all knowledge must be "intellectual" -- for only our intellect or reason, and not sense-experience, can grasp the necessity of a relation between the two terms in a proposition. From this we should not rashly conclude that there is an unbridgeable gulf between what is apprehended through the senses and what our reason can "know". For a rationalist may well hold the view that knowledge or rational knowledge is only sense-experience from which all contradictions have been systematically removed. It is on this ground that Descartes affirms the reality of "primary" qualities alone in the external world.

3

It would be naive to think that the various steps in the deductive system of Descartes' philosophy come, as he would have us believe, in the following order:(a) philosophic doubt, (b) existence of one's individual thinking self, (c) the criterion of truth, (d) existence of God (Absolute Substance, Perfect Being), (e) existence of God and the possibility of knowledge: the problem of error, (f) existence and nature of two diametrically opposed kinds of "relative" or "created" substances:
(1) Matter -- extension, and (2) minds -- thought or consciousness, (g) Rationalistic Physics, explaining everything in the external world in terms of Matter (created by God) and Motion (put into Matter or Extension by God) -- this gives us the mechanistic or scientific view of Nature, (h) Rationalistic Psychology (only slightly touched upon), (i) theory of body-mind relation in human beings, (j) theory of our knowledge of the external world, (k) ethical views.

If one were to look for an inner dialectic behind the outer dialectic of Descartes' philosophy, one would perhaps venture to suggest that it really starts with the tacit assumption of extreme dualism between "matter" and "mind". His proclaimed starting point, Cogito, ergo sum, could then be shown to be, at best, as a deduction at the end of a long chain of reasonings from his extreme metaphysical dualism.

4

I would now discuss one of the many problems that exercised the minds of the Rationalists -- Descartes, Spinoza and Leibniz. My selection of the problem may seem to be somewhat odd, but I am not sure that I should apologize for this. In this paper, I should like to discuss how the Rationalists dealt with the problem of error.

Descartes finds in the existence of God (Infinite or Perfect Being) all the assurance that we can possibly require for believing that, imperfect or finite beings as we are, "knowledge" (certain and evident cognition) is always possible for us. This is to say, without the help of the allegory he has used, that there can be no constitutional inability of our mind to know truth -- rigorously. For, if our intellect or reason can know God or the Perfect Being Himself (vide his proofs of the existence of God), then it should be capable of knowing anything and everything. But, if "knowledge" is always possible, why is it that we sometimes fall into "error"? What is it that comes in the way of our employing the deductive method rigorously and scrupulously? Descartes' answer is (1) that we have a will (faculty of choice) as well as an intellect (faculty of cognition), (2) that our will is independent of, and ranges more widely than, our intellect, and (3) that we are, therefore, all too liable to wilfully or stupidly affirm what is not clear and distinct to our intellect. To have knowledge, then, we should be careful to see (a) that our will does not

interfere with our intellect, and (b) that our intellect functions entirely in accordance with its own nature -- which is to be absolutely passive in relation to truth or clear and distinct ideas. Whenever we have knowledge, then, it seems to be a case of the light of truth shining in upon our intellect: all knowledge is revelation. This, it seems to me, is an important truth.

5

In Spinoza's position we have a marked divergence from that of Descartes. He did not believe that there is a sharp distinction between Knowledge and Error. On the other hand, he believed that there is no human knowledge, except in its upper ideal limit, which has not an element of error in it. Likewise, there is no human or sub-human cognition (comprehension, apprehension or prehension) so erroneous that it has not an element of truth in it. Strictly speaking, then, we can only speak of "more or less adequate" knowledge that sentient beings (and even "inanimate things") may have. In his elaborate theory of knowledge, Spinoza has worked out in great detail the conditions under which knowledge becomes "more and more adequate".

6

On the question of Knowledge and Error Leibniz takes up a position which is different from Spinoza's though it

does not go back to Descartes'. According to him, it would be absurd to talk about "more or less adequate" knowledge. He believed that each monad or individual mind "mirrors", "represents" or "perceives" the whole universe from its own, unique point of view (i.e., with a certain degree of clearness and distinctness), and it is only given to some individual human beings (philosophers, like himself), in some rare moments, to "apperceive" the universe or "rise to the knowledge of necessary and eternal truths". Furthermore, its representation or perception of the universe is solely dependent on a monad's own spontaneous activity (appetition). Where this appetition is blocked, more or less, by an element of passivity (materia prima) -- as, indeed, it must be in all "created monads" -- the representation or idea of the universe will fall short, more or less, of being absolutely or perfectly clear and distinct and the created monad will have no knowledge. Only God, the Monad of monads, is free of any element of passivity: He alone is actus purus and He alone has knowledge all the time, so to speak. Bare or unconscious monads and conscious monads or "souls" cannot possibly have knowledge. In self-conscious monads ("spirits" or "intelligences", as Leibniz

calls them), on the other hand, knowledge is possible, and in rare moments they "rise to a knowledge of necessary and eternal truths" only to sink back again into a more or less confused and vague perception of the universe. A philosopher, even a Leibniz, can rarely have visions -- not mystical, but rational -- of the monadistic universe, the rest of his life he spends vainly trying to penetrate the veil of the phenomenal world. Thus, though he has seen Reality, a philosopher must still live, move and have his being in a phenomenal world.

We must now pause and take notice of a thought, not explicitly stated but clearly implicit in Leibniz's philosophy. The monadistic universe of his conception is of the concrete reality. As we take more and more abstract (partial) views of this concrete reality we become aware of phenomenal worlds that undoubtedly exist, and though not real are still grounded in reality. These are worlds that contain only "organisms", or only "matter", or only "space"/"time", or only "motion". Observe, now, the backlash of this metaphysics on epistemology. "Knowledge" should, strictly speaking, be only of the real -- such knowledge is but rarely and fleetingly given to exceptional individuals. But since the phenomenal worlds cannot be said to be unreal

altogether, and are, in fact, founded upon the real world of monads, human beings (spirits, intelligences) may have knowledge (certain and evident cognition), too, of these phenomenal worlds. So, by an entirely different route, Leibniz reaches a near-Kantian position: for us, Science is possible, metaphysics all but impossible.

7

Concluding what I have tried to say in Section 2 to 6, above, I would ask you to consider the following questions: (1) What is the opposite of "knowledge"? (2) Assuming that the contrary of Knowledge is "ignorance" -- stark, abysmal ignorance -- isn't there also a third genre that might be called "error"? (3) If so, is "error" closer to "ignorance" or to "knowledge"?

My comprehensive answer to the above questions is, as follows. "Error" is essentially closer to "knowledge" than to "ignorance". And, instead of there being three things -- Knowledge, error and ignorance -- there are but two things, "Knowledge" and "error". And individuals, whether they be human beings or sub-human beings, finite and imperfect in their cognitive faculty, fall into error in the absence of knowledge.

8

But the big question still remains: What is "knowledge" itself? The Geetaa's answer to this question is unique, as it is profound. In verses 7 to 11 of the Thirteenth Chapter is given a list of twenty moral virtues, and The Geetaa says that these moral virtues are Knowledge. To say that these virtues are only the means for attaining the end of knowledge would be to miss the whole point. For here, as in other such cases, the means are the end. The virtues which are equated with knowledge, then, are, as follows, and it may not be out of place to mention them in a meeting of our Philosophical Society.

Humility, unpretentiousness, non-injury, forgiveness, uprightness, service of the teacher, purity, steadfastness, self-control;
indifference to sense-objects, absence of egoism and conceit, constant reflection on the sorrows of birth, death, old age, disease and suffering;
absence of attachment to son, wife, home and other things, freedom from possessiveness, even-mindedness in the face of good fortune and bad;
exclusive and unwavering devotion to ME, love of sequestered places and dislike for noisy multitudes;
being poised in the knowledge of the Spirit and matters spiritual, and seeing the goal of this knowledge, the Supreme Self, everywhere -- all this is declared to be Knowledge, and whatever is against all this is Ignorance.

(Bhagvad Geetaa XIII: 7-11)