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Journal of Indian Council of Philosophical Research

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JICPR

Editor D. P. CHATTOPADHYAYA -

VOLUME I
NUMBER 1
AUTUMN
1983

JICPR

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Daya Krishna

Journal of Indian Council of Philosophical Research

VOLUME I NUMBER 1 AUTUMN 1983

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The essential contestability of social sciences: a hermeneutic perspective

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The basic idea I shall be arguing for in the present paper is that interpretation is an unexpungeable component in the sciences of man and that because of the presence of this hermeneutic component, the social sciences are essentially contestable. The hermeneutic understanding of cultural sciences was formulated by Dilthey[1] but has been taken up anew and at a more complex level by Gadamar,[2] Ricouer[3] and Habermas.[4] However, while using some of the ideas and insights of these thinkers, the present paper does not claim to be a systematic exposition of such perspectives.

Since 'interpretation' is the crucial concept in this perspective, we shall begin with a few remarks upon it. *Interpretation* is an attempt to make sense of an object of study; the object must be *a text* or *a text-analogue* which, in some way, is held to be confused, incomplete or seemingly contradictory. The interpretation aims to bring to light an underlying coherence.

For interpretation to be possible, there are certain conditions which must be satisfied.

1. The availability of an object or field of objects about which we can speak in terms of coherence or its absence, of making sense or nonsense.
2. A distinction between the sense and the coherence and its embodiment in the object or field of objects. This is necessary for, after a successful interpretation, we should be able to say that the sense which was previously embodied in a confused manner in an object is now clearly revealed. If so, the meanings must be capable of having more than one expression. It is, therefore, necessary that we be able to distinguish between *the substrate*, *the meaning* and *the expressions* of that meaning; of course the various expressions we are talking about need not be exactly synonymous.
3. Lastly, we must also think of a subject or subjects for whom the meanings exist—the notion of an expression refers us to the notion of a subject. As we shall see presently, the identification of the subject may raise difficult problems.

In terms of the above conditions of the possibility of interpretation, we can now turn to the notion of *a successful or valid interpretation*. A successful interpretation is one which makes clearer the meanings originally present in a confused or fragmentary form. But how can we say that the interpretation is correct or successful ? We can say that it is successful in so far as it makes

sense of the text, removes its strangeness and puzzling character. But in all this, we presuppose that we see what is puzzling, what is fragmentary, incomplete, discordant, etc., and also that we can identify and understand a state in which these have been removed. But if some one does not 'see' these taken-for-granted claims, i.e., if he does not accept our reading of the situation, it appears that there is no coercive or compulsive way of bringing him to our understanding of what makes sense; i.e., it appears that we cannot avoid an ultimate appeal to *a common understanding* of the expressions. This is one of the aspects of what is called the *hermeneutic circle*. We are here trying to establish a certain way of understanding the whole text and for this we appeal to the understanding of its partial expressions, but the readings of these partial expressions depend upon others and ultimately of the whole.

But the problem may not be merely that others do not accept my primary reading. If they and I were to disagree at this basic level, a doubt may arise whether my guiding sense of what makes sense and what does not is itself reliable. How can I convince myself of my own reliability? Perhaps, my primary intuitions are wrong or distorted. But a mistake here is no mere error, it is an *illusion*: perhaps then I am locked up in a circle of illusion. Or is it an illusion on my part to think thus of being under an illusion? The other, by withholding his assent, can thus send me tumbling down a bewildering maze. We must hence try to reach certainty without entangling ourselves with the other, i.e., we must search for the certainty of our understandings, *objectively* rather than *inter-subjectively*.

There have been two major types of attempts to reach certainty by breaking beyond the circle—*the rationalist* and *the empiricist*. The first, which culminates in Hegel, does not negate intuitions or understanding, but postulates an understanding of a level of absolute clarity. Such a complete understanding carries with it its own inner necessity such that we can come to see that it could not have been otherwise. Surely no higher grade of certainty is even thinkable and our fragmentary understandings are to be seen as taken up and included as 'moments' in that total understanding. But to see them as 'moments' is, in a sense, to have transcended their own limitations and fragmentariness.

The other way, *the empiricist way*, is to get beyond subjectivity. The hope here is to reconstruct our knowledge in such a way that we can dispense with appeals to readings or interpretations. For this to be possible, the basic building blocks must be impressions which are prior to any interpretation. With this as the basis, the reconstruction proceeds by way of inductive methods. Verification is ultimately in terms of directly evident data; the starting points which furnish such data are beyond contestable interpretations. Similarly, the inferences from these directly evident data are also beyond the challenge of rival interpretations. Logical empiricism thus combines a theory of direct evidence with a theory of inferential procedures designed to give us further knowledge characterized by indirect evidence.

As a theory of perception, such an epistemology has to face the perpetual

threat of scepticism and solipsism. But we are here more interested in this epistemology as a theory of intelligence or understanding. The progress of the natural sciences appears to be suited to being reconstructed on this model. Hence, it is natural to expect that the sciences of man could also be reconstructed on the same model. The transformation of psychology as a behavioural science is an example of this. The empiricist orientation takes different forms in different sciences, but in general, the empiricist orientation is hostile to any inquiry based on interpretation, for such an inquiry cannot meet the requirements of non-contestable verification.

But I wish to argue, in counterpoint, that the empiricist orientation is sterile in the field of the sciences of man, that human life becomes incoherent and unintelligible within the bounds of this epistemological orientation.

The Human Sciences as Hermeneutic Disciplines

In the characterization of human behaviour, there is an essential place for the notion of meaning; we speak of a certain situation or an action as having a certain meaning for a person. Some may think that this use of 'meaning' is an illegitimate extension of the notion of linguistic meaning; while it certainly differs from linguistic meaning, it is difficult to say that it is illegitimate. When we speak of the meaning of a certain situation, we refer to the following:

1. Meaning is for a subject, a specific subject, or a group of subjects or even the human subject as a whole.
2. Such meaning is *of something*, i.e., we can distinguish a given element situation or action and *its* meaning (they are, of course, not physically separable). The relation, however, is not symmetrical, i.e., there can be no meaning without a substrate but the same meaning may be borne by another substrate.
3. Things have meanings only in a field or context, i.e., in relation to other things. There are no single or isolated meanings. From this it follows that changes in the meanings of other elements can involve changes in the meanings of the given element. Meanings are given in a field and this field varies from culture to culture. Hence arises the possibility of different meanings of the same item or situation or action in terms of different semantic fields.

If we call this type of meaning experiential meaning, we find that (1) it is for a subject; (2) it is of something; and (3) it is given in a context. Linguistic meaning has all these three features but, in addition, it also has a fourth distinguishing feature, namely, (4) it is about a world of referents.

We can thus speak legitimately of the meaning of a situation. This concept of the meaning of a certain situation or action is integral to our speech about actions. Our understanding of actions moves in a kind of hermeneutic circle. 'Shame' refers to a certain kind of situation (the shameful or the humiliating) and a certain mode of response. But the situation in turn has to be identified in terms of this disposition and the feelings it provokes. There is a circular process of understanding these terms and the phenomena they des-

cribe. Hence, as in the case of understanding language, our understanding of human action also is achieved by way of a hermeneutic circle.

But does this mean that human action can be the object of a hermeneutical science? An interpretative science, we have seen, must have three characteristics: (a) it must have an object which can be characterized as having a sense or coherence; (b) this sense or meaning must be distinguishable from its expression; and (c) this sense must be *for* a subject.

Behaviour or action, we have seen, fulfils the first requirement; the category of sense or coherence applies to it. But what about the second requirement, namely, that the sense must be distinguishable from its expression? This, we may incidentally note is necessary for interpretation, for interpretation claims to make clear a confused meaning. Hence it involves the distinction between a substrate whose meaning can be expressed in different ways and these expressions themselves. We have discussed the situation and its meaning. But can we embody the same meaning in another situation? Perhaps, there are some situations (e.g., death) whose meaning cannot be embodied in any other situation.

In literary hermeneutics, we have *a text* replaced by another *text* (its clarified presentation). But in the study of social behaviour, *a text-analogue* (i.e., behaviour) is replaced, not by another behaviour, but by *a text*, i.e., *a theory*. In the hermeneutics of social life, practice is replaced by a theory. But how can an account express the same meaning as that of an action? More important, can we speak of interpretation at all here, when the terms of the comparison belong to such radically different types? In other words, how is a hermeneutical science of human behaviour possible?

It is obvious that we must be able to find a common element between action on the one hand, and the conceptual reconstruction of it in the form of an account, on the other, i.e., we must find a link or bridge between experiential meanings and conceptualized meanings.

We can begin to see this link when we remind ourselves of the fact that the range of human desire, feelings, emotions, etc.—in fact, the whole range of experiential meanings—is bound up with the type of culture. And culture, in turn, is bound up with the distinctions and categories marked by the language of the group, i.e., the experiential field is bound up with the semantic field.

The relationship of course is not a simple one. In fact, there are two models of this relationship both of which are inadequate. The first sees the vocabulary as simply describing pre-existing feelings, as simply marking distinctions which, however, pre-exist language. Such a simply reflective view of the relationship between experience and language is, however, seriously inadequate, for sometimes the achievement of a more sophisticated vocabulary makes our experience itself richer and more finely articulated. An increased ability to identify and express sometimes alters our ability to experience. The reflective view does not do justice to this constitutive power of language.

But this constitutive competence itself may be wrongly understood, thus leading us to the other, equally inadequate idealistic view that thinking makes

it so. Against this we must remind ourselves that not everything can be forced upon us even by ourselves. There is after all a certain recalcitrance about our experiences and our mode of being in the world.

Hence it appears that neither simple correspondence nor an equally simple creation would do; human beings are neither simply archetypal nor wholly ectypal beings,[5] but the human mode of being is a constitutive one. This is not to deny the elements of truth in both. Behind the correspondence view, there is the insight that there is such a thing a *self-lucidity*. And behind the idealist view there is the insight that the achievement of such self-lucidity is a moral change, i.e., it changes the person who has achieved that kind of lucidity about himself. If that is so, error about oneself is not simply absence or lack of correspondence; it must be *inauthenticity* or *illusion*.

If this is so, we have to think of man as a self-interpreting animal. He is necessarily so, for there are no meanings for him without his interpretation of them. If so, the text of our interpretation is, after all, not so radically different from the result; it is itself something which has been interpreted in some way or other. It is a self-interpretation which is embodied in action. If a performative utterance is a doing of something by way of speaking, here we have a case of saying something by way of doing;[6] an act is an expression of the subject's situated understanding of his mode of being in the world. We shall soon turn to a consideration of what it is that an action thus says, but for the present I shall only remark that from this point of view, the radical difference with which we started out is considerably softened, for in the understanding of our actions the aim is to replace the confused text of our lives with a clarified account of what that life is saying.

But we seem to face a more formidable difficulty at this point. Can this more articulated account express the same meaning as that which is embodied in the action? Something like the notorious paradox of analysis seems to be present here too. We remember that the paradox of analysis takes the form of a dilemma; if the analysans is synonymous with the analysandum the analysis, while correct, is trivial, whereas, if it is different, it may be significant but false, so much so that it would appear that if an analysis is sound it must be trivial. Similarly, we may in the present context, speak of a paradox of social understanding to the effect that if a certain account expresses the same meaning as that expressed in the action, it cannot be said to be an *account* of that action, since it would be as incomplete and inarticulate as that which it seeks to give an account of, whereas if it expresses a different meaning, how can it be said to be an interpretation of that action? In other words, if the conceptualized meaning is the same as the experiential meaning, it would be useless, whereas if it is different, it would be false. We may hence be driven back to the question: how is a hermeneutic science of social life possible. I wish to suggest that it is possible only if we clearly grasp the transforming effect of understanding properly. I shall try to present this idea as follows: if the articulated interpretation is clearer than the original lived interpretation, then in a way, it would change the behaviour and the agent, if it were to be

accepted. If the person internalizes the new clarity, this would change his experiential meaning itself. How then can we say that the theory articulates the experiential meaning, for it seems to replace it.

We shall come back to this transformative potential of social understanding but for the present, I shall summarize the argument for the possibility of a hermeneutic science of man:

1. We can speak of the subject matter of such a science, i.e., human behaviour in terms of its sense or coherence.
2. This sense can be expressed in another form so that we can also speak of the interpretation as giving a clearer expression of the original sense.
3. This sense is for a subject.

This is the prima facie case for holding men and their actions to be amenable to study of a hermeneutic kind. If this orientation is possible, then we can have a platform for challenging the epistemological orientation of empiricism. But before entering into this debate, I shall try to say something about how a hermeneutic orientation works in a particular case, namely, political theory. An empiricist conception of political theory has to treat meanings as psychological states or psychological properties of individuals. The meanings which social reality has for the agent is conceptualized as 'political culture'. Almond and Powell define 'political culture' as the psychological domain of a political system.[7] Political culture is the pattern of individual attitudes and orientations towards politics among the members of a political system. It is the subjective realm which gives meaning to political action. Such an empiricist science of political behaviour can account for meanings as psychological states; it cannot consider meanings as being *constitutive*.

At this point of our analysis, we may refer to Searle's idea of a *constitutive rule*.[8] Some rules are regulative of acts, while others are not separable from the acts, but constitute them. This notion of constitution may be extended beyond rule-governed behaviour. There may be constitutive distinctions which are inseparable from certain practices. Institutions and practices by which we live are constituted by certain meanings and distinctions between them; hence a certain language or discourse is essential to them. For example, for the practice of voting to have a political or social significance, the distinction between autonomy and forced choice must be a distinction which must be in men's self-interpretation. This distinction is part of their experiential meaning. In this sense, the language and the categorial distinctions which it contains, constitute the practice. These meanings are not mere beliefs of individuals or their psychological states but they are constitutive of the social reality which forms the identity of the actors.

These intersubjective meanings contain an implicit vision of self and others. A positivistic social science cannot include this sense of constitutive meanings and interpretations. They cannot be admitted because they are essentially contestable; they require interpretations and can always be challenged

by alternative interpretations. But if we accept seriously the phenomenon of constitutive meanings, we need to go beyond the bounds of a social science based on the empiricist orientation. Such a science would be hermeneutical in the sense that:

1. It would not be founded on brute data; its most primitive data would be readings or interpretations of meanings which are constitutive.
2. These meanings are self-definitions of a subject or a group of subjects.
3. These self-definitions are constitutive of the practices and in this sense, they are embodied meanings.
4. A hermeneutical science of social life seeks to clarify and articulate their sense and coherence.
5. In the process of such articulation they change the orientations of the actors.

But the fundament of a hermeneutical science of man is that it has to presuppose a vision of the agent and his society; these structures of meanings constitute social reality. The aim of a hermeneutical science is to offer an interpretation of these constitutive meanings which would make sense of them. But this ultimately depends upon what makes sense and what does not, just as the primary embodied meanings are also something for which there would be alternative readings. Hence a hermeneutical science of man would seam to depend upon insight both at the beginning and at the end of the enterprise. Now, while insight may be facilitated by the gathering of data, it cannot be reduced to it.

This indispensability of insight makes disagreement a highly complex matter in social understanding, for there are *three* and not merely *two* ways of responding to disagreement. (1) One could say that the other is making a factual mistake; or (2) that he is committing a mistake in reasoning. But over and above this, one could also say (3) that his intuitions are at fault, that he is not merely in error but under *illusion*. This gap in intuitions is not merely a theoretical difference; it divides different visions of life and hence different options on life. To understand an interpretation may, therefore, require that one changes one's orientation. Hence, in the face of disagreement it is possible to respond not merely by saying 'develop your intuitions' but also more radically by saying 'change yourself'. That is why here we can speak not only of error but of illusion, and a change from illusion to insight, wherever it occurs, is a moral change. It is in this radical sense that the sciences of man are properly called moral sciences. We are here touching upon the transformative potential of social understanding; in this respect, there is an affinity with therapeutic insight.[9] But for the present, I should like to go back to the suggestion that the experiential meaning presupposes a primordial vision or perspective on man and society and that there are alternative and contestable understandings; that social theory seeks to explicate this basic understanding and in the process of explicating it, it may, under certain conditions, correct it and thereby change the life orientations of the subjects.

From this follows a certain condition of the adequacy of social explanations emphasized by Alfred Schutz, namely, that the theoretical constructs of social theory must be such that they are capable of explicating the concepts of the actors themselves.[10] It is, of course, true that the subjects themselves conceptualize their experiences in the form of lay concepts but the category-embodied meanings we are here concerned with are not to be located only in these lay concepts; rather, in so far as these meanings are constitutive of practices, even their actions may be said to express these meanings. In this connection, a certain comparison with the notion of speech acts suggests itself here; a speech act is the doing of something by way of utterance, but here in performing an action, that action or practice 'says' something; it expresses a meaning, a perspective. Hence such expressive action may be said to be a form of communicative praxis. In so far as a practice or form of action is constituted by a certain understanding or interpretation, it may be said that to perform that action is to communicate that constitutive meaning; a performance is also in this sense an utterance or text. It is precisely because a practice may be approached in this way that a hermeneutic orientation of human actions becomes possible. If actions do not have any such expressive potential, then they will be amenable only to explanations rather than interpretation. It is this expressiveness of actions that grounds the possibility of a hermeneutic science of man.

But if such a study were to be a science, it must share with the natural sciences, not so much any methodological unity, but a procedural affinity; namely, it must be a type of inquiry in which modes of self-corrective criticism are possible. While the possibility of self-corrective criticism is a general strategic principle of science, the tactics of the various disciplines differ considerably. One of the confusions involved in the empiricist orientation is that it does not distinguish between the tactical and strategic principles of methodology. But to come back to the project of a hermeneutic science of man, we can now say that such a project must allow for the possibility of self-corrective criticism of the implicit orientations. To accept all the embodied meanings as equally valid is to embrace a mindless relativism. It is against this that we must keep in mind the twofold salience of the thesis of the essential contestability of social sciences. Such contestability firstly implies that in this field no one interpretation or reading can claim to be self-evidently correct or beyond all questioning; secondly, it also suggests that each such view can be criticized, none is exempt from the necessity of being questioned as to its credibility and acceptability. Each, as it were, has to prove itself against the others. But a relativism would insulate the different perspectives from each other. Hence, the contestability of social sciences does not imply an indiscriminate relativism as may be supposed; it only suggests a more complex process of self-correction.

In order to catch a glimpse of this complex mode of self-correction, we must go back to the idea that an action is an expression of a certain understanding. If we now take up the patterned complex of actions, we have

the concept of a form of life. Such a form of life is communicative of a certain basic understanding or outlook. This underlying message has both a structural and a situated content dimension or aspect. The structural invariants which are expressed in action are the relationship to the world, relationship to others and relationship to oneself. That these three relational manifolds are constitutive of human action in so far as it is expressive of a significance may be seen by an analysis of a communicative act. In every communication, the performance of the communicative act situates me in relationship to the world (in the mode of asserting something to be true or false), in relationship to others (in the mode of appealing to intersubjective norms and standards), in relationship to oneself (in the mode of expression of intentional states). Since these relationships are involved in a communicative act as communicative, in so far as an action is what we have called communicative praxis, these relationships are also expressed by way of such actions. The human capacity to enter into such relationships by way of a communicative act, I have called in some of my other writings, 'communicative competence'.[11] I now wish to suggest that such communicative competence has relevance for the hermeneutic study of social actions also.

In that analysis I had distinguished three sub-competences involved in communicative competence, namely, constitutive, interactive and expressive competences. Here too we may use this threefold understanding of the dimensions of communicative praxis. We could say that in so far as action is interpretatively meaningful both to the agent and others who are able to understand it in terms of these agents' own meanings, action is something which makes sense only in a significant environment. The distinction here is between an environment as such and the significant environment. Motion belongs to the first whereas we can talk of actions only in the second context. This is to say that in order to understand an action as action, we must conceptualize it in terms of categories such as means, ends, facilities, resources, etc. The field of action must be understood in meaningful terms and not merely in terms of stimuli and forces. The categorization of the environment in such meaningful terms need not, of course, be an explicit self-conscious achievement on the part of the participants involved; they may take the situation in that way by, as it were, a natural spontaneity of their practices. But the reconstruction of practice is possible only if we, as theorists, attend to the categorization. From this point of view, it may be said that an action is a constitution of the significant environment and hence every action, as action, mobilizes the constitutive competence. The first component of the 'message' expressed by an action is, therefore, the constitution of the significant world in which the action is situated. An act, in this manner, communicates a certain way of representing the world. But an action is also something which is intelligible to others, something which claims normative acceptability from others. In performing an action, I claim an implicit membership in a moral community based on common understandings and norms. My action situates me in an intelligible world of fellowmen and hence, the performance of it by me

mobilizes interactive competence. My act, thus, also expresses a representation of the moral order of my being-with-others, a certain perspective of the 'mit-welt'. Thirdly, in so far as it is an action I perform and not merely behaviour which is, as it were, 'wrung from me' and in so far as I myself so take it, my act is also an expression of myself and thus mobilizes my expressive competence. At this level, my action expresses a certain representation of myself.

An act, therefore conveys a complex and presupposed representation of the world, others and myself. An act, as it were, is a dramatization of these understandings. The structure of any act, therefore, is the complex relational manifold of the world, others and the self. In so far as this is the communicative structure of praxis, actions fall into the same logical space and hence are available for comparisons and corrections. The common structure of practices grounds the possibility of such evaluations. But this structural form is, as it were, only the necessary condition of such corrective procedures, for if we leave the analysis merely at this formal level, all actions, in so far as their structural form is the same, would again be on the same level. A purely formal analysis, such as that of G. Simmel, perhaps runs this risk; the suggestion I am trying to put forth is that relativism may result either from the neglect of structural form or also from an exclusive consideration of the formal element only. We must, therefore, also take into consideration the content which goes into the form.[12]

An action is a situated performance; it is, therefore, existentially determined both in the content as well as in the perspectival aspect of its expressiveness, i.e., not only the details of the world, of sociality and self in the representations enacted in the practice, but more profoundly, the overall perspective from which they are made available to the actor are situationally specific. Not only what the world is, but also how it appears, the general vision of nature, is specifically connected with the situation; similarly with regard to the other two dimensions of the communication. Hence, every form of life is a situated understanding of the general invariants of the relationship to the world, to others and to the self. The idea here is the notion of a perspectival grasp of invariants. The structural form is relativized in this process. Such relativization of the invariants makes possible:

1. A plurality of understandings, thus making the field contestable; and
2. Also making it possible to criticize and correct the relativized understandings.

Without the first, the social sciences would become dogmatic metaphysics, but without the second, they would become ideologies. Hence we reach a somewhat surprising conclusion. The indecisive and contestable character of the social sciences appears to be an obstacle and hindrance from the point of view of the empiricist orientation. Given this appreciation of the disputability of social theories, the empiricist is in search of a methodology which would end this state of things and put social theories on the sure path of

science. Such an empiricist temper may express itself in less or more sophisticated forms. In a less sophisticated form, it shapes itself as a search for an objective natural science of society as, for example, in G.A. Lundberg.[13] But empiricist social scientists who have taken the hint from Kuhn,[14] express themselves more sophisticatedly. Kuhn seems to have impressed them that a discipline becomes truly scientific only when it achieves a paradigm, and hence the search is now on for a common paradigm of framework principles which would allow orderly and incremental progress characteristic of normal science. The naive empiricist orientation denies the constitutive meanings and hopes to reach bedrock non-interpretative data. But the more sophisticated empiricist does not deny the regulative necessity of a paradigm; only he hopes to reach a single and uniformly acceptable frame of reference. Both of them look upon the disputability and contestability of social theories as a fetter which must be overcome if such theories are to become scientific. But in this, such thinkers remind us of the dove of which Kant speaks, which, feeling the resistance of the atmosphere as a burden and an obstacle, thought that it could fly so much the faster, if only the atmosphere were removed.[15] Similarly, it is precisely the contestability of the social sciences which preserves them as morally significant and serious enterprises. To hope to overcome this contestability is either to trivialize the social sciences or more tragically, to impose one perspective or vision of man as alone thinkable in the name of science. Empiricism in the social sciences can lead to such an imperialism of categories. What can preserve both the theorist and his subject from such a danger is the unafraid and respectful recognition of the contestability of both their understandings, for that is to recognize the humanity of both the subject and the object of the social sciences.

Notes and References

1. Wilhelm Dilthy, *Selected Writings*, Pt. IV, (ed. & trans.) H.P. Riekman, Cambridge University Press, London, 1976.
2. Hans George Gadamar, *Truth and Method.*
3. Paul Ricouer, *On Interpretation*, Paris, 1965.
4. Jurgen Habermas, *Knowledge and Human Interest.*
5. Immanuel Kant, *The Critique of Pure Reason*, 2nd edn., (trans.) N. K. Smith, Macmillan, London, 1929, p. 492.
6. I owe the recognition of the importance of this aspect to personal discussions with Professor Ramchandra Gandhi.
7. Almond and Powell, *Comparative Politics: A Developmental Approach*, Boston, 1966, p. 23.
8. John Searle, *Speech Acts*, Cambridge, 1969, pp. 34-42.
9. Jurgen Habermas, *Knowledge and Human Interest*, pp. 214-46.
10. Alfred Schutz, *Commonsense and Scientific Interpretation of Human Action*, collected papers, Vol. I, p. 44.
11. (a) "Communicative Competence and Human Nature" scheduled to be published in a felicitation volume in honour of Professor K. J. Shah, Karnatak University, Dhawar. (b) "Communicative Competence and the Idea of God", *Journal of Philosophical Studies*, Vol. I, No. 1, Osmania University, Hyderabad.

(c) "Suffering and the Search for Meaning" to be published in the *Panjab University Journal* (Humanities), Panjab University, Chandigarh.
(d) "Man and Nature" *Visva-Bharati Journal*, Santiniketan.
12. I am indebted to Professor K. J. Shah for this point.
13. G. A. Lundberg, *Foundations of Sociology*, Macmillan, N.Y. 1939.
14. Thomas Kuhn, *The Structure of Scientific Revolution*, University of Chicago Press, 1970.
15. Immanuel Kant, *The Critique of Pure Reason* (trans.) N. K. Smith.

Communication and convention*

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Convention figures conspicuously in many of our activities, for example in playing tarot, in speaking and in eating. In playing tarot, convention is essential, in eating it is not. In explaining what it is to play tarot we could not leave out of account the rules that define the game; in explaining what it is to eat no mention of rules or conventions needs to be made. What is the case with speech? Are conventions mere conveniences or social flourishes, or are they necessary to the existence of communication by language?

The question is delicate because it concerns not the truth of the claim that speech is convention-bound, but the importance and role of convention in speech. The issue may be put counterfactually; could there be communication by language without convention? According to David Lewis, "It is a platitude—something only a philosopher would dream of denying—that there are conventions of language."[1] Certainly it would be absurd to deny that many conventions *involve* speech, such as saying "Good morning" no matter what the weather is like; but this is not the sort of convention on which the existence of language depends. No doubt what Lewis has in mind is the idea that the connection between words and what they mean is conventional. And perhaps only a philosopher would deny this; but if so, the reason may be that only a philosopher would say it in the first place. What *is* obvious enough to be a platitude is that the use of a particular sound to refer to, or mean, what it does is *arbitrary*. But while what is conventional is in some sense arbitrary, what is arbitrary is not necessarily conventional.

In one respect we describe a language completely when we say what counts as a meaningful utterance and what each actual or potential utterance means. But such descriptions assume we already know what it is for an utterance to have a particular meaning. Light on *this* question—the traditional problem of meaning—requires us to connect the notion of meaning with beliefs, desires, intentions and purposes in an illuminating way. It is mainly in making the connection, or connections, between linguistic meaning and human attitudes and acts described in non-linguistic terms that convention is asked to do its work. And here there are many different theories that have been proposed. I shall divide them into three kinds: first, there are theories that claim there is a convention connecting sentences in one or another grammatical mood (or containing an explicit performative phrase) with illocutionary intentions, or some broader purpose; second, there are theories that look to a conventional use for each sentence; and third, there are theories to the effect that there is

*Paper presented at the International Seminar on 'International Trends in Philosophy' held at Calcutta University in January 1983.

a convention that ties individual word to an extension or intension. These are not competing theories. Depending on details, all combinations of these theories are possible. I discuss the three sorts of theory in the order just listed.

In an early, and influential, article Michael Dummett maintained that there is a convention that governs our sue of declarative sentences.[2]

As he has put it more recently :

> . . .the utterance of a [declarative] sentence does not need a particular context to give it a point. . .The utterance of a sentence serves to assert something. . .there is a general convention whereby the utterance of a sentence, except in special contexts, is understood as being carried out with the intention of uttering a true sentence.[3]

This is a complex, and perhaps not entirely transparent, dictum, but I interpret it as follows. There is a conventional connection between uttering a declarative sentence and using it to make an assertion (one is making an assertion except in special contexts); and there is a conceptual (and perhaps conventional) connection between making an assertion and the intention to say what is true. The plausibility of this interpretation is brought out, I think, by Dummett's most convincing argument. He begins by examining Tarski-style truth definitions. Dummett reminds us (following, though he probably did not know this, an earlier paper by Max Black)[4] that while Tarski showed how, in principle, to construct a truth definition for particular (formalized) languages, he did not, and indeed proved that no one could, define truth in general, at least using his method. Tarski was therefore not able to say what it was that made each definition of truth a definition of the same concept. Convention T, to which Tarski appealed for a criterion of the correctness of a truth definition, does not specify what truth in general is, but makes use of the intuitive grasp we have of the concept.

Dummett drew an analogy between truth and the concept of winning at a game. If we want to know what winning at a game is, we will not be satisfied by being told the definition of winning for each of several games we want to know what makes the situation defined for each game a case of winning. Thinking of truth, the problem could be put this way: if we were exposed to speakers of a language we did not know, and were given a Tarski-style truth definition, how could we tell whether the definition applied to that language? A good qustion; but I do not believe it can be answered by attending to Dummett's proposed convention. For it seems to me that nothing in language corresponds in relevant ways to winning in a game. The point is important because if Dummett is right, to understand what it is in language that is like winning in a game is to make the crucial connection betwen meaning as described in a theory of truth and the use of language in contexts of communication.[5]

Winning in a game like chess has these characteristics: first, people who play usually want to win. Whether they want to win or not, it is a condition

of playing that they *represent* themselves as wanting to win. This is not the same as pretending they want to win, or trying to get others to believe they want to win. But perhaps representing oneself as wanting to win does entail that one can be reproached if it is found that he does not or is not trying to win. Second, one can win only by making moves defined by the rules of the game, and winning is wholly defined by the rules. Finally, winning can be, and often is, an end in itself.[6] As far as I can see, no linguistic behaviour has this combination of features; if so, Dummett's analogy between games and language is radically defective.

Is speaking the truth, in the sense of intentionally uttering a sentence that happens to be true, like winning? It is in this respect, that what it is to speak the truth is what a theory of truth seeks to define. *In so far*, *then*, as the truth conditions of utterances are known to speakers and interpreters in advance, and agreed upon as a condition of communication speaking the truth has one of the features of winning. (I shall question how far this is true later.) But it lacks the others, for people who utter a sentence do not usually want to speak true sentences. Sometimes they do, and very often they do not. Nor, in order to play the speech game, do they have to represent themselves as intending or wanting to speak the truth, there is no general presumption that someone who utters a declarative sentence wants or intends to speak the truth, nor that, if he does, he does it intentionally. Finally, speaking the truth, in the sense of uttering a true sentence, is never an end in itself.

Assertion, in contrast to speaking the truth, may seem a liklier candidate for linguistic counterpart of winning. Someone who makes an assertion represents himself as believing what he says, and perhaps as being justified in his belief. And since we want our beliefs to be true, it seems right to agree with Dummett that when someone makes an assertion, he represents himself as intending to say what is true. (This is how I take Dummett's remark that the speaker is "understood" to have the intention of uttering a true sentence.) As in playing a game, the representation may or may not be deceitful. (The liar makes an assertion.) The asserter may or may not, in making his assertion, intend to cause his hearer to believe he believes what he says. Making an assertion is, then, like playing a game in a respect in which speaking the truth is not: there is a public presumption of purpose. In other respects, however, assertion is unlike winning, for what constitutes the making of an assertion is not governed by agreed rules or conventions.[7]

If the concept of assertion is to provide a conventional bridge between purpose and truth, two things must hold: there must be conventions governing assertion, and there must be a convention linking assertion to what is believed true. I think neither of these claims hold.

Many philosophers have thought there were conventions governing assertion. Thus Dummett, in a phrase I omitted from an earlier quotation, says, "The utterance of a sentence serves to assert something. . . ."[8] Let us first consider whether assertion is governed by conventions. Of course, if it is a convention that a sentence meant what it literally does when uttered, then

convention is involved in all utterances and hence in assertion. But literal meaning may not (and in my view does not) go beyond truth conditions. And no one will deny, I suppose, that the same declarative sentence may have the same meaning when used to make an assertion, to tell a joke, to annoy a bore, to complete a rhyme, or to ask a question. So if there is a convention, it must be further conventional trappings of the utterance that make it an assertion. It is not enough, of course, to say that *something* in the context makes it an assertion. This is true, but proves nothing about convention. And we may be able to say what it is in the context that makes it an assertion, though in fact I think we can say only some rather vague and incomplete things. But even if the necessary and sufficient conditions were explicit and agreed upon by all hands it would not yet follow that the conditions were conventional. We all agree that a horse must have four legs, but it is not a convention that horses have four legs.

There is something more about assertion that suggests that convention may be involved, and this is the fact that in making an assertion, the asserter must intend to make an assertion, and he must intend that this intention be recognized by his audience. Assertions are intended to be public performances where the clues are adequate to identify the character of the performance as assertoric. So it is natural to think it would be useful if there were a convention, as a convenience in making our assertive intentions clear.

But Frege was surely right when he said, "There is no word or sign in language whose function is simply to assert something." Frege, as we know, set out to rectify matters by inventing such a sign, "the turnstile." "And here Frege was operating on the basis of a sound principle: if there is a conventional feature of language, it can be made manifest in the symbolism. However, before Frege invented the assertion sign he ought to have asked himself why no such sign existed before. Imagine this: the actor is acting a scene in which there is supposed to be a fire. (Albee's *Tiny Alice*, for example.) It is his role to imitate, as persuasively as he can, a man who is trying to warn others of a fire. "Fire!" he screams. And perhaps he adds, at the behest of the author, "I mean it! Look at the smoke!", etc. And now a real fire breaks out, and the actor tries vainly to warn the real audience. "Fire!" he screams, "I mean it! Look at the smoke!", etc. If only he had Frege's assertion sign.

It should be obvious that the assertion sign would do no good, for the actor would have used it in the first place, when he was only acting. Similar reasoning should convince us that it is no help to say that the stage, or the proscenium arch, creates a conventional setting which negates the convention of assertion. For if that were so, the acting convention could be put into symbols also; and of course no actor or director would use it. The plight of the actor is always with us. There is no known, agreed upon, publicly recognizable convention for making assertions. Or, for that matter, giving orders, asking questions, or making promises. These are all things we do, often successfully,

and our success depends in part on our having made public our intention to do them. But it was not thanks to a convention that we succeeded.

The second point of Dummett's claim is that there is a convention that in making an assertion a speaker is "understood" to be speaking with "the intention of uttering a true sentence." This also seems to me to be wrong, though in a somewhat different way. What is understood is that the speaker, if he has asserted something, has represented himself as believing it—as uttering a sentence he believes true, then. But this is not a convention, it is merely part of the analysis of what assertion is. To assert is, among other things, to represent oneself as believing what one asserts. It is clear that there cannot be a conventional sign that shows that one is saying what one believes; for every liar would use it. Convention cannot connect what may always be secret—the intention to say what is true—with what must be public—making an assertion. There is no convention of sincerity.

If literal meaning is conventional, then the difference in the grammatical moods—declarative, imperative, interrogative, optative—is conventional. These differences are in the open and intended to be recognized; syntax alone usually does the job. What this shows is that grammatical mood and illocutionary force, no matter how closely related, cannot be related simply by convention.

Although I have concentrated on assertion, similar considerations apply to illocutionary forces of all kinds. My main interest here, however, is not in the nature of illocutionary force, or in such acts as asserting, promising and commanding, but in the idea that convention can link what our words mean—their literal semantic properties, including truth—and our purposes in using them, for example, to speak the truth.

We have been discussing claims that there are comprehensive purposes tied by convention to the enterprise of linguistic communication—purposes that, in Dummett's word, give us the "point" of using language. I turn now to theories of quite a different sort that attempt to derive the literal meanings of entire sentences (not just the mood indicators) from the non-linguistic purposes their utterances serve. I am concerned in the present essay with theories which make the derivation depend on convention.

Stated crudely, such theories maintain that there is a single use (or some finite number of uses) to which a given sentence is tied, and this use gives the meaning of the sentence. Since in fact there are endless uses to which a sentence, with meaning unchanged, can be put, the connection between a single use (or finite number of uses) and the sentence is conventional; it is a use that can be called standard.

This is too simple, of course, but it is an appealing and natural idea. For there does seem to be an important connection between a sentence like "Eat your eggplant" and the intention, in uttering this sentence, to get someone to eat his eggplant. Getting someone to eat his eggplant is, you might say, what the English sentence "Eat your eggplant" was made to do. If this intuition could be explicitly stated and defended in a non-question-begging way, there

would be promise of an account of literal meaning in terms of the ordinary non-linguistic purposes that always lie behind the utterances of sentences.

There are intentions embedded in all linguistic utterances such that if we could detect them we would know what the words uttered literally meant. For someone cannot utter the sentence "Eat your eggplant" with the words literally meaning that someone is to eat his eggplant unless he intends the sentence to have that meaning, and intends his audience to interpret it has having that meaning. Of course the mere intention does not *give* the sentence that meaning; but if it is uttered with the intention of uttering a sentence with that meaning, and it does not in fact have that meaning, then it has no linguistic meaning at all. Literal meaning and intended literal meaning must coincide if there is to be a literal meaning. But this fact, while true and important, is of no direct help in understanding the concept of literal meaning, since the crucial intention must be characterized by references to the literal meaning. Nor can convention make a contribution here, for we were looking to convention to convert non-linguistic purposes into performances with a literal meaning. A convention that connected the intention to use words with a certain literal meaning with the literal meaning of those words would not explain the concept of literal meaning, but would depend upon it.

What we seek is intentions characterized in non-linguistic terms—*ulterior purposes* in uttering sentences. (This concept may be related to what Austin called perlocutionary acts.)

I mentioned briefly before, and now want to insist on, the fact that linguistic utterances always have an ulterior purpose; this was one of the reasons I gave for claiming that no purely linguistic activity is like winning at a game. There is perhaps some element of stipulation here, but I would not call it a linguistic act if one spoke "words" merely to hear the sounds, or to put someone to sleep; an action counts as linguistic only if literal meaning is relevant. But where meaning is relevant, there is always an ulterior purpose. When one speaks, one aims to instruct, impress, amuse, insult, persuade, warn, remind, or aid a calculation. One may even speak with the intention of boring an audience; but not by hoping no one will attend to the meaning.

If I am right that each use of language has an ulterior purpose, then one must always intend to produce some non-linguistic effect through having one's words interpreted. Max Black has denied this, pointing out that "...a man may outline a lecture, or write a note to remind himself of an appointment, or simply utter certain words, such as 'What a lovely day!' in the absence of an audience."[9] The first two cases here are clearly cases where the meaning matters, and there is an audience that is intended to interpret the words; oneself at a later time. In the last case it would be tendentious to insist that one is speaking to oneself; yet it matters what words are used, what they mean. And there must be some *reason* for using those words, with their meaning, rather than others. Black quotes Chomsky to similar effect.

> Though consideration of intended effects avoids some problems, it will at best provide an analysis of successful communication, but not of meaning or the use of language, which need not involve communication, or even the attempt to communicate. If I use language to express or clarify my thoughts, or with the intent to deceive, to avoid an embarrassing silence, or in a dozen other ways, my words have a strict meaning and I can very well mean what I say, but the fullest understanding of what I intend my audience (if any) to believe or do might give little or no indication of the meaning of my discourse.[10]

In this passage, it seems to me, Chomsky arrives at a correct conclusion from confused or irrelevant premises. The issue is whether or not the meanings of sentences can be derived from the non-linguistic intentions of a speaker. Chomsky concludes, correctly, I believe, that they cannot. But it is irrelevant to the conclusion whether intended effects must involve someone other than the speaker, and unimportant to the argument whether there are intended effects. Speaking or writing in order to clarify thoughts certainly posits an intended effect. Nor does it matter just how we use the word "communicate." What matters is whether an activity is interestingly considered linguistic when meanings are not intended to be put to use. Lying is a case where meaning is essential; the liar has an ulterior purpose that is served only if his words are understood as having the meaning he intends.

Where Chomsky is right, as I said, is in claiming that no amount of knowledge of what I intend my audience to believe or do will necessarily yield the literal meaning of my utterance. Even this claim must, as we have seen, be limited to a description of my intention in non-linguistic terms. For if I intend to get my audience to do or believe something, it must be through their correct interpretation of the literal meaning of my words.

It is now relatively clear what a convention must do if it is to relate non-linguistic purposes in uttering sentences—ulterior purposes—with the literal meanings of those sentences when uttered. The convention must pick out, in a way understood by both speaker and hearer, and in an intentionally identifiable way, those cases in which the ulterior purpose directly yields the literal meaning. I mean, for example, a case where, in uttering the words "Eat your eggplant" with their normal meaning in English, a speaker intends to get a hearer to eat his eggplant through the hearer's understanding of the words and the illocutionary force of the utterance. And here, once again, it seems to me not only that there is no such convention, but that there cannot be. For even if, contrary to what I have argued, some convention governed the illocutionary force of the utterance, the connection with the intention that the request or order be carried out would require that the speaker be *sincere*—that what he represented himself as wanting or trying to do he in fact wanted or was trying to do. But nothing is more obvious than that there cannot be a convention that signals sincerity.

It is no help, I must repeat, to say that the convention is that the sentence always means what the ulterior purpose would reveal if the speaker were

sincere, serious, etc. This is at best a partial *analysis* of the relations between literal meaning, sincerety and intention. It does not suggest publicly recognized tests, criteria, or practices.

Sometimes it is suggested that a language could never be learned except in an atmosphere of honest assertions (commands, promises, etc.). Even if this were true, it would prove nothing about a supposed role for convention. But I am also sceptical about the claim itself, partly because so much language learning takes place during games, in hearing stories, and in pretence, and partly because the acquisition of language cannot to such an extent depend on our luck in having truthful, sober, assertive playmates and parents.

It is in the nature of a game like chess or tarot not only that there are mutually agreed criteria of what it is to play, but mutually agreed criteria of what it is to win. It is essential to these games that normally there is no question about the outcome. And it is also in the nature of such games that winning can be an end in itself, and that players represent themselves as wanting or trying to win. But the criteria for deciding what an utterance literally means—the theory of truth or meaning for the speaker—do not decide whether he has accomplished his ulterior purpose, nor is there any general rule that speakers represent themselves as having any further end than that of using words with a certain meaning and force. The ulterior purpose may or may not be evident, and it may or may not help an interpreter determine the literal meaning. I conclude that it is not an accidental feature of language that the ulterior purpose of an utterance and its literal meaning are independent, in the sense that the latter cannot be derived from the former; it is of the essence of language. I call this feature of language the principle of *the autonomy of meaning*. We came across an application when discussing illocutionary force, where it took the form of the discovery that what is put into the literal meaning then becomes available for any ulterior (non-linguistic) purpose—and even any illocutionary performance.[11]

Before leaving the discussion of theories of the first two kinds, the following remark may be useful. Nothing I have said has been intended to show there is no connection between the mood indicators and the *idea* of a certain illocutionary act. I believe there is such a connection. An utterance of an imperative sentence, for example, quite literally labels itself as an act of order ing. But this is just part of the literal meaning of the uttered words, and establishes no relation, conventional or otherwise, between the illocutionary intentions of the speaker and his words. It is easy to confuse two quite different theses; on the one hand, the (correct) thesis that every utterance of an imperative *labels* itself (truly or falsely) an order, and the thesis that there is a convention that under "standard" conditions the utterance of an imperative *is* an order. The first thesis does, while the second thesis cannot explain the difference in meaning between an imperative and a declarative sentence, a difference which exists quite independently of illocutionary force. The second thesis cannot explain this because it postulates a convention that is in force only under "standard" conditions. You cannot *use* a convention by breaking it, you can only *abuse* it. But the difference between an imperative and a declarative can be, and very often is, quite properly used in situations where mood and illocutionary force are not "standard". It will not help to point to such cases as an actor wearing a crown to indicate that he is playing the part of a king. If a convention is involved here, it is a convention governing literal meaning. Wearing a crown, whether done in jest or in earnest, is just like saying "I am the king."

The gist of this remark applies also to the kind of theory that tries to derive the literal meaning of each sentence from a "standard" use. Since the literal meaning operates as well when the use is absent as when it is present, no convention that operates only in "standard" situations can give the literal meaning.

We have considered the idea that linguistic activity in general is like a game in that there is a conventional purpose (saying what is true, winning) which can be achieved only by following, or using, agreed and public rules. Then we discussed the claim that the literal meaning of each sentence is related by a convention to a standard non-linguistic end (an ulterior purpose). Both of these views turned out, on examination, to be untenable. Now it is time to evaluate the "platitude" that the meaning of a word is conventional, that is, that it is a convention that we assign the meaning we do to individual words and sentences when they are uttered or written.

According to David Lewis[12] a convention is a *regularity* R in action, or action and belief, a regularity in which more than one person must be involved. The regularity has these properties:

(1) Everyone involved conforms to R and (2) believes that others also conform. (3) The belief that others conform to R gives all involved a good reason to conform to R. (4) All concerned prefer that there should be conformity to R. (5) R is not the only possible regularity meeting the last two conditions. (6) Finally, everyone involved knows (1)-(5) and knows that everyone else knows (1)-(5), etc.

Tyler Burge has raised reasonable doubts about parts of the last condition (does a convention require that everyone know there are alternatives?)[13] and I have misgivings myself. But I am not here concerned to debate the details of the analysis of the concept of convention, but to raise a question whether, or to what extent, convention in any reasonable sense helps us understand linguistic communication. So instead of asking for example, what "conforming" to a regularity adds to the regularity itself, I shall simply grant that something like Lewis' six conditions does hold roughly for what we call speakers of the same language. How fundamental a fact is this about language?

The analysis clearly requires that there be at least two people involved, since convention depends on a mutually understood practice. But nothing in the analysis requires more than two people. Two people could have conventions, and could share a language.

What exactly is the necessary convention? It cannot be that speaker and hearer mean the same thing by uttering the same sentences. For such confor-

mity, while perhaps fairly common, is not necessary to communication. Each speaker may speak his different language, and this will not hinder communication as long as each hearer understands the one who speaks. It could even happen that every speaker from the start had his own quite unique way of speaking. Something approaching this is in fact the case, of course. Different speakers have different stocks of proper names, different vocabularies, and attach somewhat different meanings to words. In some cases this reduces the level of mutual understanding; but not necessarily, for as interpreters we are very good at arriving at a correct interpretation of words we have not heard before, or of words we have not heard before with meanings a speaker is giving them.

Communication does not demand, then, that speaker and hearer mean the same thing by the same words; yet convention requires conformity on the part of at least two people. However, there remains a further form of agreement that is necessary: if communication succeeds, speaker and hearer must assign the same meaning to the speaker's words. Further, as we have seen, the speaker must intend the hearer to interpret his words in the way the speaker intends, and he must have adequate reason to believe that the hearer will succeed in interpreting him as he intends. Both speaker and hearer must believe the speaker speaks with this intention, and so forth; in short, many of Lewis' conditions would seem to be satisfied. It is true that this is at best an attenuated sense of a practice or convention, remote from the usual idea of a common practice. Still, one might insist that this much of a mutually understood method of interpretation is the essential conventional core in linguistic communication.

But the most important feature of Lewis' analysis of convention—regularity—has yet to be accounted for. Regularity in this context must mean regularity over time, not mere agreement at a moment. If there is to be a convention in Lewis' sense (or in any sense, I would say), then something must be seen to repeat or recur over time. The only candidate for recurrence we have is the interpretation of sound patterns: speaker and hearer must repeatedly, intentionally, and with mutual agreement, interpret relevantly similar sound patterns of the speaker in the same way (or ways related by rules that can be made explicit in advance).

I do not doubt that all human linguistic communication does show a degree of such regularity, and perhaps some will feel inclined to make it a condition of calling an activity linguistic that there should be such regularity. I have doubts, however, both about the clarity of the claim and its importance in explaining and describing communication. The clarity comes into question because it is very difficult to say exactly how speaker's and hearer's theories for interpreting the speaker's words must coincide. They must, of course, coincide *after* an utterance has been made, or communication is impaired. But unless they coincide in advance, the concepts of regularity and convention have no definite purpose. Yet agreement on what a speaker means by what he says can surely be achieved even though speaker and hearer have different

advance theories as to how to interpret the speaker. The reason this can be is that the speaker may well provide adequate clues, in what he says, and how and where he says it, to allow a hearer to arrive at a correct interpretation. Of course the speaker must have *some* idea how the hearer is apt to make use of the relevant clues; and the hearer must know a great deal about what to expect. But such general knowledge is hard to reduce to rules, much less conventions or practices.

It is easy to misconceive the role of society in language. Language is, to be sure, a social art. But it is an error to suppose we have seen deeply into the heart of linguistic communication when we have noticed how society bends linguistic habits to a public norm. What is conventional about language, if anything is, is that people tend to speak much as their neighbours do. But in indicating this element of the conventional, or of the conditioning process that makes speakers rough linguistic facsimilies of their friends and parents, we explain no more than the convergence; we throw no light on the essential nature of the skills that are thus made to converge.

This is not to deny the practical, as contrasted with the theoretical, importance of social conditioning. What common conditioning insures is that we may, up to a point, assume that the same method of interpretation that we use for others, or that we assume others use for us, will work for a new speaker. We do not have the time, patience or opportunity to evolve a new theory of interpretation for each speaker, and what saves us is that from the moment someone unknown to us opens his mouth, we know an enormous amount about the sort of theory that will work for him—or we know we know no such theory. But if his first words are, as we say, English, we are justified in assuming he has been exposed to linguistic conditioning similar to ours (we may even guess or know differences). To buy a pipe, order a meal, or direct a taxi driver, we go on this assumption. Until proven wrong; at which point we can revise our theory of what he means on the spur of the moment. The longer the talk continues the better our theory becomes, and the more finely adapted to the individual speaker. Knowledge of the conventions of language is thus a practical crutch to interpretation, a crutch we cannot in practice afford to do without—but a crutch which, under optimum conditions for communication, we can in the end throw away, and could in theory have done without from the start.

The fact that radical interpretation is so commonplace—the fact, that is, that we use our standard method of interpretation only as a useful starting point in understanding a speaker—is hidden from us by many things, foremost among them being that syntax is so much more social than semantics. The reason for this, roughly stated, is that what forms the skeleton of what we call a language is the pattern of inference and structure created by the logical constants: the sentential connectives, quantifiers, and devices for cross-reference. If we can apply our general method of interpretation to a speaker at all—if we can make even a start in understanding him on the assumption that his language is like ours, it will be thus because we can treat his structure-

forming devices as we treat ours. This fixes the logical form of his sentences, and determines the parts of speech. No doubt some stock of important predicates must translate in the obvious homophonic way if we are to get far fast; but we can then do very well in interpreting, or reinterpreting new, or apparently familiar, further predicates.

The picture of how interpretation takes place puts the application of formal methods to natural language in a new light. It helps show why formal methods are at their best applied to syntax; here at least there is good reason to expect the same model to fit a number of speakers fairly well. And there is no clear reason why each hypothesized method of interpretation should not be a formal semantics for what we may in a loose sense call a language. What we cannot expect, however, is that we can formalize the considerations that lead us to adjust our theory to fit the inflow of new information. No doubt we normally count the ability to shift ground appropriately as part of what we call "knowing the language." But in this sense, there is no saying what someone must know who knows the language; for intuition, luck, and skill must play as essential a role here as in devising a new theory in any field; and taste and sympathy a larger role.

In conclusion, then, I want to urge that linguistic communication does not require, though it very often makes use of, rule-governed repetition; and in that case, convention does not explain what linguistic communication is, though it may describe a common feature.

I have a final reflection. I have not argued here, though I have elsewhere, that we cannot confidently ascribe beliefs and desires and intentions to a creature that cannot use language.[14] Beliefs, desires and intentions are a condition of language, but language is also a condition for them. On the other hand, being able to attribute beliefs and desires to a creature is certainly a condition of sharing a convention with that creature; while, if I am right in what I have said in this paper, convention is not a condition of language. I suggest, then, that philosophers who make convention a necessary element in language have the matter backwards. The truth is rather that language is a condition for having conventions.

Notes and References

1. David Lewis, "Languages and Language," in *Language, Mind, and Knowledge*, ed. Keith Gundreson. University of Minnesota Press, Minneapolis, (1975), p. 7.
2. Michael Dummett, "Truth," in *Truth and Other Enigmas*, Duckworth, London, (1978). (Originally published in 1959.)
3. Michael Dummet, *Frege*, Duckworth, London, (1973), p. 298.
4. Max Black, "The Semantic Definition of Truth," *Analysis*, 8, (1948), pp. 49-63.
5. It is not pertinent to my argument that Dummett does not believe a theory of truth can serve as a theory of meaning. The issue here is whether or not there is a convention of a certain sort governing our utterances of (declarative) sentences.
6. The distinction between activities that can be ends in themselves, such as playing the flute, and those that serve some further end, such as building a house, comes, of course, from Aristotle: *Nichomachean Ethics* 1094a; *Magna Moralia* 1211b.

7. On this point I am much indebted to Sue Larson.
8. Michael Dummett, *Frege*, Duckworth, London, (1973), p. 298.
9. Max Black, "Meaning and Intention : An Examination of Grice's Views," *New Literary History*, 4, (1972-73), p-264.
10. Noam Chomsky, *Problems of Knowledge and Freedom*, New York, (1971), p. 19.
11. For further discussion, and a suggestion as to how illocutionary force and grammatical mood are related, see my "Moods and Performances," in *Meaning and Use*, ed. Guishai Margalit. D. Reidel, Dordrecht, (1979), pp. 9-20.
12. David Lewis, "Languages and Language," pp. 5 and 6.
13. Tyler Burge, "Reasoning about Reasoning, " *Philosophia*, 8, (1979), pp. 651-56.
14. See my "Thought and Talk," in *Mind and Language*, ed. Samuel Guttenplan. Clarendon Press, Oxford, (1975), pp. 7-23.

Philosophical reflections on the nature of community*

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In this discussion I shall not be concerned with the manifold varieties of communities in their complex structures and relationships so much as with the founding characteristics of what it is to be a community. Since communities have a certain duration, indeed a historic identity, our orientation must take account of quiddities of temporality and situation. But this orientation in itself makes us, or should make us, sensitive to empiricality in a way which might be conceivably avoided were we discussing matters of greater abstraction and/or pretension. Communities, unlike many other matters with which philosophers might occupy themselves, have a habitation and a name. They *manifest* themselves in diverse recognizable fashions. While social scientists go on from consideration of interaction to the networks set up by these interactions, the philosopher is more inclined to go back to human personality itself as the root out of which all social phenomena spring. We also, as students of philosophy, tend to be interested in *Gemeinschaft* rather than *Gesellschaft*, although this would not be true of either Hegel or Marx who were, in their various ways, sensitive to the meshing of both of these in most human institutions. McKinney and Loomis spell out[1] the features of *Gemeinschaft*-type relationships in terms of aid and helpfulness, mutual interdependence, reciprocal and binding sentiment, diffuse or blanket obligations, and authority based on age, wisdom and benevolent force. At the back of *Gemeinschaft*, according to Tönnies, lay a truth which could be identified with heritage, a truth moreover that was binding on its members. Social control, on such a view, was governed by factors which were strongly historic (as found in resources such as folk customs, oral traditions and the like). The *Gesellschaft*-type group, however, centres not on truth so much as contract, law, rights and obligations and these in turn rest on interest.

It seems to me that we may be well advised to do our philosophizing on this theme in the light of a few reminders of which the following may be among the most important: (a) the concreteness of our concern, (b) the tie-up between person and community, (c) the circumstance that, as in the case of the person, so in the case of the community, we are using terms which have both an empirical and a paradigmatic sense, (d) whereas in discussing persons we have the two terms person/persons (and, of course, Divine Person, if we are

*Adapted from a paper presented at the annual session of the International Society for Metaphysics held in Nairobi in August 1981.

theists), in discussing community we have community/communities and community in a paradigmatic sense (which, again, for the theist, will be grounded in relationship to the Divine Person, God). In order to keep the discussion within, hopefully, manageable limits, I shall not link the treatment of community in a paradigmatic sense to the existence of God, although for many this may be to hamstring discussion from the start. Mea culpa.

The Person

Let us begin with a rather simple-level analysis of the fundamental nature of the person. The person is one who is capable of interacting with his fellows. To say this, of course, as any psycho-analyst would tell us, is not to say a great deal. There are types of interaction which are regarded as a 'fall' from personhood, and personhood, I fully believe, includes the possibility of, if not the right to, certain privacies and even abstentions from conciliatory interaction in the interest of personal aspiration (with provisos no doubt for glaring 'sins of omission'). The free person (it makes sense to speak of an unfree person I think, e.g., one who is physically imprisoned, under the influence of drugs, or being brain-washed, etc.) is a locus of possibilities. He is capable of having a standpoint and taking a stand. The person alternates between dependence, independence and interdependence (the family or à college a la McTaggart illustrates this point). And here a certain philosophical temptation (there are such things) presents itself, namely, to say that in the person there is a complex of internal relations within the various factors involved. Warrant for this could be found, say, in the clinical expert's criterion of absence of water-tight compartments in elucidating 'normality'. But I do not myself think the language of internal relations will take us very far. What gives pause is not the logical outcome of absolutism which is where the axiom classically takes us, but the consideration that if we are to do justice to inter-personal relationships we cannot make 'internal relations between various factors or dimensions of personality' a defining characteristic of personhood. Persons are not closed systems. Nor are communities. Both are *intrinsically* open; not that, of course, we cannot all think of cases of pathologically closed personalities or communities.

The awareness that persons have is complexly structured, and I use the word 'awareness' advisedly. I do not believe that man is primarily a cognitive being. Cognition, especially in social matters, is always embedded in much that is volitional, emotional and aesthetic (think of the beauty of a ritual tribal celebration). Pragmatists and existentialists in this century wisely drew attention, respectively, to the role of interest and worldly (*weltlich*) preoccupation in human life. If this is true of persons it will be no less true of communities, for there is a sense, although I would not like to make too much of this point, in which what we find true of persons is analogous to what we find true of communities also.

To proceed. A person is one who seeks bonds and yet whose creativity sometimes leads him to recoil from them. This thus-far-no-further stance is

also paralleled in intercommunity relationships. The person is capable of growth and also of degeneration. It is possible wilfully to destroy the person. The ill-treated prisoner of war, the shanty dweller, the political detenu in time of 'peace', those we 'let die', are all in some way or other victims of others' will to destroy the person, just as genocide is the extremest form of political will to destroy community.

On the less gloomy side, the person is capable of imaginative entry into the world of the other. It is the subject that cognizes objects, but it is the person who enters into empathetic relationships with others, who can also imitate, can aspire, can sympathize *with*. Intrinsic to the person is the capacity to communicate through a variety of signs, verbal and non-verbal, which can be 'read'. Privative forms of this include lying, distorting, and certain kinds of silence, not all. It is the person, not the subject, who works, in whose commerce with men and things there can be verity. The privative forms of this have been much written about in this century, although not often with recognition of their privative nature. Man as worker, consumer, manager, et al., is not man as total person. But is man as dancer, *l'homme qui rit*, man who celebrates, man as father, husband, brother, soldier—man as total person? The question can be answered in a semantic way if we so choose. But I take it we would like to avoid this sort of skirting round the issue. Is there any core activity which involves the whole person?

Does not loving, worshipping, creating as the artist creates, involve the total person? I draw special attention to these activities because a very strong case can be made out for each of them as paradigm activities of the total person. Furthermore, we can think of examples of each of these where community is deliberately flouted in response to supervenient appeal, e.g., a Romeo-Juliet situation, the hermit-type exploration of the cave of the heart, the flouting of the accepted canons of the community of sculptors by a Rodin. We need to tread warily if we seek to find the fulfilment of the total person in community. Some may like to set about it this way: that each of the three cases above are *sustained* by community in a wider sense. Spelling this out we get respectively, community as the sustaining dimension of all dyadic loving relationships, *samaj* (society) as the order which permits an opting out of customary duties at the behest of a quest of the transcendent, the artistic heritage which sanctions a reaching out to newer and newer forms of artistic expression. The possibility of self-transcendence certainly seems built into what we commonly mean by person in the metaphysical sense, and historic communities surely provide an environing supportive 'space' for those temporal reachings out of the spirit which we associate with the highest manifestations of the person, and these include moral endeavour, artistic achievement and religious quest.

We shall need, then, in our exploring of the nature of community, to do justice both to that triumphantly stubborn individuality which resists reduction (and to which concern with rights is closely linked) and the sustaining dimension of community life whose evidence ranges from corporate activities

such as festive celebrations to the defiant actions of the rebel who, in striving against the gravitational pull of community, and precisely because of that pull, is able thereby to make his flight.

Let us start next from the other end of the relationship, the community and see what we find.

Community and the Person

At a time when it is deemed fashionable to find a philosophical point of departure in knots, puzzles and bewilderment, it is almost with relief that we can turn to something as concrete as community. Communities are many, they are historical. One's own community has a certain familiarity, a certain givenness. But it is also possible to *choose* to belong to a different community. I think here of the switches of allegiance (sometimes these may be more correctly and happily described as extensions of allegiance) that take place in inter-caste and mixed marriages, changes of nationality through migration, and the manifold mobilities which take place in this century and which make it feasible, indeed often necessary, either to belong to a different community from the one into which one was born, or to belong to *many* communities. Indeed with the growth of understanding and opportunity, we often find that membership of one community does not *ipso facto* rule out membership of another. This bears a certain analogy to the multiple role playing which modern life imposes on persons. The way in which continents are carved up overnight and frontiers are constantly shifted whether in the Indian sub-continent, Africa or the Balkans, reminds us of the considerable flexibility of allegiance that modern man, perhaps willy nilly, can be capable of. When there is a déraciné quality about a particular community we often find that its members fall back on narrower allegiances in quest of security. To identify with a new community, in contemporary conditions, is very often a matter of pressing *interest*. Anyone who has had to opt for this kind of identification will testify that it does not enlist all interests, nor does it by any means involve total personality. In such cases, the preservation of individual identity and dignity involves a certain resistance to the dominant collective ethos. A macrocosmic example of this is also found in multiple-ethnicity within the fabric of nationhood.

Not all interactions between man and man give rise to communities. They give rise to *social phenomena*, e.g., the relation of vendor and customer, lawyer and client. Interaction, moreover, is a very inadequate word, with far too many causal associations, to express what seems to me to be one of the most characteristic features of community, namely, the aspiration of its members. No doubt a metaphysic of community must needs recognize dynamism, e.g., concern itself with formation, process, self-definition and self-transformation.

It will probably be conceded that much of contemporary interest in community has come about as a reaction to mass society. Both the quest of the person and the quest of community reflect a reaction against contemporary urban living. 'The quest for community' (the theme of a great deal of contemporary sociological writings) is to a large extent the quest for meaning in a

fragmented and anonymous world. The person has a deep need to belong, to identify and be identified, to have fellowship, all of which were more or less satisfied in traditional societies at their best. It must also be noted that, in the latter, expectations were/are rather less than they are in more complexly structured societies. We may need to be frank about the vast variety to be found along the tribal/village/urban continuum. Communities in quest of political identity, of a place in the sun, belong to a spectrum which elsewhere includes communities which admit and indeed survive through water-tight compartments between their various sections and where interaction is kept within deliberate limits. Maybe much of this will be classified as a failing or lack of community, but it is important to remember that such communities do exist and multi-cultural communities, for good or ill, are quite often of this kind.

We speak of 'belonging to a community', of 'becoming a member of community X'. It is possible to be ostracized by a community, to be expelled by it, even to have no place in any community. The sad circumstances of many recent migrations have made us aware of the fact that there are persons who have lost their original moorings in community and are not accepted anywhere. The plight of such people makes us vividly aware of how vital membership of a community is to personal identity. Such persons seek membership of a new community and are not fully *of* it until social acceptance has been brought about.

The common features that persons and the community possess may be mentioned at this point in our discussion. Persons, like communities, are on the move. There is a sense in which both are ground and horizon (I shall have more to say on this later). For both, past experience provides a certain density and yet a platform for further excursion. In elucidating each we seem to encounter not bedrock so much as a nexus. To say this is to recognize the complex structures, the sedimented layers of each. In each case what is set up as a task is a search for integration, a coming to terms with fragmentariness and even with inner conflict.

It would be unwise, however, to look on community as a sort of extrapolation of personality. The life of the individual converges and diverges from that of community. But the very divergence is sustained by a very strong grounding. How else can we explain the phenomenon of the beachcomber, rebel, outsider, *sannyasi*—to take a diversified cultural scatter. To see in the wider society the order in the soul writ large is historically too well known a view to need comment. We occasionally, however, encounter a theory of a different kind. For example, the Buddhist insight into the inner looseness of texture of personality (the *skandha* theory) is compensated for, interestingly enough, by the idea of a corporate solidarity (the *sangha* concept). A sense of dispersion of inner resources is sometimes compensated for, in Western societies, by membership of a close-knit commune.

We need to avoid romanticizing the 'free individual' and the 'small community', two concepts which stand somewhere in the wings. Those who idealize the 'wholeness' and 'totality' of these often forget that the free individual

(where this involves *viable* multiple options) belongs more to modern society than to the traditional, and that the small tribal community especially, has a big share of fears and burdens that cannot be swept under the carpet. There is an ocean of difference between a Swiss canton and a poor village in a Third World country. There is no merit in smallness as such. Let me add one further caveat.

The classical world-views, and I take this to include also Indian and Far Eastern systems of thought, never operated with the concepts 'individual' and 'community' in a vacuum. In each case, whether it was Plato or Aquinas, Shankara or Confucius, the systems in question were strongly founded on idiosyncratic belief in an underlying cosmological order. What I mean is that if in the twentieth century we are striving to present a view of the person and the community shorn of all belief in a sustaining ontological order of things (a lot of discussion of human rights strikes me as being of this kind) we shall be doing something whose roots date mainly from the eighteenth century onwards and not before. Perhaps the toughest metaphysical challenge we face today is to concede to fact whatever must be conceded without falling into naturalism. We seek to eschew the latter precisely in view of our faith in the person. But the task is fraught with difficulty, and this in no small part because of, firstly, the dichotomies which traditional thinking offers, and even more importantly, the two centuries of drilling we have had in demarcating the empirical from the transcendental and the ontological. Both in respect of the concept of the person and that of the community our ideas are in the melting pot. Modern man is not only in search of a soul, to borrow Jung's phrase, but he is no less in search of a community where he can live and grow. Let us close in on the metaphysics of being-among, for this perhaps expresses without too much distortion what the life of person-in-community is like.

The Structure of Being-Among

It is not without significance, I think, that many of those who have sought to elucidate the nature of inter-subjectivity in this century have found themselves relying on prepositions like 'with' and 'between'. Such words serve to wean us away from the tendency to reify which usually besets the metaphysician and orient us towards what is essentially a nexus, as I suggested earlier on. The structure of being-among is rooted in the awareness which each person has of his neighbour. It is a multi-dimensional form of consciousness in which perceiving, feeling and willing and various other modalities are meshed. This foundational awareness expresses itself in the life patterns wherein we react to the familiar and the unfamiliar. How are we to analyse the familiar? We are born into a community (in the twentieth century there are those who cannot even say this, for this is the century of the homeless) and don without undue difficulty, as we grow up, the *Ideenkleid* of our own community. We approach *other* communities wearing the *Ideenkleid* of our own community. When the unfamiliar becomes familiar it does not thereby lose its quiddity in our eyes. Rather, in becoming familiar it is neither adopted as our own nor is

it regarded as exotic. It receives an acceptance for what it is. Community in the twentieth century, especially in the multi-cultural societies, involves a welcoming of the unfamiliar. Put another way, the challenge is that of a call to a civilized acceptance of otherness within the nexus of community. This amounts neither to taking for granted nor is it merely allowing the other to remain in a watertight compartment. Both of these would involve a falling short of community.

Now the *Ideenkleid* we wear as persons and as communities (I have indicated earlier my belief in the importance of non-collective 'spaces' within human experience, so that for me the two sets of *Ideenkleider* are not identical) need not veil, nor should they, in a naturalistic manner, be looked on as merely kinds of 'conditioning'. Rather, they are conditions of the possibility of any responsive awareness both of those whose way of life is familiar to us and those who live and think differently from the way we do. But to say this roots them firmly in the transcendental. Yet we know that they are most surely historically shaped (I deliberately avoid any sense of 'determination' of a mechanistic kind) and that they are no less grounding than grounded, that is, they seem to have ontological resonances to which all those who care about a metaphysic of the person cannot help having a sensitive ear. We seem to come across here a blurring of boundaries between the transcendental, the empirico-historical and the ontological. It is a blurring which I believe is matched by those minglings of understanding, feeling and imagination which provide the foundational awareness which belongs to being-among. Both sets of challenges to typological thinking, I venture to say, may well provide the kind of ontological basis for inter-subjective relationship we are looking for. They are seen clearly, although not necessarily paradigmatically, in the dyadic form, that is, between persons. The fruitful encounter of communities and the evolution of multi-cultural communities where all are genuinely members one of another, illustrates what I have in mind still further.

The foregoing line of thinking may occasion disquiet on various counts. From the time of Kant and Husserl onwards we have more or less taken it for granted that the transcendental, empirical and ontological are not to be confused with each other. Likewise the habits instilled by the faculty psychology which Kant inherited die hard, and we still find it convenient to categorize structures of consciousness as cognitive, volitional and so on. But anyone who has lived through several decades of this century, including the war years, knows all too well that the growth of knowledge very often worked directly against the growth of community in its normative sense. Scientific knowledge, usually regarded as the central redoubt of rationality, was very often put in the service of destruction, the distortion of truth, and the 'perfecting' of instruments of torture. The way in which a free community (perhaps none exist in this paradigmatic sense) would utilize scientific knowledge for the further nurturing of a participative community where the freedom of each individual was both respected and promoted is a theme in itself. My own approach tends to stress knowledge (*Erkenntnis*) rather less than the total response which, it

seems to me, is highly complexly structured, and in the contouring of which past experience (including the attitudinal structures of tradition, the heritage of tribal wisdom) and the future-oriented characteristic patterns of expectation and aspiration play their own indispensable roles. In saying this I am very aware of swimming against at least one very influential stream in contemporary philosophy, the stream which takes it for granted that theory of knowledge is the core discipline in philosophy. The reasons for this current stress are well known to us all. It was largely via the analysis of perception that the descendants of the empiricists thought they could best deflate the alleged pretensions of idealist metaphysicians. In their haste to deflate the balloon of absolutism many wise insights of the idealists were interred under the parquet floor of a simplified pluralism. Among these were the concept of the common good and the invaluable insight into a certain *kinship* between the various powers within the individual and those within the group. What I am now suggesting may seem no less of a scandalon in the eyes of the tough-minded. But I put forward for serious consideration the view that if we are to elucidate at all *truly* (I deliberately use this word) the role of *Ideenkleid* in the life of the person and of the community we are likely to be led to two conflations, that of the transcendental, the empirico-historical and the ontological, and that of the various structures of consciousness. That this will not land us in some form of naturalism or other will I hope become clearer in the section where I discuss community as unitary telos. But before I turn to this, something must be said about the way in which 'untruth' enters into the nexus of community whose characteristic mode of being is being-among.

Community and Untruth

I here to some extent draw on the classical Indian notion of *avidya* or ignorance, a veil which blocks our vision of the truth and yet which is intrinsic to the human condition. A non-awareness of the other, whether of the other person or of one community by another, presents a barrier to community both in the specific sense and also in its sense as unitary telos. When this is fed by factors like misinformation, rumour and propaganda we begin to see more explicitly that we are dealing with matters that are by no means merely cognitive. It would also be unrealistic if we were to ignore the economic factors which present barriers to community. I have in mind the exploitative structures which there may be in a particular community as part of the heritage of the past. So many communities in different parts of the world today are rent with dissension leading to overt conflict and violence thanks to injustice of some form or other. The *avidya* to which modern man is subject is not cosmic in character, but includes all those factors which make for untruth in human relationships. We cannot expect to attain community in any paradigmatic sense until these blocks and barriers are tackled. It is almost as if we here once more come close to another of the insights which was part and parcel of the nineteenth-century idealist heritage—that incompleteness and partial failure is built into our quest for the truth.

A most critical form of non-awareness, moreover, is tied up with the basic constraints under which even the would-be democratic states function. I refer to the fact that the individual voter, and therefore ultimately the particular community, is often, for reasons of security or otherwise, not in possession of the vital data which make his or her role in decision-making effective. Traditional societies were (and are) in large part bearers of the accumulated wisdom of previous generations. But the modern community today is not the bearer of the accumulated and accumulating knowledge which modern scientific research provides. The extent to which ignorance is built into the life of even the most highly educated person and necessarily so, is perhaps something which would take us beyond the scope of our theme. But a few examples may fill out what I have hinted at somewhat darkly. The voter is not aware of the military commitments which follow by remote causal chains from his voting behaviour. He may not have the information which would enable him to assess the impact of government policy on, say, members of a backward or minority community. Does this mean that a free flow of information is a basic presupposition of community? At first sight the answer may seem to be affirmative without qualification. But those concerned, say, with defence strategy, policy and administration may put in a word of caution here and with reason. It seems to be one of the most serious quandaries that democratic communities are in today that the very process of democratic decision-making takes place in conditions of ignorance, and often with disastrous effect.

It is not my purpose here to do more than to draw attention to a serious issue in our philosophical reflections on the nature of community. The hiddenness of the forces that are at work in society and in international politics is a grave factor working against the fulfilment of community in our century. The factors which make for untruth in contemporary life have far-reaching impact, and Mahatma Gandhi had his finger unfailingly on the pulse of the twentieth-century condition when he associated untruth with violence. Is violence not the biggest enemy within the gate that communities contend with today, especially the havoc caused by pathological individuals *within* communities?

The point we reach in our discussion now is the consideration that our *Ideenkleider* contain both resources which are interactive in a conciliatory way and those which work in the very opposite direction. Given that this is so, what content can be given to the idea of community as unitary telos? I take up this crucial question in conclusion.

Community as Unitary Telos

There is a danger, perhaps, in treating community in the paradigmatic sense as a sort of *eschaton*. At first sight the idea seems no doubt infinitely seductive rather than dangerous. I do not speak here of utopianism for which I have a certain sympathy in that all paradigms as light-bestowing agencies serve a useful purpose in throwing up dark places, and in any case there are always shadows close to the light. But it is sometimes important to remember

that it is in those very finite communities, imperfect and crisis-ridden as they are, that community in the fulfilled sense is to be found in germinal form. We may choose what language we please, that of enteleche, or path and goal, but in each case we have metaphysical resources of strength and resilience, something which affirms the integral bonding of the now and that which is to come. It is perhaps worth pondering on the circumstance that Greek, Christian, and Hindu thought systems are all hospitable to the notion of, if not a continuum (this would be foreign no less to Platonism than to Christian metaphysics) then to a faith in a certain *belonging* of the finite and the infinite, witnessing to an intimation that human experience, fragmentary as it is, yet bears depths of meaning and is endowed with rich potentialities for development.

The experience of communities witnesses in a strangely poignant form to that reaching out in endeavour which can be spelt out in terms of a host of symbolic corporate activities. The idea of community as unitary telos is big enough to include both tradition and rebellion, overarching consensus and challenging diversification of opinion. And yet what is the content of such an idea? That it is regulative in function will be readily conceded. I also feel that it need not necessarily be envisaged in terms of a noosphere, although the temptation to see it this way exerts an unmistakable pull. When Tönnies speaks of a *Gemeinschaft* of mind as the truly human and supreme form of community he seems to be yielding to this pull. And Teilhard de Chardin of course does so. I would rather conceive the telos in terms of a quality of corporate living which would be compatible with quite a range of institutional forms. We are not obliged to think in terms of fifth-century Athens, the village republics of ancient India or a commune of a way-out contemporary kind. It is indeed intrinsic to such a telos that it be able to accommodate and welcome the widest cultural variations and institutional improvization while also allowing for the personal privacies and breathing space on which I have already laid some stress. For a concept to be both ground and telos is something which has respectable precedents in the history of philosophy.

One way of testing our concept is by exploring its limits. The limit of community, as I see it, is, at one pole, individual egoity where this presents a barrier to fellow-feeling, and, the macrocosmic limit, group conflict in the form of overt violence or war. We obtain a negative criterion of the connotation of the concept of community as unitary telos if these are seen as manifestations of what it is *not*. But can nothing positive be said about it?

I suggest that it is because of the abundance of horizons which individual communities bear (I search for a better verb) that community as unitary telos is an operative possibility. By saying this I am optimistic enough to believe that it is already in the making. The hiddenness of the telos is by no means total. It is manifest in all communities when corporate living reveals signs of caring concern and constructive activity in the teeth of catastrophic events and the inhumanity of man to man. Community in this paradigmatic sense is progressively disclosed. It is both ground and horizon of the meaningful life of persons in community. The history of philosophical thought in various

parts of the world already accommodates paradigms which are both presupposition and goal of endeavour. For example, the concept of *dharma* is one such. We need to grant that that which profoundly *is* can need nurturing to come to full flowering, to become manifest in all its ontological fullness. A pooling of metaphysical resources of diverse traditions, reinforces the philosophical viability of a closer intermeshing of the actual and the ideal, the fragmentary and the totality which beckons, than we have hitherto been prepared to regard as metaphysically respectable. To translate such insights into concrete living is, needless to say, set us as a task not so much as philosophers but as persons in the various communities to which we belong.

NOTE

1. 'The Typological Tradition', in Joseph S. Roucek (ed.), *Contemporary Sociology*, The Philosophical Library, New York, 1958, p. 558.

Regularity, normativity and rules of language*

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ABSTRACT. The paper attempts to establish the thesis that though the concept of rule-governance is involved in that of language and therefore of a natural language, a natural language is not constituted by its rules. It proceeds by stating a set of conditions which are to be fulfilled by the rules governing a phenomenon in order that the phenomenon may be said to be constituted by them, and then explains why the rules of a natural language cannot fulfil them. The rules of a constructed language fulfil these conditions, and so do those of a game, and are therefore constitutive of their phenomena. A natural language resembles a game insofar as both are rule-governed and the rules of both are in a sense arbitrary, but to claim that the former is also, like the latter, constituted by its rules is to stretch the analogy between the two too far.

In the process of reaching the above conclusion it is shown that rules of a natural language, whether grammatical, or conceptual, essentially linked with linguistic practice. The former are shown to be statements of linguistic regularities, and the latter shown to be explainable as dependent on linguistic regularities sometimes directly and sometimes indirectly via grammatical rules. The normativity of these rules is admitted but explained as springing from or thrown out by the fact of their being, in effect, regularities of linguistic practice. This process of the emergence of normativity has been shown to be a natural, pragmatic process, explained in terms of the twofold assumption that man, the user of language, is a social and rational animal. The assumption of sociality is minimal in the sense that it simply means that man is interested in having social intercourse, i.e., intercourse with other members of his society. So is that of rationality since it also simply means that man is rational enough to feel committed to adopt the means to what he has accepted as his goal.

The primary objective of language is communication, and linguistic communication is an important means of effecting social intercourse. Accordance with the rules of a language is necessary for attaining communicative success. Therefore, it is natural that these rules acquire normativity, since it is natural for a rational being to feel that he ought to use them if he wants to attain communicative success. They thus function as conditional imperatives or prescriptions, but become more binding than many other conditional imperatives because man, being a social animal, does want to achieve communicative success for having successful social intercourse. Sometimes by a process of conditioning a rule of language may even acquire the status of a categorical imperative, as it perhaps happens in stylistics.

The above analysis of the normativity of linguistic rules is further reinforced and some other relevant issues are clarified by refuting Snyder's counter claim (*Mind*, April 1971) that since linguistic rules are normative, they cannot be called statements of linguistic regularities.

In this paper I shall be concerned almost exclusively with the concept of natural language and references, if any, to that of formal or artificial language will be made only to highlight some aspects, or to exhibit some contrastive features of the former. My concern even with natural language has a very narrow and

*Some parts of the paper were used by the author in his U.G.C. National Lectures in Philosophy for the year 1981.

limited objective: I shall try only to determine in what sense and to what extent linguistic rules are logically involved in the concept of natural language. The conclusion I will arrive at is that, though in a sense the very concept of language and, therefore, of natural language can be said to involve the concept of rule-governance, i.e., the functioning of a phenomenon can be described as the functioning of a language only if it is governed by a set of rules, it is *not constituted* by its set of rules. The relationship between linguistic rules and the concept of language is, thus, as claimed here, a little odd and complicated, since if something is contained in a concept it is natural to treat it as also constitutive of the latter. But I hope to show that the oddity is not illogical nor the complexity inexplicable.

I have been attracted by this problem about the concept of (natural) language because of the claim made by some philosophers of language that the rules of language constitute language and because of the fact that the claim is very often presented as a conclusion from the purported premise that the very concept of language entails that language is or must be rule-governed. I shall accept the premise but reject the conclusion without, hopefully, committing any serious logical, or factual, error. But, although my interest in the problem has been aroused by certain happenings in the recent history of the philosophy of language, I do not intend to discuss it in a historical manner. I shall not present my case as a criticism of some view or views maintaining that language is constituted by a set of rules. Rather, I shall present it as a philosophical position emerging out of an analysis of the concept of language and linguistic rules. Therefore, I shall feel neither offended nor disappointed if somebody shows that I have not refuted any existing theory on the subject.

That language is a system of symbols is a truism too obvious to be elaborated, but its implications need to be drawn out to exhibit the importance of rules in making it possible for any language to function as a means of communication. A word is a symbol and, in a sense, language consists of words. But any word can function as a symbol only in a system of symbols, only because it is the member of a system of symbols, only if there are many other word-symbols with which it can have certain types of relationships. To be a (linguistic) symbol is to have the ability to perform a set of functions in communication and this a word can do only if it can have a set of relationships with certain other words. 'Cat' is a symbol for the animal it denotes because there is a host of other symbols like 'animal', 'mixed', 'unmixed', 'colour', 'leg', 'one', 'four', etc., with which it can enter into a set of relationships, entitling us to make statements such as, 'A cat is an animal having four legs, one tail, and mixed or unmixed colours.'

A word is like a piece in a game, or a coin in a currency. The card we call the queen of spades is the queen of spades only in a set of cards related to each other in some specific ways according to the rules of card-games. A fifty-paise coin has the exchange value it has only because it is a piece in the Indian currency with a set of rules determining its relationships with other pieces and thereby its use in trade. Taken in isolation from the net-work of pieces it belongs to, the game or the currency as the case may be, the card called the queen of spades is just a picture-card and not the queen of spades, and the metallic piece called a fifty-paise coin is just a metallic piece and not a fifty-paise coin. So too the word 'cat', or any other word for that matter, in isolation from the linguistic system it belongs to, is only a particular sound or mark, only a particular phonetic or graphic entity, and not the word it is in its language. With regard to any word (or any linguistic element) it must be logically possible to ask and answer the question, 'To which language does it belong?', in order that it may be given the (linguistic) status of a word.

A mere collection of words, therefore, does not constitute a language. What makes a collection of words a system of symbols, a language, is the existence of a set of rules which legitimizes our practice of classifying combinations of words into permissible and impermissible strings or complexes. Even the kinds of things we do with language, the speech acts we perform or may perform, are possible because each speech act is governed by a set of rules, and because there are rules which interrelate the various speech acts. The speech act of asserting is possible not only because there are rules which determine when an illocutionary act is an act of asserting, but also because other speech acts like affirming, denying, conceding, agreeing, disagreeing, doubting, questioning, describing, supposing, justifying, proving, disproving, etc., are possible and because there are rules relating one speech act to or distinguishing it from others. That is, whether we take language as a set of structures consisting of words as symbols, or as a set of speech acts which we perform with the use of linguistic elements, it is a system, and not just a collection. It is a system because there are rules which govern the combinations of words or the performance and interrelations of speech acts.

That there are linguistic rules is again an obvious truth about any language. Rules of a certain type constitute grammar, and every language has a grammar. The grammar of a language is peculiar or regional to it, as grammatical rules have jurisdiction only over the elements of the language whose grammatical rules they are. Apart from grammatical rules, there are also conceptual or logical rules which language in general has to abide by, and whose jurisdiction ranges over all languages, in the sense that the violation of any one of these rules by an element belonging to any language creates some hurdle, minor or major, in communication. For example, to say that A is greater than B and B is greater than A will fail to convey any sense, and this failure is not due to the fact that the linguistic elements used here are English. Such a combination of the corresponding linguistic elements belonging to any language will meet the same fate. This is so because the rule about the operation of an asymmetrical relation is not a regional, but a conceptual, or logical, rule which has its jurisdiction over human communication, or speech, as such.

A grammatical rule, on the other hand, is language-specific. For example, the rule that the form of the adjective in certain cases changes in accordance with the gender of the noun it qualifies (kālā ghorā; kālī ghorī), is a regional rule which is true of the syntax of Hindi but not of English. Even if a

grammatical rule holds good in several or all languages, it has the status only of a regional rule, since the fact that it applies to all languages is true only as a matter of fact and not as a matter of logic. It is accidental and not necessary that all languages have the same grammatical rule if they have one. Perhaps the rule that every noun-word must have a gender, or that a plural noun functioning as the subject of a sentence must take a verb in the plural, can be cited as examples of regional rules operative in all languages. But even if they are not, it does not matter because the point I am making does not depend upon the availability of an authentic example.

Language is the most important human, and perhaps only a human, means of communication, and communication is the primary objective for which it is used. We use language to communicate our doubts, beliefs, ideas, thoughts, feelings, intentions, etc., and we are able to do all this because we use linguistic elements—words, groups of words—in accordance with a set of rules. To communicate in any language is to make one's linguistic behaviour accord with certain rules, to make the use of the linguistic elements concerned accord with the relevant rules which belong to the traditional, conventional, stock of rules of the language in question, and also with some conceptual rules which are appropriate to the speech act or acts performed and the concept or concepts involved therein. For example, if I intend to communicate in English a relational fact that A is greater than B, I must not only observe in my use of the English elements the relevant rules of English grammar but also must not contravene the conceptual rule pertaining to the concept of asymmetry by adding that B is also greater than A.

Apart from grammatical and conceptual rules, the use of language is also subject to moral, legal and social rules. For example, 'Tell the truth but not the unpleasant truth' expresses a moral rule; 'Do not use an unparliamentary expression in a public debate' expresses a legal or quasi-legal rule; 'Do not use an imperative-form conveying an order but one conveying a request when you ask an elderly person to do something for you' a social rule, etc. But these rules need not be considered while discussing the rule-governance of language because linguistic behaviour, being also a form of social behaviour, is subject to them more as general social behaviour than as linguistic behaviour. They follow from certain norms, moral, legal, social, etc., which we have accepted as valid or desirable for human behaviour, and not from those which are taken to be the norms of man's linguistic behaviour in particular. These rules determine the appropriateness, fittingness, becomingness, etc., of an expression uttered in a certain context but not its correctness, accurateness, preciseness, etc. Therefore, in this paper I shall be concerned only with grammatical and conceptual rules of language, i.e., with rules which one must observe in order to communicate successfully what he wants to communicate through language, no matter whether the method or purpose of his communicative act is morally, legally, or socially admirable or reprehensible.

Linguistic communication is so much dependent on the observance of rules that our use of the very concept of language has acquired a necessary, or

quasi-necessary, reference to rules. We seem not to be able to think of any L as a language if it is not governed by a set of rules. We would not call any L a language if generally its use is not governed by a set of rules. Therefore, it seems to be not just inductively true that all languages have rules; it also seems to be logically true that any language to be a language must have rules. That a language must have rules is also supported by the fact that it is the rules which apparently provide the standards of linguistic evaluation. Quite often we distinguish between right and wrong uses of linguistic expressions and we do that on the basis of rules; we declare a use incorrect because it violates a rule of language and correct it in the light of the latter. This fact that the use of a linguistic expression can be correct or incorrect is again not merely an accidental or empirical but a necessary feature of language. We would not call any L a language if it is not possible to distinguish between correct and incorrect uses of its expressions.

It is primarily this feature of language, i.e., its being rule-governed, which has encouraged some philosophers to draw an analogy between the concept of language and that of a game, since a game is also essentially a rule-governed phenomenon. We would not call any G a game if it is not rule-governed, if it does not permit of the distinction between right and wrong moves in terms of some rule or rules. Some scholars further hold that the rules of a game as well as those of a language are arbitrary in the sense that no reason can be given for the existence of one particular rule against another, or for one set of rules against another possible set. But the analogy between the two, though not uninstructive, must not be overemphasized. Overemphasizing it is likely to tempt one to ignore or misunderstand some of the distinctive features of the rule-governance of language. It seems to me that such a thing has happend at least in some quarters of contemporary philosophy of language and therefore I would like to discuss in what follows some of the respects in which the rule-governance of language is different from that of games. I have no intention to question the claim that being rule-governed is central to both the concept of language and that of game, nor the utility of the analogy between language and game to illumine the nature of language, or even to dispel some wrong, mythological, theories of language. But it does seem to me that rule-governance is not central to both of them in exactly the same sense, and therefore the analogy has to be taken as possessing only a limited significance. All this happens because the rules of language and those of game possess some very importantly different features.

The basic difference between language and game can be briefly stated by saying that the rules of a game *constitute* the game, but the rules of a language, whether grammatical or conceptual, do not.

When a phenomenon has a set of rules, its rules do regulate or govern its functioning, partly or fully, flexibly or inflexibly. But all rules do not constitute the phenomenon they belong to, nor are all phenomena constituted by their rules. To say that one is so constituted is to make a much stronger claim. The concept of being constituted by rules can be explained by stating the

conditions the rules which constitute their phenomenon must satisfy. Taking R to designate a set of rules, $R_1 \ldots R_n$ to designate individual members of the set, R_I to designate any member of the set, and P to designate the phenomenon, the set of things or activities to which R belongs, we can say that R constitutes P if the following conditions are fulfilled.

1. R must be a complete set a set all of whose members are specifiable or enumerable without any uncertainty or ambiguity. It would make no sense to say that $R_1 + R_2 \ldots +$ some unknown R_I's constitute P.
2. Each R_I must be equally essential to P in the sense that treating an infringement of it as of no consequence, or dropping it, must be taken as making some change in the character of P, or sometimes even as turning P into something else.
3. A violation of any R_I must be unambiguously decidable.
4. The violation of any R_I by an event E in P must make E lose the significance it has when it does not violate that R_I. If E is not considered to have lost its normal significance even after violating R_I then either the latter is not a proper R_I, or the phenomenon in which E occurs is not P but some other one.
5. The violation of an R_I by an E makes E impermissible in an absolute sense; that is, E is not on some occasions made more or less impermissible than on some others depending upon the gravity or degree of the violation. It is not that a certain degree of deviation from the rule does not affect the character of E or affects it only meagrely, while a greater deviation affects it conspicuously. The degree of violation in a sense is of no consequence here. The mere fact that E violates an R_I is enough to make it impermissible.
6. It is not difficult to decide, on the basis of one's ignoring some R_I, that he is not engaging himself in P. Whenever rules constitute a P_I, one can be declared as not being engaged in a particular P_I but in a different one if he is found to consistently or systematically ignore a certain number of R_I's.

Most of the games satisfy all of the above conditions and almost all of them satisfy a good majority of them. The rules governing a game, say football, constitute a complete, closed set; each one of its rules is as essential as any other; the violation of every rule is generally empirically and always in principle unambiguously decidable; the violation of any rule by a move is sure to make it lose its significance, e.g., kicking the ball through the net of the opposite team by a player who crosses the boundary he is not allowed to cross is sure to make the kick lose the status of a score; the degree of violation is of no consequence, as the ball's merely touching the hand of any player other than the goalie calls for a penalty; and it is, in principle, always decidable when one is not playing football on the basis of his consistently ignoring some rule or rules. If all the players indiscriminately use their hands and legs in playing, one would be justified in saying that they are not playing the game of football but some other game which may have certain similarities with the former but is none the less a different game. To admit that one is playing the game of football is to admit that there exists a set of rules determining how the game should be played and that he is willing to play it according to these

rules. A serious player of the game would not like to play if there are no rules to decide fouls, penalties, scores, boundaries within which one is to move, etc.

A natural language, on the other hand, does not fulfil most of these conditions and those that it does fulfil are fulfilled in a much looser way than in the case of a game. It is a necessary condition for any R to constitute any P that R must be a complete and closed set. But in the case of a natural language this condition cannot be satisfied. It is not possible to present its grammar in a completed form, to give the complete set of its syntactic and semantic rules, for the simple reason that it is a growing, developing, changing phenomenon on account of which it is always possible that some one of its rules gets modified or replaced by a new one. Rules of language depend upon, as will be explained later, how the language functions; in a sense they follow (though also control) linguistic practice, and therefore they cannot (predetermine or) constitute it.

Conceptual rules also are not in an advantageous position in this respect. It is not possible to prepare a complete list of these rules because, as will be shown later, they also ultimately depend upon linguistic practice, or upon the use of the relevant expressions, and linguistic practice or use is not something which can be determined *a priori* or once for ever. Moreover, the statement or formulation of a conceptual rule is itself the result of linguistic analysis, i.e., analysis of the behaviour of the linguistic elements which are normally used to express the concepts or conceptual relationships concerned. That is why statements of conceptual relationships quite often raise controversies and become subjects of serious philosophical debate. For example, each one of the alleged rules, ' "Good" is not a property-word', 'Proper names are non-connotative', ' "Ought" implies "can" ', ' "Mind" and "Body" belong to two different categories', etc., has been arrived at after a great deal of logical or linguistic analysis and each one has provided occasions for prolonged philosophical disputations.

Conceptual rules are in effect rules of coherence or consistency, as their violation produces incoherent or inconsistent discourse. Therefore, treating them as being constitutive of language would amount to declaring that an incoherent or inconsistent linguistic expression is not a linguistic expression, which would be empirically false. Incoherence admits of degrees and therefore an incoherent discourse could be more or less incoherent. An incoherent discourse can perform some communicative role if its incoherence does not exceed a certain limit. How much of incoherence can be tolerated or digested by usage without causing complete communicative failure or deadlock cannot be determined *a priori* but only by experience. Since it is not true that an incoherent expression can perform no communicative function, it would not be fair to deny to an incoherent linguistic expression the status of a linguistic expression.

As I hope to show at a later stage, conceptual rules depend upon and, therefore, presuppose usage. For this reason also they cannot be called constitutive of language. A rule cannot be dependent upon the language it is said to

constitute; (it is the language which would depend upon its rules) if it were constituted by them. It can be concluded, therefore, that for the reasons listed above, i.e., on account of their being, in substance, rules of coherence, rooted in usage, and (potentially) controversial, conceptual rules cannot, by themselves, or in association with grammatical rules, be said to constitute natural language. It is obvious, to repeat, that condition (1) is not fulfillable by any natural language, and it being a necessary condition, even if the remaining conditions are fulfillable, which is not the case, its non-fulfillability alone is a good enough reason for saying that the rules of a natural language cannot be claimed to be constitutive of it.

Since grammatical rules can change, and conceptual rules can be controversial, no grammatical or conceptual rule can be said to be *essential* to natural language. If it is urged that in the case of any language, any one of its rules may not be, but their complete set could be, essential to it and therefore constitutive of it, it is worth recollecting that, since it is not possible to prepare such a complete set, the possibility of the complete set being essential and therefore constitutive cannot be accepted as a genuine possibility.

Violation of a grammatical rule is not always conclusively decidable because it is not a rigorous rule. For example, according to the rule of gender in Hindi grammar, of two words of the same form, or meaning the same thing, one could be masculine and the other feminine (*Rani, Pani; Grantha, Pustaka*) and, therefore, no decisive criterion can be formulated to determine whether or not a certain use is a violation of the rule. Only an appeal to linguistic practice can be made and practice being what it is, it cannot offer a decisive, absolutely unambiguous, criterion either. Most grammatical rules admit of exceptions, and whether a deviation is to be counted as a violation of, or as an exception to, a rule, cannot be determined by an appeal to any set of decisive criteria. The single fact already mentioned, namely, that a conceptual rule could be controversial, implies the possibility of border-line cases and therefore rules out the possibility of there being an all-time decisive test for its violation. We are still debating, in spite of Ryle, whether or not it involves the violation of a conceptual rule to treat both 'mind' and 'body' as concepts of the same logical type.

Every violation of a linguistic rule, or the violation of every linguistic rule, does not completely block or nullify communication which is the primary goal of any linguistic activity. That we quite often understand what a man says in spite of the fact that he violates some grammatical rule or rules is a well-known fact of normal human experience; similarly, that we understand what a philosopher, whom we accuse of violating some conceptual rule or rules, means to say is a well-known fact of philosophical scholarship. In spite of Descartes' violating a series of conceptual rules pertaining to mind-language, Ryle could understand him; and in spite of his own (and Russell's) violation of some conceptual rule or rules about the word 'mean' Wittgenstein could understand what he wrote in the *Tractatus;* otherwise Ryle could not have attempted to explode the Cartesian myths, nor Wittgenstein to supercede his earlier views. This is not to deny that the degree, or extent, of violation of a grammatical or conceptual rule can be of a type which blocks or frustrates all understanding. This is the case with such strings of words as 'A women will fetched pond from water in' which violates more than one grammatical rule of English and with 'My headache is the quotient of an yellow entailment' which violates more than one conceptual rule.

But the number of cases in which violations do not matter much is legion, and what extent of violation does or does not stifle communication is determined generally by experience and not by any rigidly specifiable set of criteria. Even specifications regarding the scope or relative jurisdiction of the rules do not always help. Quite often one has to appeal to one's linguistic intuitions or sensitivity. The rule about the use of prepositions does not always decisively say whether or not the use of 'in' in place of 'into' or 'at' in a certain sentence at a particular place is a clear-cut violation, nor does the conceptual rule of implication (for natural language) decisively determine whether or not one is violating it in denying or saying that A's affirming that X is good implies that A likes X. All this results from the fact that neither of the two rules is precisely, or rigorously, formulatable. That is why one has to argue out or establish by an appeal to usage, use, or by an analysis, that in a certain case the relevant rule has been violated, or that a certain violation is not innocent. One cannot claim of every (alleged) violation that it is a violation and therefore incorrect simply by appealing to a rule, as one can do in a game. It is much easier to detect the violation of a rule in a game because the rules are much fewer in number, much more precisely formulated, the boundaries within which they are to operate much clearer, and the moves or acts which are subject to their control much more precisely characterizable. This is the reason why the decision whether or not a certain move has violated a certain rule of the game is never left to the sensitivity or intuition of an experienced player but is made by an appeal to the book of rules, or to an expert who has mastered the book of rules.

The violation of a rule of language is like the improper fixing of a wheel in a carriage. Sometimes the carriage can move in spite of it, though not with great ease and speed, and sometimes it cannot move at all, depending upon the extent of defect in the way the wheel has been fixed. When the carriage does not move at all, even a raw hand at driving can detect the defect. But when it moves though with a little less ease than it normally does when all the four wheels are properly fixed, it is capable of taking the passengers to their destination and the defect it suffers from can be detected only by an expert, sensitive, driver, who is keen not only to reach his destination but also to reach by driving a carriage which runs smoothly.

If the violation of a rule R_1 does not matter in a game G_1 the natural inference is that R_1 is not a rule of G_1, or that the game in which R_1's violations do not matter is a game different from G_1. The situation is very different, as has been shown above, with the rules of a natural language. We are able to understand a Hindi speaker who says 'Hamārī patnī bīmār hain' (literally

meaning 'Our wife is sick' but intended to mean 'My wife is sick') though he violates the rule of Hindi that a pronominal adjective must be of the same number as that of the noun it qualifies ('our wives', 'my wife'). That Hindi speakers usually violate this rule has become a common feature of spoken Hindi, but the violation does not make the language they speak non-Hindi.

Examples of violations of conceptual rules, which do not reduce the language that involves them to plain gibberish, can also be easily found. For instance, Spinoza may be said to have confused the notion of an efficient cause with that of logical entailment in asserting that the world follows from the nature of the substance in the same way in which the theorem that the three angles of a triangle are equal to two right angles follows from the nature (or definition) of a triangle. His assertion may thus be accused of violating some conceptual rule or rules, some rule or rules about the use of the concept of an efficient cause or that of logical entailment. But even then one would not say that his language thereby becomes meaningless jargon.

It is clear from the foregoing discussion that linguistic rules, both grammatical and conceptual, operate in such a manner that their violation admits of degrees, and can in some cases be not only undecidable or inconclusively decidable but also partially or (almost) completely ineffectual as far as the success of the communicative act, in the performance of which they occur, is concerned. All this cannot happen in the case of a constitutive rule, as is clear from the way game-rules operate. The rules of a formal, constructed, language also operate as constitutive rules, perhaps obviously more so than even game-rules do. If it is a rule in a formal system that a sequence of symbols to be a well-formed formula must be of the form (....), then even the slightest variation from this pattern, e.g., (....)), will make the sequence ill-formed and rule out even the remotest possibility of its ever being a well-formed formula of the system. If the pattern (....)) is accepted as a well-formed formula, then it follows that the above rule is no longer a rule of the system, or that the system in which (....)) is considered to be well-formed is different from the system in which there is a rule legislating that only sequences of symbols arranged in the form (....) can count as well formed. Here the deviation from a rule does not have to be of any conspicuous magnitude in order to be named a violation. It cannot be said that '(....))' is permissible because it deviates from the prescribed form by having only one extra parenthesis whereas ') (....)))) ((' is not because it has several extra parentheses.

The rules of a natural language do not function as constitutive rules also because their role in communication is only subsidiary, though not at all for that reason unimportant. The success of the communicative act depends not only upon one's following a set of rules but also upon one's proper understanding of the context, the needs of the moment, the background of the person one is addressing or is addressed by, etc. In the example given earlier the Hindi speaker fully succeeds in communicating, and the addressee in correctly receiving, his intended message that his monogamous wife is sick though what he says, if interpreted strictly according to the rules of Hindi grammar,

would mean that his polyandrous wife is sick. All this is made possible because the context, the background of the speaker, the relevant social conditions, are well understood by the person addressed. Similarly, when a politician says in an election speech that the defeat of his party entails a catastrophe for the weaker sections of the country, it does not take much time even for a philosopher, or anyone else who has been paying attention to the conceptual links between the different elements of the speech, that what the politician means is a causal and not a logical implication. Contexts thus play a supplemental or corrective role in communication, in one's conveying as well as receiving the intended message. The relative importance or share of the two, i.e., rules and contexts, again, cannot be determined *a priori*, by means of any formal criterion, but only by experience, by one's linguistic sensitivity and intuition. That contexts do not play any supplemental or corrective role in a formal language or a game is too obvious to need any elaboration. No context can justify or condone offering '–(p·–q)' as equivalent to '–p·–q' or a hand-throw of the ball by the centre-forward in the net of the opposing team as an intended kick by his left leg.

It has been said earlier that rules serve as the standards of correctness for the use of linguistic expressions and that the fact that uses of expressions can be correct or incorrect is an essential feature of language, From this it may seem natural to conclude that rules are essential to language. In a sense this conclusion would be quite innocent. But if one takes it to entail that rules *constitute* language it would not be justified. I shall try to show this in what follows by analysing the nature and source of the normativity of linguistic rules.

Since linguistic rules serve as standards of correctness, they are prescriptive or normative rules, in the sense that they operate as norms, as points of reference, determining correct and incorrect usage. It is not bad logic to claim that a certain use of an expression is incorrect because in it a singular verb has been used with a plural subject, or that an if-then sentence is incorrect if it is used to express an entailment-relation when it is possible for the antecedent to be true and the consequent to be false. But the normativity of linguistic rules is of a very peculiar kind because it is ultimately derived from linguistic practice. I shall show this to be true first in the case of conceptual rules and thereafter in that of grammatical rules.

The link between the normativity of a conceptual rule and linguistic practice can be interpreted as direct or as indirect, i.e., via some grammatical rule or rules, whereas the link between the normativity of a grammatical rule and linguistic practice is unambiguously direct. That is why the former may seem to be normative in its own right.

It is a conceptual rule that a question cannot be true or false. It can be put in the form of an imperative: 'Do not call a question true or false', or in the form of a normative: 'It is wrong to call a question true or false.' But it makes no sense to call a question true or false because if you consider the way in which the speech act of asking a question is ordinarily performed, responding to a sentence expressing a question by uttering 'true' or 'false' will be

against linguistic practice. 'True' and 'false' perform some functions in usage, and so does the act of asking a question. As our practice is constituted at present, the functions performed by the former are not combinable with those performed by the latter. We use 'true', for example, to confirm, affirm, concede, express agreement with, etc., what has been said, stated, or asserted, while we ask a question to seek information. The proper response to a demand for information is not to offer confirmation, affirmation, etc., but to supply, or refuse to supply, or express one's inability to supply, the information sought.

The linguistic practice about the use of 'true' and about the modality of the speech act of questioning is also expressed or reflected in the relevant grammatical rules. For example, it can be said that it is a rule of English grammar that an interrogative cannot be the subject of a sentence whose predicate is 'is true' (or 'is false'). If one prefers the imperative or normative form, one can put it as: 'Do not make "is true" the predicate of a sentence whose subject is an interrogative sentence', or as 'It is wrong to. . . '. Therefore, one can say that it is conceptually wrong to call a question true or false because of the grammatical rule that 'is true' or 'is false' cannot be meaningfully predicated of an interrogative. But then one must not forget that the latter rule owes its sanction to nothing but linguistic practice. If we change the practice, the grammatical rule will automatically change, leading to the relevant consequent change in the conceptual rule.

It is a logical rule that if all A's are equal to C, this A must also be. This is so not because of any regularity about the nature of A's, but because of a regularity about the use of the word 'all'. In current linguistic practice 'all' is used in a certain way, and as long as that practice remains unchanged, the above rule will hold good. We can say that the logical rule holds good because of a grammatical rule about the use of 'all' and then explain or describe the latter rule as the expression of the relevant linguistic practice, or relate the logical rule directly to the linguistic practice because a grammatical rule is nothing but the expression of a regularity in linguistic behaviour. Both the logical and grammatical rules, though rooted in or originating from linguistic regularities, acquire the status of, or function like, normatives or prescriptives because of certain facts of man's linguistic life. Adjusting or according one's linguistic behaviour with linguistic regularities or practice is an important condition for successful communication and it is this fact which lends prescriptive force to these practices and thereby to conceptual or grammatical rules which are their reflections or offsprings. This point will be furthere laborated in the following discussion about the normativity of grammatical rules.

A grammatical rule is a statement of regularity exhibited in linguistic practice, turned into, or raised to the status of, a normative rule. To start with, every grammatical rule is the outcome of linguistic practice; it is stated or formulated after noticing that certain elements of a language are generally, regularly, used in a particular way. That is why the only reason why a certain rule, say, the rule that plural subjects take plural verbs, is a rule of a certain

language is that people generally, as a rule, use plural verbs with plural subjects. Every grammatical rule is a record, a congealed form, of a regular usage and therefore when a linguistic practice or usage changes, the relevant rule also changes. But the rules, which are in fact statements of linguistic regularities, acquire in course of time a prescriptive force and thus turn into or function as norms, or normative rules, by sheer dint of their usefulness in communication. When I utter to a person a certain sentence S constructed in accordance with a set of rules, I can convey to him what I intend to and he can understand, or receive, the right message encoded in S only if he interprets it rightly, i.e., as constructed according to a set of rules which is identical with my set, or which has to a very large extent the same members as my set has.

In linguistic communication one is bound to follow tradition, i.e., the set of rules the use of which has become a part of linguistic practice or behaviour; otherwise what one says may not be properly or fully understood. It is this fact which endows linguistic rules with a prescriptive or normative force, with the result that they also function as norms or standards of good linguistic behaviour. Since they are the rules which linguistic behaviour regularly follows, ignoring or completely deviating from them is likely to block understanding completely or partially, and therefore they have to be, ought to be, followed. They are thus conditional imperatives: one has to, ought to, regulate his linguistic behaviour in accordance with them if he wants what he says to be properly understood or to properly understand what is said to him. Linguistic ability, the ability to communicate, i.e., the ability to make oneself properly understood and to properly understand what is said to him, is such an obviously, commonly, cherished and prized goal that its mention does not seem necessary when we talk of the normativity of linguistic rules. We take it for granted that it is one of the important goals of social life. But it remains a fact that linguistic rules have to be followed only if we value this goal as a desirable human goal. If a person does not value linguistic ability, he will have no commitment to follow linguistic rules, and the latter will, therefore, lose, for him, all the prescriptive force which ordinarily goes with them. It is in this sense that linguistic rules are conditional imperatives.

Although linguistic rules derive their prescriptive force from the fact that making one's use of language accord with them is an almost indispensable means to successful communication, it is not unnatural sometimes to consider acquisition of ease or expertise in their use as something of intrinsic importance. Whenever such a thing happens, it can be explained *a la* of J. S. Mill's explanation of the miser's valuing money as an object of desire in its own right. As he puts it, pleasure is the only natural object of desire for its own sake. But since money is a means to pleasure, one may also desire to have money and then, by the psychological process of conditioning, one may in course of time transfer the value attached to the end, i.e., pleasure, to the means, i.e., money, and start desiring to have money for its own sake. This is what, according to Mill, happens with the miser who values money for its own sake and not for the sake of the pleasures it is a means to. In a similar way,

we may get conditioned to prizing expertise in the use of rules as an end in itself, as if its value or importance were not just instrumental. The fact of the matter is that we naturally, on account of the demands of social life, value successful communication, and since the use of rules is a means to it, we initially learn to value the latter as a means only. But finding it almost always indispensable for communicative success, by a process of conditioning similar to the miser's, quite often imperceptibly, we get habituated to valuing it as something more than a means.

Language itself derives its value from its being a means to communication, and, therefore, when some other means better than it is available, we do not hesitate to make use of it. But since we also get used to valuing it, by conditioning and transference, as if it were an object of intrinsic importance, we try to refine and perfect the instrument far beyond the requirements of grammatical (or logical) correctness. The development of stylistics owes a great deal to this interest and the result is that of various possible, grammatically equally permissible, modes of saying the same thing as far as communicative success is concerned, some are considered to be preferable, on stylistic grounds, or grounds of elegance, to some others. Vāṇabhatta's permission, as the story goes, only to his youngest son to complete his unfinished *Kādambarī* is a good example of his greater regard for stylistics than for grammar or logic.

As the foregoing discussion has shown, the interpretation of linguistic rules as regularities in language use quite satisfactorily accounts for all, or almost all, of the features which philosophers and linguists consider their important features. But Snyder claims that so interpreted rules of language are not of any philosophical interest. In the philosophically relevant sense 'a rule is something which can be followed. Presumably, it is something like a guide to action; that is, a precept or maxim, a standard or norm, a regulation, or so on.'[1] He considers it comparable to a rule of etiquette or game. Rules of language, according to him, are normative and not linguistic regularities. Accepting a normative rule is a reason 'for or against behaving in a certain way'. Regularities too can function, he admits, 'both as motive and as reason for behaving in a certain way',[2] but there is an important difference between the way rules function as reasons and the way regularities function as reasons. 'In order that a rule should function as a reason, nothing more is required than that one accept or adopt the rule. Indeed, this might almost count as an analysis of what it is to accept a rule.' On the other hand, to accept, for example, the fact, the regularity, 'that crows are black does not *by itself* provide a reason or motive for not shooting at white birds', unless and until I am out to hunt crows. That is, it could be a reason only if I intend to, want to, hunt crows. Another feature of normative rules is that 'though they can (perhaps always) be stated by uttering a sentence in the indicative mood, it is also possible to state them by uttering a sentence in the imperative mood', while a rule in the regularity-sense cannot be stated in the imperative mood. 'Even though, as a rule, American cars are larger than European cars, there is no sentence in the imperative mood which counts as a natural statement of that regularity.

Accordingly, the question, "Are there rules of language?" should be treated as asking about rules of a normative sort'.[3] Snyder's answer, obviously, to this question is that there are rules of language and they are normative, and what he says, as quoted above, asserts or implies that they are not statements of regularities.

That rules of language are normative is accepted, but Snyder's explicit or implicit claim that they are not also rules in the regularity-sense is to be questioned. He seems to hold that the same rule cannot be at the same time both a regularity and a normative. That is, according to him, the same sentence cannot express both a regularity of linguistic behaviour and a norm which the latter is to abide by, whereas that is what I have pointed out to be the peculiarity of linguistic rules.

Snyder's first argument in favour of his thesis is that a regularity can be a reason for or against a certain behaviour not by itself but only when some end or object of desire is assumed. A rule of language, on the other hand, is by itself such a reason. Therefore, it cannot be said to be a regularity. But this argument is not valid because the second premise is not true. No rule of language is a categorical imperative (or reason) to perform a linguistic act. As has been already shown, its prescriptive force is a consequence of the fact that according one's linguistic behaviour with it is a means to successful communication. Therefore, it is also, like a regularity, a reason for or against a certain (linguistic) behaviour only when successful linguistic communication is assumed to be one's end or object of desire. Every linguistic rule owes its normativity to its corresponding regulairty. The only sanction or reason for requiring one to use a singular verb with a singular subject is that the users of English regularly, as a rule, do so. This is not an invalid argument because it is not a piece in formal logic. Rather, it gets its sustaining force from facts of social life of which linguistic life is a form. We communicate successfully when our use of language accords with the relevant regularities exhibited in the linguistic behaviour of our speech community and, therefore, we have to, ought to, conform to those (linguistic) regularities, if successful communication is what we aim at. This is not to deduce an 'ought'-from an 'is'-sentence, but to note that facts of social life do throw out norms or normatives for social behaviour. That is why in several spheres of social life, and certainly in linguistic behaviour, it is justified to say one ought to do X because the relevant people regularly, generally, do it.

If one does not want to communicate, or to communicate well, no rule of language will by itself provide a reason to behave in any particular manner. One would not then need to accept any rule of language, and, therefore, even if accepting a rule does provide a reason for behaving this way or that way, such an eventuality will not arise in one's life. If I am not at all interested in buying a car, the information that American cars are, as a rule, larger than European cars will give me no reason for buying an American or European car. Similarly, if I do not want to communicate, or to communicate successfully, to anyone that all crows are black, the relevant rule about the agree-

ment of the number of the subject with that of its verb, neither in its regularity-form, namely, 'A plural subject always takes a plural verb', nor in its imperative form, namely, 'Always use a plural verb with a plural subject', will give me any reason for using 'are' in place of 'is' after the subject 'crows' in the sentence 'All crows are black.'

Snyder's second reason for saying that linguistic rules are not regularities is that they can, whereas regularities cannot, be expressed in the imperative mood. This may be a general grammatical truth about regularities and rules, but because of the peculiar kind of normativity of linguistic rules, it is not as important as he takes it to be for proving his conclusion. The point of stating a linguistic rule can be expressed equally well by stating it either as a regularity or as an imperative. The purpose of the grammarian is served either by saying 'Plural verbs are used with plural subjects' or by saying 'Use plural verbs with plural subjects.' This is so because the prescriptive force of a linguistic rule originates from nowhere except a corresponding regularity of linguistic behaviour, and that is why that regularity itself can function prescriptively. Neither are linguistic regularities ordinary regularities, nor are linguistic rules ordinary imperatives. Linguistic rules, therefore, do not cease to be regularities while functioning as, or clothed in the garb of, imperatives.

The regularity-sense of rules of language is thus of great philosophical interest because the rules are normative on account of there being corresponding regularities. All this becomes clear when we are required to offer a justification for a rule of language. In the vast majority of cases the only possible justification for making one's linguistic behaviour accord with a rule is that people generally do that. Only when, which very rarely happens, a person deliberately promulgates a certain rule, he may not appeal to a regularity or usage but to some other considerations like simplicity, elegance, etc.

Since we take it for granted that the members of a linguistic community do intend to communicate successfully, effectively, and intelligibly, with other members of the community, we do not think it necessary to state the rules as explicitly conditional imperatives; we rather state them as if they were unconditional imperatives. Further, we perform the same speech act of stating a rule of language, as has already been mentioned, no matter whether we state it in the indicative or in the imperative mood. We cannot do it in the case of a categorical imperative, since the role or roles performed by it cannot be performed by a sentence in the indicative mood. We can do it in the case of a hypothetical imperative because its regulative force is largely or wholly derivable from such regularities as those about how things are, how human beings behave, what goal or goals they want to seek and achieve, etc. It is in this way that some social conventions even become principles of morality and some social rituals rules of etiquette. Almost the whole of caste-morality and caste-etiquette in Hindu society have emerged in this manner. For many Brahmins even today it is not only a mere social convention that they do not eat food touched by a non-Brahmin but also a normative ethical (or religious) principle; so is the (originally) ritualistic method of greeting a Brahmin by a non-

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Brahmin by touching the former's feet not an unimportant ritual but an important rule of etiquette or social behaviour.

In ethical matters the argument-form 'One ought to do X because the members of his community do it' may not be always unquestionable as, at least in principle, it makes sense to say that what people generally, or as a rule, do may not be worth doing. But in the case of linguistic behaviour we cannot in principle question the correctness of what people generally, as a rule, do. Here there is not available any other criterion of correctness except accordance with general, regular, usage or practice. When the users of English generally, regularly, write the first letter of a proper name in the capital form, it is correct to do that and no other reason is needed to prove that it is correct. Similarly, in the case of rules of language, regularities corresponding to or standing behind them are in a much stronger position to endow them with normativity, with the authority to regulate, control, or guide linguistic behaviour, than are the regularities of conduct corresponding to or standing behind some ethical rules. To conclude, a rule of language is the statement of a regularity in linguistic behaviour but not a mere statement of regularity, since it also regulates linguistic behaviour and is therefore normative as well. It is not, therefore, a truncated, pure, imperative because its normativity is inexorably linked with its corresponding regularity of linguistic practice.

The only primary evidence that R_1 is a rule of a language L_1 is that the community to which L_1 belongs generally make their relevant linguistic behaviour accord with R_1. On the other hand, Snyder thinks that explicit or implicit listing of rules in reference works, occasional statement of rules by speakers, and evaluation of linguistic behaviour by reference to rules, are evidences other than, i.e., additional to, regularities, for their being rules of language.[4] But he forgets that none of them is a primary evidence. Reference works, speakers, or critics, do mention rules. But their mention can be accepted only as secondary evidence because when questioned why they consider, say, R_1 to be a rule of L_1, they can offer no other evidence for it than the (alleged) fact that the relevant linguistic behaviour exhibits the required, corresponding, regularity.

It may be that some regularities do not generate corresponding normative rules while some others do. This phenomenon, if it ever happens, can be explained by pointing out that only those regularities are prone to do the latter deviation from which is likely to obstruct communication, at least to the minimal extent which can create some difficulty in social life, in man's dealings with some other member or members of his community. We want to communicate with our fellow-beings and, therefore, such regularities in linguistic behaviour, accordance with which is necessary for successful communication, get elevated, by the demands of linguistic life, to the status of normative rules in a manner which remains largely unperceived by individual users of the language concerned.

There is an important distinction between a regularity *giving rise to* a normative rule and *itself being raised to* the status of a normative rule. In this

connection it would be useful to distinguish between two kinds of regularities: (i) regularities pertaining to the way things are, happen, or behave, as a matter of natural necessity, i.e., on account of their being what they are, on account of their nature, and (2) those pertaining to the way human beings voluntarily behave, i.e., behave in virtue of possessing some abilities or in virtue of having been accustomed to some convention or conventions. Some examples of the first group are: crows are black, breathing becomes faster while climbing steps, magnets attract iron, etc. Examples of the second group are: Men walk faster than women, Indians greet their elders with folded hands, Speakers of English do not use proper nouns in the plural, etc.

Regularities of the first type are natural, factual, regularities, sometimes called laws of nature. I shall therefore call them *natural regularities*. They can give rise to but cannot themselves become normatives. For example, we can say: Since breathing becomes faster while climbing steps, if you want to breathe faster, you ought to climb steps. Here the normative generated is 'you ought to climb steps'. There is no sense in converting 'Breathing becomes faster while climbing steps' itself into a normative. The regularities of the second type are about human behaviour, about men as agents. I shall call them *behavioural regularities*. They can themselves become normatives. For example, if the ability of men to walk faster than women is taken to be a sign of man's physical superiority over women and its possession a matter of masculine pride, men may start thinking that they not only do but ought to, or when they do not, ought to develop the ability to walk faster than women. Naturally then there will emerge the normative 'Men ought to walk faster than women.' Such a possibility becomes much stronger or clearer in the case of conventional regularities like 'Indians greet their elders with folded hands', 'Speakers of English do not use proper nouns in the plural', etc.

It is a fact of social life that the prolonged use of a convention not only makes people accustomed to following it, but also makes them think that it serves some important purpose, which it may in fact be doing, and thus the convention earns for itself some amount of respectability. In consequence, social practice raises it, almost imperceptibly, to the status of a normative principle. Thus it seems quite natural to say to an Indian, 'You, being an Indian, ought to greet an elder with folded hands', or to a speaker of English, 'Since you speak English, you ought not to use a proper noun in the plural.' Such prescriptions are conditional because the obligation to fulfil them is dependent upon the acceptance of the purpose they are believed to serve or the goal they are considered to be a means to. In the case of the greeting, the condition can be made explicit as: 'If you want that your greeting be taken as an Indian mode of greeting', 'If you want that your greeting receives the attention a greeting in Indian social life receives', etc. In the case of the rule of language, it can be expressed as: 'If you want to communicate successfully', 'If you want yourself to be properly understood', etc.

That only a behavioural regularity can itself be raised to the status of a normative need not surprise anyone, since a normative can meaningfully apply

only to voluntary behaviour, only to actions, to things which we can meaningfully be said to be doing or abstaining from doing. Natural regularities pertain to such things or occurrences in the context of which the concept of doing or abstaining from doing something has no application. That is why there is no sense in presenting a natural regularity as a normative, or in the imperative mood. The absurdity of such normatives as 'Crows ought to be black', 'Magnets ought to attract iron', etc., is obvious, and equally absurd would be the attempt to derive from them, or express them as, imperatives. Where a natural regularity is used to generate a normative in conjunction with some other factors pertaining to human behaviour, the normative so generated relates to man's voluntary behaviour and not to the natural regularity itself. Knowing that magnets attract iron and that someone wants to find out what kind of metals magnets can be used to attract, one can issue to him the normative: 'You ought to use a magnet to attract iron', or express it even as an imperative: 'Use a magnet to attract iron'. Though the normative, or the imperative, has a reference to magnet, the normative or imperatival force of the expression is directed towards the behaviour of the person concerned and not to magnet or iron.

Linguistic regularities, on the other hand, are regularities of voluntary human behaviour and, therefore, their being expressible as normatives or imperatives, for the resons explained earlier, is not at all unintelligible. To say that proper nouns in English do not have any plural form is to say that users of English do not use proper nouns in the plural, and to say that proper nouns in English are not to be, ought not to be, used in the plural is to say that users of English are not to, ought not to, use proper nouns in the plural.

Since linguistic rules, in the regularity and therefore normative sense, follow, *depend upon*, linguistic practice, upon how language is ordinarily and generally used by the members of the concerned speech community, they cannot, logically speeking, constitute language. Rules of language are discovered, dug out, from linguistic practice and not invented or promulgated to bring linguistic practice into existence. All this would not have been the case had they been constitutive of language. A rule cannot constitute the phenomenon on which it depends for its own existence. The situation is very different with the rules of a formal, constructed, language, since they constitute or rigidly determine their language. We first invent, promulgate, rules, and then as dictated by them, construct the formal language concerned. We cannot discover, before their promulgation, the rules of a formal language from the latter because its existence is consequent upon and not antecedent to the promulgation of its rules.

Where the rules pertaining to an activity constitute it, to fulfil the main objective of the activity is by definition to fulfil it in accordance with (or by following) the relevant rules. For example, if a propositional calculus is constructed with the objective to prove that any well-formed formula which is a theorem of the system is a tautology and every tautology is a theorem of the system, to prove this is by definition to prove it in accordance with the rele-

vant rules of the system. Similarly, when two teams are playing a game of football, each one's objective is to defeat the other by scoring a goal. But to score a goal is to score a goal in accordance with the rules of the game, and not to get the ball into the opposite team's net in any manner whatsoever. It is not that one scores a goal partially, or unsuccessfully, if he does not follow the rules, he does not score at all, he is no winner at all. We use language, on the other hand, to communicate, not to communicate with rules, and we use rules because they help us to communicate well. That is why we are able sometimes to communicate, as has already been shown, even when we violate some relevant rule or rules. I can successfully communicate to a person my hatred, animosity, or love for him even by uttering a sentence which is grammatically incorrect (or conceptually incoherent). 'You is a fool' is not less offensive than 'You are a fool' when uttered seriously and meaningfully.

It is not the rules of language which determine communication, but how poeple generally communicate with each other which determines the rules. That is why when people are found to communicate with each other in a manner which is not in accordance with hitherto acknowledged rules, or rules laid down in grammar books, the old rules are modified to accommodate the prevailing practice rather than legislatively forbidding prevailing practice. We learn linguistic rules because they enable us to communicate, but we do not learn the rules of a game because they *enable* us to defeat the opponent. On the other hand, some rules may make defeating extremely difficult, but even then they remain as important as other rules. Playing in accordance with the rules of a game is not a *means* to defeat or win, whereas using language in accordance with its rules is a *means* to (linguistic) communication. To play a game one has to have at least a working understanding or knowledge of its rules, but most of the native speakers of a language learn the language without having or acquiring an understanding or knowledge of its rules. The understanding or knowledge of rules of language comes at a much later stage when one has developed some analytical abilities. That is why *every* user of a language cannot be said, strictly speaking, to be *following* its rules; at the most we can say of him that his use of language is (occasionally, generally, or always) *in accordance with* the rules. One cannot follow a rule unless one knows what it is, but one's behaviour may be in accordance with it all the same.

In order that one's linguistic behaviour is *in accordance with* the relevant rules of the language, it is only necessary that it coheres with them, that it is describable as their exemplification, or that the rules may be read into it. All this can happen even if one is not aware of the rules, nor able to mention, state, or describe them. But one can *follow* a rule only if one knows what it is, and when required, can mention, state, or describe it with more or less success depending upon one's analytical ability. To be a successful user of a language one does not have to acquire the ability to describe or state its rules, but one has to be able to convey one's ideas with as much accuracy as circumstances permit.

It has been said that rules determine the right or wrong uses of linguistic

elements. In a sense this statement is not incorrect, but only if it is taken to be an indirect, or stenographic, way of referring to linguistic regularities and their role in achieving communicative success. To use a singular verb with a singular subject is right because doing so is one of the important things one needs to do in order to successfully say what one wants to say, and it has acquired its importance because of the general linguistic practice of using a singular verb with a singular subject. It is this practice which is reflected in the rule which we may express as an indicative, an imperative, or a normative, sentence. Therefore, to say that the above use is right because it is in accordance with a rule is only to say in an indirect way that it is right because it is congruent or in conformity with a relevant practice. But when we recollect that congruence with practice is required because it is a means to the achievement of the communicative goal, we immediately realize that the rightness or correctness of an use is ultimately determined not by a rule, nor even by a linguistic practice, but by its ability or power to enable the user to communicate what he wants to communicate, i.e., by its being a means to the goal of success in communication.

Many of those who emphasize the role of rules in determining correctness or incorrectness of linguistic behaviour also emphasize the instrumental character of language. They say it is a tool, or a set of diverse tools. But then they seem to forget that the correctness of a certain use of a tool is ultimately determined not by any rule but by the success attained or attainable by that use in fulfilling the goal or goals for the fulfilment of which that tool is considered to be a tool. If my goal is to drive nails into a wooden box to join its vertical and horizontal sides, and to achieve the goal I select a type of hammer and use it in a certain manner, the rightness of my choice of the hammer and the use made of it will be determined by the result achieved, i.e., by my succeeding or not succeeding in nailing together the vertical and horizontal sides, and not by any rule about the choice of hammers or by one about their use. There may exist such rules, but their very utility as rules, or their right to be called rules, will be ultimately derivable from the fact that behaviour in accordance with them has been found to be instrumental in achieving certain human goals. In a similar way, the conception of language as a set of tools, which is by and large a right conception, in stead of providing any justification to the commonly made claim that the rules of language function as the (ultimate) standards of correctness, implies the contrary, namely, that in the ultimate analysis rules cannot, by themselves, be considered as the (ultimate) standards or determiners of correctness.

Every piece of linguistic criticism, like any other criticism, makes a reference, explicit or implicit, to some standard or norm. In some cases the standard referred to may be a rule, but rules are not the only things which can function as standards. When a sentence is criticized as improperly punctuated, wrongly structured, or containing a mistake of category, one can in each case mention a rule as the ground for one's criticism. But this may not be possible in the case of every criticism. For example, if what a person has said is criti-

cized as unclear, unintelligible, confused, failing to communicate, etc., some standard is involved in each case. This standard would not, however, be a linguistic rule but a linguistic goal or value, something which is prized or aimed at by users of language. It is not a rule of language, conceptual or grammatical, that one should state things clearly. Rather, clarity is a value which our linguistic behaviour aims at, and in some contexts it may be considered to be an extrinsic, while in some others an intrinsic, value. Linguistic behaviour involves, like any other social behaviour, both rules and goals. Both, apparently, function as the standards of linguistic criticism. But the goals or values are the ultimate standards, since it is they which give to the rules the privilege of functioning as standards in the non-ultimate sense discussed above.

In a sense the user of any language is obligated to make his use of it accord with the rules of his language. But this is so not because the rules are prescriptive or normative in their own right. They, on the other hand, derive, as the above analysis has shown, their obligatoriness, or normative force, from the fact that accordance with them is an important means to attaining communicative success. This peculiarity becomes intelligible only if we make the assumption that man is a rational and social creature. To assume that he is not to assume something very big or implausible. In this context to assume that man is a rational creature is to assume (among other things) that he is committed to using what he knows or considers to be a necessary means to achieving what he aims at, and to assume that he is a social creature is to assume (among other things) that he is committed to using language in a meaningful, effective, manner. Linguistic behaviour is social behaviour, behaviour necessary for enabling man to live his social life. As a social being he is committed to using language and using it in such a manner that he can successfully communicate with, or enter in communion with, his fellow-beings.

To lead a social life conceptually involves, among other things, entering into, or preparedness to enter into, communicative relationships with others. Since to do that one of the most important things man needs to do is to make his linguistic behaviour accord with the linguistic traditions or conventions, i.e., the rules of his language, we can say he is obligated to make his behaviour accord with them. A refusal to accord with the rules would amount to a refusal to adopt an important means to having communicative relationships with other members of his society, which in turn would amount to a refusal to lead a social life. But if he concedes that he is a social creature and disowns any commitment to making his (linguistic) behaviour accord with the rules of his language, we can meaningfully try to convince him that he ought not to do that only by appealing to, or reminding him of, what we have assumed, his rationality. We can remind him then that as a rational being he is committed to making use of the appropriate means to his ends. Being on his own admission a social creature, he is committed to having communicative relationships with his fellow-beings, and since accordance with rules of language is, to all intents and purposes, a necessary means to the former, he

is obligated, we can say, to make his linguistic behaviour accord with the rules. Not doing so would be irrational. In case he declares himself to be irrational, we cannot convince him either of the desirability of according with the rules, or of his commitment to fulfil any obligation whatsoever. Thus, only a rational and social being can be expected to, or shown to be obligated to, make a proper, i.e., a meaningful, communicative, use of language.

The link between man's rationality and the obligatoriness of rules of language can be made clear in another, much simpler, way. Linguistic activity is purposive in the sense that we use language to achieve certain ends. For example, we use it to seek information (when we ask questions), to induce or encourage someone to believe something (when we make statements), to get something done by someone else (when we utter imperatives or normatives), etc. We can hope to achieve these ends or to participate meaningfully in such activities, only if we accord with the relevant rules of language, i.e., the rules governing the use of the linguistic elements used in the performance of the speech act or acts concerned. Therefore, for a rational being it would be natural to consider it necessary to accord with the rules. But to say that it is necessary to accord with them is not very different from saying that they ought to be accorded with.

Since rules of language are grounded in linguistic regularities, they are not located in the mind of the user of language, or in the non-mental world of nature, nor is there any philosophical advantage in considering them locatable in the mental or non-mental world. The most appropriate way to conceive of them, it seems to me, is to conceive of them as internal or intrinsic to language, or linguistic behaviour, itself, as features of the form of life that language is.

Notes and References

1. Aaron Snyder, 'Rules of Language', *Mind*, Vol. LXXX, No. 318, April 1971, p. 162.
2. Ibid., p. 162.
3. Ibid., p. 163.
4. Ibid., p. 163.

Wittgenstein, rules and origin-privacy*

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ABSTRACT: In discussing Wittgenstein's *Philosophical Investigations* people often speak of "the private language argument". But there are actually several private language arguments that can be gleaned from Wittgenstein's writings. Many of these are arguments for the famous view that it is impossible for someone to have a private language in the sense of a language that would be logically impossible for anyone else to understand. In this paper, however, I discuss the view that no one could have a language while being the only sentient being who ever existed, even if this alleged language were taken to be logically possible for other people to understand. I discuss what appear to be the considerations that led Wittgenstein to favour this latter view, and I argue that they do not provide good reasons for doing so.

My abstract can also serve as the beginning of my paper. In discussing Wittgenstein's *Philosophical Investigations*, people often speak of "the private language argument." But there are actually several private language arguments that can be gleaned from this book. Many of these are arguments for the famous view that no one could have a language that is private in the sense of being logically impossible for anyone else to understand. In this paper, however, I consider the view that no one could have a language while being the only sentient being who ever existed, even if this alleged language were taken to be logically possible for other people to understand. I discuss what appear to be the considerations that led Wittgenstein to favour this view, and I argue that they do not provide good reasons for doing so. I might add that I have recently learned that Kripke has also written about 'Wittgenstein on following a rule.' But I was not able to refer to his work before this paper was written. So I do not know how my views compare with that of his. There is a compensation for me: I am able to present my views unencumbered by the views of someone who, at least in the United States, has become almost a figure among Philosophers (I also cannot resist mentioning that this paper probably antedates Kripke's writings, as I read the original version of this paper at an American Philosophical Association Convention in 1976).

I am dealing with the material in §§139-242 of the *Philosophical Investigations*, henceforth referred to as '*PI*'. All Wittgenstein passages cited in this paper come from this source. Wittgenstein raises the question here of what makes a use of a term in accord with what was meant. For example, if you say '1004' after saying '1000' in response to my order 'add 2', with what, if anything, about me do you conflict and in what way? Wittgenstein attacks some possible answers as follows. No mental picture I have entails that my order should be taken in one

*Paper presented at the International Seminar on 'International Trends in Philosophy' held at University of Calcutta, Calcutta in January, 1983.

particular way. Any mental picture can be applied in various ways. The notion of going on in the same way after 1000 as before will not pick out only one continuation, as any next step can count as going on in the same way. That is, different beings acting on the same training and explanations may go on to do different things, each of which they can count as applying *that* training. What seems the same as what has been done may differ for these different beings. Thus, the idea that I mean what is in accord with my training also does not entail a unique next step. A formula or rule like 'add 2' does not itself determine what is to count as obeying it, as the training and explanations that went into the teaching of the rule 'add 2' up to 1000 can be generalized by some beings to point to adding 4 after 1000. These factors taken by themselves do not seem even to point towards one unique use as correct.

But now a question arises. Is there such extreme indeterminacy in language that any use whatsoever of an expresson at t_2 counts being in accord with what I mean at t_1? Such indeterminacy would be so extreme as to allow no constraints on what could count as a correct translation. This is much more drastic than the sort of indeterminacy and seems obviously unacceptable. But what prevents it from holding? Just what question is being asked here is partly determined by which answers count as not begging it. That is, what one wants is an account of meaning in terms of effects—what question is being asked and is affected by what one thinks he understands without such an account. Thus, one might suggest that for you to use a rule as I mean it is for you to accord with my intention in giving the rule. But the following question can still be asked. With what about me does a use accord when it accords with my intention? The basic bewilderment seems the same: I have mental pictures, training, past use, etc., but when a use accords or conflicts with my intention, with what about me does it accord or conflict and in what way? Look again at Wittgenstein's question; What is it, if anything, about me when I say 'add 2' with which uttering '1002' after uttering '1000' accords and uttering '1004' after uttering '1000' conflicts? With recourse to my intention rejected as raising the same question about what it is to accord with my intention, Wittgenstein's question about meaning looks like a special case of the general question of what determines the objects of propositional attitudes. Wittgenstein does not really treat propositional attitudes in general explicity in *Philosophical investigations*, but treats similar problems for other particular propositional attitudes, including intending (*PI*, §§ 205, 337, 660, 637-8), being guided (§§ 172-8), deriving (§§ 162-4), attending (§§ 33-5), referring (§ 689, p. 177, part 2), ordering and obeying (§§ 212, 217), expecting, planning and hoping (§§ 438-42, 572, 574).

Some of Wittgenstein's remarks suggest answers to the question of what gives determinacy in language. These remarks are related to the supposed impossibility of a language originated by the only sentient being who ever existed. I call this type of (putative?) language an "origin-private language". Wittgenstein says that:

> . . . a person goes by a sign-post only in so far as there exists a regular use of sign-posts, a custom.
>
> (*PI*, § 198)

This is justified by remarks like the following:

> Where is the connection effected between the sense of the expression "let us play a game of chess," and all the rules of the game? Well, in the list of rules of the game, in the teaching of it, in the day-to-day practice of playing.
>
> (*PI*, § 197)

> . . . What has the expression of a rule . . . got to do with my actions? What sort of a connection is there here? Well, perhaps this one: I have been trained to react to this sign in a particular way and now I do so react to it.
>
> (*PI*, § 198)

> It is not possible that there should have been only one occasion on which someone obeyed a rule. It is not possible that there should have been only one occasion on which a report was made, an order given or understood; and so no. . . . To obey a rule, to give an order, etc., are *customs* (uses, institutions).
>
> (*PI*, § 199)

In reply to the problem that any use can be taken to accord or conflict with a rule, he says:

> It can be seen that there is a misunderstanding from the mere fact that in the course of our arguments we gave one interpretation after another as if each one contented us for a moment until we thought of yet another standing behind it. What this shows is that there is a way of grasping a rule which is *not an interpretation*, but which is exhibited in what we call "obeying the rule" and "going against it" in actual cases.
>
> (*PI*, § 201)

> And hence obeying a rule is a practice and to *think* one is obeying a rule is not to obey a rule. Hence, it is not possible to obey a rule "privately", otherwise thinking one was obeying a rule would be the same thing as obeying it.
>
> (*PI*, § 202)

These passages suggest the following view:

Since what we call obeying a rule and going against it are required for determinacy in meaning, social use is required. If the only person who ever existed invented a language, there would be no distinction between his obeying a rule and his thinking he obeyed it—there would be no distinction between his obeying a rule and disobeying it. This is *not* because of unverifiability, but because there would be nothing his use could conflict with when he thought he was

obeying a rule. There would be no training, no social practice, no acceptance or rejection of his use by others, which Wittgenstein seems to suggest are necessary to provide one's use with something with which to accord or conflict.

Wittgenstein thus seems to suggest that training, social practice and others' responses to specific moves provide and are necessary for determinacy in language. The following objection arises. Wittgenstein's own remarks cited above suggest that anything can count equally well as applying training, continuing a social practice in the same way or generalizing from others' responses to specific moves. Different beings may apply training, correction and past use in different ways. Thus Wittgenstein's own points may undermine his view that the "institution of use" (*PI*, § 380) keeps from hanging in the air rules that would so hang without it. Since social training and past practice can be taken in different ways, why suppose they provide more determinacy than my own rule, mental picture, or isolated past use, which Wittgenstein seems to suggest could not provide determinacy precisely because they could be taken in different ways?

A possible reply is that while any way of continuing social training and practice is correct on *some* way or other of generalizing, not any move is correct on *my* way. Thus, determinacy in what I mean is given by my social training, past use, and social practice conjoined with my natural way of generalizing. Wittgenstein suggests in several passages (*PI*, §§ 189, 195, 198) that this causal determination provides my meaning with determinacy, probably in a criteriological rather than a logical manner.

Once this move is taken, however, it is unclear why other people are necessary to provide determinacy. My isolated mental picture or formula, conjoined with my natural way to apply them can also causally determine my next move. But the only sentient being ever existing could have a formula or mental picture, so it is not clear why he could not have a language. In fact, the psychological effects of social training can occur even if there are no other people. Natural noises like birds' chirps at appropriate times may function like social correction or reinforcement of responses in training. A reply may be that what is needed is not the psychological role of social training and past practice, but its logical role in ensuring determinacy. But since social training and practice, just like mental pictures or formulas, (a) logically can be applied equally well in many ways, but (b) causally may determine *my* application, given how I generalize, it is unclear how social training and use can have a logical role in ensuring determinacy that a mental picture cannot have.

Wittgenstein does say that the application (*PI*, § 146) is a criterion of understanding, but why cannot the application of the only sentient being ever existing be a criterion of his understanding just as the applications and reactions to others' uses are criteria of understanding of people in a soceity? One might claim that at least in a society current social usage is something which not every use of *J's* can count as being in accord with, for other people may correct him. But suppose, like the pupil in *PI*, § 185, *J's* natural tendency is to interpret

the order 'add 2' as we interpret 'add 2 up to 1000, and 4 up to 2000, etc.' Suppose everyone else interprets 'add 2' as we do and *J's* oddity has not yet been noticed because he has not gone over 1000. When he says 'add 2 to 1008' to accord with *his* rule one must say '1012'. This step conflicts with what everyone else calls 'obeying the rule' and 'going against it' in actual cases. Since the other people do not even mean by 'add 2 to 1008' what *J* does, it is unclear how they give his language determinacy that he could not have in isolation.

It might be argued that this case begs the question against Wittgenstein by assuming what Wittgenstein seems to deny, that *J* can mean something by 'add 2' even if there is no social practice with which he is in accord. But as Wittgenstein sets up the problem, there *seems* to be a possibility of someone who follows and understands a rule differently from the rest of his society. Wittgenstein considers someone who, when taught to apply 'add 2' up to 1000, after 1000 says '1004', '1008', etc. Wittgenstein says that:

> In such a case, we might say, perhaps: it comes natural to such a person to understand our order with our explanations as *we* should understand the order "Add 2 up to 1000, 4 up to 2000, 6 up to 3000 and so on".
>
> (*PI*, § 185)

Of course, Wittgenstein does seem to suggest later (in the passages already cited) that to follow a rule one must be part of a social practice, and reason for invoking a social practice and training seems to be to provide determinacy in how a particular rule is meant. But once one sees how the considerations Wittgenstein raises bring up the question of what it is to accord with 'add 2' as *J* means it, the suggestion that to accord with 'add 2' as *J* means it is to accord with the practice of his society looks like an *ad hoc* attempt to provide determinacy.

I do not mean to suggest here that Wittgenstein holds that the sentences (1) '*J* is following a rule' and (2) 'People in *J's* society would accept *J's* application if they observed it' mean the same. He denies a related view (cf. *PI*, pp. 226-7). Just what Wittgenstein takes to be the relation between sentences like (1) and (2) is not obvious, but the following suggestion seems plausible. Wittgenstein holds that there is an agreement in different people's "prelinguistic quality spaces", to use an expression of Quine's, which makes them apply and generalize linguistic training the same way. He realizes that this "agreement" is just an empirical fact, but holds that it is necessary for there to be a language. Because of such agreement, sentences like (2) are true. On this view, if sentences like (2) were not true, part of the form of life that underlies the determinacy of language would be lacking. Thus, the truth of sentences affirming actual practice is necessary for our determination of sense of sentences like (1). I shall not try to specify the relation of sentences like (1) and (2) more closely here. (See *PI*, § 240-1 and pp. 225-7.)

It is questionable whether Wittgenstein's solution will always provide even

ad hoc determinacy where determinacy seems wanted. Suppose two societies, *A* and *B*, live side by side. The members of *A* are like the pupil in A185 who follows the order 'add 2' as we would follow the order 'add 2 up to 1000, 4 up to 2000, 6 up to 3000, and so on'. The members of *B* are like us. These two societies have no contact, except that one child *C* happens to be raised by members of each society on alternate days (although no one in either society knows that the other is involved in raising the child). Members of each society have trained the child in the application of 'add 2' up to but not beyond 1000. He has been taught numbers larger than 1000; he just has not added 2 to them in the presence of trainers. When he first says 'add 2 to 1000', to accord with his rule, must one say '1002' or '1004'? Either move conforms to the practice of a society whose members trained him. One might suggest (adapting a remark of *PI*, § 146) that to find out what *C* means one should look at what *he* counts as in accord with his rule 'add 2 to 1000'. But now the role of the social practices is unclear. They do not determine a unique next step that is in accord with *C*'s rule, as *C* has been trained by members of different social practices. One might argue that social practice is still necessary for determinacy, but how would this be justified?

Consider also the following problem. The question naturally arises of just what about other people is supposed to be necessary for *J* to follow the rule 'add 2'. What moves of *J's* are in accord with the way *J* means 'add 2' in situation *S* will not be established solely by other people's applications of 'add 2' because there is still the question of what counts as *J*'s following 'add 2' the *same* way that other members of his society follow it. The natural reply is that only what other people in *J*'s society take to be going on in the same way (or would if they observed it) counts as going on in the same way in this context. Thus, what moves of *J*'s others in his society accept or would accept will be relevant to determining what *J* means in situation *S*. Of course, actual acceptance or rejection of *J*'s moves by others cannot be necessary for determinacy, as one often uses language when no one else passes judgement. Thus, perhaps which moves of *J*'s accord with what *J* means is determined by which moves other people in his society would accept if they observed him. Suppose, however, that on one particular occasion, *J* has released a poison gas that would change the brain structures of any people observing him and caused them to interchange their usual meanings of 'add 2' and 'add 4'. (The gas does not affect *J* this way because he has taken an antidote.) In this case, the moves of *J*'s that accord with what he means by 'add 2' do not seem to be those that other people accept or would accept if they observed him. One might say that the moves of *J*'s that accord with what he means by 'add 2' are those that other people in his society would accept under normal circumstances. (See *PI*, § 323 in connection with normal circumstances.)

But now a new question arises. If a qualification about normal circumstances would be needed in addition to social practice, can we get along as well without recourse to social practice at all? Thus, another account of what gives determinacy in language may be suggested, as follows. What *J* means by 'add 2' is given by (1) however, if he is the only sentient being who ever existed, he goes on with 'add 2' under normal circumstances, i.e., how he goes on with it unless some independently identifiable disturbance occurs and (2) what moves of other people he would accept under normal circumstances, if there were other people who could use the rule. This does not seem to be Wittgenstein's view, as it involves no recourse to actual social practice. It is not my view either, for reasons that lie beyond the scope of this paper. I have brought up this view to show how some of Wittgenstein's own considerations (cf. *PI*, §§ 146 and 323) can be used to support a view which seems as reasonable as his, but does not require social practice for determinacy in language. This view also provides something (as well as Wittgenstein's view does, anyway) with which *J*'s application could unequivocally conflict or unequivocally accord. That is, *J* may apply 'add 2' in a way he would not accept under normal circumstances; he may also apply 'add 2' in a way he *would* accept under normal circumstances. Similarly, on this view, one can avoid the conclusion that there is no distinction between *J*'s obeying a rule and his thinking he is obeying it (cf. *PI*, 202). *J* may believe wrongly that he is applying 'add 2' the way he meant it when he is producing a series which, under normal circumstances, he would recognize as in accord with what he means by 'add 3', not 'add 2'. Note that recourse to normal circumstances avoids not only the conclusion that whatever I take to be correctly applying a rule is in accord with how I mean(t) it, but also the conclusion that whatever all members of a society take to be correctly applying a rule is in accord with how they mean(t) it. It is hard to see why the second conclusion would be more acceptable than the first.

As I have said, I do not accept the forgoing account. There are many problems with it. But these seem to be problems for the account under criticism as well. For example, on both accounts what *J* means is related to what moves he or others would accept. But accepting a move is a propositional attitude and I have argued that the basic problem is about propositional attitudes. This problem re-arises in the form of how to specify what it is to accept a move. There are other problems in the views discussed which I will not go into here.

The Upanishads—what are they?*

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The *Upanishads*[1] are perhaps the most famous of the sacred texts of India. Only the *Gita* may presumably dispute this place. Besides being acknowledged as sacred and thus surrounded by an aura of religious authority, they are also the fountainhead of one of the major schools of Indian philosophy usually designated as Vedanta. The history of the discovery of these texts along with that of their translation and publication is well known. But what is perhaps not so well known, except amongst the very specialized scholars of the subject, is the history of the texts themselves and how they have come to be known and designated as the *Upanishads*. Even amongst the specialists, the awareness of the problem and the issues related thereto is only marginal. It would be no exaggeration to say that the tradition concerning what are regarded as the *Upanishads* is largely accepted uncritically and repeated as read or heard from the so-called 'authorities' whom, in the context of the Indian tradition, one has learnt not to question.

The number of texts constituting the *Upanishads* is not exactly settled and most scholars make a distinction between the major and the minor *Upanishads*. Yet, the dominant tradition in India treats them as a part of the *Śruti*, that is, as an integral part of the *Vedas* without noticing the incompatibility between the two contentions. If they are an integral part of the *Vedas*, how can there be a distinction of major and minor between them or a dispute about their exact number? It may be urged that the situation with respect to the *Vedas* is no different, as the status of one of the *Vedas*, that is, the *Atharvaveda* is not generally regarded as equal to those of the other *Vedas*. Even amongst the other three, there *is* what may be called an order of priority or hierarchy amongst the *Ṛg*, *Yajur* and *Sāma* in that order. Even if this be conceded, it would be accepted that there is, in the case of the *Vedas*, such a thing as a closure of the canon which does not seem to have been the case with respect to the *Upanishads* as they continued to be composed long after the Vedic corpus was finalized. Everyone talks about the *Allohpanishad*, but no one seems to see the significance of it. If one could think of writing such an *Upanishad*, then obviously the *Upanishads* could not have been regarded as an integral part of the *Vedas*, as everyone seems to take for granted today. The same is

*The central investigation undertaken in this paper is the result of a question that arose in a departmental seminar on Indian Philosophy in the Department of Philosophy, University of Rajasthan, Jaipur.

*This paper is dedicated to the members of the seminar who have contributed to its success over the years.

true of the 'sectarian' *Upanishads*. The very fact that they continued to be written is ample proof that no one thought of the *Upanishads* in the same way as they thought of the *Vedas*.

It is, of course, a matter of dispute even within the tradition as to what is to be regarded as *the Veda* in the strict sense of the term. The dispute concerns the *Brāhmaṇas* and the *Āraṇyakas*, besides the *Upanishads*. But whether the former two are regarded as an integral part of the *Vedas* or not, they did not continue to be composed beyond a certain period which was reached very early in the tradition, a situation far different from that of the *Upanishads* which continued to be composed till almost the thirteenth century. It may, therefore, be safely surmised that the *Brāhmaṇas* and the *Āraṇyakas* were treated as having reached a finality within the Vedic corpus in the sense that nothing more could be added to them, a situation which was absent in the case of the *Upanishads*. To provide a spurious continuity with the Vedic tradition and treat them as an integral part of the Vedic corpus, all such *Upanishads* as were written later were ascribed to the *Atharvaveda*, thus indirectly confirming the slightly inferior status which had been given to it from the very beginning as compared with the other three *Vedas*, which have been distinctively referred to as *Trayī*.

In fact, though the term *Upanishad* is found even in the *Ṛgveda* as a title in Hymn No. 145 of the tenth Mandala, it was not regarded so sacred or sacrosanct as not to be used in profane contexts. Kautilya's *Arthashastra* uses it in the sense of secret weapons to destroy the enemy and Vatsyayana's *Kāmasutra*, according to Keith, uses it in an analogous manner also. If the fact of this usage is taken into account along with the continuing production of *Upanishads* as late as the end of the thirteenth century or even the first half of the sixteenth century, depending upon the date assigned to the commentary of Lakshmidhara on *Saundaryalahari*, the *Śākta Upanishads* seem, by common consent, to have been written very late. Yet, if the *Upanishads* not only continued to be composed but also to be accepted and included in the orthodox canon, then they cannot be regarded as *Śruti* in the same sense as the Vedic *Saṁhitās* or even the *Brāhmaṇas* and the *Āraṇyakas*.[2]

In fact, even in traditional times, that is, the period of the Vedic *Saṁhitās*, *Brāhmaṇas* and *Āraṇyakas*, it was not clear as to what is to be considered as an *Upanishad* and on what grounds. True, the so-called eleven major *Upanishads* have continued to be accepted as a part of the authoritative Vedic corpus from almost the very beginning of the tradition. But even with respect to these, it is not clear why they have been traditionally so accepted or, in other words, what have been the grounds of their acceptance. It is well known, at least amongst the specialists, that many of these *Upanishads* are not independent works but selections from existent texts. But if that is so, someone must have made the selection and presumably, there must have been some basis for the selection that was made. It is not quite clear what was the basis of the selection or why, during this long period of time since the first selection was made, no one has made a different or alternative selection.

Take, for example, one of the oldest *Upanishads*, the *Aitareya*, which forms a part of the *Aitareya Āraṇyaka* and must have been selected out of it to be treated separately for certain purposes. Chapters 4, 5 and 6 of the second *Āraṇyaka* are usually known as the *Aitareya Upanishad*. Yet, in none of these chapters is the word *Upanishad* anywhere mentioned, nor does it refer to itself as *Upanishad*. This would have little significance if there is no statement to this effect in any other part of the *Āraṇyaka*. But, the third *Āraṇyaka* starts by proclaiming itself to be an *Upanishad*. It says clearly "अथातः संहिताया उपनिषत् ।" Moreover, the fifth paragraph of the second chapter of the third *Āraṇyaka* starts with the statement "अथ खल्वियं सर्वस्यै वाच उपनिषत् । सर्वा ह्येवेमाः सर्वस्यै वाच उपनिषद इमां त्वेवाचक्षते ।" which is translated by Keith as follows, 'Now comes this Upaniṣad of the whole speech. All these indeed are Upaniṣads of the whole speech, but this they so call.' It is strange that in the face of this clear-cut statement within the *Āraṇyaka* itself, the *Aitareya Upanishad* is not usually taken to include the third *Āraṇyaka* which proclaims itself to be such and includes chapters 4, 5 and 6 of the second *Āraṇyaka* which says nothing about itself being an *Upanishad*. Keith is aware of the difficulty and in fact entitles his discussion of the issues as 'The three Upaniṣads of the *Aitareya Āraṇyaka*.'[3] He writes, 'Book III bore the special title of *Saṁhitā Upaniṣad* which is given to it in Śaṁkara's commentary and which it claims for itself by its opening words.'[4] But the so-called *Saṁhitā Upanishad* has almost never been treated or listed separately as an *Upanishad* nor been regarded as important by anyone. And this in face of the fact that it proclaims itself as an *Upanishad*. The same is true of the so-called *Mahāaitareya Upanishad* which is supposed to consist of *Āraṇyakas* II and III and would thus include the portions which proclaim themselves as *Upanishads* in this *Āraṇyaka*. First, there is a dispute about what this *Mahāaitareya* actually includes. As Keith writes, 'the term Mahāaitareya or *Bahvṛca-brāhmaṇa Upaniṣad* though it sometimes applies to both *Āraṇyaka* II and III, sometimes is confined to *Āraṇyaka* II.'[5]

The very fact that the usage of the term was so fluctuating proves our point that the criteria for what was to be considered an *Upanishad* were not fixed. Still, it is surprising that what proclaimed itself as an *Upanishad* should have been the subject of controversy, a situation that casts grave doubts on the veneration and infallibility with which *Śruti* is supposed to have been regarded in the orthodox Indian tradition. It should be noted that if the term *Mahāaitareya* is confined only to *Āraṇyaka* II, it would still exclude the self-proclaimed *upanishadic* portions of the *Āraṇyaka*, while if it is supposed to include both *Āraṇyaka* II and III, we will have to face the problem as to why it has not usually been commented upon or treated or listed as a separate *Upanishad*. And, why should we accept that 'there is no doubt that the term *Aitareya Upaniṣad* especially belongs to II, 4-6',[6] as Keith contends? Surely, if we accept the texts to be integrated wholes, it would be more logical to expect that the meaning of chapters 4-6 cannot be understood except in the context of what has gone before and what comes later in the *Āraṇyaka*.

Of course, Keith argues that the doctrines developed in chapters 1-3 of

Āraṇyaka II are different from those developed in chapters 4-6 and that the latter are a further development of the doctrine. And, according to him, the doctrine contained in chapters 1 and 2 of *Āraṇyaka* III is a step backward from the one contained even in chapters 1-3 of *Āraṇyaka* II. But if this is the case, and here he seems to agree with what Śaṁkara and Sāyaṇa have to say on the subject, then the whole sequence of the *Āraṇyakas* has to be rearranged if they are to be meaningful from the philosophical point of view. Or, at least the selection that we are to make regarding what is to be regarded as significant in the *Aitareya Upanishad* has to be arranged differently from what tradition has handed down to us until now.

The problem is not confined to the *Aitareya Upanishad* only; it simply highlights the problem which is endemic to almost all the *Upanishads*. Take, for example, the *Īśā Upanishad*, which is supposed to be an integral part of the *Śukla Yajurveda, Vājasaneyī Mādhyandina Saṁhitā itself*. It is supposed to be the fortieth chapter, the last one of the *Saṁhitā*. But as even a cursory glance would reveal, it has no connection with the other thirty-nine chapters nor any continuity with them. The *Īśā Upanishad* has nothing to do with Yajna with which the rest of the text is directly concerned. Keith has rightly observed, "...the Īśa Upaniṣad has succeeded in obtaining entry as a book [xl] of the Vājasaneyī Saṁhitā, with which it has nothing really to do..."[7] But if an extraneous text can smuggle itself into the Vedic *Saṁhitā* and manage to pass itself as an integral part of the *Saṁhitā*, what happens to the much-vaunted sacrosanct character of the Vedic texts whose transmission through an infallible oral tradition is praised by scholars and laymen alike? Further, if all this is true, how can one accept their so-called revelatory character which gives them the aura of supernatural authority? If the text could be tampered with, it could not have been regarded as a revelation by those who tampered with it. The *Upanishads* are now regarded by most people as revelatory in the same sense as the Vedic *Saṁhitās*. In that case, either an exception will have to be made in the case of the *Īśa Upanishad* or the revelatory character of the *Śukla Yajurveda*, of which it forms an integral part, will have to be regarded as dubious.[8]

There is another problem to which not much attention has been paid in the literature on the subject. Unfortunately, the *Yajurveda* itself is divided into two parts called the *Śukla* and the *Kṛṣṇa* or the White and the Black *Yajurveda*. Now there is no counterpart of the *Īśa Upanishad* in the *Kṛṣṇa Yajurveda*, not even with a variant reading. It may be said that the *Taittirīya Saṁhitā* which constitutes the so-called *Kṛṣṇa Yajurveda* has no parallelism with the text of the *Śukla Yajurveda* except that in both the *Saṁhitās*, unlike the *Ṛgveda* and the *Sāmaveda*, the name of the *ṛṣi* with whom the *mantra* is associated is not given. But if the two are so different, what is the point of calling them by the same name? It only misleads us into thinking that there are four *Vedas* when, in fact, there are five. Either we should treat the two *Saṁhitās* of the *Yajurveda* as completely different in essentials and deceptively unified by the accident of a common name, or some parallelism between

the two has to be established in significant detail.[9] If the latter course is adopted and if the *Īśa Upanishad* is accepted as an integral part of the *Śukla Yajurveda Saṁhitā*, then we shall have to ask the question why there is no parallel to *Īśa Upanishad* in the *Kṛṣṇa Yajurveda Saṁhitā*.

The *Kṛṣṇa Yajurveda* which consists of the *Taittirīya Saṁhitā* has another peculiarity which has not been noticed. The *Saṁhitā* has three separate *Upanishads* embedded in it, some of which are supposed to be an integral part of the *Taittirīya Āraṇyaka* and others a part of the *Taittirīya Brāhmaṇa*. The *Taittirīya Upanishad* is supposed to consist of parts 7, 8 and 9 of the *Taittirīya Āraṇyaka* while the *Mahānārāyaṇa Upanishad* is supposed to be part 10 of the same *Āraṇyaka*. On the other hand, the *Kāṭhaka* or *Kaṭha Upanishad* is supposed to be a part of the *Taittirīya Brāhmaṇa*, a situation different from the diverse *Aitareya Upanishads* which all form part of the *Aitareya Āraṇyaka* only.

The *Kṛṣṇa Yajurveda* itself is supposed to have another *Saṁhitā* called the *Maitrāyaṇī Saṁhitā* which has an *Upanishad* attached to it called the *Maitrāyaṇa Upanishad*. But then what is the relationship between the *Taittirīya* and the *Maitrāyaṇī Saṁhitās*? Is it that between two recensions occasioned by the fact that it was handed down in two different schools or is the difference a deeper one as, say, between the *Kṛṣṇa* and the *Śukla Yajurveda*? Whatever the case, it should be noted that the *Maitrāyaṇī Saṁhitā* has no *Brāhmaṇas or Āraṇyakas* associated with it, but only an *Upanishad*. This raises doubts about the theory that each Vedic *saṁhitā* has its own *Brāhmaṇa* and *Āraṇyaka* and the *Upanishads* are embedded in either of them. The *Sāmaveda*, of course, is not supposed to have *Āraṇyakas*, but still it has *Brāhmaṇas* associated with it. The *Maitrāyaṇa Upanishad*, then, will have to be understood on the pattern of the *Īśa Upanishad* which managed to get itself incorporated as an integral part of the text in the *Śukla Yajurveda Saṁhitā*. While there is little dispute about the antiquity of the *Īṣa Upanishad*, almost everyone thinks that the *Maitrāyaṇa Upanishad* is a later work both in terms of its style and content. Keith writes, '...in the case of the Maitrāyaṇīya, which Max Müller wrongly believed early in date, the language is obviously closely allied to classical Sanskrit, which it follows in the introduction of greater development and complexity of style.'[10] Deussen, on the other hand, tries to account for the spuriously archaic character of this *Upanishad* which misled Max Müller into thinking that it belonged to an earlier period. According to him:

> The orthographic and the euphonic peculiarities of this *Śākhā* recur in the Upaniṣad which, on that account, preserves an ancient appearance. But this character of the Upaniṣad which is not, indeed, itself ancient or archaic but on the contrary *which is contrived to have been archaic* had misled Max Müller (with whom L.V. Schroeder agrees) to ascribe this Upaniṣad to 'an early rather than to a late period'. The numerous quotations literally borrowed not only out of Chāndogya—and Bṛhadāraṇyaka Upaniṣads but also out of Kāṭhaka, Śvetāśvatara, Praśna...and indeed,

> out of still later other copious literature...makes the late character of the work indubitable....[11]

It is strange that a *Śākhā* which possesses a Vedic *Saṁhitā* itself should commit a forgery and try to pass on a Upaniṣad as belonging to that *Saṁhitā* when it does not belong to it. If Deussen's phrase 'which is contrived to have been archaic', 'which we have italicized in our quotation, is taken seriously, it would cast grave doubts on the so-called role of the *Śākhās* in preserving the sacred texts intact. Rather, the evidence points to a competition amongst the *Śākhās* in which one staked claims to antiquity and tried to win by all means, fair or foul. The claim in this case does not appear to have succeeded for Śaṁkara did not consider the *Upanishad* important enough to write a commentary on it.

But then even when Śaṁkara has written commentaries on some *Upanishads*, they are alleged to be only spuriously ascribed to him. Potter, in the third volume of his *Encyclopaedia of Indian Philosophies* devoted to Advaita Vedanta up to Śaṁkara and his pupils, treats only the commentaries on *Bṛhadāraṇyaka, Taittirīya, Chāndogya, Aitareya, Īśa, Kaṭha, Kena, Muṇḍaka, Praśna* and *Māṇḍūkya Upanishads* amongst those allegedly attributed to him. Even amongst these, only the commentaries on *Bṛhadāraṇyaka, Taittirīya, Aitareya, Chāndogya, Muṇḍaka* and *Praśna* are supposed to be authentic. He argues:

> . . . the following may without question be accepted as the work of the author of the *Brahmasūtrabhāṣya*: the *Bṛhadāraṇyakopaniṣadbhāṣya*, the *Taittirīyopaniṣadbhāṣya*, and the *Upadeśasāhasri*. There seems no real reason to question the inclusion of the *Aitareyopaniṣadbhāṣya*, the *Chāndogyopaniṣadbhāṣya*, the *Muṇḍakopaniṣadbhāṣya* and the *Praśnopaniṣadbhāṣya* on this list. Beyond this point, however, is only speculation.[12]

If we accept the distinction which Potter seems to be making here, then we can be sure about Śaṁkara's *bhāṣyas* only on the *Bṛhadāraṇyaka* and the *Tattirīya Upanishads*. As is well known, 'The most careful work on the criteria for deciding which works are Śaṁkara's has been done by Paul Hacker, with application by Sengaku Mayeda.'[13] But, firstly, most of the *Upanishads* ascribed to Śaṁkara have not been examined for their authenticity according to Hacker's criteria and, secondly, even when some alleged work has been found to be correct with respect to Hacker's criteria it has not been accepted as Śaṁkara's by many scholars, including Potter himself. Śaṁkara's alleged *bhāṣyā* on *Māṇḍukya Upanishad*, for example, is a case in point. Potter, after conceding the argument that this *Upanishad* fulfils all the criteria proposed by Hacker, still refuses to accept its ascription to Śaṁkara. He writes, 'Vetter, Hacker and Mayeda all utilize Hacker's criteria. Hacker finds no serious discrepancy between the style of this work and that of Śaṁkara's genuine works. . .'[14] But, 'Despite these considerations, I retain serious doubts about

the work's authenticity.'[15] One way out of this difficulty would be to regard Hacker's criteria as necessary, though not sufficient conditions for accepting the genuineness of any work alleged to be ascribed to Śaṁkara.

Hacker's criteria are primarily substantive and doctrinal rather than formal or linguistic in nature. And though they have been applied only to determine the genuineness of ascription of any work to Śaṁkara, they or any of their variants could also be used to determine what is to be regarded as an *Upanishad*. At places, Śaṁkara himself is supposed to have used such a criterion. For example, chapter III of the *Aitareya Āraṇyaka* which proclaims itself as the *Saṁhitā Upanishad* is not regarded as an *Upanishad* because it is not concerned with the doctrine of the Ātman and with those who seek freedom through knowledge. The difference between the three *Upanishads* of the *Aitareya Āraṇyaka* derives from their being concerned with different types of persons who desire different things. 'There are three classes of men, says Sāyaṇa in the Introduction to Book III, those who desire immediate freedom through knowledge of Brahman, and accordingly find it by aid of Book II, 4-6, those who desire to become free gradually by attaining to the world of Hiraṇyagarbha, for whom II, 1-3 is intended, and those who care only for prosperity, for whom the third *Āraṇyaka* serves.'[16] This certainly makes some sense but it still fails to answer the question why, if it is all a question of graded desire or aspiration, the third *Āraṇyaka* comes *after* and not *before* the second. Surely a discussion of the means for the fulfilment of desire for prosperity should precede those that deal with gradual and immediate liberation. Also, as the third *Āraṇyaka* calls itself an *Upanishad*, it is clear that at that time at least, the term *'Upanishad'* was not confined only to those texts or treatises which dealt with matters which according to a Śaṁkara or a Deussen they should be exclusively or essentially concerned with.

Even if we take the content-criterion seriously and seek to apply it to what are usually regarded as *Upanishads* we would still have to do a lot of pruning. Both the *Bṛhadāraṇyaka* and the *Chāndogya* have large parts which have little to do with doctrinal matters relating to Atman or Brahman. In fact, they remind one more of the *Brāhmaṇas* or the *Āraṇyakas* which have never been treated as *Upanishads* by tradition. True, there are portions of these texts which are preeminently *upanishadic* in the technical sense of the term, but then they should be delinked from the other parts which are not ostensibly such and treated separately as the *Upanishads* proper. In fact, large portions of the early parts of the *Bṛhadāraṇyaka* could be treated as an *Āraṇyaka* only and not as an *Upanishad*. The same could be done with the *Chāndogya* even though *Sāmaveda* is not supposed to have an *Āraṇyaka* of its own. In fact, Keith does remark that 'the first two sections of the work are of the *Āraṇyaka type*'[17] but does not see the implication of what he has said. Instead of suggesting that hence they should not be treated as part of the *Chāndogya Upanishad* proper, he ascribes the reason why they are not regarded as *Āraṇyakas* to the general fact that 'texts attached to the *Sāmaveda* generally do not bear that name'.[18] But Keith knows very well that even when a text has both *Āra-*

ṇyakas and *Upanishads*, it is not always the case that what traditionally forms a part of one could not, with more justice, be treated as belonging to the other. The same is true even of the *Brāhmaṇas* which sometimes have a portion which should go to the *Āraṇayakas* or even to the *Upanishads* and vice versa.

The problem arises because everybody has treated the traditional classification as sacrosanct forgetting that the person who did the classification in the past might have made a mistake or that his criteria might have been different from ours or overlapping and even conflicting. The latter seems more often the case and, if so, what we need to do is to disentangle the situation and not continue as helpless victims of what someone did in the past.

Most of the *Upanishads* are not *independent* works but *selections* made out of a pre-existent text which is explicitly referred to at the beginning of the *Upanishad* concerned. Then the obvious questions are, who made the selection and what were the criteria for the selections? Further, if the selections were made from a pre-existent text, can they be understood by themselves without reference to the text in which they were embedded and of which they formed an integral part? On the other hand, if once the idea of making the selections was accepted, why were alternative selections not attempted? The acceptance of a particular selection for millennia seems strange indeed, specially when they gradually replaced the real functioning authority of those very texts from which the selections had been made for at least one of the most important spiritual and intellectual traditions of the country, that is, Vedanta.

These questions have hardly been raised by scholars who have paid intellectual attention to these sacred texts of the Hindu tradition. To give but one example, Arun Shourie, whose book *Hinduism: Essence and Consequence* is a fairly detailed study of the *Upanishads*, the *Brahma-Sūtras* and the *Gita*, and was published as recently as 1979, does not show even an awareness of the issues involved in the questions we have raised.[19] Nor, for that matter, does Karl H. Potter whose third volume of the *Encyclopaedia of Indian Philosophies*[20] is devoted specifically to Advaita Vedanta up to Śaṁkara and his pupils and was published as recently as 1981.

One possible reason for this may perhaps lie in the usual contention that the *Upanishads* are the last part of the *Vedas*, a situation epitomized in the tradition by calling the philosophy embedded in them as Vedanta and treating the *Brahma-Sūtras* as their summary. But as most students of the subject know, or should know, this is not always the case. The *Aitareya Upanishad*, one of the oldest, forms part of the middle of the *Aitareya Āraṇyaka*. The *Kena Upanishad* is a part of the *Jaiminīya Upanishad-Brāhmaṇa* and occurs as its tenth chapter followed by two more chapters, the eleventh and the twelveth. The *Tattirīya Upanishad* occurs as part 7, 8 and 9 of the *Taittirīya Āraṇyaka*, but it is followed by part 10 which is treated as a separate, independent *Upanishad*. It is called the *Mahānārayaṇa Upanishad* and is not only far longer than the *Tattirīya* but also different in content and spirit. But it is doubtful that it is on this ground that it has been treated as a separate *Upanishad*, for even those that are treated as one *Upanishad* do not display a unified character within themselves. The first part of the *Tattirīya*, for example, has little relation with the other two.

The *Kaṭhopanishad* which also belongs to the *Kṛṣṇa Yajurveda* seems to stand almost in a class apart, for though it does occur in the eighth *Aṇuvāka* of the eleventh *prapāṭhaka* of the third chapter of the *Taittirīya Brāhmaṇa*, it only occurs in an attenuated seed form and not in the independent, full-fledged form in which it is found in the text bearing that name. According to Keith, 'it is really a rewriting, from a philosophical as opposed to a ritual point of view, of the story, found in the Taittirīya Brāhmaṇa, of Nachiketas and the winning of boons from Death by him.'[21] But this only establishes the lineage of the *Upanishad;* it does not tell us wherein it is embedded. And in case it is not so embedded in its full form, it would share this characteristic, among the major *Upanishads*, with Śvetāśvatara which, however, is more the work of a single author and cannot be ascribed, according to Deussen, to 'any Vedic School furnished with *Saṁhitā* and Brāhmaṇas.'[22] The Kaṭha, on the other hand, definitely belongs to a school which is designated by the name, *Kāṭhaka*. The *Kāṭhakas* are supposed to have a *Saṁhitā* of their own,[23] though Deussen considers it more as an 'extensive Brāhmaṇa-work'.[24] In any case, whether it is regarded as *Saṁhitā* or a *Brāhmaṇa* it consists of 'an admixture of *Mantras* and Brāhmaṇas', running 'in general, parallel to the *Tattirīya Saṁhitā*'.[25] But if it is so like the *Taittirīya Saṁhitā* in its admixture of *Mantras* and *Brāhmaṇas*, it is difficult to understand why Deussen refuses to call it a *Saṁhitā*.

In the case of all these terms, their reference is not indicated as clearly as one would like it to be done for intellectual purposes. One can, of course, accept an extensional definition of the terms or tell oneself that the situation is the same with all definitions which are not stipulative in character. Even with extensional definitions, one would have to have a closed universe to feel completely secure as any new member would raise the difficulty of ascriptive classification once more. On the other hand, stipulative definitions may show unwelcome implications leading to a situation requiring us to change the stipulation. Yet, even though there may be some problem or other with all terms, we bear with the situation only when it does not lead to cognitive difficulties which we regard as serious or if they do not lead to intellectual confusions which are harmful in their consequences. The situation with respect to what goes by the name of the Vedic corpus is such that it leads both to cognitive difficulties and intellectual confusions which need to be rectified. As is well known, even the tradition does not agree whether the *Upanishads* or the *Āraṇyakas* should be counted as an integral part of what is to be considered as the *Vedas*.[26] But why the *Brāhmaṇas*? And, if the *Brāhmaṇas*, why not the *Āraṇyakas* and the *Upanishads*?

There may be substantive reasons either way, but they have to be spelt out and brought into the open. Perhaps, the line of division falls between those who opt for what is called the *jñāna pakṣa* (ज्ञान पक्ष) of the Vedic corpus and those who opt for the *karma pakṣa* (कर्म पक्ष). The traditional debate

between the Mīmāṁsaka and the Vedantin seems to support this. But this would be to assume that the hard core of the Vedic corpus, that is, the *Mantras*, have meaning *only* in the context of the sacrificial ritual adumbrated in the *Brāhmaṇas* on the one hand and the *Śrauta-Sūtras* on the other. This obviously is not the case, as to do so would not only be to do violence to the innumerable *Mantras* of the *Ṛgveda* which have no necessary relation to any specific sacrificial ritual but also to adopt an ultra-operational theory of meaning of both observational and theoretical terms which has proved inadequate even in the context of modern science.

Besides the generalized problem referred to above, the problem with respect to the *Upanishads* has other dimensions which have been mentioned earlier in the course of this article but not discussed seriously until now, by major scholars in the field. Until questions have not been raised about what the *Upanishads* are, one may remain satisfied with what tradition has handed down to us in this regard. But once the question has been raised, we cannot close our eyes to the arbitrariness of the way in which what are now known as the *Upanishads* have come to be so known. And once the 'accidental arbitrariness' of the selection presently designated as *Upanishads* is realized, the way is open for a *new* selection based on explicitly formulated criteria or even a number of selections made for different purposes based on different criteria.

It may be objected that all the texts which are known as *Upanishads* at present are not selections out of pre-existent texts and at least in their case what we are suggesting has no relevance whatsoever. The *Upanishads* ascribed to the *Atharvaveda* all share this characteristic. Even such well-known *Upanishads* as the *Muṇḍaka*, the *Māṇḍūkya* and the *Praśna* do not belong to any *Brāhmaṇa* or *Āraṇyaka* or even *Saṁhitā*. Regarding the *Muṇḍaka*, Deussen says that it 'does not belong to a definite Vedic school but is as the name signifies, "the Upaniṣad of those who have shaved their heads clean"'.[27] In fact, all the *Upanishads* which are ascribed to the *Atharvaveda* have been done so in a residual manner. As Deussen remarks, 'when all these Upaniṣads were joined to the Atharvaveda the reason for it lay mostly not in an inner connection with the same but only in the fact that this fourth Veda, originally half apocryphal, was not preserved or protected like the three other Vedas through a competent surveillance by their Śākhās in the face of alien intruders.'[28] The *Atharvaveda* itself enjoys only a dubious authority, and the *Upanishads* linked to it may be supposed to share the same fate. In a sense this is true for, except for *Muṇḍaka*, *Praśna* and *Māṇḍūkya*, hardly any of them enjoys any venerable authority in the tradition. Thus, the very fact that they *are* independent works seems to have militated against their being accepted as being authoritative. As for the exceptions, the *Praśna* in its frame of narration appears, according to Deussen, 'an imitation of Śatp. Br.10.6.1 ff, of Chand. 5.11.1 ff with the only difference that there in those passages... the six Brahmanas inquire of Aśvapati about one and the same common theme; while in the *Praśna Upaniṣad* everybody asks something different....'[29] As

for *Māṇḍūkya*, even though it is assigned to *Atharvaveda* it 'bears the name of a half-lost school of the Ṛg-Veda.'[30] Also, its importance is because it 'gave rise to one of the most remarkable monuments of Indian Philosophy, viz., the *Kārikā* of Gauḍapāda,'[31] a foundational work of Advaita Vedanta. It may be interesting to note that according to Deussen, all the four parts of the *Kārikā* are 'usually regarded as four *upaniṣads*' even though it is only the first which includes the *Māṇḍūkya Upanishad*. Deussen must have had some evidence for his assertion, but I have not been able to corroborate it from any other source. However, it confirms once again the arbitrariness with which a particular text or part of a text is called an *Upanishad* or regarded as one.

But whatever may be one's view regarding the three well known *Upanishads* of the *Atharvaveda* there can be little doubt that *Upanishads* which are really independent works are hardly regarded as of major importance by anyone and those that are so regarded are mostly not independent works at all but selections out of pre-existent texts made on the basis of criteria which seem neither clear nor uniform to our apprehension. An alternative selection made on the basis of clearly formulated criteria which are also philosophically relevant from the contemporary point of view may meet the current needs better than the one that was made long back with a view perhaps to meet the needs of those times.

Notes and References

1. The term '*Upanishad*' has usually been written without the usual diacritical marks except when used in quotations.
2. The situation is even more complicated by the fact that texts whose theme is not even remotely connected with what the *Upanishads* are usually supposed to be concerned with call themselves by that name. The latest to be published with such a title is *Vāstu-sūtra Upaniṣad* edited by Alice Boner, Sadāśiva Rath Śarmā and Bettina Baümer, Delhi, Motilal Banarsidass, 1982.
3. A. B. Keith, *The Aitareya Āraṇyaka*, (Oxford Univ. Press, 1909), 1969, p. 39.
4. Ibid., pp. 39-40.
5. Ibid., p. 39. Laxmaṇa Shastri Joshi treats the *Aitareya Upanishad* as consisting of *Āraṇyakas* II and III on the ground that Śaṁkara has treated them as such in his commentary on the *Upanishad*. But he does not discuss the points raised by Keith nor does he give any reason why the latter thinkers treated only the chapters 4, 5 and 6 of *Āraṇyaka* II as constituting the *Aitareya Upanishad*. See Lakshmaṇa Shastri Joshi, *Dharma Kośaḥ, Upanishatkāṇḍam*, Vol. II; Part II, Wai, 1949.
6. See on this question the whole discussion by Keith, *Aitareya Āraṇyaka*, pp. 39-52.
7. A. B. Keith, *The Religion and Philosophy of the Vedas and the Upanishads*, Harvard University Press, Cambridge, 1925, p. 499.
8. Dr. R. C. Dwivedi, in a personal communication, informs me that 'chapters 28-39 of the *Śukla Yajurveda* are also supplement and later addition. If so, the situation even with respect to the *Saṁhitās* is far worse than is commonly imagined.
9. Normally, the distinction between the *Śukla* and the *Kṛṣṇa Yajurveda* is drawn on the basis that while in the former the *Mantra* and the *Brāhmaṇa* portions are seperated,

in the latter they are combined. But the more important question is not whether the two are seperate or mixed, but whether they are the same or similar to a substantial extent. Unless they are two recensions of the same text, there is no point in calling them by the same name.

10. Keith, p. 500.
11. Paul Deussen, *Sixty Upaniṣads of the Veda*, translated by V. M. Bedekar and G. B. Palsule, Vol. I, Motilal Banarsidass, Delhi, 1980, pp. 328-9. Italics mine.
12. Karl H. Potter, *Encyclopaedia of Indian Philosophies*. Vol. III, Motilal Banarsidass, Delhi, 1981, p. 116.
13. Potter, p. 115.
14. Ibid., p. 309.
15. Ibid., p. 309
16. Keith, *The Aitareya Āraṇyaka*, p. 40.
17. Keith, *Religion and the Philosophy of the Veda*, p. 499.
18. Keith, ibid., p. 499.
19. Arun Shourie, *Hinduism : Essence and Consequence*, Vikas Pulblishing House, Delhi, 1979.
20. Karl H. Potter, ed., *Encyclopaedia of Indian Philosophies*, Vol. III, Motilal Banarsidass, Delhi, 1981.
21. Keith, p. 499.
22. Deussen, p. 301.
23. Keith, p. 499.
24. Deussen, p. 269.
25. Ibid., p. 269.
26. मन्त्रब्राह्मणयोर्वेदानामधेयम् ।
27. Deussen, Vol. II, p. 569.
28. Ibid., p. 555.
29. Ibid., p. 589.
30. Ibid., p. 605.
31. Ibid., p. 606.

The address of "I" : an essay on the subject of consciousness, "mind" and brain*

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By "Mind" we mean a totality of processes and phenomena whereby an organism is primed by stimuli in the external or internal environment to make adaptive responses for the sake of the protection and survival of the organism. The capability of organism for perception of environment and to recall, to identify, to learn, and to fix experience and exteriorise it constitute various basic processes. The speed, or rather the quickness, of cognitive mechanism and systematisation of experience is expressed by the word "intelligence". "Drive" states refer to the internal conditioning environment which influence the speed of processes to the point that patterns of resolvable sequences become identifiable. Internalised processes used to systematise memory or engrams of experience depending upon inhibition or potentiation of certain memories are recognised as repression, phantasy formation, inventiveness or other "creative" expression by which new correlations are brought into being which did not exist in the recorded past for the individual.

Consciousness refers to the dimension of reactivity and activity in which these processes exist between input and response. This refers to primordial substratum in which above processes occur as waves or peturbations.

We recognise this dimension to be associated with the whole organism. But we suggest that there exists an organ and a state of the body wherein above processes of "mind" are concentrated and realised and modified and integrated as the consequence of plastic alternations brought about by these processes, in actuality energy aspect of these processes.

We invoke the foundation on which the ensemble called "mind" can be assembled in a state of dynamic metastability. This is the location of the conscious (unconscious) sense of "I". There is no need to differentiate conscious and unconscious; qualitatively, the conscious and the unconscious are two ends of continuum of this dimension of living matter and are distinguished by the ease of recall of a stored image. Since awareness subsumes an agent which is "aware" of an object, all awareness arises by its interaction with the internal and external environment, hence it is necessary to postulate the sense

*Lecture delivered in the seminar on Mind, Brain and Consciousness, organised by the National Council of Educational Research and Training at National Institute of Mental Health and Neurosciences, Bangalore.

of "Self" or "I" and try to establish its neurophysiological site. Judging from the cluster of emotional or other expressions on motor activity or mood, its locus in the brain ought to be such that it is surrounded by emotive centres, and areas affecting waking and sleep. The "mind" is also engaged in new synthesis out of experience, and establishing a hierarchy of images and their associated emotive (value) counterparts. The structure of "mind" thus makes it possible to bring about electrical activity or long-range coherence, under thermodynamic compulsion, which manifest as ethical and aesthetic behaviour. Now, to every object we ascribe some properties which distinguish it. With every living object, therefore, for the present, let us say, there is associated a state which is indicated by the phenomenology exhibited as consciousness, which in its highest reaches exhibit phenomena, like sensing, probing, internalising, and ordering of experience from the internal or external world that gives rise to it. The objective of these processes is to ensure that the state of consciousness remains as unperturbed as possible. The reference point against which these activities are monitored and titrated is the elementary or the primordial perturbation or qualification of consciousness manifested as a sensation which we verbalise as "I" or the "Self". It seems to possess a site and the "mind" evolves as a set of necessary processes and their products (experience and its memory). We need go no further than to state that this is the primal perturbation, coextensive, and coterminous, with all matter, but on the living organisms, particularly in *Homo sapiens*, capable of giving rise to perturbations of varying duration which together constitute the phenomenology called the "mind". To recognise this duality is fundamental to proper analysis of "mind", its disorganisation and therapy.

We may now state the properties, the mechanisms and the locus of "mind". Judging from the fact that unconscious happening in the tissues, like swelling gives rise to excitation called stretch which may in high intensity evoke physiological responses even upto the brain, we may recognise brain along with this functionally active input area as the *parabrain*, i.e., the entire field of tissues and connective links to the centres of perception in the nervous system. In a similar way in the domain or for the mathematician "space" of consciousness one could recognise "paramind" as the entire field of activity relevant to the "mind" in the happenings which can react with and alter the processes of the "mind", in other words: (a) the mind and (b) the field of mind-active phenomena and objects. This extended view of "mind" is supported by the interaction of many "minds" even at the totally unconscious level, for example, the progressive change in behaviour of the mind from that of two, to a family of minds, "mind" of a herd, a nation, a species.

Thus the consciousness as a property associated with living matter organised in a hierarchy of processes is gradable in a variety of levels which together constitute the mind. Awareness is due to development of the elementary perturbation—the sense of "I". It is a special vectorially directed relationship of various processes to a special area which we call the area for self. The processes included in the "mind" are of increasing magnitude and diminishing

time-course of processes and these we describe as perturbations of definite kinds. From the point of view of magnitudes we have levels of awareness from unconscious([1-8,10,11]) to subconscious,([12]) preconscious([9]) and the conscious. These may be associated with neurophysiological correlates, to encode each event as a perturbation or may have hitherto undecipherable correlate, i.e., they are purely "mental". Even when spiking into the domain of conscious experience, the input is cocooned in a surround of progressively unperturbed region. In domain of the consciousness each set of less differentiated region is controlled and at the bottom of that is the region of "Self" or "I" in the primordial body of consciousness recognisable *as a domain of adaptive reactivity in the organism, a common final point of awareness vectors.* It is the presence of the psychological object called "I" or "Self" which is stimulus to the evolution and integration of processes which we refer to as the mechanisms and manifestations of the "mind". The clue to the topographic locus of this property is provided by the fact that in selective attention and in all processes of cognition the attention is polarised to an object or its representation in the brain. For this representation increasing evidence points to the cerebral cortex as the sphere of loci, taken singly, or as a cooperative interaction of many. If normals are drawn from the cerebral cortex towards the base of the brain then we define an area at the base of the brain which becomes the above common point of reference in case of all perception and it is plausible to describe this as the area where the sense of "I" ought to be located, the area 0μ ("zero mu"). Embryologically this would be the diencephalic portion of prosencephalon. It is interesting to note that the area in the vicinity would give rise to the hypophysis cerebri, the pineal, (to control biological rhythmicity of some types), diencaphalic gland of Scharrer and Scharrer, the hypothalamus, and thalamus, i.e., the visceral and the emotional "brain". Again it is rostral to the formatio reticularis, associated with waking and sleep. Thus the area seems to be in anatomic continuity with the emotional, visceral, sleep, and endocrine status of the organism. These are the major modulations of mind and its mood.

The Mechanism of the Stimulation of the Area 0μ

A well-controlled body temperature is essential for life. It is common knowledge that what is termed as "heat" is associated with molecular movement. Such movements, including bending, stretching, twisting, vibration of bonds in a collection of molecules correspond to a modality of energy described as "heat". Each energy level represents a wavelength. These motions lie in the range of microwaves to millimeter waves. These are the thermal or heat like effects and are nonspecific. It has been shown that some millimeter waves are generated due to a completely different mechanism, namely due to making or breaking of bonds. These are non-thermal effects. If metabolism is suddenly increased due to a burst in an activity of a cell there is a sudden increase in the production of these specific waves. Under certain circumstances these may become coherent like a laser or a maser (Microwave Amplification of Stimulated Emission of Radiation).

Modern evidence points to the generation of non-thermal millimeter waves from cells which are performing metabolic activity. Under the influence of a suitable stimulation they undergo self-focussing of electrical signals of proper strength. In self-focussing, [18-20] the incoming beam shrinks and for a length R_{nl} becomes restricted into a thin waveguide whose length R increases as the strength of the field which causes the emission of the millimeter (Fröhlich) wave increases. R_{nl} is measured by $R_{nl} = a\ (\varepsilon_0|2\varepsilon_2 E_0^2)^{1/2}$ in which a is initial radius of the beam, E_0 field intensity on the beam axis, and ε is represented as the expansion of complex dielectric constant in powers of the field:

$$\varepsilon = \varepsilon_0 + \varepsilon_2|A|^2 + \varepsilon_4|A|^4 + \ldots .$$

ε_0 being the linear dielectric constant. A can be obtained from the equation $E = 1/2\ A\ (r, t)\ \exp i\ (W_0 t - kr)$—c.c, ε_0 is thus the asymptotic value of ε as $A \to O$. Now, therefore, with stimulation of a cortical area a pencil of wave may travel normal to its origin in the cortex towards the base of brain at defined distances impinging if and only if, sufficiently strong, on to the area 0μ evoking an adaptive response from the area 0μ. Thus Penfield's representations of external or internal objects and phenomena on the cortex interact through regions right up to the area 0μ. Metabolic, hormonal, toxic stimulation of varying regions of the brain colour the adaptative response which is evoked depending upon the strength of the stimulus and the dielectric state of the brain. Normally appropriate areas in the brain receive all input or stimulation, but the organism attends to only the dominant necessity oblivious of the "unperceived" stimulation. We are cognisant of a theme due to such polarisation. In the absence of polarised behaviour due to insulation of sensorium by closure of the eye or other input points, Cortical $\lesssim 0\mu$ ($C \lesssim 0\mu$) traffic is governed by metabolic and chemical stimulation leading to nonlocal perception like phantasy or day-dream or dream. Because of integer multiples (i.e. higher harmonics), sums (a frequency mixing) or differences (i.e., parametric generation) of a few fundamental frequencies, states of metabolic drives conditioned by food, or sex or emotional states can influence the wave. The ability of metabolic states to generate specific frequencies labels the area of generation as representational set of very specific kind. Psychophysicists have often been perplexed by the need to provide a reproducible but distinct and exceedingly numerous storage points of experience. With virtually half of a hemispheric surface thus available for storage of frequency-coded as well as amplitude coded engrams an almost infinite capacity is generated, particularly when one takes into account a gradation of amplitudes, cross correlations and other features.

Many physical formalisms are utilised for dealing with denumerably large particles or waves; the "many body" formalisms. It is important at this time to remember that in many-body interactions as demonstrated by Haken an unstable mode of vibration may slave (enslave) a more stable and durable mode, i.e., it is always followed by the durable mode as an obligatory consequence. Since unstable mode may be shortlived or relativity not numerous the assembly is structured from unstable made downwards to the stable modes

and may appear deterministic although still within the framework of probabilistic, i.e., stochastic activity. As stated above the fact of restriction of length of waveguide by strength of field may account for processes which do not enter into consciousness and are relegated to unconscious when fieldstrength is switched off or become subliminal. Since organisms are constantly exposed to input of stimulus and its exteriorisation such structures are influenced by drugs and toxic factors. These would represent influences on the waves, which will be reflected in increased or decreased thresholds of stimulus—response both in cognitive and conative activity, and in the limit, to breakdown.

Essential "Structure" of the Mind

The above model represents a conglomeration of wavelike activity in the energy domain which is as evanescent as the lifetime of the stimulation, open to genetic, hormonal, metabolic, emotional factors directed towards adaptation with internal and external environment. It enjoins a necessary set of slaved modes following activation—a process of mentation ensues. So far as physical location is concerned there is a hierarchy of points in the reticular system which extends from the top of the spinal canal to the cerebrum and pineal gland. The common passage for these, or isthmus, would provide locus of the area 0μ somewhere along the bed underlying the aqueduct below lateral ventricle. These are shown in the diagram. In Table I distances to the *centre* of a typical brain (length) are stated and demonstrate approximate equality.

Higher Mental Function and Creative Activity

Relevant to these are the plastic state of matter[13] which permits psychophysical structuration and provides the basis of thermodynamic compulsions for ethical and aesthetic behaviour which we proposed earlier.[14]

It is important to recognise that in a state of "mind", far from equilibrium just as in case of matter, stimulation of areas in brain arise with varying life times, extensions, colouring and imagery as provided by the vicinal areas. Thus a dynamic function of the brain in the domain of consciousness becomes feasible. Fixation of both the deterministic and descriptive experience is driven into dynamic states of varying durability. It is tempting to speculate that originality and artistic creation would thus reflect long-range coherence in phase or energy of these waves. These speculations are experimentally verifiable *in vitro*, and also *in vivo* by recording the mm waves, proper analysis of the EEG on these bases, and examination of the area referred to as area 0μ.

Implications of the Area 0μ

To correspond with and to coordinate sensory data of general sensibility like pain, temperature, touch and special ones like vision and hearing with activities (motor activities) performed by the body with necessary swiftness has always been a difficult problem. Coordination of unconscious function of internal organs with the rise and effects of emotional needs and with the rhythm of various bodily activities depending on light and other modalities are

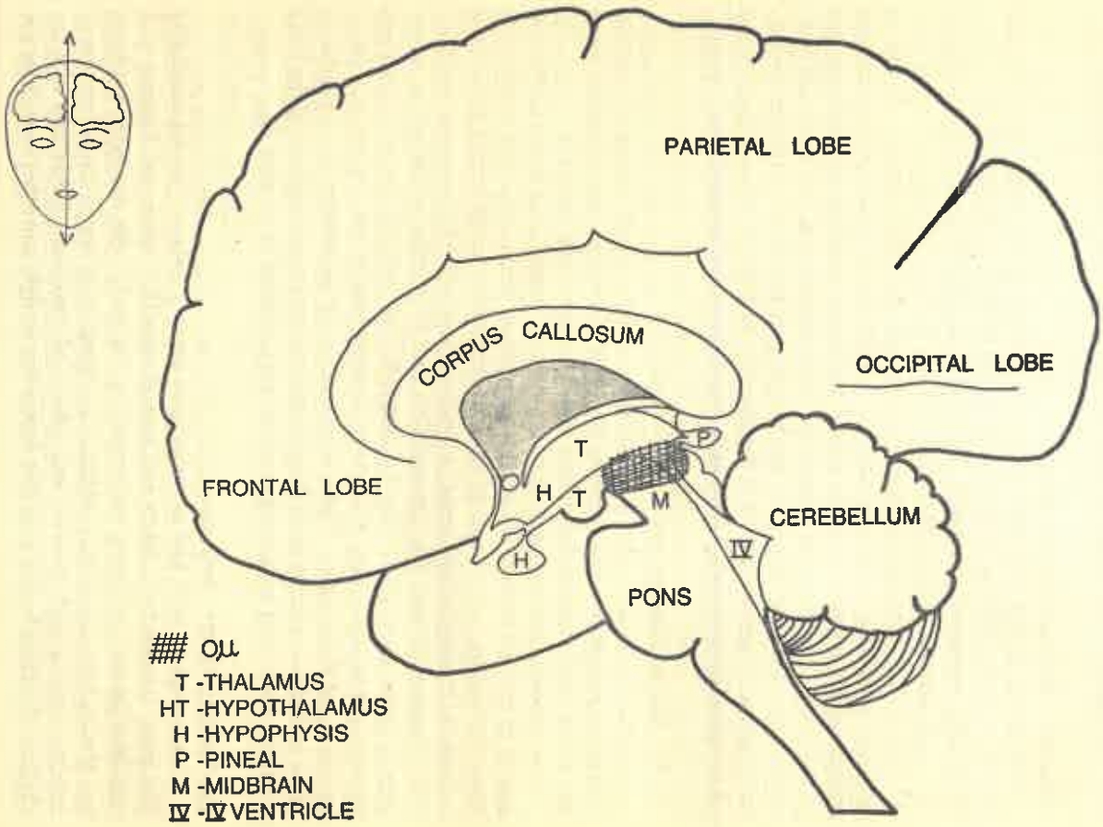

FIGURE 1: Sagittal section of the brain from cerebral cortex down to the brain stem. Hatched area denotes the postulated area 0μ. The inset shows the cut made to show the area.

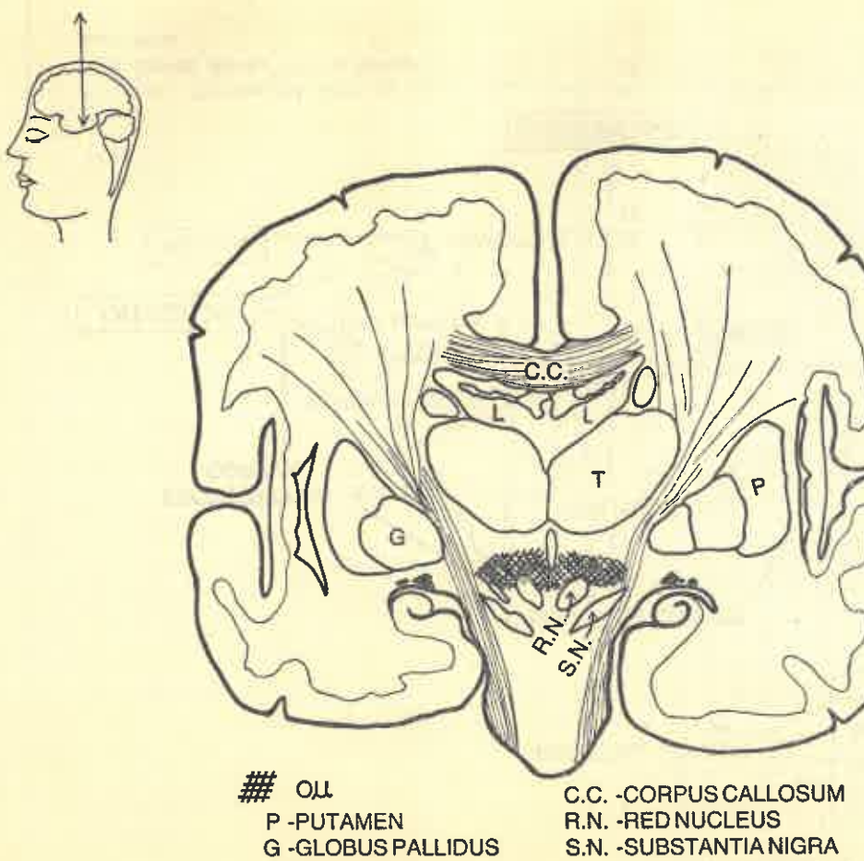

FIGURE 2: The coronal section reveals the area 0μ which is shown as hatched part. The inset shows the cut made to demonstrate the structure.

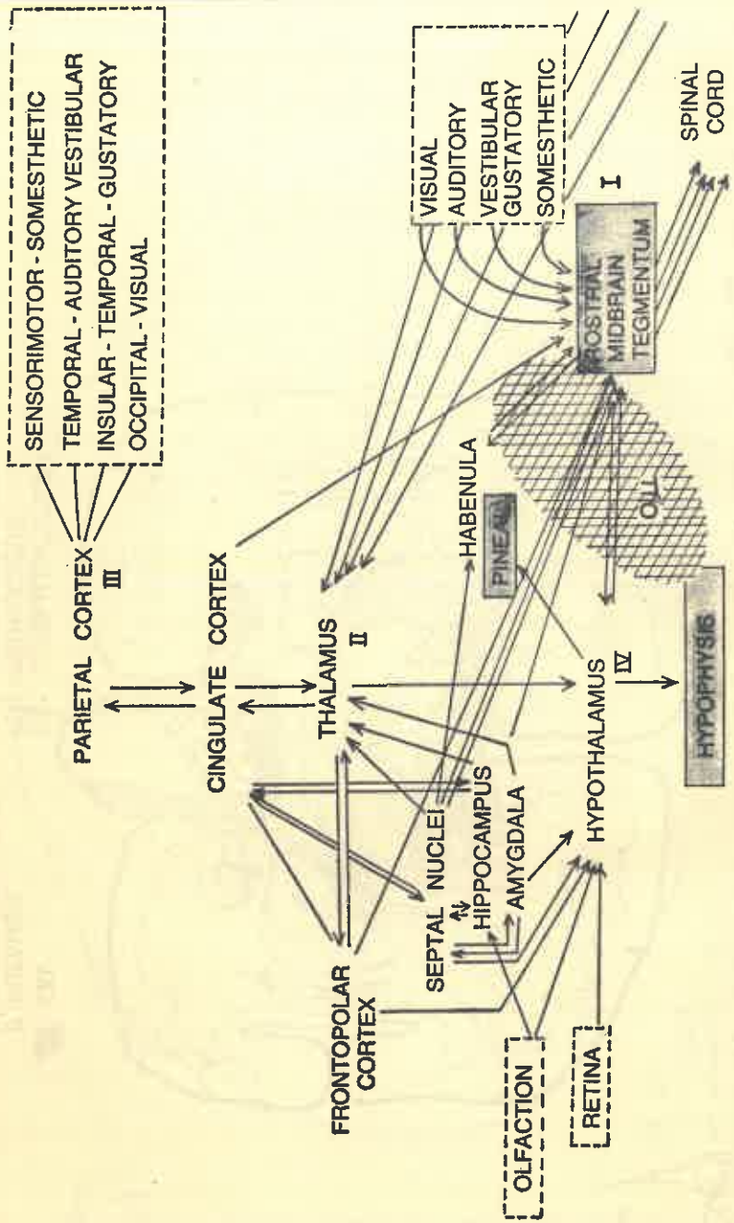

FIGURE 3: The area 0μ shown as an area which is connected to common sensation, motor activity, hearing, taste, vision, endocrines (hypophysis), diurnal rhythm (pineal gland). It is connected to areas for waking and dream by structures in the midbrain and the brain stem.

also equally puzzling. Emotions and other activities like sex transform an individual into a new phase of personality which for the time being subordinates all others. But perhaps most extraordinary sensibility is the awareness of self—not self as a body image as proposed by Field, or by Schilder but rather as a nodal reflex point in the entire reflex republic of the nervous system. All activities are directed towards its protection and survival by a short-term or a long-term manoeuvre.[9] In philosophical literature this corresponds to body of primordial consciousness. The activity to record visible anthropomorphic universe (the Vaiśvānara) and the universe of ideas and dreams is surpassed by this nodal point of a body in the domains of consciousness that is in the "prajñānaghana" (refined knowledge as mass). The area proposed has intimate relationship to all the sensory modalities stated above. It is posited within a network (formatio reticularis) which extends from farthest recesses of spinal cord to the areas in the cerebrum and is connected with the rhythm controller of the body, the pineal gland. Modern concepts of excitation and de-excitation in a network comprised of facilitatory and retarding paths show that an activation of the entire network may declare itself only at one point. We suggest this is the area 0μ. It is also made more plausible since the area, if not the point, is equidistant from the entire cerebral cortex and the brain stem. It is recognised that EEG patterns do not reflect individual thoughts. This may be because the electrical correlates may not correspond with individual thoughts of mental function. The mechanism suggested here indicates that stimulation may travel in coherent pencils of energy, i.e., electromagnetic energy like 'dark' light and not as electrical charge. There is of course proof that such emanations issue from cells and metabolism of various compounds. Also there is general basis to think that, they can be coherent. Of course such "pencils" and their lengths remain to be measured.

TABLE I

Typical Distances of the Centre of Postulated 0μ to Numbered Area with Contex

Area Number	*Specifications*	*Distance in mm*
3	From Hind Limb of the area	75
3	Lower Part of Post Central Gyrus	68
1	Hind Limb of the Area	79
1	Lower Part of Post Central Gyrus	65
2	Hind Limb of the Area	77
2	Lower Part of Post Central Gyrus	65
4	Centre of Superior Medial Border	76
4	Lower Tip of Pre Central Gyrus	65
17	Occipital Pole	91
18	Centre of Superior Medial Border	88
19	From Superior Medial Border	76
22	Centre at Superior Temporal Gyrus	64
37	Centre of the Area	65
39	Centre of the Area	66
40	Centre of the Area	64
44	Centre of the Area	65
45	Centre of the Area	64
41	Centre of the Area	58

Keeping 58 mm as a constant distance the various structures that fall in the range are:
Internal Capsule;
Lateral Ventricle (Trigone Region);
Diencephalic Mesencephalic Junction;
Region close to the Thalamus.

ACKNOWLEDGEMENT: Thanks are due to M. Raje for recording the distances expressed in Table I.

REFERENCES

1. Broadbent, D. (1958): *Perception and Communication*, Oxford, Pergamon.
2. Treisman, A. (1966): "Selective Attention in Man". *British Medical Bulletin, 80*, 12-16.
3. Deutsch, J. and D. Deutsch: "Attention: Some Theoretical Considerations." *Psychological Reviews, 70*, 80-90.
4. Neisser, U. (1967) : *Cognitive Psychology*. N.Y. Appleton Century Crofts.
5. Posner, M. (1973) : "Coordination of Internal Codes". In W. Chase (ed.), *Visual Information Processing*. N.Y. Academic Press.
6. Sternberg, S. (1975) : "Memory Scanning : New Findings and Current Controversies." *A.J. Exper. Psychol. 27*, 1-32.
7. Klein, G. A. and R. R. Holt (1960): "Problems and Issues in Current Studies of Subliminal Activation." In J. G. Peatman and E. L. Hartley (eds.). *Festschrift for Gardner Murphy*. N. Y. Harper and Row.
8. Speneè, D. P. and B. H. Holland (1962): "The Restricting Effects of Awareness. A Paradox and an Explanation." *J. Anbnormal Social Psychol. 64*, 163-174.
9. Fisher, C. (1956): "Dream, Images and Perception. A Study of Unconscious—Preconscious Relationships". *J. Amer. Psychoanalytic Association, 4*, 5-48.
10. Dixon, F. (1971): *Subliminal Perception. The Nature of a Controversy*. London, McGraw-Hill.
11. Shevren, H., and M. Dixon (1980): "The Psychological Unconscious." *American Psychologist. 35*, 421-434.
12. Freud, S. (1958) : *Instincts and their Vicissitudes*. Standard Edition (vol. 14) (C. M. Baines, Translator), London, Hogarth Press (Original Publication, 1915).
13. Mishra, R. K. (1965) : "The "Mind"-Brain Relation: A Physical Analogy." *I. J. Psychat*. 190-193.
14. Mishra, R. K. (1976) : *An Approach to the General Theory of Values* (16 June 1976). Indian Institute of Advanced Study, Simla.
15. Prangishvilli, A. S., A. E. Sherozia, and F. V. Bassin (eds.) (1978): *The Unconscious; Nature, Functions, Methods of Study*. Tblisi, USSR Metaniereba.
16. Kaiser, Fr. (1978): Z. Naturforsch 33a, 418-431. Coherent Oscillation in Biophysical Systems II Limit Cycle Collapse and the Onset of Travelling Waves in Fröhlich's Brain Wave Model.
17. Kaczmarck, L. K. and A. Babloyantz. (1977) : *Biol. Cybernetics. 26*, 199-208, "Spatiotemporal Pattern in Epileptic Seizures".
18. Del Guidice, E., S. Doglia and M. Milani (1982): "Self Focussing of Fröhlich Waves in Cycloskeleton Dynamics". *Physics Letters, 90A*, 104-108.
19. Akhmanov, S. A., R. P. Sukhorukov and R. V. Khokhlov. (1972): in *Laser Handbook*. F. T. Arecchi and E.O. Sclutz—Du Bois (eds.) North Holland, Amsterdam, Chapter E3.
20. Shen, Y. R. (1975): *Prog. Quant. Electr. 4*, 1.

Anxiety: a neuro-cybernetic model

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ABSTRACT: In this paper our primary objective is to find out an adequate explanatory model for a proper understanding of the phenomenon of anxiety based on a critical analysis of the conceptual and experimental issues involved.

For a systematic approach to this objective we have subdivided this paper into three main parts. In the first half of Part I we have laid down the general orientation by giving short elaborations of some important theoretical approaches to anxiety and classifying them under four main headings, viz., (i) purely descriptive approaches, (ii) descriptive-cognitive approaches, (iii) neurophysiological-biochemical approaches, and (iv) phenomenological approaches.

In second half of Part I we have critically assessed the merits and shortcomings of each of these approaches and have also endeavoured to show how some of the major and best known theories of anxiety, viz., of Cattel and Izard, Freud, Sullivan, etc., can be subsumed under one or other of those four headings.

In Part II of this paper we are mainly concerned with showing that the seeming theoretical convergence of the different theories of anxiety (as classified according to the scheme developed in Part I) is only apparent because the pivotal concepts, viz., 'stress' and 'threat' fail to live up to the promises on closer scrutiny. So we undertake a conceptual analysis of these two concepts with a view to showing their mutual dependence. The inadequacy of any attempt like Spielberger's, to sharply demarcate and to define independently the concept of 'stress' and 'threat' follows as a consequence of this essential interdependence. We have then tried to show how the failure of any such attempt entails the impossibility of giving a purely objective definition of anxiety. We end Part II by clearly specifying the theoretical requirements to be satisfied by any adequate theory of anxiety.

The last part (Part III) of this paper deals with two themes. In the first half we propose an explanatory model of anxiety (following the lead of *cybernetics*) and explain it with a relevant flow-chart diagram.

In the second half we show how the explanatory model proposed by us can meet all the theoretical requirements specified in Part II and at the same time can accommodate the various experimental findings of the researches on anxiety performed by W. D. Fenz and others.

I

Any exact scientific study of a phenomenon requires as a starting point a clear and generally agreed definition of the concepts pertaining to the phenomenon. In the research programme on anxiety difference begins to crop up right from this starting point. Dr. Spielberger nicely sums up this situation with an oriental analogy: "Ambiguity in the status of anxiety as a psychological concept appears to stem from the fact that different investigators have invested this term with a variety of meanings. In commenting on the lack of agreement in descriptions of anxiety Epstein suggests that the problem of defining anxiety may be analogous to the difficulties experienced by the proverbial wise but

blind men of Indostan who differed dramatically in their conceptions of an elephant because each had touched only certain parts of its exterior anatomy. But achieving consensus in the definition of anxiety may present an even more complicated problem. Presumably, the wise men of Indostan spoke the same language, while those who research anxiety phenomena often use very different terminology in their descriptive statements."

The truth of the above characterization is betrayed by the fact that there are a multitude of incomensurable theories of anxiety. Very frequently they are incomensurable because they often start from very radically different conceptuo-experimental standpoints. "That is to say, each theory constitutes a formal conceptualization of experiences that refer to anxiety phenomena. These experiences may have been those of the theorist himself, or they may have been those of another. Further, some of them were grounded in perception while others were objects of conception. Wherever their source and whatever the mode in which they were given, such experiences comprised the domain from which each theoretician selected his theory-building material. In other words, each theory represents the particular theorist's own effort at vigorously formulating perceptual and/or conceptual experiences pertaining to anxiety phenomena."

Besides these radical differences in standpoints, there are always some metaphysical commitments, implicit or explicit, in each definition and theorization of the phenomenon of anxiety. Thus, as Fischer points out towards the end of his book *Theories of Anxiety*, "each theory rests upon and is grounded in particular metaphysical assumptions as to the ultimate nature of human reality. In some cases, this means that human phenomena must be reduced to the language of physics. In others, it demands that all experience be understood as subjective, as prone to error, and that only the scientist's experience be granted validity. In still others, it requires that experiences be translated into the language of physiology. Certain theorists demand that an event be intersubjectively reliable before it is considered real. Others are not comfortable with an experience or a formulation of that experience unless it is already consistent with 'established' theories. Whatever the criteria, the metaphysical assumptions are always and inevitably operative."

We are now faced with the following difficulties: each theory starts with a different definitional conception of anxiety; each poses a somewhat different question to the experiences with which it deals; and each makes its own particular metaphysical commitments.

How are we to assemble these theories in some form of fruitful dialogue? Are we forced to choose one conception and negate the other? Or should we accord with the view that despite some evidence of convergence in theoretical views and increasing sophistication in the research methods employed to study anxiety, a meaningful integration of theory and research on anxiety does not appear to be possible at this time, and be acquiesced with a spirit of resignation passively waiting for a better future?

As the last pessimistic alternative mentioned above cannot be acceptable

for obvious reasons, we shall try to open up a kind of meaningful dialogue among the different theories of anxiety. In order to be able to do that we shall start by categorizing the theories of anxiety under four broad headings.

I. Purely descriptive theory of anxiety of Cattel and Izard.
II. Description of anxiety with emphasis on the central or cognitive factors—done by Beck, Epstein, Mandler, etc.
III. Neurophysiological and biochemical approach to anxiety by Barratt and Levitt.
IV. Phenomenological approach to anxiety in terms of subjective-objective poles and the experiencing of anxiety as has been done by Fischer et al.

I. *Purely Descriptive Theory of Anxiety*

The modern psychologists describe anxiety as an unpleasant emotional state or condition which is characterized by subjective feelings of tension, apprehension and worry and by activation or arousal of the autonomic nervous system. According to them an anxiety state is a transitory emotional state of the human organism which is evoked whenever a person preceives a particular stimulus or situation as potentially harmful, dangerous or threatening to him. Anxiety states vary in intensity and fluctuate over time as a function of the amount of stress that infringes upon an individual. Level of A-state should be high in circumstances that are perceived by an individual to be threatening irrespective of the objective danger. A-state intensity should be low in non-stressful situations or in circumstances where an existing danger is not perceived as threatening.

The conceptual distinction between anxiety as a transitory emotional state and as a relatively stable personality trait was introduced by Cattell and Scheier. But Cattell is mainly concerned with describing the unique and distinctive pattern of responses that is associated with anxiety states. Cattell contends that the response pattern in state-anxiety is a 'unitary source state'. On the contrary, Izard holds that anxiety is a complex but unstable reaction which consists of variable combinations of other more basic emotions such as fear, distress and shame. This view regards anxiety basically as a *state* and not so much as a trait or a process. As such it cannot distinguish between fear and anxiety.

II. *Cognitive Theory of Anxiety*

Beck, Epstein, Mandler and Spielberger all emphasize the centrality of cognitive factors in the arousal of anxiety as an emotional state. According to them the cognitive factors play a critical role in the arousal of emotional states. Cognitive appraisals of danger seem to be the first step in the arousal of an anxiety state, and cognitive reappraisals are determiners of the intensity of such states and their persistence over time. These investigators differ with regard to the response-patterns that are found in anxiety reactions, the stressful stimuli that evoke these reactions and the nature of the mediating cognitive mechanisms.

This formulation emphasizes the trait-aspect of anxiety. Trait-anxiety refers to relatively stable individual differences in anxiety-proneness, that is, to differences in the disposition to perceive a wide range of stimulus-situations as dangerous or threatening and in the tendency to respond to such threats with A-state reaction. Trait-anxiety is not directly manifested in behaviour but may be inferred from the frequency and the intensity of an individual's elevations in A-state over time. Persons who are high in A-trait are disposed to perceive the world as more dangerous or threatening than low A-trait individuals. High A-trait individuals are more vulnerable to stress and tend to experience A-state reactions of greater intensity and with greater frequency over time than persons who are low in A-trait.

But the state-trait distinction is implicit in Beck's hypothesis that individual differences in vulnerability to stress are important factors in the development of psychosomatic symptoms. According to him, the persistence, over long periods of time, of intense psychophysiological reactions associated with anxiety states in people who are prone to respond to stressful circumstances with anxiety may ultimately lead to the development of psychosomatic disorders.

The so-called process-definitions of anxiety can be shown to be subsumable under the cognitive approach. For example, Lazarus and Averill define anxiety as "an emotion based on the appraisal of threat, an appraisal which entails symbolic, anticipatory, and uncertain elements. . . anxiety results when cognitive systems no longer enable a person to relate meaningfully to the world about him." This definition of anxiety implies a complex process that involves stress, cognitive appraisal of threat, reappraisal mechanisms available to the individual for coping with the stress, and an emotional reaction that includes behavioural and physiological manifestations, but in which cognitive reactions predominate. Here the emphasis is clearly on cognitive factors. For Mandler, "anxiety results from a process in which a well-organized plan or sequence of behaviour is interrupted, which leads to a state of distress and arousal that turns into helplessness and anxiety in the individual has no appropriate task or situation-relevant substitute behaviour to complete the interrupted sequence." This view also emphasizes the importance of cognitive factors in anxiety indirectly but equally unmistakably by making the 'interruption of a well-organized plan of behaviour' as the source of anxiety. However, a purely process-definition of anxiety (i.e. one emphasizing the role of the man-environment reaction process without adequately emphasizing the cognitive factors) must be inadequate because it would fail to distinguish adequately between an 'objective anxiety' and a 'neurotic anxiety' since as mere interaction-processes they may be indistinguishable.

III. *Neurophysiological and Biochemical Approach to Anxiety*

Barratt and Levitt emphasize the neurophysiological and biochemical factors of anxiety state. They are primarily interested in the neurophysiological and biochemical changes that are associated with anxiety states, although

Levitt admits the importance of drawing a distinction between A-state and A-trait in his later writings.

That there is a substantial amount of truth in the physiological and biochemical approach has been substantiated by various researchers. The experiment cited below performed by J. J. Schildkraut and S. S. Kety clearly shows the role played by such biochemical factors as epinephrine, nor-epinephrine, and the metabolism rate of other biogenic amines in the genesis and determination of patterns of anxious behaviour.

In recent experiments interest has been focussed on some of the important brain monoamines—such as epinephrine, nor-epinephrine, dopamine, serotonin, etc.

Nor-epinephrine is present in highest concentration in the hypothalumus—while epinephrine is present in the adrenal medulla although in much lower concentration. This is quite significant because both the hypothalumus and the adrenal medulla are known to be clearly related to our affective states.

Funkenstein and others, in an extensive study of the cardio-vascular responses in states of psychiatric patients and normal subjects under psychological stress, found the physiological changes associated with angry and aggressive states to be similar to those occuring during nor-epinephrine infusion whereas cardio-vascular responses in states of anxiety or depression were similar to those observed during epinephrine infusion.

The findings of Mason and others show that *increased* epinephrine secretion seems to occur in states of anxiety in situations of unpredictable nature. In contrast, nor-epinephrine secretion may occur in situations which are challenging but *predictable.*

On the other hand investigators, who have given human subjects infusions of *epinephrine*, have reported the occurrence of subjective symptoms resembling anxiety. However, in these simulated anxiety states some subjects reported feeling *as if* they were anxious and some subjects did experience no emotion at all under epinephrine infusion.

It has been suggested, therefore, that epinephrine infusion may produce a non-specific state arousal and that the past experiences of the individual subject determine the quantity and intensity of the elicited emotions. Herein comes the notion of the *life-style* of an individual as an important determinant of his anxiety reactions.

IV. *Phenomenological Approach to Anxiety*

As opposed to the other view-points the phenomenologists maintain that the phenomenon of anxiety can be properly understood only when it is viewed in a concrete setting of the *felt* experience of the anxious person. Taken by itself without reference to the lived experience the term anxiety appears to be an abstraction. Its referents are, on the one hand, a particular mode of experiencing that can be described as anxious and on the other hand, particular objects of experiencing that can be characterized as myself or another being anxious.

"The mode of experiencing that is described as anxious is lived, unreflected and unselfconscious. It illuminates a structure whose poles are a world that is *lived-for-and-toward*, and an existing identity that demands affirmation and perpetuation. The world pole ... is not a simple aggregation of objects and entities. It is a temporally constituted network of relationships and involvements to which the individual has committed himself and in which he comprehends and realize his identity.... The identity pole is a temporally unfolding *project*, a having-been-being-becoming, that is oriented toward the establishment of a particular form of human living."

This *project* is constituted by milestones, each of which derives its full meaning from the unfolding process taken as a totality. The project is the particular orientation of the identity-world structure. The milestones are thematic. They are focal points of experience and emerge as hurdles that must be surmounted if the project is to be sustained. Hence, faced with each hurdle, the question of ability arises and the individual, himself, apprehends and lives his evaluation of his own possibility. As the individual apprehends the uncertainty of his ability, the world-identity structure threatens to dissolve and in the face of such dissolution the individual becomes anxious. He is anxious in the face of the potential unrealizability of his relationship and involvements. Further there is an experienced form of motivation that refers to the perpetuation and realization of both poles. In both cases, it is a must.

So according to the phenomenological point of view the analysis of anxious experiencing is a structure that involves the following interrelated components:

1. An Identity: This is an unfolding project, constituted by milestones, which is oriented towards the establishment of a particular form of human living. Its threatened loss is that about which the individual is anxious.
2. A world: This is a lived-for-and-toward network of relations and involvements expressed to differing extents in each of the milestones, when one of the milestones emerges as possibly insurmountable, the world threatens to dissolve and this potential dissolution is that in the face of which an individual is anxious.
3. Motivation: A 'must' or 'musts' that refer to the perpetuation and realization of the individual's world and his identity.
4. An Action: A having or doing that constitutes the achievement of the particular milestone in question. This having or doing is apprehended as expressive of the individual's being.
5. The individual's lived evaluation of his uncertain competence with regard to the achievement of the milestone. Here the phenomenon of anxious experience has been summarized. But what is revealed in the experience of the other-being-anxious is characterized as a unitary object of experience. It is given as a gestalt, a whole, not the simple addition of independent elements.

Some other major theories of anxiety, namely Freud's and Sullivan's, can be shown to be amenable to a phenomenological interpretation. According to Freud, there are three distinct forms of anxiety: reality anxiety, moral

anxiety and neurotic anxiety. And, in fact, each form of anxiety can be grasped in terms of the structural characteristics of anxiety-experience as explained from a phenomenological point of view. These three forms of anxiety emerged from their own unique relational context. Each form of anxiety is grounded in the ego's transactions with a particular 'world'. Thus, in the case of reality anxiety, this context is the ego's concern with the external world; in the case of moral anxiety, it is the ego's dealings with the world of parental values and principles; and in the case of neurotic anxiety, it is the ego's struggle with the world of instinctual, unchosen and frequently alien needs and cravings. Thus Freud's three forms of anxiety can be analysed with respect to its world and identity poles, as well as its motivational, actional and experienced ability components.

Harry Stack Sullivan's concept of anxiety can also be interpreted from the phenomenological point of view. According to him the phenomenon of anxiety is an experienced tension arising from, as well as expressing disjunctions in, the individual's significant interpersonal relations. It occurs in so far as 'significant others' express condemnation of one's manner of being human. The other's condemnation—Sullivan termed it the other's 'forbidding gesture'—tend to undermine the individual's striving to become an interpersonally acceptable human being. It is this in the face of which one is already anxiously experiencing. Further, the questioning of one's adequacy and worth as a person is integral to the anxious experience and is that about which the individual is, in fact, anxious. According to Sullivan, the developing individual is always concerned with one fundamental and continuing problem: the adequately human achievement of need-satisfaction. Thus the experienced motive-action sequence is inherent in the anxious experiencing of the Sullivanian person.

At this point it is worth mentioning that the phenomenological approach is not to be looked down upon as a mere philosophical speculation rather than being a respectable experimentally verifiable scientific hypothesis. In fact, in the recent past there have been quite a few experimental procedures which provide experimental corroboration for the subjective aspect involved in anxiety phenomena. The earliest efforts to construct self-report measures of state-anxiety were carried out by Nowlis, Cattell, Scheier and Zuckerman. At the present time, Zuckerman's Affect Adjective Checklist is the instrument most widely used for assessing the subjective aspect of phenomenological component of anxiety states. Two new instruments, the profile of Mood States and the State-Trait Anxiety Inventory are now also available for measuring A-state.

People differ in anxiety proneness. Therefore, a comprehensive theory of anxiety must include a concept of anxiety as a personality trait. General measures of trait anxiety such as the Taylor Manifest Anxiety Scale, The IPAT Anxiety Scale and the A-Trait Scale of the State-Trait Inventory seem to measure anxiety proneness in social situations. Individuals who are high in A-Trait are more disposed to experience elevations in A-State in situations that

pose threats to self-esteem, and especially in interpersonal relationships in which personal adequacies is evaluated.

II

At this point it should be reasonably clear that our classification of theories of anxiety under the four broad headings is fairly comprehensive. Of these four approaches the phenomenological one seems to be quite intangible and least objective from a hard-core scientific point of view. Would it not be nice if we could define anxiety purely objectively, in terms of some empirically measurable parameters? Apparently, it seems plausible to assume that since all the theories of anxiety are trying to deal with the same phenomenon, namely anxiety, there must be a factor which can serve as a common denominator of all these diverse approaches. At first sight, the different theories seem to agree on at least two points, viz., (a) anxiety is generated only under a *stress-situation* or under stress and (b) a stress situation is a situation which has some *threat-value* for the subject, i.e., constitutes a *threat*, real or imaginary, to him.

However, this theoretical convergence of the different theories of anxiety is only apparent. In fact, when different theoreticians use 'stress' and 'threat' to describe or define anxiety they hardly ever use them in the same sense. "In their detailed review of the research literature on anxiety in school children, Phillips, Martin, and Myers note many contradictory research findings and a great diversity in the theoretical orientations that guide research in this field. Consequently, their conclusion that most investigators seem to agree that anxiety reactions are evoked by some form of stress represents an important point of theoretical convergence in an otherwise chaotic literature....Some form of stress or threat is a necessary antecedent condition for the occurrence of anxiety as an emotional state. There is considerably less agreement, however, with regard to the definition of stress, the pattern of response that defines an anxiety state, and the nature of the mechanisms that mediate between an anxiety reaction and the stressful stimulus events or situations that evoke it."

Dr. Spielberger is one of the most notable writers in this field who has tried to straighten up this terminological muddle by trying to define clearly and distinguish between 'stress' and 'threat'. Thus in the book, *Anxiety : Current Trends in Theory and Research*, he says, "It is suggested here that 'stress' be used to describe the extent or magnitude of objective danger that is associated with the stimulus properties of a given situation....The term 'stress' be used exclusively to denote environmental conditions or circumstances that are characterised by some degree of objective physical or psychological danger... while situations that are objectively stressful are likely to be perceived as dangerous by most persons, whether or not such situations are regarded as threatening by a particular individual will depend upon his own subjective appraisal....Thus, it is proposed that 'threat' be used to describe an individual's subjective appraisal of a situation as physically or psychologically dangerous

for him. Presumably, the appraisal of a situation as dangerous or threatening will be determined by individual differences in aptitudes, skills and personality dispositions (traits), and by personal experience with similar situations in the past."

This distinction, though helpful, cannot be regarded as really effective in overcoming the incommensurability of the different theoretical approaches to anxiety for the following reasons: (*i*) It is ambiguous, (*ii*) 'Stress' and 'threat' are distinguishable but not separable, (*iii*) Circularity of stress definition of anxiety.

(*i*) The term 'stress' besides being used too narrowly (as Dr. Spielberger himself admits) it is used somewhat ambiguously in so far as 'stress' refer to environmental conditions characterized by some degree of 'objective physical or psychological dangers'. What is exactly meant by an objective factor's possessing a character which is psychologically dangerous? How is this degree of psychological danger to be objectively measured? With reference to which standard can we say that the psychological danger is objectively stressful? Clearly, a purely statistical norm cannot be adequate because even one and the same person facing the same environmental situation may show different degrees of anxiety manifestation depending upon his cognitive conceptual framework in terms of which he tries to comprehend the situation. Let us take an example to make this point clear: Suppose a person A is given a geiger counter (about the function of which he does not know anything) and is asked to go into a forest with it. Further suppose that he finds a house where he can lock himself in and can be safe from wild animals. He goes into it, locks himself in and notices that his geiger counter has begun ticking and shows a high reading on the dial. Clearly this is not likely to produce any significant anxiety in him whereas the same man after he has learnt the use of the geiger counter would manifest a high degree of anxiety because he would know that, that house was highly radioactive and hence dangerous and yet the outside would be equally unpreferable. On the other hand, a superstitious African bushman B might under the same circumstances be as anxious as a physicist (in A's situation) would be, although for a completely different reason. For example, B might think that the behaviour of the geiger counter must be due to some kind of ghost or spirit and hence would consider the house haunted.

Now the objective situation is the same. The complacency of *A* does not reflect his physical danger, on the other hand the anxious-behaviour of *B* though *indistinguishable* qua anxious-behaviour from that of a physicist under similar conditions is yet *unreasonable* from our point of view. Clearly, therefore, a purely behaviouristic criterion or a purely statistical one cannot be used as an objective criterion for measuring the degree of stress.

(*ii*) Once it is admitted that a purely objective characterization of stress is not possible because it would always involve a subjective element, the attempt to make a clear-cut distinction between 'stress' and 'threat' in terms of subjective and objective factors can no more be upheld. Stress and threat may be

distinguishable but clearly not separable, i.e., not definable independently of each other.

(*iii*) Thirdly, a more serious objection is that even if we succeeded in defining 'stress' and 'threat' separately, the definition of anxiety in terms of these concepts would be circular. Do we have to characterize a situation as stressful or threatening when they produce anxiety reactions? Or is it the other way round? That is, are we to characterize any behavioural manifestations, (in the wide sense of 'behavioural') elicited by situations already characterized as stressful or threatening by some independent criterion, as anxious behaviour by definition? Evidently neither of these approaches can be adequate because the concept of 'stress' and 'threat' can have their full-blooded significance only as objects of an anxious-experiencing-situation, while the concept of anxiety degenerates into mere abstraction without reference to a stressful or threatening situation.

This last point has been substantiated by Martens (1971) on the basis of an extensive review of research on anxiety and motor behaviour. He has recently suggested that psychological stress, as this concept was defined by Cofer and Appley (1966) is 'substantially synonymous with the concept of state-anxiety' as defined by Spielberger. Similarly, Carron (1971) equates stress with state-anxiety on the basis of the work of Lazarus and Opton (1968).

From the foregoing discussion it should be evident that no purely objective formulation of anxiety is possible. The subjective-objective poles are always present as clearly distinguishable and yet essentially inseparable correlative factors in an anxious situation.

On the other hand, the physiological-biochemical research mentioned earlier clearly emphasizes the indispensability of a physicalistic approach to anxiety for any comprehensive theory of anxiety.

So, on the basis of our foregoing discussion we may now, by way of recapitulation, emphasize the following basic points:

1. An adequate theory of anxiety must be able to distinguish 'anxiety' which is objectless, from fear which is always dependent upon some actual object. Fear is a process that involves an emotional reaction to the anticipation of injury or harm from some real or objective danger in the external environment. But anxiety is described as an emotional reaction which is considered 'objectless' because the stimulus conditions that evoke it are unknown. In fear the intensity of the emotional reaction is proportional to the magnitude of the danger that evokes it. In anxiety, the intensity of an emotional reaction to a stressful situation is disproportionately greater than the magnitude of the objective danger.

2. State-trait and process approaches are complementary rather than incompatible with each other for a proper understanding of the phenomenon of anxiety.

3. A purely objective formulation of the concept of anxiety is not possible. (As is betrayed by the failure to make a sharp distinction between stress and threat and the circularity involved in defining anxiety in terms of them.)

4. From the foregoing discussion it should be clear that the most plausible way of accommodating (1) above within the conceptual framework of a theory of anxiety is:
   (a) to emphasize the centrality or cognitive aspect as a necessary factor in anxiety whereas
   (b) to obviate the difficulties involved in (3) above one has to take seriously the subjective-objective poles and anxious experiencing as is done by the phenomenological approach.

5. Since man is not spirit alone but a physico-chemical organism having consciousness, any adequate theory of anxiety must be able to indicate a possible neurophysiological and biochemical mechanism underlying the phenomenon that we consciously experience as anxiety.

The last two points in their turn clearly indicate that any explanatory model of anxiety must be able to strike a proper balance between the phenomenological and physiological approaches. The cybernetic model of anxiety that we propose and explain below is believed to satisfy all these theoretical requirements.

III

In the diagram on p.107 an arrow indicates the influencing factors. Thus the arrow from Box 1 (B1) to Box 2 (B2) (representing the receptors) indicates that the objective states of affairs influence or determine our receptive state and so on. As the diagram clearly shows B2 in its turn influences B5 which represents the cognitive conceptual framework as determined by the C. N. S. But B5 is also influenced by other central internal factors like memory and the physico-chemical state of the organism as a whole. For example, a man in an unfavourable physico-chemical state and some kind of unhappy psychological association with some objective state of affair similar to present one would, other conditions remaining the same, tend to behave more anxiously than he would do had his past experiences and physico-chemical states been different. This is indicated by the combined arrow from B3 & B4 to B5. Now, once the cognitive conceptual framework is somehow determined by the external and internal factors it B5 influences B6 & B8. B6 represents in our diagram the envisaged alternatives that may befall the organism with different respective uncertainty and threat value.

Let us explain the notions of 'envisaged alternatives' as well as 'threat value' and 'uncertainty value' of such alternatives. Suppose, a man A after buying a large stock of shares hears the rumour that the price of the shares he has just bought are likely to go down drastically. If we assume that he is not rich enough to absorb such a loss without a ruffle, it would be very natural to expect him to behave anxiously in the face of such states of affair. Here, A's hearing the rumour corresponds to the influence of B1 on B2.

Clearly B2 will influence B5. But suppose that, that A is of low anxiety-trait (which plausibly is determined, at least in part, by his physico-chemical

constitution) and from his past experiences he has seen that rumours about stock markets are more often false than not. In such a case A would not be so highly anxious as he would have been if he were high in anxiety-trait or his past experiences were just of the opposite kind. Now, once A faces an anxiety-producing situation, he would under normal conditions try to tackle it and the greater the amount of anxiety involved the more the effort he would need to cope with such a situation. But what can we use as an index for the degree of the felt anxiety? To explain this let us reconsider the situation of A. To tackle the situation, A might think like this: supposing that the share values drop, the loss can be avoided by adopting one of the following alternatives:

(1) to hold up the shares until the market returns to normal;
(2) to sell the shares at a slightly lower rate before the prices begin to fall so that the loss, if any, be minimized;
(3) to hold part of the shares until normalcy returns and to sell part of it at par or at a slight loss.

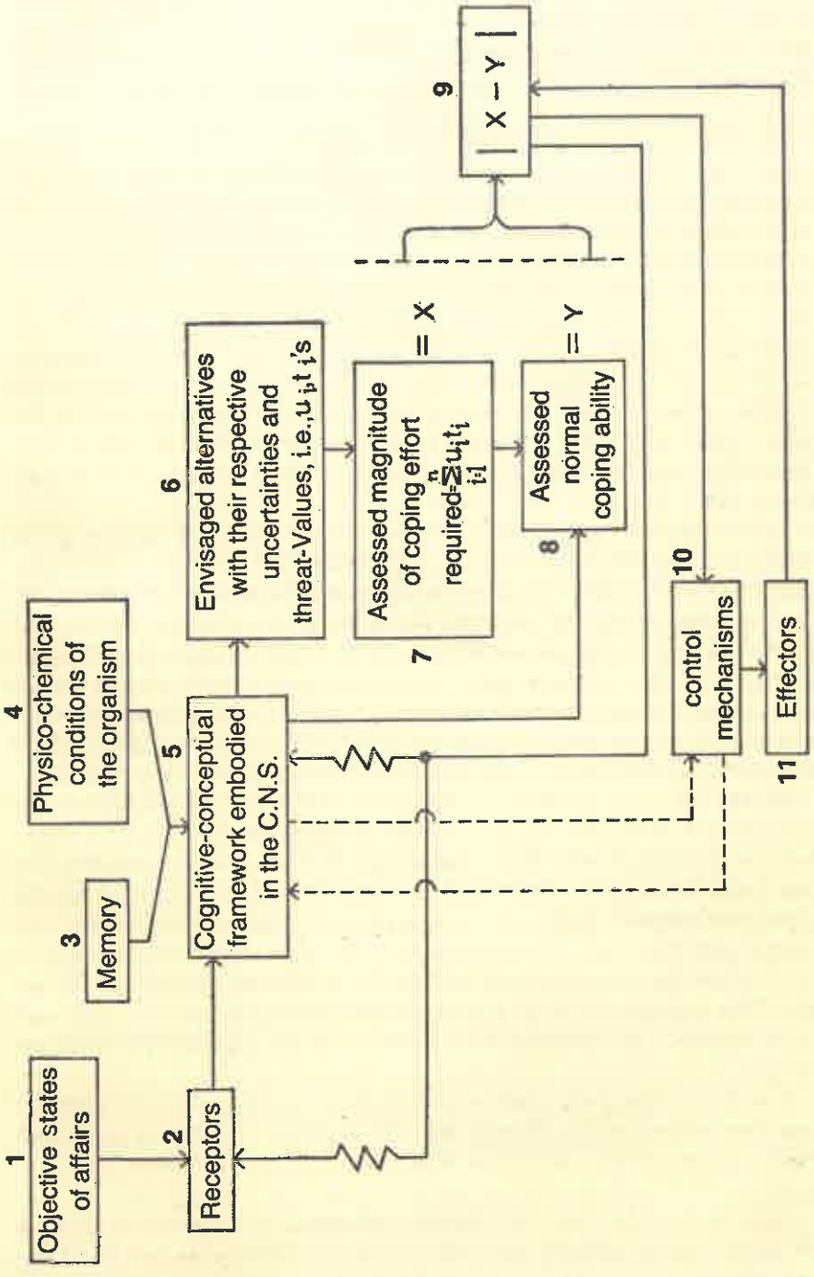
There may be many other possible alternative courses of action, but for the sake of simplicity let us assume that these are the only three envisaged by A. Let us denote the three alternatives as a_1, a_2, a_3. a_1 prevents any loss to A but at the same time blocks up his money on which he loses interest and at the same time there is no certainty that the shares will ever be selling at a profit. Let this uncertainty of a_1 be u_1 and the threat value of a_1 be t_1. Here the threat value is the amount of interest lost in case A's speculation fails.

In the same way alternative a_2 minimizes A's loss and in that sense has least uncertainty but its threat-value from a speculator's point of view is rather high because it amounts to losing money by relying on some rumour. Let the uncertainty and threat value of a_2 be u_2 and t_2 respectively. In the same way from A's point of view a different set of uncertainty value u_3 and threat-value t_3 would be attached to a_3 and so on.

Clearly, if another speculator B was in A's position he would impute different uncertainty-value and threat-value to different alternatives, maybe he would think of a completely different set of alternatives altogether.

Now once we have the notions of uncertainty value and threat-value of an envisaged alternative defined, we can use the sum of the products of u_it_i, i.e., $\sum_{i=1}^{n} u_it_i$ as an index of the degree of the felt anxiety for a given person. The reason for using this as an index is clear because the larger the number of alternatives envisaged and the higher the degree of uncertainty and threat attached to each one of them the higher is the anxiety felt.

It should be equally clear that the greater the degree of *felt* anxiety the greater would be the assessed magnitude of the coping effort required by the anxious person. This is represented by the arrow from B6 to B7. For brevity we have used 'X' to denote the assessed magnitude of the coping effort required. We recall at this point that Box 5 influences Box 8 which means a man's assessed normal coping ability is a function of his cognitive conceptual framework, i.e., B5.



Since a person's assessed normal coping ability, i.e., his self-confidence is higher in direct proportion to the stability and favourable dispositions of his cognitive conceptual framework (B5), we can say that B5 positively influences B8, or more technically, B5 sends a positive feedback to B8. On the other hand if according to a person's own assessment the coping effort, required to tackle the situation he is facing, is very high, i.e., if $\sum_{i=1}^{n} u_i t_i$ is very large then that will undermine his self confidence, i.e., B7 influences B8 in a negative way or the feedback from B7 to B8 is negative. For brevity we denote the degree of self-confidence or assessed normal coping ability of a person by Y. The vertical doted line represents a hypothetical scale for measuring the degrees of X and Y. The widely separated X and Y are, the wider is the gap between a person's assessment of his own coping ability and the magnitude of coping effort required as assessed by the man himself. Clearly coping effort in this diagram can be viewed as an effort to minimize the absolute difference between X and Y which, as we have just shown, is a function of two opposing forces (represented by B7 & B8). If it is possible to reduce the absolute difference between X and Y to zero, i.e., where $|X—Y| = 0$ the situation is said to be completely coped with.

As our diagram shows B9 is a function of the absolute difference of X and Y and represents the subjectively felt gap between X and Y. Now if the magnitude of $|X—Y|$ is very large then the signal that goes from B9 to B5 & B2 may be strong enough to overcome the threshold of resistance (represented by the wavy part of the arrows from B9 to B5 & B2) and may *distort* the functioning of B5 & B2. This distortion, if it is too large, would disturb the normal functioning of both B2 and B5 and thus would explain why under extremely tensed high-anxiety situation a person may have his receptive and cognitive faculties distorted and may end up with hallucination and crazy thinking.

On the other hand, when $|X—Y|$ is not too high, i.e., where the signal strength from B9 is below the critical point, it cannot interfere with B2 & B5 but activates the appropriate control mechanism B10 which in its turn influences the effector process B11, resulting in manifest behaviours (which we call the coping behaviours) which works back on B9 to minimize the value of $|X—Y|$. At the same time that B10 influences B11, B10 also sends forth and receives back information signals represented by the broken arrows between B5 and B10. This corresponds to the anxious person's conscious appraisal of his coping behaviour. This completes the description of our explanatory model for anxiety.

If we look at this model and analyse the functions of its different stages we can show without much difficulty that this explanatory model at least minimally satisfies all the theoretical requirements of any adequate theory of anxiety.

First, the fact that Box 7 is ultimately influenced by B1 as well as by B3 & B4 via B5 clearly indicates that both objective or external as well as subjective or cognitive factors are determinants of a person's felt magnitude of

anxiety. In other words our model can accommodate the subjective-objective pole distinction as an essential ingredient and thereby is compatible with the phenomenological approach. On the other hand, since B5 is influenced by B3 & B4 it shows that a person's past experience and his physiological and biochemical factors can affect his anxious experiencing as well as anxious behaviour. This is clearly in accordance with the findings of such physiological experiments (which have been discussed earlier) involving epinephrine and nor-epinephrine.

Thirdly, our model can successfully account for the distinction between a real anxiety and a neurotic anxiety. A neurotic anxiety results when the entire magnitude of X is a function of the internal factors, viz., B3, B4 and B5 whereas the influence of B1 is either absent or minimal. In such cases we can call it chronic neurotic anxiety.

On the other hand, a person may show neurotic anxious behaviour when the strength of the signal from B9 to B5 & B2 goes beyond the critical point and distort the functioning of B2 & B5 in the way indicated earlier. In such cases the neurotically behaving anxious person may regain his normalcy once the tenseness of the situation is relaxed, i.e., $|X—Y|$ falls back within the limits of tolerance. For obvious reasons we call these 'neurotic anxiety under severe stress' to distinguish it from 'chronic neurotic anxiety'.

As opposed to these neurotic anxieties when B1, B3 & B4 have their relevant proportionate shares in determining the magnitude of X and $|X—Y|$ is below the critical point, we have, what is called, normal anxious behaviour.

Fourthly, it is clear, from the forgoing discussion, that our model can also account for the distinction between fear (which is always objectively determined) and anxiety which is objectless (in the sense that the internal or cognitive factors play a predominant role in the genesis of anxiety).

Finally, certain experimental facts regarding anxious behaviour can also be nicely explained within our explanatory framework. For example, Professor Fenz's findings about parachute-jumpers, namely the fact that experienced jumpers show lesser anxiety than novice jumpers, can be explained in the following way: for the experienced jumper the envisaged alternatives are definite and very limited. Moreover, his past successful experiences have generated a definite expectation pattern for each envisaged alternative thereby minimizing both the uncertainty value and the threat-value of those alternatives. Consequently $\sum_{i=1}^{n} u_i t_i$ has a very low value indicating a very low magnitude of anxiety. On the other hand his past successes also increases his assessed normal coping ability or self-confidence, i.e., the magnitude of Y. As a result the difference between X & Y becomes minimal and can be expected to be very easily coped with.

On the other hand, in the case of a novice jumper the number of envisaged alternatives is often increased by taking seriously some rather unreasonable alternatives. Moreover, lack of experience lowers his level of self-confidence, i.e., the magnitude of Y, while at the same time attaches high uncertainty and

threat values to the alternatives and consequently increases the value of $\Sigma_{i=1}^{n} u_i t_i$, i.e., of X. As a result the gap between X and Y is much wider in the case of a novice and consequently requires much more estimated coping effort, thereby causing the novice to behave more anxiously.

So, considering all these facts, we feel justified in believing that the neuro-cybernetic model proposed here is one of the most adequate, if not the best, theoretical models for explaining the phenomenon of anxiety.

References

1. Hofferman, J. M. and Trumbull, R., *Note on Self-Regulating Systems and Stress.*
2. Shibutahi, T., *A Cybernetic Approach to Motivation.*
3. Spielberger, C. D. (ed.), (1) *Anxiety: Current Trends in Theory and Research*, vols. I & II. New York, Academic Press, 1972, (2) *Anxiety and Behaviour* (ed.) 1968.
4. Fischer, W. F., *Theories of Anxiety.*
5. Giorgi, A. (ed.), *Phenomenological Psychology*, vol. 1, (Dequense University Press).
6. Lazarus, R. S. and Opton, E. M. (ed.), *Personality.* (Penguin).
7. Pribram, K. H. (ed.), *Brain and Behaviour and Mood: States and Mind.* (Penguin Books, London, 1969).
8. Buckley, W. F. (ed.), *Modern Systems Research for the Behavioural Scientist.* (Aldine Press, N. Y., 1971).
9. Wiener, N., *Cybernetics.* (John Wiley & Sons, New York, 1949)
10. Sluckin, W., *Minds and Machines.* (Penguin Books, London, 1967)

Conceptual change: historicism and realism

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'The great problem round which everything that I write turns is: Is there an order in the world a priori."—WITTGENSTEIN

An attempt will be made in this paper to defend realism in general and Indian realism in particular mainly against process philosophy and in passing against Marxist Indology. The Marxist Indologists of India, in their search for a sort of national heritage, discover an atheistic trend in all the major Indian philosophical schools hitherto known as theistic,[1] and a sort of Marxian dialectic in the philosophy of Buddhism.[2] I would try to show that the Buddhist never entertained the sort of belief in dynamism which the Marxists and the process philosophers share; even the exact nature of the controversy relating to the phenomenon of change in the case of the Buddhists and their opponents is different from what it is in the case of the process philosophers or the Marxists on the one hand, and their respective rivals on the other. Whatever that may be and even if it is not confused with the philosophy of flux, Buddhism is incompatible with realism. For Buddhism, being an extreme form of 'atomism', cannot accommodate the possibility and objectivity of conceptual cognition, while a belief in them is one of the central features of realism. Again, whether or not the Marxist Indologists succeed in their attempted discovery of the element of dynamism in the Indian philosophical heritage, the sociology of knowledge, at least in its Marxist version, has recently become a serious threat to realism or realist philosophy. Sociologists of knowledge intending to be faithful to Marx would argue that all truth is 'class truth' and that all forms of philosophy, including realist philosophy, are an 'ideological' defence of the status quo by reactionaries. But in any case a sociologist of knowledge would reject with Foucault the nontemporal character of forms of knowledge and inquiry, so much so that even mathematics will have only a changing identity.[3] He would hold, as has been beautifully put by Mannheim in his *Ideology and Utopia*, 'It is impossible to conceive of absolute truth independently of the values and positions of the subject and unrelated to the social context. Even a god could not formulate a proposition on historical subjects like $2+2=4$, for what is intelligible in history can be formulated only with reference to problems and conceptual constructions which themselves arise in the flux of historical experience.'[4] This rejection of absolute truth, and allowing historicism to affect even the form and substance of knowledge, are

unacceptable to the realists. For the second central feature of realism, which is a corollary of the first already noted, is the belief that scientific knowledge is about one real world, that truths about the world are true regardless of what people think or do and that there is one true description of the world. A realist could hardly accept even the much weaker claim that the changing socio-economic substructure determines the forms and truths of knowledge we acquire in, say, history and sociology, while the knowledge we obtain in logic, mathematics and the natural sciences is not relative to any observer standpoint. But in fact, as we have seen, a corresponding stronger thesis is sometimes advocated. It is also an undeniable fact that what has popularized the sociology of knowledge and turned it into a force to reckon with is the introduction of social criteria into the interpretation of natural scientific theories by men like Kuhn, Feyerabend and others. But in general the sociologist of knowledge seems to be defending a view, if not contradictory, at least self-defeating.[5] For, if he is true to his standpoint and consistent then the sociology of knowledge itself would equally be relative to observer standpoint or socio-economic substructure or whatever it is. This would lead to what has been called the 'logical circle of sociology of knowledge'. On the other hand, if the sociologists of knowledge try, as they often do, to make themselves and others believe that regularities and laws may still be discovered in nature and society, then it would look as if they want to 'compensate themselves for the loss of an unchanging world by clinging to the faith that change can be foreseen because it is ruled by an unchanging law'.[6] But if they give up this much of conservatism then, they would be forced to reject the possibility of conceptual cognition and would initiate as they are sometimes held to do, a sort of competition with the philosophers. At the same time, historicism need not be conceived in the way Popper or Hayek conceived it; nor does one need to think that historicism in the Popperean sense is involved in the view or approach known as the sociology of knowledge. Indeed it is very difficult to find any characterization of historicism that integrates all or most of the ways in which the term has been used or can give a clear meaning to the term. But so long as the sociology of knowledge is based on the belief or the inference that in course of time and social changes our beliefs become false and laws invalid, so long as sociologists of knowledge reject (as did Mannheim who found in the sociology of knowledge a way to avoid intellectual skepticism that may otherwise follow from historicism) the atemporal character of knowledge, neither historicism nor the ontological problem, thought to be otherwise avoidable, can be avoided. Popper did not only generalize the concern of the sociologists of knowledge into that of the historicists, he also identified the basic problem of concern of the latter as the problem of change. He again rightly emphasized the truth that this problem is not new and that this can be traced back to Heraclitus. Whatever that may be, interest in the philosophy of flux has been revived.[7] And this also poses a threat to realism. It entails a total inapplicability of the conceptual framework of realism or of the realist's logic and language. I shall, however, argue in the second

section of this paper, that process philosophy in its extreme form holds a self-stultifying position as it entails the impossibility of conceptual cognition, whether philosophical or scientific. On the other hand, in its less radical, Whiteheadean, form it is simply bad metaphysics, much worse than traditional speculative metaphysics.

One may, however, argue from the standpoint of process philosophers that change is a fact of experience and cannot be denied.[8] What can be debated are whether this change is confined to social reality or extends to nature as a whole; whether this change is brought about by natural forces, by the collective efforts of human beings, or by both; whether the forces that initiate and perpetuate this change are mechanical or dialectical; and so on. But in any case if the fixed conceptual framework of the realists cannot cope with this changing reality, so much the worse for the realist framework. Without raising the difficult problem of ontology, a sociologist of knowledge may argue that the growth of knowledge is a fact and that without being blind to this fact one cannot ignore its implication, viz., the rationality of conceptual change. What is more, existence and the rationality of conceptual change are generally accepted by contemporary philosophers of science.[9] The questions involved here are important and intricate, and little can be gained by talking in vague generalities or by making sweeping remarks. For this reason, in this paper, the views of Marxist Indologists and of process philosophers have been selected as case studies for discussion. But we may as well state our positive views rather dogmatically and briefly if that can be of any use. Our answer to the argument offered from the standpoint of the process philosophers is that the realist does not deny change, he only denies the need for a different logic to understand it.[10] So far as the argument from the point of view of the sociologist of knowledge is concerned, the realist would say that what changes is not the truths or the concept of truth but the notion of rationality or intelligibility; norm of understanding; standard of criticism; and so on. Change in nature and society determines the genesis and evaluation of our knowledge but not its nature, theoretical activity and pursuit but not the theory. A realist would have no hesitation in granting that socio-cultural conditions determined Marx's acceptance of production as the given or form of life and his choice of non-linguistic activities of production as the paradigm under which to study man and society. Even nature is to be approached from this point of view, as providing both the means of subsistence and the necessity of reproducing them.[11] But this is in no way significantly different from the fact that the paradigm of scientific knowledge changed at different times in history. It is also most unlikely, given his Viennese background, that Wittgenstein's choice of the phrase 'forms of life' was not determined by his background, particularly by the fact that a book had already been published and was in wide circulation, the very title of which was *Lebensformen*.[12] Nobody denies the existence of such socio-cultural or historical determination. It is some such culturally determined norm of understanding which explains why Marxism and the Marxist tradition failed to have any great impact on British or Indian

philosophy.[13] And that its impact on Polish philosophy too was not very great is becoming apparent nowadays when Poland is rediscovering its socio-cultural self-identity which it lost during the period it was made to reel under the influence of Marxism.[14] So a realist can concede that the genesis of our ideas, norms of understanding, standard of evaluation, etc., are socio-culturally determined. He cannot, however, give up his demand for rationality or objective validity of the conceptual framework by means of which he rationally orders the world of experience. Nor can he forgo his conviction that reality justifies all these demands or beliefs of ours. In the words of William James, whose views we do not accept fully, 'All the magnificent achievements of mathematical and physical science....proceed from our indomitable desire to cast the world into a more rational shape in our minds than the shape into which it is thrown there by the crude order of our experience. The world has shown itself, to a great extent, plastic to this demand of ours for rationality.[15] Realists also cannot give up the belief that the results of that logical analysis is constant, that upon analysis each conceptual scheme reveals the same or semantically equivalent sets of elementary propositions and that ultimately, exactly the same states of affairs are depicted in each conceptual scheme.

II

One major objection against (metaphysical) realism is that it tends to encourage a wrong theory of reality or a mistaken philosophy of science. The objector argues that a realist admits fixed categories or concepts with the help of which he wants to capture, represent or understand reality and in the process kills reality. Reality is a historical concept and its essence is change. The categories with which a metaphysical realist operates are, so to say, static. A system of categories or, for that matter, categorial analysis, is an unhelpful tool, to say the least. This is in essence the objection in its classical epistemological formulation, from the point of view of process philosophy—an old philosophy in which interest has been revived in recent years. Since Wittgenstein initiated a new tradition by replacing epistemology by logic as the starting point in philosophy and since the philosophy of science began to flourish more rapidly than ever before, the objection against the realists was reformulated. The language or logic of the realists—the realist system of logical or linguistic concepts—is not, so the objection goes, adequate for the sciences. Growing and changing science can no more be formulated in realist logic than dynamic reality can be represented in and through a static scheme of categories. But distrust in change nurtured by a faulty metaphysics, as for example, realism, leads some philosophers to legislate for science in the name of helping the scientist by offering a tool for analysis.[16] The objections then boil down to this. Realism, at least the sort of realism we are concerned with here, is unhistoric. Formulated in these words the objection seems to gain additional force against the background of the growing influence of the sociology of knowledge and historicism.

One may now see why the realists cannot accept the historicism shared by process philosophers and some sociologists of knowledge. But the historicists themselves sometimes offer their own and different account. They think that a realist does not have any cogent argument to deny the fact of change. His point is not theoretical. It is practical. There is explanation, though no justification, why he denies historicism. In our everyday life, the realist says, we can make very little use of what is ever changing. Our practical interest and activity turn to what is, at least relatively, static or unchanging. The very assumption on which our practical life is based is incompatible with the historicist's view of the world. So historicism is practically useless. It seems that it was with such an objection against process philosophy in mind that Bergson wrote, 'The duty of philosophy should be...to examine the living without any reservation as to practical utility...Its own special object is to speculate, that is to say, to see.'[17] Another suggested argument as to why some philosophers do not accept historicism is that the reality of change normally escapes our attention except during great natural catastrophe or socio-political upheaval. It has been formulated in the following manner by Popper who nevertheless thinks this argumentation to be wrong. 'Contrasting their "dynamic" thinking with the "static" thinking of all previous generations, they [the modern historicists] believe that their own advance has been made possible by the fact that we are now "living in a revolution" which has so much accelerated the speed of our development that social change can be now directly experienced within a single lifetime.'[18]

These are their accounts as to why realism did not appear generally to be the correct view of reality. But what are their arguments for rejecting realism? The general argument is that any attempt to enframe historicism with a set of categories is to disfigure process or to devalue it. What thus the historicists object to is the attempt on the part of the realist philosophers to conceptualize reality—to try to represent reality through a scheme of concepts. Categories are fixed, concepts have fixed meanings and obey rules; the categorial scheme or conceptual framework is inflexible. But reality is ever changing. It ever eludes the realist's language which has a fixed structure and logic defined by laws which are immune to natural or socio-cultural changes. These rules hold unconditionally; the truths remain true in all circumstances. The laws of identity, non-contradiction and excluded middle are basic to the realist's logic—and this logic defines for him not only the limits of thought and language and the nature of the conceptual framework but also provides a criterion for existence. Every well-formed expression has a fixed meaning; every well-formed sentence is either true or false; no theory is acceptable if it involves or allows derivation of contradiction. Nothing is real which does not satisfy the criterion of identity; nothing is intelligible if it does not submit to analysis by means of this logic. If a single logic fixes the limits of existence, intelligibility and truth then there is no reality which is not logical. And the logic sketched above is realistic if and in so far as it is non-conventionalistic.

The Marxist historicists' opposition to realists who operate with this sort of logic and language is perhaps the strongest.[19] The statement that the Marxists are opposed to realism may appear puzzling to many and annoying to the Marxists themselves who not infrequently put forward their claim to being realists. None the less, the statement is true and their claim is false besides being deceptive.[20] They label almost every philosophical position including realism as metaphysical if it does not adopt the dialectical point of view in the investigation of nature and of the social life of human beings. 'This dialectical point of view demands that we should consider nature in its process of becoming and development, as opposed to the "metaphysical" point of view which considers nature statically, as something fixed andu nchangeable.' But 'adherents of dialectics set themselves in opposition to certain laws of formal logic, in particular the law of contradiction. The adherents of dialectical materialism think that every change, thus motion too implies contradiction. . . .the dialectical materialists recognize the reality of motion. . . .They thus assert both that motion exists and that it implies a contradiction. This leads them to the conclusion that contradiction exists and that the law of contradiction, being one of the fundamental canons of formal logic, ruling out all contradiction, is false.'[21] In *Anti-Dühring* Engels also characterizes as metaphysical the mode of thinking according to which not only things but ideas are regarded as independent and fixed and obeying a logic according to which things either exist or do not exist. This is a mode of thinking which views positive and negative as mutually exclusive categories. This used to be the 'scientific' way of thinking . But this reveals not so much the soundness of this view as the poor state of development of science at one time, when it was yet to grasp the world in all its interconnections, processes, becomings and contradictions. Historicists of the Marxist tradition further hold that just as the correct way to view reality is to view it as process so also the correct way to describe it is not to describe it as a homogeneous and mechanical series or as one even flow of events, but as a dialectical and heterogeneous process. At least two of the four laws of the dialectic—of transformation of quantitative changes into qualitative changes and of the unity and conflict of opposites—clearly show this. The process philosophers subscribing to the thesis of creative evolution or creative advance and emphasizing process and heterogeneous continuity would adopt the same attitude to reality.

There is, I think, no strictly necessary connection between the realist logic sketched above on the one hand and metaphysical realism or rationalism on the other, though all philosophers believe that reality is categorizable/conceptualizable and many philosophical systems have hitherto used the realist conceptual framework. It is sometimes alleged that rationalist philosophers could accept logic of the type sketched above because they denied the concept of time and change and thereafter used this logic to defend their rationalism. But all who actually operate with what has here been called realist logic or the conceptual framework of realism are not rationalists; some of them are empiricists and most of them admit time and change not only as mere facts of

experience but also as real. On the other hand, there are philosophers, viz., the Buddhists who really do not accept time[22] or change but are referred to, wrongly I think, as philosophers of flux.[23] Buddhists, however, agree with the historicists about the non-conceptualizability of reality. Again, the realists adhere to their conceptual framework not because they deny change or because they need to defend rationalism. They start, as do many others, with a demand for rationality which really forms the absolute starting point of every theoretical discipline. The essence of this demand has been formulated in not too happy terms by one who is certainly not a realist or a recent philosopher. The formulation however is candid. 'The actual starting-point and basis is an assumption about truth and reality. . . .the object of metaphysics is to find a general view which will satisfy the intellect, and I have assumed that whatever succeeds in doing this is real and true, and that whatever fails is neither. This is a doctrine, which, so far as I see, can neither be proved nor questioned.'[24] The conceptual framework of the realists defines their norm of rationality or determines the limit of intelligibility. What makes this framework realistic is, among other things, the claim to the objective factual validity of the framework—its adequacy for the purpose of formulating or conducting factual discourse including scientific discourse. The claim of adequacy is not to be confused with the claim of finality. Realists themselves have changed their conceptual framework in course of the development of knowledge—the rising level of information and understanding.[25] But continuity was preserved. Old concepts were redefined and when new concepts were added this did not consist simply in the introduction of a few formal axioms but in definition, explication, etc., in terms of older concepts. Realists do not deny alternative frameworks but honestly believe that, if adequate, these frameworks will have equal descriptive or explanatory value. A conceptual framework is not realistic if it is conceived in the pragmatist, conventionalist or verbalist way. An Indian realist would draw a sharp distinction between a scheme of categories and a scheme of concepts though sometimes they use a scheme of concepts in a broad sense so as to include categories also. Their scheme of category has associated with it a claim to finality.Whether a particular framework is as a matter of fact complete is open to examination. But a realist framework cannot be associated with the belief that a complete categorial framework is in principle impossible, just as a formal system is framed as a complete system if there is no formal and conclusive proof for incompletability in principle. Realists do not believe in essential incompleteness or incompleteness in principle of categorial framework.[26] A categorial framework is a system of objective essences while a conceptual framework consists of objective, theoretical but descriptive notions. The limit on meaningful discourse is set by conceptual framework and that on reality is fixed by categorial framework, while the nature of truth is determined by both. Within comprehensive realism these two frameworks are related since language and reality are related. The realists are opposed not only to skepticism and solipsism but also to every sort of mysticism and obscurantism. It is their funda-

mental belief that everything real is capable of being described in realist language or, as the Indian realists put it, *sarvam vacyam*. There is nothing ineffable about reality; essential ineffability is a sure mark of unreality. Anything which violates the law of non-contradiction is unreal. If we utter contradictory sentences then we do not describe anything, we do not perform a proper linguistic act. But if it is the case that something cannot be described except by uttering contradictory statements, without transgressing the limit of meaningful discourse, then it cannot be described within the conceptual framework of realism. And what does not admit of description within this framework is not real. But for all that, to be describable is not the meaning of reality. For realists describability within the realist conceptual framework and being real are not the same though they go together. Those who identify the two either consciously like the verbalists or unconsciously due to such reasons as inadequate attention to precision, personal or doctrinal predilections or ambiguity of expressions like 'predicate', fail to distinguish significantly between categories and concepts. The principle works from the other side also. Any piece of realist discourse has a descriptive content and objective validity. A piece of discourse which has passed the test of analysis in terms of the realist conceptual framework cannot fail to describe fact or reality.

To return to our point, historicism as we use it here is opposed to realism—to realist logic and language. But there is no necessary connection between realism and the rejection of time or change. Rejection of time and change is not constitutive of realism nor do all those who reject the realist conceptual framework admit time or change. Thus even if historicism constitutes a sufficient ground it is not a necessary ground for rejecting realism. The real issue involved here is more complicated than is apparent at first sight. If realists can admit time and change then what feature or features of historicism conflict with realism? And if neither Buddhism nor historicism (taking them to be distinct and confining our discussion only to these two anti-realistic standpoints) is necessary ground for rejecting realism, can we find out what is? To say that this ground is the non-conceptualizability of reality in principle or within the realist conceptual framework would be to postpone one's answer to the question. For what is the common source of belief in the non-conceptualizability? The historical character of reality cannot be the source. But unless we can find out some common feature of reality as it has been conceived by the Buddhists and the historicists and unless we find something basic to the realist conceptual framework which conflicts with that feature of reality, our understanding of the real nature of the opposition in question will remain unclear. An examination of Buddhist philosophy may help us in this matter.

In India—among classical Indian philosophers or among students who could and did study Indian philosophy from the truly Indian standpoint—there has never been any lack of clarity or uncertainty about the exact nature of the issue. Realists never mistook Buddhists to be process philosophers nor Buddhists ever contended either that realists rejected time and change or

that reality was non-conceptualizable within the realist conceptual framework because of its dynamic nature. If occasionally some recent writers have referred to the Buddhists as philosophers of flux then that is perhaps a matter of linguistic inaccuracy which they could easily set right if they were a bit more careful in their analysis and use of language. The case, however, does not seem to be so simple with Marxist Indologists or the so-called theoreticians (members) of the Marxist communist party of India. Instead of benefiting from whatever liberating force Marxism had, they turned Marxism almost into a religion. Such a tendency is perhaps not confined to Indian Marxists alone. Surely it was not with Indian communists in mind that Feyerabend wrote 'There is nothing inherent in science or in any other ideology that makes it essentially liberating. Ideologies can deteriorate and become stupid religions. Look at Marxism.'[27] Those who turned Marxism into a religion are seen to be labouring to find everything in Marxism and Marxism everywhere. The first of these two tendencies perhaps explain why changes that had to be incorporated were incorporated in the form of republication of relevant Marxist literature as undated editions. The second type of tendency is manifest in the attempt to prove that all the major classical philosophies of India were, so far at least the intention of the original propounders is concerned, atheistic. Another example is the attempt made by some Marxist Indologists or Marxist writers of India to make us believe that Buddhism is very much like Marxism in respect of the (dialectical) dynamism of the latter.

It is true that Buddhists are opposed to realism. But the major issue between Indian realists and the Buddhists was not the reality or unreality of change or time. The Indian realists accepted the reality of time and change, and it was the Buddhists in fact who did not admit the reality of either. One major issue was, however, the admissibility of objective universals. Buddhists did not while the realists did accept the concept of objective universals. It seems that both these schools of Indian philosophers were aware that the problem of change was not immediately relevant to the problem of universals. Their theory and practice show that they believed that one could accept or reject both—objective universals and reality of change. The really central issue between them was that of identity and to clinch the issue the realists sometimes referred to recognitive awareness.[28] One's view about change can affect one's view about objective universals indirectly through its bearing on the problem of identity. If a certain view about change or the reality of change entails unreality of identity then the whole of (realist) the categorial framework and conceptual apparatus of logic and logical language will fail. Belief in objective identity—the existence and identifiability of the objective sameness of individual things across the passage of time and or spatial gaps—forms the very core of realist logic and conceptual framework. The realist feels that without a clear sense of the objective identity of individual things we can hardly make clear sense of the objective differences between such things. The notion of objective universals on the other hand involves the notion of the identity of general predicates as applied to different individuals or the identity and recurrence of a certain property

in different individuals. The realists' conception of change is determined by their conception of the objective identity of individual things. It is not enough that change and identity should be compatible; change should be conceived as involving identity as its core. Change therefore is conceived by the realist as the change of the self-same and identical substance. Change is either the change of stuff or state or property of the identical thing or substance. There is no change in the abstract; there is only changing and changeable substance. Even a cursory look at the realist's language or logic, his conceptual framework or scheme of ontological categories will confirm the basic role of substance. A realist philosophy is a philosophy of substance.[29] What is central to a substance is not its permanence but its durability, for what is common to both permanent (in the sense of omnitemporal) and impermanent (though identifiable as identical across a time gap) substance is durability. And what is durable does not lose its identity with every passing moment of time.

Though Buddhists are not process philosophers they are anti-realists. And they clearly saw through the complicated structure of the comprehensive philosophical system of the realists, that the whole structure was based on the belief in the objective identity—a paradigm case of which was substance.[30] They therefore brought their argument to show that everything, every entity loses its identity with each passing moment of time. Things of no two successive moments are identical. So the Buddhists placed in opposition to the realists' doctrine of objective identity, their doctrine of universal momentariness. Just as the Nyāya belief in objective identity (as applied to non-permanent things) led to realism or the philosophy of substance the Buddhist doctrine of momentariness propounded in opposition to realism led to phenomenalism. One lacks the realist's motivation for distinguishing a thing and its properties (including qualities) when a thing loses its identity (in the strongest sense in the case of the Buddhist) in a moment. Anyway, the Buddhists tend to destroy the very basis of substance philosophy by demonstrating the so-called substance to be transient. And they prove this by showing inconsistency within substance philosophy which contends at the same time that there are substances and that substances, at least some of them, are causes. The Buddhists point out that a thing cannot fail to be or to do what is its nature to be or to do. Nothing is or can be without its nature even for a moment. The realist themselves would say that every substance can cause some effect. But then no substance can exist even for a moment without causing its effect. In other words, no substance can exist except for the moment when it causes its effect; and no effect can be reproduced. Every alleged substance—substantival unity of qualities which maintains identity through time—is thus proved to be momentary on the basis of some general requirement of causality; and the Indian realist believes in causality. The realists say that the Buddhists who admit causality cannot consistently say that cause should be momentary, for it must precede its effect at least by one moment and must also exist at the moment the effect is produced. This shows that the bare requirement for a thing to be a cause is that it should exist for at least two moments. Buddhists, however,

prefer to redefine cause so that causal relation may obtain between contemporaneous (or simultaneous) events. Thus, causal change is reduced to instantaneous destruction without residue. Whatever causes its effect in a moment thereby ceases to be beyond that moment, or we would have to attribute to the thing two incompatible properties of presence and absence of ability to cause effect. And though the Buddhists do not make the law of non-contradiction constitutive of their norm of understanding they make it constitutive of the nature of reality. Whatever that may be, instantaneous destruction should not be mistaken for change. Change cannot be sustained by things which cannot maintain identity through time and beyond temporal gaps. Since in their system there is no place for (temporal) change the Buddhists have no use for time.[31] In fact, they repudiate time. Thus instead of viewing reality as historical, as ever-changing process they take the real to be momentary. It is not the fact of their admitting time and change which prompts the Buddhists to oppose the realists. Buddhists are opposed to the realists' philosophy of substance and their concept of objective identity of (enduring) individual things.

Buddhists' opposition to realism or their rejection of the conceptualizability of reality should not lead us to construe their view as historicism or process philosophy. Their 'momentarism' is not only not dynamism—mechanical or dialectical—it is opposed to dynamism. This clarification of the Buddhist position and the delinking of historicism and opposition to the realist conceptual framework would enable the otherwise enigmatic rejection of Aristotelian logic by the process philosophers. Aristotle did not only admit time, change and causality, he also admitted time as a category. Thus he, more than Plato, was in a position to do justice to the development of knowledge. This might have been the reason why recent philosophers of science tend to be more Aristotelian than Platonist in their views. None the less the source of the historicists' opposition to realist logic and the conceptual framework of Aristotle is that the latter admitted substance as the most fundamental category or form of reality. And like the realists he maintained that substance maintained objective identity through time. This is to understand or represent reality as static in the same way as the Indian realists did. But the historicists urged that the attempt to understand dynamic reality by means of a fixed category is as much doomed to failure as the attempt to represent motion with the help of still photographs. Growth, decay, process and change are experienced facts and no corner of reality can be found where change and continuity are missing. Time in the sense of uninterrupted duration or temporal continuity is itself a datum of sense; a 'genuine sensation' as William James called it. This time is a flowing continuity and reality is historical while the categories are static, non-conventional and *a priori*. Belief in the non-conceptualizability of reality amounts to scepticism. Process philosophy or historicism, so far as it is different from scepticism, contends that we can understand historical reality conceptually provided our conceptual apparatus is different from that of the realists. We require a different logic and language to deal with such dynamic reality. If process philosophy succeeds through 'the

discovery of new kinds of logic adequate to the challenge of symbolizing fluid relations in a universe of flux. . .the concept of "things" will become an historical curiosity'.[32] Process will replace substance in the conceptual framework of the historicists.

Just as the realists' philosophy of substance or their framework of static concepts such as the objective universal and individual identity is unacceptable to the historicists, so also any system that claims finality is opposed to the spirit of historicism even if the latter permits conceptual representation of reality. Kant, for example, thought that he had discovered a complete and final scheme of categories. He did not seriously entertain the possibility or necessity of any addition or revision. This view is incompatible with the view according to which reality is ever growing, following a dialectical process. Some philosophers of science nowadays say that a static view of reality or the world is incompatible with a modern scientific world-view. This leads the process philosophers to claim that their view about the world is the only scientific world-view. The implication is that realism is antiscientific or at least unscientific. One of the most forceful advocates of process philosophy writes, 'I hear the physicists saying that nature is dynamical energy in ceaseless and protean emergence in which the permanent and the static are nowhere to be found. Thus the elevation of process to the categorical level seems unanswerable. To my colleagues who would disagree I can only say: You apparently do not believe that the consensus of these physicists provides an accurate description of reality; our dispute is therefore over what we respectively will allow to count as admissible evidence in our conceptual ordering of experience. Since I do accept their findings, and do concede the ultimacy of the category of process, my common sense interpretations of objects as they appear must therefore differ from your own'.[33]

For more than one reason it is not possible to discuss at adequate length whether quantum mechanics completely revolutionizes our conceptual scene. But I would plead guilty to Putnam's charge of minimizing the conceptual revolution brought about by this discipline and hold that its major, if not whole, implication, so far as classical logic is concerned, is minimum. For, even as Putnam agrees,[34] in Quantum Logic, all the following laws of classical two-valued logic hold:

$$--\,p \rightarrow p$$

$-(p.-p)$	$-p \vee p$
$p,q \rightarrow p.q$	$p \rightarrow p \vee q$
$p.q \rightarrow p$	$q \rightarrow p \vee q$
$p.q \rightarrow q$	

Distributive law for conjunction and disjunction, however, fails. If this is viewed (of course in a non-conventionalist way) as change in the meaning of the notions of conjunction or disjunction or both, and as a mark of the birth of a new and alternative logic, then also it cannot be denied that the 'Analytic philosophers. . .are. . .unanimous in regarding 2-valued logic as having a

privileged position: privileged, not just in the sense of corresponding to the way we do speak, but in the sense of having no serious rival for logical reasons'.[35] On this ground and on grounds such as the sense of 'alternative' in alternative logic is not clear and alternative systems of logic are yet to receive serious and extensive physical application, we feel inclined to conclude that the realist view of the world has not yet been proved to be wrong beyond doubt. On the other hand, besides the project of a logic for fluid relations being largely unclear, such a logic is yet to be propounded.[36]

Again, just as realists need not and do not reject time, so also historicists, or at least process philosophers, do not attach the same sense to time. So an attempt to reinstate the classical formulation of the opposition between the process philosophers and the realists cannot succeed. It cannot be said that the realists do not admit time in the sense of the process philosophers. The realists spatialize time and reduce it to a collection of atomic moments. But even under this formulation the objection is not true. For, in the first place, Indian realists do not hold an atomistic conception of time and, secondly, there is no *the* sense attached to time by all the process philosophers.

Every process philosopher does not share the Bergsonian insistence on continuity which conceives reality as irrational and amenable to intuition alone. Such a reality defies the possibility of conceptualization. In the hands of Whitehead process philosophy has come much closer to the systematic realism of our realists. For Whitehead clearly recognizes that a certain amount of order is necessary. And many now find it desirable that something be done to combine Bergsonianism and Whiteheadeanism—absolute irrational continuity and order[37]—if process philosophy is to survive as a viable philosophy. 'For Whitehead continuity is potential and atomicity actual. For Bergson continuity characterizes reality and discreteness arises within the logical order of materiality (that is, through perception of matter)'.

The classical wing of process philosophers, in so far as they have a metaphysics of their own (as S. C. Pepper has shown in his *World Hypothesis*) would tend to make process the fundamental category and contend that all the rest including event and power are sub-categories. This, however, is not sufficient characterization of process philosophy, since the process philosophers differ in their interpretation of process, i.e., as to whether process is continuous (James and Bergson) or discontinuous (Whitehead); whether it is the only reality (Dewey, Mead, Randall and Pepper) or admits the possibility of a permanent principle such as the eternity of duration, eternal objects or God (Bergson, Whitehead, Hartshorne). But as we have already shown, the crucial problem is what should be one's notion of identity. And what distinguishes a systematic metaphysician from a (systematic) process philosopher is his different notions of identity. So far as the notion of time is concerned the question is if time is to be considered epochal or durational. The former is a *demand of a coherent system* which synthesizes experience as a logical pattern and the latter is the result of an intuitive vision of life which coincides with the rhythm of reality's vital order. This is the crossroads of process philosophy.

'With respect to the issue of continuity process philosophy must recognize the crossroads of Bergson's *radical* continuity and Whitehead's synthesis of potential continuity and actual atomicity. The decision for process philosophy then revolves around the issue of whether or not the ultimate metaphysical reality (or Logos or harmony) is *represented* in a logical, coherent system or whether it can be *comprehended* as a rhythmic vital order. Maybe an ultimate synthesis between the intuitive order of dynamic *durée* and the logical order of a coherent system may achieve the real aim of speculative philosophy which both philosophers strove to accomplish.'[38]

I should not say that such synthesis is to be found in the philosophy of our realists. But their conception of time and change is not the sort of radical continuity which renders systematic representation in thought impossible. Our realist conception of time and change can meet the demands both of man's indubitable datum of immediate experience (viz., duration in some sense) and of coherent system. Thus if process philosophy is not to reduce itself to some sort of mysticism or anti-intellectualism, if it is to be a genuine philosophy of science it cannot do away with order and logic, with concept and category. So, we should distinguish between two types of process philosophy: One, which views reality as radical continuity leading towards mysticism or at least anti-intellectualism and a second which takes such process seriously, tries to conceptualize it and to develop a coherent system. The Whiteheadean type of process philosophy is a case in point. From the side of this second type of process philosophy it may be urged that the issue is not between conceptualization and non-conceptualization of reality but between bad and good conceptualization. If, therefore, the realists as also process philosophers believe in the genuine possibility of a distinction between good and bad categorization and not simply between categorizability and non-categorizability then mutual accusation of bad categorization can be settled only by agreeing on some criteria for the acceptability of any proposed categorial scheme. It will not do to say as process philosophers seem to be saying, that the scheme that does not admit process as a category is unacceptable. For the proponents of every categorial scheme may argue the same way. On the other hand, no single set of criteria may be adequate or equally applicable for every metaphysical system (for construction of such systems may have been determined by different norms of understanding and approach). We may, however, agree upon a set of desiderata.

One such desideratum, it may be granted, is to keep to the minimum, to abide by the law of parsimony, i.e., not to unnecessarily multiply the number of kinds of entities that are there. In other words, to carry on reduction in the number of entities so long as the explanatory power of the system as a whole, or the adequate description of reality (not our experience or language) is not affected. From this point of view a categorial system should fulfil these conditions:

(a) should contain a list (even if consisting of one) of categories, and
(b) a reductive method whereby we can justify the list of categories as being

both adequate and minimum. This reductive mechanism would serve the purpose of showing that no less or no more categories be admitted. In other words, if any new category is proposed the reductive machinary would enable us to reduce it to some or other of the listed category or to show that it is self-inconsistent (or, at least, inconsistent with the accepted scheme of categories or norm of understanding) or serves no purpose in the system if recognized as a distinct kind. In the latter case if this new category can by itself or with the help of some other categories constitute a viable scheme then we shall have an alternative metaphysical system. I find in such associated reductive machinery or programme not only the strength of that metaphysical system but also that in the system metaphysical pursuit has been executed seriously and self-consciously, with some definite stake. I find such reductionism at its best in the descriptive metaphysics of some Indian realists. It seems that somehow or other whoever proposed a categorial scheme had latent belief in some such reductionism; but this reductionism has not always been pursued systematically as a programme. In classical metaphysical systems with their cosmological orientation reduction in categories was seriously pursued. In course of development of the natural sciences metaphysics was gradually separated from cosmology. But formal ontologies developed under the influence of mathematical logic are always tested by their propounders against Ockham's razor. Anyway, Aristotle's list of 10 categories may appear unduly rich. And Whitehead's list of 45 categories sketched in Part I, Chapter II of *Process and Reality* is simply 'dismaying'. But even this number was felt to be inadequate and was increased to 66 by a pupil of Whitehead when he endeavoured to construct a system of metaphysics. Who knows if matter ends there? In fact, process philosophy in general or metaphysics of descriptive generalization, of Whitehead's description in particular, does not only not have an inbuilt or associated reductive mechanism, perhaps it can never have one. What process philosophy entails is, it seems, not only a change of a certain logic or conceptual framework. It tempts us to overthrow every conceptual framework, every hope of ordering our experience of reality. It is an invitation not to change norms of rationality but to become irrational and to defend irrationalism we do not know how.

Notes and References

1. Cf. Debiprasad Chattopadhyaya, *Indian Atheism: A Marxist Analysis*, Manisha, Calcutta, 1969 and the review of this book in P. K. Mukhopadhyay, 'Did Gautama Believe in God', *Dārśanik Samikṣā*, Vol. I, No. 2, Calcutta, 1969.
2. Cf. Rahul Sankrityayan *et al.*, *Buddhism: The Marxist Approach*, Peoples Publishing House, New Delhi, 1970.
3. Chattopadhyaya, *Indian Atheism*, p. 122.

4. F. Brown, J. Fauvel and R. Finnegan (ed.), *Conceptions of Inquiry*, Methuen, London, 1981.
5. Mary Hesse, 'Theory and Value in Social Sciences', in ibid., p. 323.
6. Karl Popper, *The Poverty of Historicism*, Routledge and Kegan Paul, London, 1957/1961.
7. Even before Charles Hartsharve revived it in his 'Order and Chaos' Charles Pierce advocated what is a favoured thesis of Process Philosophy, viz., that order evolves from chaos, in his doctrine of tychism.
8. Marxists also admit change as a sensory datum. But, contrary to what has sometimes been thought, this does not show that every empiricist admits change in the relevant sense. Cf. Kazimierz Ajdukiewicz, *Problems and Theories of Philosophy*, Cambridge University Press, London, 1973.
9. M. Burian and C. Z. Elgin, 'Wittgenstein, Sellars and Conceptual Change', in Elizabeth Leinfellner *et al.* (ed.), *Wittgenstein and His Impact on Contemporary Thought*, Vienna, 1978, p. 221.
10. This is essentially the view of L. Chwistek who did much to turn the scale against anti-rationalism in Poland. Chwistek accepted Marxian dialectical materialism as a thesis of universal mutability. But he did not accept the dialectical method. Cf. Z.A. Jordan, *Philosophy and Ideology*, D. Reidel, Holland, 1963, p. 62.
11. R. Zimmermann, 'The Later Wittgenstein and Historical Materialism', in Leinfellner *et al.* (ed.), *Wittgenstein and His Impact on Contemporary Thought*, p. 63.
12. S. Toulmin in his Introduction to S. Morris Engel, *Wittgenstein's Doctrine of the Tyranny of Language*, Martinus Nijhoff, Netherlands, 1975, p.xi.
13. Cf. Charles Taylor, 'Marxism and Empiricism', in Bernard Williams and A. Montifore (ed.), *British Analytical Philosophy*, Routledge and Kegan Paul, London, 1966/1971. Taylor has shown in detail and with admirable clarity that Marxism failed in Britain. I believe, though for different reasons, that Marxism can have little impact on Indian *philosophy*. I have hinted at only some of these reasons here.
14. Jordan, *Philosophy and Ideology*, Chapter 35.
15. William James, 'The Dilemma of Determinism', in A. Castell, *Essays in Pragmatism*, Hafner, New York, 1949, p.39.
16. P. K. Mukhopadhyay, 'Conventionalism, Pragmatism and Philosophy of Science', in K. K. Banerjee (ed.), *Logic, Ontology and Action*, Macmillan, Delhi, 1979, pp. 140-41.
17. Henri Bergson, *Creative Evolution*, Random House, New York, 1944, p. 215.
18. Popper, *Poverty of Historicism*, p. 160.
19. It is, however, very difficult to find in the writings of Marx or Engels any sustained examination of this sort of logic. But this mood and general attitude find expression too often in their writing. Cf. Karl Marx, *The Poverty of Philosophy*, in Marx, Engels, and Lenin, (On) *Historical Materialism*, Progress Publishers, Moscow, 1972/76, p. 77; Karl Marx and F. Engels, *German Ideology* in ibid., p. 43; Frederic Engels, *Anti-Dühring* in ibid., p. 204; Frederick Engels, Letter to C. Schmidt dt. 27.10.1890 in ibid., p. 302.
20. 'Materialists...Often put the realistic thesis in the forefront of their doctrine, presenting it as its basic content. In doing so they are incorrect because the realist position does not necessarily imply the materialistic thesis as its consequence.' See Ajdukiewicz, *Problems and Theories of Philosophy*, p. 111. Again, when Marxists-Leninists claim themselves to be realists they mean by realism socio-anthropological realism where objectivity is understood as merely socially subjective. Cf. Jordan, *Philosophy and Ideology*, pp. 343-44. Again, Process Philosophy is widely accepted to be opposed to realism and realist logic, language and conceptual framework. Cf. R. C. Whittemore, *Studies in Process Philosophy II*, Martinus Nijhoff, Netherlands, 1975, pp. 22, 30 and 62.
21. Ajdukiewicz, *Problems and Theories of Philosophy*, pp. 107, 110; and Frederick Engels, 'Ludwig Feuerbach and End of Classical German Philosophy', in Karl Marx and Frederick Engels, *Selected Works*, Progress Publishers, Moscow, 1969/77, pp. 362-63.

22. Haran Chandra Bhattacharya, *Kāla Siddhānta Darśinī*, published by the author, Calcutta, 1941, pp. 99-101.
23. Cf. Papers by Rahul Sankrityayan and Y. Balaramamoorty in Sankrityayan *et al.*, *Buddhism*.
24. F. H. Bradley, *Appearance and Reality*, Oxford University Press, London, 1893/1946, p. 491.
25. P. K. Mukhopadhyay, 'The Theory of Universals' in P. K. Sen (ed.), *Logical Form, Predication and Ontology*, Macmillan, Delhi, 1982, pp. 238-39.
26. Ibid., p. 243.
27. Paul Feyeraband, 'How to Defend Society Against Science', in Ian Hacking (ed.), *Scientific Revolutions*, Oxford University Press, London, 1981, p. 157.
28. (31) 1/17.
29. This is as much true of Nyāya-Vaiśeṣika philosophy as of Aristotelian philosophy. In both these philosophies substance enjoys ontological priority and a central position in the scheme of categories.
30. The Buddhists rightly thought that rejection of substance will destroy the very basis of realist metaphysics. Cf. Śāntarakṣit, *Tattvasamgrahaḥ* Vol.I, Bauddha Bharati, Varanasi, 1968, p. 261, verse 633.
31. We may as well observe that of the four possible reactions to Zeno-(Heraclitean) problem two did not find favour with the Indian philosopher. Process philosophers (taking Bergson to be a representative of them) preferred to revise the notions of time and change on the basis of what they call immediate experience. Such a notion admits change and not *something* changing as real. And Zeno's puzzle relates to something changing which already involves spatialization or atomization of time. Whatever other merits this may have, the Bergsonian approach does not tell us how to make sense of moving (changing) things like arrows, which are data of ordinary experience. Marxists-Leninists at one time asserted with a boldness which did not derive from logical cogency, that contradiction is a fact and should be accepted, on experiential evidence, along with changing reality. None of these reactions is acceptable to one who operates with a logic based on principles of identity and non-contradiction. The Bergsonian view cannot make sense of identity even of the process as a whole without admitting completability of time or postulating a second time. And Marxists flouted at one time the law of non-contradiction. Buddhists were convinced on various grounds of the unreality of the notion of some identical thing changing in course of time. They, therefore, restricted the existence of everything real to one single moment. But they realized if change is denied, if something that changes is rejected then we neither can nor need admit time. For there could hardly be need for a self-sustaining change or time in the absence in principle of anything changing or temporal. The best answer, so far as we find it, to the problem under reference was found out by the Nyāya-Vaiśeṣika philosophers. Their solution was in terms of a unique sort of identity enjoyed by changing substances. This sort of identity could be captured by a special concept of *avayavi*. Cf. Gopinath Bhattacharya, 'Space and Some Allied Concepts' (unpublished). In short, realists as we understand them do not believe that every change implies contradiction—logical or otherwise.
32. Donald Hanks, 'Process as a Categorical Concept', in Whittemore, *Studies in Process Philosophy*, p. 30.
33. Hanks, 'Process as a Categorical Concept', in Whittemore, *Studies in Process Philosophy*, p. 31.
34. Hilary Putnam, 'The Logic of Quantum Mechanics', and W. V.O. Quine, *Philosophy of Logic*, Prentice-Hall, London, 1970, pp. 85-86.
35. Hilary Putnam, *Mathematics: Matter and Method*, Philosophical Papers, Vol. I, Cambridge University Press, London 1957/80, p. 172.
36. Hanks, 'Process as a Categorical Concept', in Whittemore, *Studies in Process Philosophy*, p. 30.

37. We do not suggest that Bergson is opposed to metaphysics but he is certainly opposed to the realist way of doing it.
38. C. R. Schmidtke, 'A Crossroads for Process Philosophy', in Whittemore's *Studies in Process Philosophy*, pp. 98 and 100.

Language, theory and reality-modelling I

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Theories are constructed in science with a view to ascertaining the possible structure of the underlying reality as gleaned through a specific set of observable phenomena. In short, on the basis of a set of observable data scientists try to construct a model that best represents the structure of reality. It is also a commonplace that such models may go widely off the mark and consequently a model which is taken to be *the* representative model of the structure of reality at one time is subsequently rejected as utterly redundant or untenable. [cp. the aether-corpuscle picture of the classical physics, the absolute nature of Euclidean 3-space, postulates of continuity before the advent of Quantum Mechanics, preservation of symmetry and integrality of charge and mass of the basic particles, etc.] Another point that hardly needs emphasis is that the underlying structure of reality as modelled by the scientists must be expressed through some 'Language'. We consider mathematics as a form of language in this wider sense of language.

Keeping the foregoing remarks in mind we may indicate the aim and structure of this paper.

The main body of this paper consists of three parts. In the first part we are concerned with the following:

(i) Elucidating the two distinct and radically different senses of modelling;
(ii) Clarifying the notion of 'representability', e.g., when we claim that a model must be an adequate representation of reality;
(iii) Since scientific theories are invoked for better explanation we may naturally ask: what is the nature of scientific explanation? This is the other question taken up in the first part of this paper.

The second part of the paper is devoted to giving a plausible account of why and how even the best and most successful theories fail to uniquely determine the structure of reality. In this connection we also touch on the mutually incompatible potentials of modelling.

In the third part we bring out some of the implications of our view for the language-reality relation and show how some of the unmistakable patterns of growth of scientific knowledge can be better understood from our point of view.

I

1. *The concept of model*: The concept of 'model' is quite familiar in the field of mathematics as well as in the field of the empirical sciences. One point re-

garding modelling is not, however, always clearly recognized. The point needing emphasis is this: although both mathematicians and empirical scientists employ models of various kinds and use the term 'modelling' yet there is a complete reversal of primary emphasis in the two cases. As a consequence, we can say, the role of models in mathematics is not *exactly* analogous to that of models in the empirical sciences. Let us elaborate the point further.

A domain D of entities is said to be a formal model, i.e., model, of a formal system S when D satisfies certain conditions and there is a mapping M from S onto D.

A formal structure S is said to be an empirical model of a domain of entities D, such that there is a mapping M of a specific kind (the specific set of conditions, that M must satisfy, is not relevant here) which maps Ś onto D. Ideally speaking M should be 'bijective', but it is not necessary. In modelling-contexts M is called an 'interpretation'. Let us call modelling in empirical sciences *'empirical* modelling' and modelling in mathematical contexts *'formal* modelling'. In empirical modelling D is the set of phenomena that needs to be explained, S is a prospective theory in terms of which the interrelations between the elements of D are proposed to be explained and understood. In empirical modelling the decisive role is played by D. If a proposed theory S is subsequently found incapable of 'representing' D adequately, it is S that has to be modified, not D. On the contrary, in formal modelling, it is S that determines the acceptability of D, not the other way round. To take an example from modal logic: let S5+BF (Barcan Formula) be a formal system S′ which satisfies the requirements of Lewis system S5 and in which the Barcan Formula (BF) holds. Further, let D be a non-empty set which satisfies S5+BF, i.e., S′ and D_1 be another set that satisfies S5 but not BF. The formal requirements of S′ dictate that it is only D and not D_1 that is to be entertained as a possible domain of application in this case, i.e., of the two, only D constitutes an acceptable model of S′. Thus, since we are concerned here with formal modelling, it is the formal structure of S′ (here S′ = S5+BF) that plays the decisive role and determines the acceptability of D. In short, in empirical modelling, the nature of D determines the acceptability of S, whereas in formal modelling the structure of S determines the acceptability of D.

2. *The concept of 'representation'*: We have remarked earlier that in empirical modelling S, in order to be acceptable, must be able to 'represent' D adequately. What does 'represent' mean in such contexts? In classical physics a physical theory was at one time believed to represent the underlying structure of reality in the sense of giving an intelligible mental picture of this infrastructure. Thus Rutherford's theory of atomic structure pictured an atom as a miniature solar system with the nucleus at the centre and the electrons in the orbits. However, with the advent of Quantum Mechanics (henceforth QM) and the prevalence of the Copenhagen interpretation, it has become a commonplace that 'representation' in the sense of 'picturing' is neither necessary nor, in many cases, even possible. "The main object of physical systems is not the provision of pictures, but the formulation of laws governing

phenomena. If a picture exists, so much the better; but whether a picture exists or not is a matter only of secondary importance." (Dirac 1961, p. 10) How are we to decide then whether a theory adequately represents a domain D of explananda or not? From an abstract point of view a scientific theory may be regarded as a formal system consisting of a non-empty set of elements and a set of rules which these elements must obey. So, henceforth, we shall denote both a theory (by which we will mean scientific theory unless specified otherwise) and a formal system by capital S, with or without sub/super scripts. Now, the question we raise is this: Does any theory S, which is formally elegant and easy to manipulate, equally satisfy the requirements of acceptability? If not, what else is needed? In response to such questions some philosophers of science maintain that in order to be acceptable a scientific theory must have explanatory power and that predictability is the sole criterion of scientific explanation. They even go so far as to equate *predictability* with scientific explanation. It may be shown very easily with a few actual counter-examples from the history of science that predictability, far from being equatable with scientific explanation, is neither a sufficient nor even a necessary condition for scientific explanation. [Such counter-examples are given in (Good 1962, 315-19; Sarkar 1978, pp. 347-50)].

There are other thinkers, e.g., Lord Kelvin and some positivist-formalist philosophers of science who equate scientific explanation with the establishment of quantitative relation among the phenomena that constitute the domain to be explained. Purely qualitative explanations, it is said, are nothing but bad and inadequate quantitative ones. Thus, on this view, the use of models should aim at and lead to quantitative laws and *ipso facto* to scientific explanation which in its turn is the ultimate justification for the use of models.

The above view is too restrictive and is based on a confusion between a *'rigorous* formulation' and 'a *quantitative* formulation'. In fact, some of the very profound explanatory theories in science, e.g., the theory of evolution or psycho-analysis belong to the former category without being quantitative in the narrow sense. S. Andreski has severely criticized the prevalent tendency in contemporary social science to construct theories about social phenomena couched in a needlessly complicated mathematical form, all in the name of formalization, without achieving either deductive rigour or deeper understanding of the phenomena. This is a case of quantification without rigour (in our sense). The converse case of rigour without quantification in the narrow sense can also be instantiated from history of science. Rigour and quantification, therefore, need not, and do not go, hand in hand. (Andreski 1978)

3. *Relation between 'model' and scientific explanation*: Now, if, as the foregoing discussion shows, scientific explanation is not to be equated with either picturability or predictability or quantifiability, then what constitutes a scientific explanation? What role does a model play in the context of scientific explanation? If it is not necessary that a model truly pictures reality or else leads to predictability or at least facilitates quantification, how can it explain? And if it does not explain how can it be called a scientific explanation?

Following a suggestion, implicit but unmistakable in Renè Thom's writings (e.g., Thom 1975) we may say that a model, if successful, leads to better *systematization* and *understanding* and hence to scientific explanation. Thus the *sine qua non* of scientific explanation according to the supporters of such a view is greater systematization leading to better or deeper understanding. In this sense, scientific explanation consists in neither picturability nor predictability nor quantifiability as such and yet each one of them constitutes partial justification for calling a proposed model explanatory and scientific. This, it should be noted, does *not* imply that picturability, predictability, etc., though not sufficient, yet are, none the less, necessary conditions for an explanation being scientific. None of them, taken by itself, is either necessary or sufficient, yet each one of them is *relevant* in the context of scientific explanation. The concept of relevance, as it is being used here, is an *intensional* concept (i.e., it cannot be adequately treated within the purely extensional framework of standard mathematical logic) and hence cannot be captured in terms of necessary and sufficient conditions usually defined in terms of negation '$\sim$' and material implication '$\supset$'. We may try to clarify the nature of the relation which holds, according to our view, between predictability, picturability and quantifiability on the one hand (denoted respectively by p, q and r) and a scientific explanation E on the other thus: Suppose, $((\sim(p\rightarrow E) \,\&\, \sim(q\rightarrow E) \,\&\, \sim(r\rightarrow E)) \,\&\, ((\sim p \,\&\, \sim q \,\&\, \sim r)\rightarrow \sim E))$ holds. Then, as is easy to see, none of p, q, r, taken *severally* is either a necessary or a sufficient condition of E, and yet the union-set of the three is a necessary condition of E [i.e., $\sim$(p or q or r)$\rightarrow\sim$E]. In such cases we would regard p, q, r, taken severally, as constituting neither necessary nor sufficient conditions of E and yet they are collectively relevant to E in a clear sense. Here, '$\rightarrow$' is a non-truth-functional connective 'if. . .then. . .' and is not to be equated with '$\supset$'. For example, whether a bride is highly educated may be relevant in settling matrimonial negotiations in some Indian communities, yet it is neither necessary nor sufficient for reaching such a settlement. The concept of relevance in the present context is to be understood in an analogous sense.

It is now easy to see in what sense picturability, etc. are relevant to scientific explanation without being a precondition for it. It is obvious that picturability cannot mean photographic reproducibility. A model 'pictures' reality by being a representation of it. In this sense y is said to represent x, if y is isomorphic to x. However, y need not be *strictly* isomorphic to x, to represent x. A *fuzzy* isomorphism, which we shall call quasi-isomorphism,[1] will do. So, in our sense, 'a model pictures some aspect of reality' means that 'the said model is quasi-isomorphic to a given aspect of reality'. In fact, no actual model can ever be proved to be totally isomorphic to the relevant segment of reality, because if it were, it would be provable that it is an absolutely perfect representation and as such, infallible and unalterable in principle. However, such infallibility and unalterability are incompatible with the essentially open-ended growth of scientific knowledge. This implies an important corollary, viz., no model used in science can claim to have a perfect fit with

reality. The possibility of there being an element of discrepancy, between a model and the segment of reality that it purportedly represents, is, therefore, ineliminable in principle. In other words, one can never *prove* with respect to any particular model that there exists no discrepancy between the model and the segment of reality that it purportedly represents. We assume, however, that such a discrepancy always *does exist* as a matter of fact. Granted this assumption, it is natural to expect that as we make more and more comprehensive models moving gradually up the scale of abstract formalization (as in the mathematical formalism of QM) playing down the importance of perfect-representationality requirement in empirical explanatory models, the discrepancies involved in all the previous stages pile up cumulatively until a critical point is reached where the old model completely breaks down. Let us call such critical points, following Thomas Kuhn, the 'paradigm-shift points' (Kuhn 1973). Once such a point is reached in the process of scientific model-making or theory construction, the gap between model and reality cannot be narrowed by any amount of mending of the old model. The old model becomes either irrepairable (cp. QM) or repairing it becomes too wasteful in terms of conceptual economy. (cp. The attempts to mend the Ptolemaic system of astronomy by increasing the number and complexity of the epicycles and finally its overthrow by Copernicus' new conceptual model).

Now, the relevance of representationality or picturability to scientific explanation can be easily understood. Although picturability is not a constitutive condition, yet it is a desideratum for every explanatory model in so far as it imposes a *realistic constraint* on any explanatory model. This constraint embodies the realistic *assumption* of modern science, viz., there is a theory-independent reality which is *intrinsically structurable*, presumably in more than one ways. Explanatory models try to capture and to build on this feature of reality. Picturability, in the sense of representationality-requirement, is both relevant and essential for all explanatory models and can be shown to be consistent with views like P.A.M. Dirac's which deny that picturability plays any essential role in a theory. What Dirac and similar thinkers are denying is that in order to be acceptable as a scientific explanation an explanatory model must picture reality either *uniquely* or *photographically*. This must not be taken to imply the denial of the representability-requirement in our sense.

Predictability also is relevant to, without being a necessary condition of, scientific modelling, i.e., theoretical model-construction in science. This is so, because, we want our explanatory models to 'represent' the reality as best as it can and *if* the representation of a segment of reality is adequate, it should naturally enable us to infer the features of the *other segments* of the reality which were not explicitly or consciously incorporated in the original model. Such inferability is what is called predictability. Now, since we cannot *directly* compare the model-representation with reality, we make a kind of back calculation and from the fact that a model has led to certain predictions, we tend to conclude that the model-representation is adequate. This is the familiar logical pattern of verification in science which, from a strictly deductive

point of view, is logically fallacious. This explains why such high importance is given to predictability in explanatory contexts and yet predictability cannot, and should not, be *equated* with scientific explanation.

II

In the first part of this paper we have claimed that every model necessarily contains some element of discrepancy which prevents its perfect fit with reality. But why must it be so? How is it that the discrepancy-generating factors creep in every empirical model that we may aspire to construct on the basis of observable data? Without going into the details of this question I shall mention some of the main factors responsible for generating and injecting such discrepancies in every empirical model. As we have already seen, the chain leading from the linguistic description of reality to the structure of reality as such may be represented thus:

Formal Language→Interpretation→Model→Structure of reality.

The discrepancy-generating factors may, and actually do, creep in at any step of this process.

(i) At the level of formal language they creep in via the requirement of idealization, e.g., mass-point in Newtonian physics, perfect gas, etc., being idealized convenient mathematical fictions can have no *exact* counterpart in nature.

(ii) Existence of a one-many relation between the observed data and the inferred structure of reality, e.g., a set of alternative micro-state descriptions may all be equally compatible with a given macro-state description.

(iii) Alternative equivalent *finite* characterizability of the structure of reality. For example, the model of reality as implied by Special Relativity and that of Lorentz-Fitzerald thesis in terms of Fitzerald-contraction are indistinguishable within a limited context. The same holds for Einstein's and Whitehead's versions of the General Theory of Relativity.

(iv) Existence of alternative 'interpretation-functions' leading from the formal structure of language to the model of reality. For example, the Boltzman equation for entropy and Weber-Fechner Law in psychophysics both have the same formal structure, viz., $S = K \log R$, without implying that two such diverse phenomena have the same underlying ontological structure, although the relation between the respective variables in the two domains (here physics and psychology) can be expressed by using exactly the same form of mathematical equation.

(v) Finally, the inadequate representation caused by the use of improper mapping functions may also produce model-reality discrepancy. This is manifested in the relativistic quantum theory (which stems from the unqualified availability of the infinite number of degrees of freedom of a local field) by generalizing the notion of the vector space of states with indefinite metric. With such an indefinite-metric quantum-field-theory the various scattering and transition amplitudes can be calculated to a desired degree without the appearance of infinities. However, to achieve this we have to deal with generalized probabilities which may be positive or negative. But negative probabilities cannot be reconciled with the physical interpretation of probabilities in quantum theory. To overcome this logical hurdle the so-called 'shadow states', which are mathematical states having no intuitvely clear physical significance, have been postulated. Now, the kind of mapping-function that correlates 'negative probabilities' with 'shadow states' is an example of what I have called *improper* mapping function. (Bençansons, 1974.)

We have elaborated above some of the ways in which discrepancy-generating factors enter into empirical models during the process of construction of scientific theories. Now, if we remember (i) that the 'models' are not like perfect photographs of an absolutely given chunk of reality but are inferentially constructed conjectures about a profile of reality, so to say, and (ii) that scientific theory of one stage depends on and elaborates the existing theories of the preceding stage, it follows that any discrepancy-generating factor introduced into the model at one stage would establish a kind of positive feedback loop and would make the model-reality discrepancy greater and greater until the paradigm within the framework of which such model-building was continuing, breaks down (cp. the breakdown of Aristotelian physics) or is replaced (cp. the Copernican revolution in astronomy and the Einsteinian revolution in physics). The question of how and why such paradigm-shifts occur in the history of scientific thoughts and other related issues lead us to the third and final part of the paper.

III

Man indulged in scientific activity with a view to putting the apparently anomalous phenomena of the world of experience in some order. But in his attempt to establish such an order he was gradually forced to go beyond what is immediately given in sense-experience and probe deeper into and make conjectures about the structure of reality that underlies and unifies the phenomena. For this the ordinary language of everyday use was found wanting in many ways and had to be replaced or supplemented by a more precise formal language, e.g., mathematics. Once such a formal language is developed and a paradigm of scientific thinking is set up, further sophisticated theories are developed within such an existing paradigm with further and further refinement of the existing formal apparatus. We have already seen how such a process of development necessarily tend to be discrepancy-accumulating. In this way, when the margin of discrepancy exceeds a certain limit of tolerance, the accommodation of new and recalcitrant facts become either impossible or too

uneconomic in terms of conceptual economy, to accommodate within the existing conceptual framework by simply mending and doing patchwork to the old theory. (cp. the switchover from the Ptolemaic system of astronomy to the Copernican system, or the problem of black-body radiation and the transition to the quantum postulate).

Such critical points in the history of thought, where a sudden transition from an existing paradigm to a qualitatively new one takes place, are of momentous significance because these are the points when, what Kuhn and others call 'paradigm shifts', take place. On our view such shifts are not historical accidents but are inevitable 'catastrophic'[2] changes determining the morphology of conceptual-development of science. Here the critical value of the accumulated discrepancy constitutes, so to say, the region of instability.

Another implication of our view regarding language-reality relationship is that just as the structure of reality imposes certain constraints on the conceptuo-linguistic framework, similarly our conceptuo-linguistic framework also determines the nature of reality *as we know it*. This is the point I wanted to emphasize when I claimed that reality is alternatively *structurable* but is never given as absolutely *prestructured* to us. The alternative descriptions may be about the same reality although they may not be *provably* equivalent. This claim of mine is motivated by Wittgenstein's claim that the 'limits of our language are the limits of our mind' (*Tractatus*: 5.6).That is why the development of a new language often precedes the development of a profounder scientific theory. (cp. the role of Calculus in Newton's physics and that of non-Euclidean geometry and Tensor-calculus for Einstein's theory). Thus the pattern of language-thought-reality interrelation is more complex than mere representation or mirroring. It is a sort of creative-innovative participation in a cross-word-puzzle, so to say. In this sense a poet and a scientist have an affinity of spirit in so far as both creatively transform their wealth of observation-experience instead of just merely reporting, in a newspaper style, what is given in experience. Of course, it must not be overlooked that the creative transformation of a poet and the theoretical reconstruction of a scientist are radically different modes of transformation. All that is claimed here is that there is a thematic affinity between poetic and scientific creativity so far as the creative-transformative aspect of the processes involved is concerned.

If the above claim is granted even a prima facie plausibility, one must be ready to give up, or at least to radically mollify, the craze for 'ultra objectivism' in the methodology of science—a kind of objectivistic craze that has probably done more harm than good to the development of social sciences and psychology.[3]

I hope, in this paper, I have been able to highlight some of the important facets of language, modelling and scientific theory and have been able to show that the study of problems underlying language-model-reality relation can be and is more than an idle intellectual pastime, particularly in so far as its heuristic and methodological implications are concerned. Some of the other issues connected with the problems discussed in this paper will be dealt with in the

second instalment of this paper. A brief outline of the contents of the second instalment of this paper is given in the fourth part below.

IV

I am fully aware that in the course of this paper I have introduced several ideas which need to be further precisified and clarified. I have also made certain claims which stand in need of further justification. Moreover, I have thrown in, rather cryptically, a few controversial suggestions which need to be further elaborated and worked out with all their major ramified implications. The ones that, to my mind, need closer and more immediate attention are the following:

(i) To clarify the notions of 'systematization' and 'rigour' and to show how they are interrelated.
(ii) To show how 'systematization', 'understanding' and 'scientific explanation' are related to each other.
(iii) To clarify the notion of 'alternative structurability' with illustrative examples from the history of science while contrasting it with a similar philosophical view, e.g., the one held by Kant.
(iv) To show that our assumption regarding the ineliminable discrepancy between a segment of reality and its model is *not* a purely *ad hoc* a priori assumption—that it can be justified by a sort of 'transcendental argument' (in the Kantian sense) based on the actual history of science.
(v) To justify our claim that there is no sharp line of demarcation between subjectivity and objectivity and to trace out, in this connection, the undesirable consequences of, what I have called, the craze for ultra-objectivism in the methodology of science. This, in its turn, would also require us to justify our claim, implicit though it is in this paper, that both in the construction and in the acceptance of a new scientific theory, especially if it is a revolutionary one, subjective factors and socio-cultural milieu of the time play a very significant role. Theory construction and its acceptance is never, or hardly ever, exclusively determined by cold, dispassionate and objective logical considerations—although it may not be as bad as Feyerabend's 'propaganda' theory seems to suggest.
(vi) The suggestion thrown in my paper regarding the affinity between poetic and scientific creativity also needs to be worked out in greater detail.

The second instalment of this paper will be devoted to the discussion of (i)-(iv) above. Though originally planned to be presented as a part of this paper in one single instalment, the idea was later dropped to keep the paper within manageable length. The issues relating to (v) and (vi) above will, however, not be dealt with in the second instalment of this paper since both the issues are fairly complex and require at least one full paper devoted to each of these topics.

NOTES

1. The notion of quasi-isomorphism may be made more precise in terms of some kind of 'fuzzy mapping' and 'fuzzy-similarity' The author is presently working on this problem and has made some progress. The basic ideas underlying such an approach have been taken from Kaufmann's 'Theory of Fuzzy Sub-sets-I'. On the notion of vagueness also see M. Black, 'Vagueness : An Exercise in Logical Analysis,' *Language and Philosophy* (Ithaca, 1949), pp. 23-58; and G. Lakoff, 'Hedges: A Study in Meaning Criteria and the Logic of Fuzzy Concepts', *Journal of Philosophical Logic* 2 (1973): 459-506. Y. Gentilhomme has defined mathematically the notion of vague set (in French, ensemble flou), making it possible to describe the zone of application of these vague notions in 'Les Ensembles flous en linguistique', *Cahiers de linguistique theorique et appliqueé* (Bucharest, 1968, pp. 47-65).
2. In the technical sense of the term in which it is used in Catastrophe Theory—a new branch of mathematics developed by René Thom.
3. But that is a separate issue and I have dealt with it in detail elsewhere—in 'Growing under the Shade of Physics or Languishing under its Shadow?'. It was presented at a graduate seminar at the University of Waterloo. I have a plan to publish a modified and expanded version of it in the near future.

REFERENCES

Andreski, S. (1978) : *Social Science as Sorcery*. Penguin, London.
Beçanson, R. M. (1974) : *Encyclopedia of Physics*. Van Nostrand Reinhold, New York.
Dirac, P. A. M. (1961) : *Introduction to Quantum Machanics*. Oxford University Press, London.
Good, I. J. (ed.) (1962) : *The Scientist Speculates*, Heineman & Co., London.
Kuhn, T. S. (1973) : *The Structure of Scientific Revolution*. University of Chicago Press, Chicago.
Sarkar, T. K. (1978) : *Emergence, Complexity and Reductionism*. University of Waterloo, Waterloo. (Unpublished doctoral dissertation.)
Thom, René (1975) : *Structural Stability and Morphogenesis*. W. A. Benjamin, Massachusetts.

Two problems in the ontology of fictional discourse

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"...as I say, sir, that which is a game of art for you is our sole reality"—PIRANDELLO, *Six Characters in Search of an Author*, Act III.

PREFATORY

This paper forms part of a larger work which attempts to provide a general solution to the problem of singular reference to nonexistent (Fictional, hallucinated, painted or falsely believed-in) items in negative existential as well as other sorts of statements. The proposed solution turns on a conception of any kind of speaking of objects as governed by the conventions of some language-game or other. The language-games distinguished (and numbered) are as follows:

Game (1)
Speaking of actually existent spatio-temporally identifiable objective concrete particulars.

Game (2)
Speaking of the items mentioned in a work of fiction taking the states of affair exhibited by the fiction's sentences to be actually obtaining facts, a thumb-rule being, e.g., that whatever the author writes is true in this game.

Game (3)
Speaking of immediately perceived items just as they are perceived (without evaluating the perceptual experience for correctness), e.g., in describing the contents of a dream.

Game (4)
Speaking of abstract objects like numbers, triangles, etc. on the one hand and styles, symphonies, etc. on the other.

Game/Master Game*
A special style of speaking across two or more of the above games. This game is invoked exclusively for our transit from game (2) or (3) to game (1) in order to ask whether and assert that a particular designated item of fiction-talk (or dream-talk, etc.) is or is not also an item of game (1). Existence-appraisal of fictional particulars outside the context of fiction is typically done within the Master Game, which looks over the other games and allows simultaneous participation in two of them.

This admittedly crude specification of the language-games is given at the outset so that the frequent allusions to game (2) or game (4) in the body of this paper are not missed. Space does not permit me to state my cautioning and tightening thoughts about these games any more explicitly. The above list of games together with the taxonomy of fictional discourse given in the introductory section below must be borne in mind for a clear comprehension of the ideas recorded in the paper.

INTRODUCTORY

For facility of discussion I have constructed the following preliminary table of the various kinds of statements involving use of fictional names and descriptions. Labels like "F1" and "F5" should also lead to brevity. I do not claim that all possible sorts of such utterances have been taken into account, nor is the justification for each distinction hoped to be evident at this stage. Some of these distinctions, e.g., between F1 and F2, will be familiar,[1] others are less common or even controversial. The subsequent sections will generally presuppose these distinctions, and also, where needed, defend them.

TYPES OF CONTEXTS FOR FICTIONAL NAMES

Story-Telling or Fictive		
F 1 (existential or predicative)	—	Author's utterances, sentences in the text of the fiction
F 1.1	—	Stage-setting lines giving, criterial description of items (roughly more towards the core of their essences)
F 1.2	—	Story developing lines making references to already introduced items
Story Re-telling or Fictional		
F 2	—	Readers's utterances claiming to correspond to or follow from the author's say-so
F 2.1	—	Description of people and things, etc. or recounting the plot of the story, which sticks to the letter of the text with lexically equivalent rephrasing
F 2.2	—	Inferential statements about what went on in the story, though the author did not explicitly mention that
F 2.21	—	Conclusions drawn wholly from fictional premises
F 2.22	—	Conclusions drawn from partly extrapolated nonfictional premises incorporated from the actual world.
Existence Assessment		
F 3	—	Straightforward singular (negative or affimative) existentials across fictional and actual worlds.

Character Talk		
F 4	—	Talk of 'creatures of fiction' outside the fiction, typically in literary critical contexts
Attributive Use		
F 5	—	Oblique reference, often merely adjectival, to fictional items in talking about the real world.
About Emotional Reactions of Real People to Fictional Items		
F 6	—	Statements involving simultaneous reference to real people and fictional items recording the real psychological attitudes of the former to the latter.

For fictive discourse with even the minimum degree of complexity of structure, separation of the stage-setting (F1.1) part may become practically impossible. We not only do not expect the beginning (or any particular part) of the novel or story to give us the inflexible core of the narrative or the criterial details about the fictional items, we often wait until the end of the story to explore the 'real' identity of the items or the 'real' story line. Yet, the distinction is a valid one. *Some* fictive statements involve explicit back/forward reference to already introduced items; and not all fictive utterances are meant to be taken as equally determining the essential features of the fictional items.

Both F3 and F4 are spoken of in the literature as *outside* remarks. But, surely the sense in which we deny the existence of a *character* like that of Sherlock Holmes in Elizabethan literature is not the sense in which we deny the existence of *Sherlock Holmes*. Character talk may be immediately unrecognizable because of picturesque use of words suitable for inside-the-fiction descriptions, e.g., "Conan Doyle first killed off Holmes but then brought him back to life". The easiest way to find out that this is not F2 type talk is to notice that it is not intended to be true in the Holmes stories. Clearer examples of F4 would be remarks like "Falstaff has a long history in comic drama" where we are explicitly talking of Falstaff as a literary object. Such outside talk of characters displays its typical independence from the internal fictional framework when we freely discuss characters from two or more different novels or plays written about (in a typically fictional-historical sense of "about") different times and milieus. Statements like "Hamlet's agonies are much more subdued that Oedipus's" place us in a point of view which is as external to *Hamlet* as to *Oedipus Rex*. We popularly call it a statement about fictional objects because both are fictional, but we must not forget that the world created by Shakespeare is as foreign to that created by Sophocles as both are to the actual world.

Interesting interweaving, recursion and even partial breaking-down of the above distinctions are also fairly common. If, in making F2 statements inside *The Man with the Twisted Lip*, we say about Hugh Boone, the suspected murderer of Mr Neville St. Clair, that he does not exist we shall be indulging in F3 inside F2. Apart from such doubly fictional statements, we can easily come

across fictional people making serious assertions about contemporary real events and persons. Many revolutionary opinions have been thus expressed. Sherlock Holmes can appraise a fictional character (e.g., from Shakespeare's plays) from the outside point of view (F4 inside F2). There is a story where the fictional persons talk about their creator—making true statements about him (R. L. Stevenson, *Men of the Tale*, an appendix to *Treasure Island*). Even while writing a fiction, an author might suddenly take a non-fictional stance and address the reader directly to report facts or moralize about them. Such serious reflection may be woven fairly unnoticeably with his fictional yarn. Some fictions again, like *The Tempest*, reveal the fictionality of some of its own characters: "These our actors;/ As I foretold you, were all spirits, and / Are melted into air, into thin air" announces Prospero. We can be puzzled by some fictional characters lamenting their own actual non-existence (for instance, in the Stevenson story).

F5 statements are not strictly statements about fictional items. When someone says, "How can I tell who stole your purse? I am not Sherlock Holmes !" the reference to the detective need not be interpreted as dragging us into the realm of fiction. Such statements are, therefore, better classified as using names like descriptions (as in describing an intelligent child, "He is a little Einstein") and we shall not have much to say about them.

Finally, we must be careful to distinguish F6 statements from statements recording our admiration, etc. for the *characters* as pieces of art-work. To say about a fictional person "He is a terrible bore" as a F4 statement may be paying a tribute to the portrayal of the character.

I

Creationism versus Platonism

The view that by indulging in fictive discourse (F1) the author *creates* the objects (to whatever ontic category they may belong) to which we refer in F2 (or even F4) kind of talk is here called "*creationism*". "*Platonism*" is the name given to the opposite view which pictures the referents of fictional discourse (whether of F2 or F4 sort) as timelessly there to be picked out, or, even if temporal, as at least existing (in or outside fiction) independently of the author's writing about them.

Creationism, in its most commonsense form—the form in which it indeed looks like the fact of the matter rather than a mere ism—leaves it ambiguous what exactly is supposed to be created by the author. The word most unsuspectingly used is "characters". Yet, that word can be used with at least two radically different denotations in two different kinds of contexts. We talk of what this or that character did or said in the story at definite points of story time. We also talk of the characters being completely fictional, life-like or partially based on real historical persons or some other characters of earlier fictions. Surely, the entity which kills or loves cannot be the same as the one which is life-*like*. What sense does it make to say about some of our friends in

real life that *they* are *based* on some others? Of course, their *characters* (this time in a specific sense which makes them distinct from the individuals they are of) can be modelled on those of others. Indeed, characters in this sense may even be partly shareable between individuals. We shall come to this 'type'-sense of characters in a moment. The ambiguity of the expression "character of a fiction" stems from the double use of fictional names respectively in F2 and F4 types of parlance. Consider a story which I write in 1982 in which an ancient Egyptian scientist builds in 800 B.C. a huge thinking machine nearly as powerful as a modern computer. In the story, the machine is called "Thramesis". And the story proceeds with the spectacular performances of Thramesis which gradually supersedes its maker, comes gradually to show signs of free will until people regard it as a divine oracle who finally brings about the scientist's doom. Now, we can ask: When was Thramesis created and who created it? The answer: In 800 B.C. by an Egyptian scientist, will place the question (together with the answer) in F2 type discourse, and would clearly refute creationism. *I* did not create Thramesis. The answer: In 1982 by A. Chakrabarti, will tend to support creationism but then it would be a sample of F4 talk. It speaks of a distinct entity—not the ancient oracular computer—but, if you like, *its* character in the sense already sketched out.

Apart from the disparity in time coordinates, the distinction between characters and items becomes clearer through the asymmetry of our emotional attitudes towards them. We can say, for instance, that one cannot but feel fascinated by a certain fictional character because *he* is painted (so faithfully to life) as typically tedious. The solution of the paradox surely lies in detecting the switch from F4 to F2 talk. What one is fascinated by is an abstract entity of literary criticism which actually exists and is admirable as a work of art, like a symphony or a dance (viz., the character, or more accurately, the portraiture of it).

Corresponding to this, there is the other item which is nonexistent in the actual world, the fictional person, who is available for reference only in what we have called game (2) and that person is boring. He bores his companions (call them—playfully—his fellow non-beings) in the world of the story and, in a special sense, bores us—not as a literary creation but as a person. The character is an *it*. The item is a *he*. And it is his character.

Now, creationism is obviously false if applied to the sort of entity *he* is. There are several obvious arguments for that. The argument inside F2 (hence, game (2)) would be that Jane Austen could not have created Emma because Austen was no God and Emma not a man-made artifact. (Aren't many authors born much later than the people they take the stance of writing about?) Emma was born of her parents, Mr and Mrs Woodhouse, and if any human being can be said to have produced her, it is they. The argument outside game (2) would be that to create is to bring into existence, so that if Austen did create Emma, we would not have said that she never existed.

The role of the author inside game (2) would be one of a reporter rather than that of an architect or creator. Like the historian or archaeologist who,

by first informing us about a hitherto unheard of city or king, makes the city or the king *known*, the author of the fiction (make-believedly) tells us, for the first time, about items which, depending on where he places his plot, existed, exists or will exist or (in case of certain untimed fairy-tales) are there, independently of his act of writing about them.[2]

But surely, the author does create something! Something distinct, i.e., from a series of token sentences. Does he then create the abstract entities we are inclined to call characters in the stricter sense? Waiving for the present immediate worries concerning the awkwardness of *creating* an abstract entity, let us concentrate on the notion of a character—the sort of entities to which Kripke suggests that the fictional use of language commits us and which Peter van Inwagen (1977) has called *creatures of fiction* ("creature" suggests creation too!).

To maintain that such fictional characters exist and that with respect to them, ordinary language has the full apparatus of quantification and identity —as Kripke does—is not to agree with the vulgar Meinongian that Iago or Prospero has some kind of spectral ontological status, but to hold a quite different sort of view.

Inwagen almost cheats us into believing that he is saying about the *same* fictional entities which we commonly regard as nonexistent—that "every single one of them exists" (ibid., p. 299).[3] It becomes more deceptive and, in the final analysis, *incorrect*, when he claims that it is these existent entities which are named by fictional proper names like' 'Mr Pickwick". In terms of our own taxonomy, he takes F4 type discourse as the paradigm of straightforward verifiable talk about Mrs Gamp. Thus, his own examples of the properties that she really has (it is curious that he calls the abstract entity of literary criticism "she" while he says that it belongs to the same class of objects as:

> plots, novels (as opposed to tangible copies of novels)
> poems, meters, rhyme schemes, borrowings, influences,
> digressions, episodes, recurrent patterns of imagery

we do not normally use *personal* pronouns for any of *these*!) are—

> being a character in a novel,
> being a theoretical entity of literary criticism,
> having been created by Dickens,
> being a satiric villainess, etc.

as to the properties she is said to have in the story, like being old, being fat, being fond of gin, etc. Inwagen plays some ingenious logical tricks. He says that just as for a Cartesian the person Jones strictly cannot himself have the physical qualities like being six foot tall, although he is loosely said to have it, for Inwagen the character itself cannot have these personal (non-literary) properties. Indeed it is as impossible for the character to *be* (strictly) fond of gin as it is for an epic simile to be so. Yet, the statements that we make in F2

about Mrs Gamp have to be given some account. And Inwagen proposes an "Ascription" predicate which has three places respectively for the property, the creature of fiction and the literary context (a novel, a place in a novel, a story, a section of a story, a paragraph or even a sentence). Thus, the statement:

> Anna Karenina committed suicide

will receive the following analysis

> A (committing suicide, Anna Karenina, Chapter 31 of Tolstoy's novel *Anna Karenina*)

The predicate A (x, y, z) is taken as a primitive for various technical reasons. We could, of course, quantify over any of these argument places issuing statements like

> "There is some character in every novel to which the property of being very passionate is ascribed."

or

> "A particular property is such that in some novel every character is ascribed that."

Such an analysis, as we shall see later, has immediate solutions for the problem of indeterminacy or incompleteness, as well as those of author-endorsed inconsistencies. We do not have to say that some nonexistent woman used to drink gin and puzzle about the possibility of drinking without existing.

We do not have to take fictive statements at their face value and get perplexed with cases where, in the first chapter, the author says that the heroine's apartment was in the ground floor and, in the tenth chapter, the heroine comes down from her flat by the lift. We can simply intervene in the contradiction through the Ascription-predicate and regiment the corresponding fictional statement as:

> "A (living in ground floor, the heroine, Chapter 1) and A (not living in ground floor, the heroine, Chapter 10)"

which is not reducible to the form "fa and $\sim fa$".

Generally, as we have already remarked, this is the proposal to rephrase all F2 claims as F4 ones and thus get rid of Sherlock the detective in favour of Sherlock the literary creation who is depicted as a detective.[4] Apart from the obvious artificiality of the proposal, it suffers from at least some other fundamental deficiencies.

First, it cannot provide any account of how F1 talk, which is surely not concerned with abstract entities of literary criticism (because these entities evolve out of F1 talk) can serve as a ground for referring to them.[5] We have to honour the intuitive idea that we pick up our reference to Holmes from Conan Doyle's use of the name. We use the name Holmes for whatever entity he—infact Watson himself—was using it for. Yet, Watson or even Doyle

was certainly not using it for a creature of fiction in Inwagen's sense. About F1 type discourse, Inwagen makes a Rylish remark:

> Typical narrative or descriptive statements taken from works of fiction are not about creatures of fiction. They are not about anything. (Inwagen, ibid., p. 307.)

We have already rejected the non-referential, non-assertionist views of fictive discourse. If Dickens is not speaking about anything when he writes the story about Oliver and we are speaking about whatever he is speaking about (when we say 'Oliver was born an orphan.') then we are speaking about nothing either. But that is false on *all* accounts of the matter. So, Dickens must be speaking about something and something distinct from an abstract entity of literary criticism at that.

Secondly, in his enthusiasm to show how the Mrs Gamp that we talk about in literary criticism *exists*, just as numbers and plots do, Inwagen has ignored the question, philosophically the much more interesting one, how she does not. He discusses the issue in the final footnote, confessing to its complexity, and comes up with a rather old-fashioned Russellian solution:

> The utterer of such a sentence ["Mr Pickwick does not exist"] would probably be addressing himself to someone who had mistaken discourse about Pickwick for discourse about a *man*, owing to the act that the ascription-relation is expressed in English by what sounds like the apparatus of predication. He would probably be expressing the proposition that. . .nothing *has* all the properties *ascribed to* Pickwick. (Inwagen, ibid., p. 308.)

This is easily seen to be wrong-headed. In the first place if one takes "Mr Pickwick" as the name of a *man* he would most probably be more right than Inwagen who takes it to be either the name of an abstract entity or not a name of anything at all. In the second place the denier of Mr Pickwick's existence can very well admit that someone has (had) *all* the properties ascribed to Pickwick, by accident, and yet stick to the negative existential which is singularly *singular*.

Even if we reject this attempt to collapse the referents of F2 talk to those of F4, can we maintain, even about these characters that they *have* the property of being created by the authors of fiction? By rejecting the thesis that "Mrs Gamp" in "Mrs Gamp was fat" refers to a character we need not, in fact do not, reject the insight:

(a) that there *are* such abstract entities corresponding to fictional names, and
(b) that they are talked about by us and literary critics when we issue statements like "Joyce created Bloom in the image of the Homeric hero."

In order to answer the question: Did Tolstoy bring the abstract entity into existence? we have to consider first the nature of characters more closely and see in what sense some other abstract entities like styles of architecture and techniques of painting or symphonies are brought into existence.

We have already seen how characters can be looked upon as types which persons exemplify, which can be said to belong to people. "She is of my type.", the mother says about a favourite daughter. Formally, we can perhaps take person-types as sets of properties. This is what Carter (1980) suggests as a reconstruction of Inwagen's creatures of fiction, although we are not eager to put the explanation into exactly the same kind of use. We can harmlessly say that the character of Mrs Gamp is *constituted* by or has, as a member, the property of being fat without making Mrs Gamp herself identical with the collection of her properties any more than I am a collection of mine. The character of a person (fictional or real) is, we may say, what it takes to be he or she. And it takes a certain uniquely exemplifiable set of properties to be an individual, to be sure. In fact, real entities can be said to have characters too, insofar as each of them (at any given point of time) has a cluster of properties which may be said to constitute its type. Two real entities, however, can never have numerically the same type (if we include spatio-temporal determinations into the set of properties) because of the necessary discernibility of non-identicals, but they can share a major chunk of their common characteristics—at least for a certain length of time. The overlapping or intersecting set of their properties can be said to represent their common character.

With such an understanding of characters as person-types, we can easily say that fictional characters, e.g., characters *of* Prof. Moriarty (note that here the "of" is not an idiomatic substitute for "namely" as in "city of London" but a strict "of") of Tom Thumb, of Long John Silver, etc. (person-type is too narrow in connotation; we have thing-types as well, e.g., the character of the Tinderbox, or of El Dorado the country) are existent, unlike the items of which they are characters. Usually, nothing in reality fits such characters, although that is not at all what is reported by F3 type singular statements which are not to be taken as speaking of characters anyway. Characters exist[6] because they are bona-fide items of game (4).

Let us now face the question: Are these item types created by the author? Insofar as they are clusters of properties, it does not sound right to say that they are. Yet there is some sense in which before Dickens' writing about him the character of Pickwick did not exist. Are we then to be creationists about characters? Assistance in answering this question might be received from the related problem about the sense in which the Ninth Symphony or Pointillism (as against particular performances of it or paintings done in that style) could be said to be *created* by Beethoven or Seurat.

Abstract entities form a very heterogeneous flock. Some of them, like nation states, seem to demand that we recognize their starting to exist at definite points of time. Kripke seems to be a creationist about fictional characters bracketing them with abstract entities like institutions, which surely come into and go out of existence (see Kripke, (JLL), Lecture 3).

Kripke is conscious of the F2/F4 distinction and does not try to reduce the one into the other. But he holds that if nobody ever wrote the Holmes stories, the character of Holmes which now actually exists would not have

existed. The character, like a political organization, can be brought into being by certain acts of story-telling or writing by a human being. Upon this view, a character is not like a symphony which can have many performances to which it is related as a type to its tokens (one is not too sure as to what relation the symphony bears to the *score* which is definitely written for the first time by the composer, although what we mean by creating a musical work is obviously distinct from the act of writing the score—since it can be created in the head, etc.). It would be more like an association or church ($\neq$ the building) which, though abstract, does not have *instantiators* falling under it. If we take characters as property clusters creationism becomes much less plausible. Since Kripke did not clarify his own individuation principle for characters, except for a tentative comparison with nations, let us opt for the property approach and see if creationism can be altogether avoided without overlooking the fact that Conan Doyle did *pioneer* some kind of activity concerning the character of Holmes.

An abstract entity has a conceptual pull towards timelessness. It is very difficult to see, for instance, how a symphony can go out of existence. Yet, normally we expect creatable things to be perishable as well. Everybody might forget how to play the Ninth Symphony; no buildings are nowadays built in the Buddhist cave-temple style. Yet that symphony or architectural genre cannot ever be said to have become nonexistent. We can even call it extinct in the sense that it has stopped being instatiated or satisfied by any individual, but not nonexistent like an extinguished flame.

Can't we say, in a similar spirit, that what Seurat did about Pointillism was to paint the first exemplifier of it? Does that detract from his credit as the "father of Pointillism"? I don't think it does.

Mathematical theorems are not created, but hit upon or discovered by a genius who constructs the first proof for it. To think that Beethoven, by writing out the score of the Ninth Symphony, discovered a timeless abstract entity of which all subsequent performances would be instances or exemplifiers, is to pay him no less a tribute than is paid by calling him, loosely, the creator of it.

Such abstract objects (some of which necessarily and timelessly exist) are our topics of conversation in game (4) and in F4 type talk. Some abstract objects like numbers do not have *instances* which are in space and time. They are easily recognizable to be platonic and timeless; whereas others like literary styles, artistic genres and musical compositions are very often confused with their temporal counterparts, their instances—pieces of writing, physical items like a canvas, events like performances.

We need not, therefore, be creationists even about the characters or item-types. They, too, can be looked upon as platonic entities which, to phrase it in what would be strictly be an inaccurate temporal way, pre-exist the author's writing about the items falling under them. What the author does by entering into fictive discourse is to make it fictional or make-believe that a unique item fits a certain character (usually with reference to a story-time) when, in fact,

nothing actually does. The dangling individual kinds are grasped and made into characters by the author's so-called creative use of language.

However, the characters are unlike symphonies in at least two respects. Firstly, they do not have *many* instances falling under them; like characters of real objects the complete character of a fictional item, too, is unshareable and bears a 1-1 rather than a 1-many relation to its instantiator (inside the make-believe). Secondly, in *fact*, i.e., in game (1), nothing instantiates the character, whereas after the composer's act of bringing the symphony to light, hosts of musical events may start to instantiate it.

The blueprints exist like other abstract entities timelessly, because they are arbitrarily choosable sets of properties. The author chooses some of them which he usually believes to be—at any rate, *wholly*—unfulfilled by any actual item and pretends that they *are* fulfilled, that they are characters of certain real people, things, places and events. To make it sound more tangible: What the author does is to confer *characterhood* upon some previously unthought of and untalked about person-types and thing-types. We can say that before an author's pretending that the blueprint $[\phi_1, \phi_2, \ldots, \phi_n]$ is answered to by the unique item M, the above set does not become a character. It remains a merely constructible property-cluster. The author makes it a character by pretending that M has it, when M actually does not exist. What we have called the stage-setting part of fictive discourse (if any part of a given story is so separable) is where the author selects the core or basis of the property cluster which he will make into a character, and the rest of the fictive sentences go on to enrich that set of properties, until at the end of the story or series of stories we get the maximal form. Even in that form, the character is, nevertheless, always (inside game (2)) only part of the character of the item M who answers to it.

Inside game (2) these become characters of real (thus, complete) people, things and places. In game (4) they are *created* in the extended sense that some author has played a game (2) where these abstract objects are asserted to be answered to for the first time by concrete items.

We do popularly mix up F4 and F2. Paraphrases might be needed in such cases.

"Thousands of characters in English Literature have fallen in love"

should be read according to our theory as:

"Thousands of characters in English Literature include falling in love as an element"

because the *characters* do not fall in love themselves.

We face some minor troubles regarding negative existentials asserted inside game (4), e.g.,

"The character of Touchstone did not exist in any pre-Shakespearean play" or ". . .does not exist in Hamlet".

Such judgements assert only a relational absence rather than an absolute

non-being of a character and can be easily taken care of by analyses like the following:

> "No item referred to in any game (2) played earlier than Shakespeare's time or in the particular game (2) played by Shakespeare in *Hamlet* answers to the character of Touchstone"

when "The character of Touchstone" refers to the totality of properties ascribed (explicitly and implicitly) to Touchstone by Shakespeare in *As You Like It*.

Shakespeare created Touchstone because he was the person to pretend for the first time that a unique individual had the character that Touchstone (in the appropriate game (2)) had, not because he brought that character—those properties or their conglomeration—into being; much less because he brought that court jester himself into some kind of a shadow of being. Am I being a platonist about fictional characters then? Well, in so far as the properties which make up the character of Sherlock Holmes are concerned, I think platonism is at least more plausible than creationism. But I do give the author his due credit for choosing the relevant propertycluster and for conferring characterhood upon it by pretending for the first time that such a property-set is (or was, etc. somebody's character when, in fact (i.e., in game (1)) it is (or was, etc.) nobody's. The name 'Touchstone' refers to Touchstone the flesh-and blood jester inside game (2) and may refer to the character of Touchstone the abstract literary object inside game (4). In the Master-game it refers to the nonexistent item picked out of game (2). It is failure to keep the inside/outside distinction straight that gives rise to vulgar Meinongism about non-existent particulars bearing genuine properties and also to vulgar creationism about produced (and hence existent) abstract objects being ascribed inappropriate personal properties and such like.

Even Wolterstorff[7] who seems to hold an anti-creationist view very similar to ours fails to keep the inside-outside distinction *fully* in sight. Though he says, as I have said, "If characters are person-kinds, then they *do* exist. . . . But the author did not bring that kind into existence," and also makes the distinction, suggested in this paper, between dangling person-kinds and those that have been given characterhood.

"Perhaps, though, a person-kind is not properly called a 'character' until some work has been composed of whose world it is a component. Then it would be a mistake to think of *characters* as awaiting selection by some author. That would be true only of person-kinds. And then what could be said of the fictioneer is that he brings it about that what are not characters become such."

"In so far as the kinds an author delineates are different from any which he believes to be or have been exampled or delineated, we may say that he has been creative. But to be thus creative is not to bring the character into existence. Neither is it to bring it about that the character has an example. His creativity lies in the freshness, the imaginativeness, the originality of his selection, rather than in his bringing into existence what did not before exist". (Wolterstorff 1980, pp. 144-45.)

This is all very well, but coming to analyse the role of fictional proper names he correctly recognizes that in the inside-the-fiction discourse (at least in the author's own utterances) the names cannot refer to these platonic entities. Instead of taking the step (which we have taken) of asking even the philosophical question about what the fictional name refers to inside the fiction, *inside the fiction*, he abides by the constraint of a Russellian sense of reality—the dictate of not admitting non-existent referents—and decides that the fictional referring expressions are not *properly* referring, that they function like variables supported eventually by an introductory use comparable to that of a general term or an indefinite description (see Wolterstorff, 1980, pp. 149-63).

We have avoided this unnatural conclusion which jars against our intuitive constraint that in F2 discourse our references by the use of fictional proper names must keep a continuity with the references of those names in F1 and that in fact, we must be able to refer to whatever items get referred to by the fictional persons (not person-kinds) inside game (2) or the world of the work. We have to ask and answer the philosophical question: What does "Sherlock Holmes" refer to? also inside some game or other.

II

Emotional Response to Fictional Objects

While groping for the distinction between fictional characters and items, we have noticed, in passing, that it is possible to have two opposite emotional attitudes (e.g., admiration and revulsion, enjoyment and sorrow) towards elements of fiction at two distinct levels. As a literary critic, one admires the *character* of a certain fictional villain *because* as a reader one hates *him*. Records of the latter sort of ground level emotional reactions of real people towards fictional items have been classified as F6 type statements. Before we enter into the problem concerning F6 statements we must caution ourselves against a mistake. Although in deciding what exactly is *created* we have talked of item-types being given characterhood by authors of fiction, it is not exactly those characters or person-kinds themselves which are always admired by the critic when, e.g., their non-existent exemplifiers are loathed. The object of the critic's admiration or dislike is also an existent abstract object which is most probably distinct both from the non-existent item, e.g., the villain and its character (in the sense defined). Maybe it is *the portrayal* of that character which moves the critic. The character of a thrilling person may be duly depicted by a certain author. We get into fuzzier categories here, like the author's act of depiction, the depiction as an independent abstract entity which is generated by that act, the depicted character, and the concrete individual who, the author pretends, exemplified that character when in fact no one did. Whatever

it may be that people find beautiful or entertaining in watching or reading a tragic or terrifying play, it is not those people or events which befall them (make-believedly) which arouse only pity and fear in us. We cannot be pitying and praising the same entity. What attracts us about a horror movie is not what scares us stiff. Graver problems, however, persist: How can we fear and pity items which we know do not exist (or did not happen)?

To take Walton's[8] classic example. Charles watches a blood-curdling movie about an all-devouring green slime. He says later that he was terrified of the slime. The problem arises not because we cannot existentially generalize out of such a true claim (viz., "Charles was frightened of the slime") and say truly that there was something such that Charles was frightened of it. "To fear" and other emotional attitude verbs are notorious for not allowing such existential exportation of their objects. Charles could be genuinely afraid of, or crave for, or rejoice at nonexistent things and events, *which he falsely believes to be real*, as much as he can dream of, or hallucinate about them. The problem arises because in the case in question (in typical F6 type contexts) Charles does not believe that the green slime exists. The puzzle, strictly stated, consists in the joint inconsistency of all four of the propositions below all of which look initially plausible to common sense:

(A) $(\forall x)$ (x knows that P$\rightarrow x$ believes that P)
(B) $(\forall x)$ (x is emotionally moved by $O\rightarrow x$ believes that O exists)
(C) Charles is genuinely afraid of (i.e., emotionally moved by) the green slime.
(D) Charles knows that the green slime does not exist.

A solution may be attempted by dropping any of the four. The one most often left undisturbed is (A) and the one most often sacrificed is (C).

Let us quickly dispose of the shallower proposals first. One can argue that like avowedly irrational fears or gut feelings which can co-exist with intellectual certainty about the unreality of the danger or relevant objects of feeling, our fear of fictional items is not counteracted by our knowledge of their nonexistence. That we are moved by such recognized unrealities is "just a psychological fact about ourselves which remains inexplicable at the level of rational discourse". This is to revise (B) in favour of:

$(\forall x)$ (x is *rationally* emotionally moved by $O\rightarrow x$ believes that O exists)

But Charles need not consider his fear of the slime with shame, as a lapse into irrationality. Being moved by the fate of Anna Karenina is a more intelligent and reasonable reaction to that novel that remaining stolid on the grounds that it is all fictitious. Even if we grant that ones reaction is at an unreflective "gut" level, it should be supported by a corresponding gut belief as well at that instinctive level.

Does our excitement and anxiety at fictional happenings involve us even in any such spontaneous momentary or half-hearted belief in the actuality of these happenings? This is another suggestion which relies either on a qualified rejection of (D) or on a mild attack on (A). Charles might be described as so intensely caught up in the fiction that he momentarily "loses hold of reality" and believes that the slime is real. This might be claimed to happen because he ceases to know that it does not exist or because his knowledge that it does not cannot prevent him from believing or half-believing it—in a sort of self-delusive way. Such claims, as Eva Schaper (1978) convincingly argues, are based on peculiar compromises prompted by what she thinks is Coleridge's singularly unilluminating phrase: "*willing suspension of disbelief*". Unless we want to give up (A) (i.e., knowledge→belief) we cannot mean (in this context) by "suspending disbelief" either believing in what we know not to be the case or not believing in what we know to be the case. F6 statements can very normally describe fairly long-term emotional reactions which demand an explanation even if we admit that we do sometimes momentarily forget that what we are reacting to is fictional. We can be said to be sorry for Juliet and haunted by Dr. Jekyll even when we are not 'in the grip' of the play or story, not watching or reading it and in full awareness of their fictionality.

Several solutions have been attempted by challenging (C) instead. First, one might hold that what Charles is afraid of is the depiction of the green slime rather than the green slime that is depicted. Aren't we moved to tears by the novel itself? And the novel we *do* believe (rightly) to be real. True, sometimes we *are* so affected by the representation itself rather than what is represented. But to recall the distinction that we made at the outset, *this* reaction is not what we are here concerned with. Rembrandt's *Blinding of Samson* is superbly beautiful. What it depicts is macabre. The picture moves us favourably. But there is an opposite feeling—not towards the existent canvas or an existent reproduction of it but towards the Biblical subject of the painting—and event which we do not *need* to believe ever happened. Horror movies are loved because what they show is feared. The *movie* is not what is standardly feared (except, maybe, by a cardiac patient). Secondly, it could be suggested a bit more subtly that what Charles is afraid of is not that particular slime which he knows is unreal but *some such* slime which he believes may be actual. Such a suggestion can be fleshed out in different ways. We often explain our reactions in terms of wondering how it would be if such things happened and happened to us. This again is to be admitted as a genuine fact about our psychological reaction to fiction, but a fact which is distinguishable from, and does not fully capture or account for the fact that we shed tears at Desdemona's own agony and feel excited at the most recognizably improbable adventures that our fictional heroes go through. We are not moved merely by the thought of their anticipated *resemblance* to reality.

Finally, one can simply deny that Charles is genuinely moved. If he was, he would have fled the cinema hall, would have tried to protect himself from, and warn others about that danger. Walton seems to take something like this as his starting point by calling Charles' mental state "quasi-fear". Quasi-fear is not actual fear. It may or may not even be a component of it. Walton's

reliance on (B) and (D) seems to outweigh for him the case for (C). Thus he remarks:

> The fact that Charles is fully aware that the slime is fictional is, I think, good reason to deny that what he feels is fear. It seems a principle of common sense, one which ought not to be abandoned if there is any possible alternative, that fear must be accompanied by, or must involve, a belief that one is in danger. Charles does not believe that he is in danger, so he is not afraid. Walton, ibid., pp. 6-7.

In fact, Walton's position is a lot more sophisticated than just that the fear is illusory, or that the reaction is not genuine. But before proceeding to embrace a view similar to his in terms of our familiar language-games let us consider two strong alternatives.

(1) *Are the Feelings Directed at Non-subsistent Pure Objects?*

Taking either a free logician's or a Meinongian approach, we can hold (as Eva Schaper seems to do) that we need not believe that Othello existed in order to believe (and, hence, e.g., regret) that Othello was jealous of Cassio. Since the latter sort of belief is all that is required to feel emotionally disturbed about, say, Othello's unfounded suspicions and since that belief is not incompatible with the knowledge that Othello does not exist, the paradox vanishes. Strictly speaking, this solution rejects (B) in its present form but it can accept all that we might need to accept of (B) by revising it as:

(B′) $(\forall x)$ (x is afraid, happy or anxious that a is $\phi \rightarrow x$ believes that a is ϕ)

Don't we commonly hold that beliefs of the following two sorts are quite compatible?

(i) Richard III has just now ordered the gruesome execution of the Princes of the Tower.
(ii) There is no Richard III on the stage now, and nobody there has actually commanded anybody's execution.

Schaper calls the latter first-order and the former, second-order beliefs and maintains that unless one confuses the two orders, there is not only no reason to think that they clash, but rather that, in a characteristic way, the second-order beliefs are *based on* the first-order ones. We properly understand what goes on in a fiction by holding *de dicto* beliefs about fictional items only when we recognize that such beliefs do not commit us to the real existence of the items referred to within the fictional framework.

> It is only when they are supposed to have such commitments that these logically suspect and intuitively implausible views arise, which attribute to the person moved by fiction either total confusion...or amazing gullibility. (Schaper, 1978, p. 29.)

Such a position is based on a very controversial theory which tries to dissociate the notion of identificatory reference and predicational truth claim from that of existence assumption. The position is, nevertheless, extremely appealing and appears to solve our puzzle with minimum disturbance to the initial quartet of assumptions. But a harder look reveals that, like all those logicians who are enthusiastic about truth without denotation, Schaper was suffering from a confusion of levels herself. She was right that we do not need to believe that actually Anna and Vronsky were real to believe, fictionally, that they loved each other. And we need to believe only the latter if we are to be fictionally moved by their passion and their misfortunes. But she does not provide any clear account of why even to be moved *really* by their misfortunes, we do not need any more than the belief that *fictionally* they suffered. Schaper seems to say that since that a is f can be believed without believing that a exists (which is too controversial to be taken for granted), we can believe that Anna loved Vronsky as it were *tout court* without any pretence operator, along with our belief that Anna did not exist. What is most intriguing is how we can have both the first-order belief in the nonexistence of Anna and the second-order belief in her *existence* (because we have to have that belief inside the fictional context). She seems only too zealous to maintain that the emotion that we feel is situated very much in the actual world while the object of the emotion, though nonexistent, bears sentimentally evocative properties and performs exciting actions. Since we can solve the puzzle without venturing such outrageous hypotheses like being thrilled by the real actions of unreal doers, we should eschew such a view.

(2) *Is Desdemona a Bit of Fregean Sense?*

We can reject (C) in a sophisticated manner, not by denying that we are *really* moved by the green slime but by denying that we are really moved *by* the green slime. Taking clue from a nice distinction between "A is frightened by B" (which allows "$(\exists x)$ (A is frightened by x)") and "A is frightened of x" (which does not allow any corresponding quantification, although "B" would be one of the descriptions under which A identifies what he is frightened of). Peter Lamarque (1981) follows up this line of thought.

When a real murderer chases Charles he is both scared of and by that killer. When it is a fictional murderer he is afraid *of* him, but frightened *by* merely the *thought of* him. Fictions and plays convey thoughts which affect us strongly because they come in well-developed bodies. No actual or believed danger needs to be associated with the entertainment of the thought in order that it might be frightening; and that is why likelihood of actual personal involvement is not relevant for the emotional impact of the thought. Walton cannot agree that Charles is really afraid because he means by fear, fear about oneself. Charles cannot be frightened according to Walton without fearing that he himself is in danger. He can, however, be frightened by the thought of the slime devouring a particular fictional heroine or a city or everything in the world of fiction. It may be as impossible for us genuinely to sympathize with Desdemona, the flesh and blood fictional woman, as it is for us to go and tell Othello about his mistake. But Desdemona might enter our world not as a

person, not even as an imaginary person, but as a Fregean sense or type-mode of presentation. We might develop Frege's doctrine of indirect reference to the senses in intentional contexts and treat "In the play/story. . ." as a variant of such contexts. Thus, the name "Desdemona" in the following occurance can refer to the common cognitive content—the cluster of descriptions "appropriately derived from those offered in the play" (Lamarque misleadingly calls it a psychological object which will tend to posit private Desdemonas for each of us):

"I feel sorry that in the play Desdemona is unjustly suspected of infidelity."

Lamarque confesses that the above account needs a great deal of filling out. For instance, we must not recognize thought of any old x satisfying the content of a set of descriptions as thought of Desdemona. There must be a causal root back from that thought to Shakespeare's play. The identity of that particular play must come in somewhere in the genetic history of that thought. Such problems apart, the view incorporates the insight that reflections on jokes about real or imaginary people seems to yield, viz., we can have emotional reactions to a thought independently of accepting it as true of this world.

The ideas are familiar to us. Treating fictional names as referring to their own senses (since they have no reference to refer to) and treating fictional statements as expressive of unjudged thoughts are not absolutely fresh strategies. Here too, in Lamarque, we have an analogy of playing a game without any motive of winning or scoring. The suggestion has obvious tempting features. But it finally fails to account for our objectively referential and assertive stance inside the game of fiction where winning and losing are as important as in the game of world description. Thoughts and senses, after all, are either dubious Fregean entities, populating an objective third realm or they are too private to be common targets of sentimental attitudes of several readers and spectators. Frege would not have been happy with the suggestion himself, as we can gather from the last paragraph of *Der Gedanke* where he discusses the question whether thoughts can themselves influence our actions. Thoughts are held by Frege not to be *Wirklich*; it is only our apprehension of them, or the act of taking them to be true that can goad us into activity or emotion. He would rather say that it is a mock assertion of a mock thought that moves the reader of a fiction, than that he is really moved by an unasserted thought or by a group of them (such effectiveness would make thoughts *Wirklich*!). But the acts of apprehension of mock assertion are after all private. I could not appreciate so completely what you putatively felt when you announced "I cannot but feel sorry for Shylock" if Shylock was for you just a bit of your thought. Unless we assume publicly available thoughts as some sorts of intentional entities—at least as dubious as nonexistent objects—we lose the *shared* reference of all F6 type statements involving the same fictional item across many different appreciators.

Walton's account is based on an analogy with children's game of make-believe in which straight truths about certain props in the game generate make-believe truths about imaginary objects. Charles is playing a game of

make-believe in which the images on the screen are props. Certain physical facts about those images make it fictional that a green slime raises its head and slowly oozes towards us and certain mental facts about Charles makes it fictional that he is threatened.

Working on the basis of careful distinction of scopes of the make-believe operator, this account can very elegantly solve puzzles concerning our ambivalent attitudes towards fictional plots and events. We seem sometimes to wish both that the hero should come out victorious (because we like *him*) and that he should not (because we dislike stories with typical happy endings). The tension is easily solved by noting that while it is make-believe that we want the hero to win, we actually want it to be make-believe that the hero does not win. Similarly, the child wants to hear, and enjoys the suspense of, the same story repeatedly because while it may know that subsequently in the story make-believedly M rather than N happens, make-believedly it does not know but waits breathlessly to see whether M happens or N.

We have rejected Walton's account in connection with the more fundamental issue of meaning and truth claim because under the make-believe operator the truths under his interpretation seem to be at bottom merely existentially quantified. They fail to capture the unique singularness which F1 and F2 kind of talk admits of.

But we can accept one fundamental insight from him on this issue, namely that F6 statements are also made inside game (2) and are founded on a reader's self-incorporation into the world of fiction. Just as we tolerate unserious mention of some items of game (2) while playing game (1) in what I have called F5 type hybrid statements (e.g., "Holmes would have solved the Watergate mystery in a matter of weeks"); in F6 type statements, I think, we should construe the real reader or spectator (to whom the emotion is ascribed) as taking part in the fictional world of game (2). The author already enters the world of fiction in the role of an anonymous chronicler of facts. The readers, too, can take the implicit role of being (fictionally) told about what actually happened at sometime, somewhere in this world. We could easily go a little further and

> Rather than somehow promoting fictions to the level of reality, we, as appreciators, descend to the level of fiction. (Walton, 1978b, p. 21.)

We can feature as ourselves in the game of pretence where Sir John Gielgud might be playing the role of Richard III and, thus, playing the same game we can be (inside the game) moved genuinely by Richard III's ruthlessness. Our position, thus, may not simply consist in denying that Charles is *really* moved, but in rejecting that, Charles, *as threatened by the fictional slime*, knows (correctly believes) that the slime does not exist. Far from mistakenly believing in the slime or not knowing, for the time being, that the green slime does not exist, he correctly believes that the slime does exist, because all this, including the fright, is happening inside game (2) where it really does. We could not even disbelieve in *its* existence unless we partly participated in game (2)

in which alone *it* is available for reference. That is why, we cannot say in game (1) that Charles is really afraid of the slime, and that is why Charles does not behave in the real world like a normal frightened person. F6 truths belong to game (2), in which Charles enters mentally and—while he describes himself as having been afraid, etc.—verbally, though not physically.

I used to feel tempted to treat statements like "Ernest Jones finds out the reasons for Hamlet's delay in avenging his father's murder" as virtually game (2) statements with Ernest Jones as a game (1) guest. Depending, however, on the nature of the claims made by the psychoanalyst, we might have to regard his statements sometimes as straightforwardly about characters as game (4) items or on a par with F5 statements deserving a David Lewis sort of counterfactual analysis in terms of possible worlds. If, of course, the psychoanalyst's stance towards fictional individuals is like that of the person who genuinely feels about the precise fictional individual rather than about just anyone of its kind—then it is better to treat his statements as well as our description of his activity involving the fictional items as belonging to game (2), like F6 statements. Except for F3 statements which compel us to walk across the boundary between game (2) and (1), we shall do well to listen to Walton's advice of not accepting cross-world interaction if we can help it. Where we shall have apparent mention of items from both games, we should try to weigh pragmatic evidence to ascertain which references cling more tenanciously to their home games, and then force the entire statement into the relatively dominant game.

Notes

1. cf. Devine (1974).
2. Parsons faced this problem when he was making a distinction between native and immigrant objects. An object is native to a story if it is totally *de novo* 'created' in the story in question. To this he adds cautioningly, "The word 'create' here is meant in the sense in which an author is commonly said to create a character. It does not mean 'bring into existence' for such objects typically do not exist. Perhaps 'create' is a bad word, but it *is* customarily used in the sense I intend". Parsons (1980), p. 51. Remembering his special sense of 'fictional', Parsons can say that the author makes a Meinongian object *fictional* for the first time. But *we* do not need this special usage.
3. W. R. Carter (1980) makes the point which hardly needs making that those who deny the existence of fictional entities and Inwagen, who affirms the existence of creatures of fiction are not talking about the same things.
4. Such a view was apparently held by Roman Ingarden, a contemporary critic of Meinong and a creationist. See Barry Smith (1980).
5. Commonsensical claims—which on the face of it speak for creationism of some sort—like the following "Tolstoy first made Anna fall in love before she visited her brother; then he reversed the order of events" seem obviously to belong to character-locution. Applying our test, viz., attaching "in the story" to the statement brings out clearly that claims like this do not fit into F2 talk. They are true in our world, not in the world of Anna Karenina. They ought to be looked upon as some kind of cross talk between game (1) and game (4), both of whose items are existent in the absolute sense. "Anna" in the above statement must be referring to the character of Anna, or to be more precise, the core cluster of properties of that character.
6. Some characters may *not* exist as well, although I am not sure that non-existent characters can be singularly referred to. "Cinderella's step-brother does not exist" says that there is no such character. We should recognize that such a person-type does subsist, but nobody has ever pretended—in the relevant tradition—that such a person-type was exemplified. So, it has not been made into a character.
7. cf. Wolterstorff (1980).
8. Walton (1978a).

References

1. Carter (1980): 'Do Creatures of Fiction Exist?' in *Phil. Studies*, Aug. 1980.
2. Devine (1974): 'The Logic of Fiction', in *Phil. Studies*, 1974.
3. Frege (Der Gedanke): 'Thought: a Logical Enquiry' in Strawson (ed.), *Philosophical Logic*, Oxford, 1967.
4. Inwagen (1977): 'Creatures of Fiction' *American Phil. Quarterly*, Oct. 1977.
5. Kripke (J.L.L.): '*Reference and Existence*' Unpublished John Locke Lectures delivered at the University of Oxford in 1973.
6. Lamarque (1981): 'How Can We Fear and Pity Fictions' in *The British Journal of Aesthetics*, Autumn, 1981.
7. Parsons (1980): *Nonexistent Objects*, Yale, 1980.
8. Schaper (1978): 'Fiction and the Suspension of Disbelief' in *The British Journal of Aesthetics*, Winter, 1978.
9. Smith (1980): 'Ingarden vs Meinong on the Logic of Fiction' in *Phil. and Phen. Research*, Sept-Dec., 1980.
10. Walton (1978): 'How Remote are Fictional Worlds from the Real World ?' in *Journal of Aesthetics and Art Criticism*, Fall 1978.
11. Walton (1978a): 'Fearing Fictions', in *J. of Phil.*, January, 1978.

Book reviews

DAYA KRISHNA, *Political Development: A Critical Perspective*, Oxford University Press, Delhi, 1979, 211 pp., Rs. 60.

After the Second World War the USA arrogated to itself the "leadership" of the "free world", and assumed the "global responsibilities" following from this self-imposed role in international relations. This meant, in effect, unequal military alliances under American hegemony throughout the world, and a global diplomacy based primarily on military and economic aid. In the Third World this policy also involved, in addition to military aid, the political and strategic butteressing of illegitimate and dysfunctional regimes in order to keep them on the strait and narrow path of capitalist development and thus in the American sphere of influence. It was evident by the late fifties, however, that this policy had not succeeded in the Third World countries under American tutelage, most of which showed signs neither of accelerated economic development nor of political viability, not to speak of "freedom" in the Northwestern, capitalist sense. The US Administration and the Multinational Corporations got equally worried over the prospect of the less developed countries "falling a victim" to communism through internal "subversion"; and the Foundations controlled by the MNCs started offering massive grants to American academics for researching this failure of US policy in the LDCs. The American academics who, in their given Social Darwinian cultural context, have always maintained closer material and intellectual linkages with the Administration and the MNCs than their counterparts in most other countries, rose vigorously to the occasion. While W. W. Rostow's *Stages of Economic Growth: A Non-Communist Manifesto* spelt out the American economic strategy in the LDCs and was quickly adopted by the American Administration, the works of Samuel P. Huntington, Gabriel Almond, Lucian Pye et al. aimed to shed light on the dilemmas of American political strategy in the Third World and to indicate, in particular, how the hundreds of millions of people in the newly independent countries could be "saved" from communism. The sixties and early seventies witnessed a flood of American literature on the problems of economic development on the one hand, and of political development on the other, in the Third World countries. For two main reasons, however, the flood subsided by the mid-seventies. In the first place, this vast literature, particularly that on political development, betrayed serious internal imperfections, including conceptual and analytical inadequacies, as it also proved to be generally irrelevant to the concrete political dynamics of the new states. Secondly, with the Soviet Union establishing parity with the USA in strategic weapons by 1967 and threatening to take a lead by the mid-seventies, the Foundations diverted their funding to research

on the arms race and "arms control". The victims of intellectual and cultural neoimperialism among the intellectual elites of India and other Third World countries, however, avidly swallowed up this political literature produced for their benefit by the USA, and courses on "political modernization" or, "political development" were introduced in most Indian universities, where the American literature was prescribed as essential reading. As in the case of most other neoimperialistic impacts, the tide has started subsiding in India only long after it subsided in the USA.

Professor Daya Krishna's book is a powerful and virtually unanswerable critique of this American enterprise on the study of political development in the new states on a comparative basis. He begins by correctly pointing out that the cognitive and evaluative aspects of the American perception of political development in the LDCs are inseparably interlinked, and that the evaluation is essentially ethnocentric, being heavily conditioned by the American "success" in terms of wealth and power, the Northwestern form of political democracy and Northwestern civilization in general. He then proceeds to make a critical examination of the criteria adopted by different American political scientists for the comparative study of political development, and shows that none of them can be accepted as a valid analytic concept for the identification, measurement or comparison of political development. He first examines the validity of political participation as a criterion of political development with special reference to the views of Lucian Pye, Samuel P. Huntington and Alex Inkeles, and finds it both analytically imprecise and empirically misleading. Through acute conceptual analysis, he also shows that differentiation, whether evolutionary or otherwise, cannot be accepted as a valid criterion of political development. While participation seems to be a criterion immanent in the polity itself, and differentiation relates to its structure, 'capabilities' as a criterion of political development relates to the functions of a polity, particularly in its relations with other polities. Professor Krishna examines the criterion of capabilities both in terms of 'social justice', and in the 'instrumental-neutral' sense of Gabriel Almond, and finds it conceptually and analytically unsatisfactory in both these senses. He particularly examines the input-output model of capability as developed by Gabriel Almond and concludes that "The measurement of the 'capabilities' of a political system in terms of Input-Output ratios on the model of economic theory thus runs against some basic and fundamental difficulties which do not seem easy to overcome" (p. 82). But since the output is realized by the polity through what Almond calls the Conversion Functions, Professor Krishna proceeds next to find out whether the concept of political development "might find its sure footing", and the terms in which different polities could be compared, in these functions. In fact, about half of the book is devoted to a long critique of the so-called Conversion Functions of Gabriel Almond as a criterion of political development. The Professor examines all the six Conversion Functions of Almond, namely, Interest Articulation, Interest Aggregation, Political Communication, Rule-Making, Rule-Application and Rule-Adjudication, and

finds that these functions are not only conceptually ambiguous and empirically inapplicable, but even totalitarian by implication. "The assumption, it is generally forgotten, presupposes not only the *primacy* of politics but also its *totality vis-a-vis* the social system. Such a totalitarian view of the functions of politics may be natural and perhaps even welcome to practising politicians, but that it should be so to political scientists also is surprising indeed" (p. 91).

The central arguments running through Professor Daya Krishna's critique of the criteria of political development as proposed by the American writers are that the sphere of politics has not been either analytically or empirically separated from the other spheres of society with sufficient precision and clarity; that the criteria of political development, as distinguished from other kinds of development, have not been clearly defined; that a necessary correlation (as distinguished from a spurious one) between these criteria and so-called political development has not been established; and that politics has been consciously or unconsciously assigned a primacy in social development which it does not necessarily possess. He finally argues that while the concept of development, though necessarily value-laden, is a valid one, that of political development is not; and reaches the conclusion that the problems involved in identifying political development and defining its criteria are in fact insoluble. "The criteria that have been offered up till now have been shown to be untenable, and there can be little hope of finding any unless it be first established that the value or values sought to be realized in the field of politics are of such a nature as to permit not only asymptotic growth but the devising of a common measure in terms of which that growth may be measured. Till such time as this is established, the search for criteria is bound to be fruitless; and there are reasons to think that, if the arguments advanced in the course of this book have any validity, the situation is irremediable not only as a matter of fact, but in principle" (p. 205).

The title of the book, presumably thought up by the publishers for commercial reasons, arouses the false expectation that Professor Daya Krishna, with his usually brilliant conceptual analysis and philosophical reasoning, has produced a book on the problem of political development in a critical perspective. But one is soon somewhat disappointed to find that he is in fact engaged in the purely negative exercise of pointing out the untenability of the criteria of political development as proposed by the American writers on the subject in the sixties and early seventies. Perhaps one has to appreciate this essentially negative character of the book in the context of the author's work at the East-West Center, Hawaii, and elsewhere in the USA, where he had continuous personal dialogues with many of those American writers whose views he has criticised.

As a negative academic exercise, Professor Daya Krishna's book is perhaps the best in the field, even by international standards. It shows much greater intellectual capability than most, if not all, of the works he has criticised. In a more functional sense, it exposes the ideologically charged and politically motivated character of the American academic enterprise on the study of

political development. But in retrospect, the effort looks like beating a dead horse, for by the mid-seventies, the study of political development was already in decline in the USA. It is worth noting that the author has left virtually untouched the Marxian sociology of development, which does not assign primacy to politics, and which many Third World intellectuals find intellectually as well as emotionally more satisfying than the Northwestern approach to political development.

If Professor Daya Krishna's brilliant work leads to serious rethinking on the teaching of comparative political development in Indian universities after the American pattern, it will have made a lasting contribution to the liberation of our intellectual elites from intellectual and cultural neoimperialism, although it will fail to throw light on how to change the immediate world of misery around them, or even to interpret it.

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MARGARET CHATTERJEE, *The Language of Philosophy*, Allied Publishers Pvt. Ltd., Delhi, 1981, (co-published by Martinus Nijhoff, Amsterdam, 1981), viii+139 pp., Rs. 50.

Anyone who picks up a book which avowedly seeks to discuss the language of philosophy may expect it to be yet another addition to the extant copious literature in the tradition of linguistic analysis or, the more favoured label, analytic philosophy. But to any student of philosophy who has not been baptized by the 'analytic church', it will be a pleasant surprise to find in this work a committed and convincing attempt to reiterate a view of philosophy whose core is metaphysics. To this end the author has investigated the hermeneutics of the language of philosophy, as used by philosophers of various strands, and has shown that it is in the use of metaphors that the creative imagination finds its most sophisticated expression and it is here that the artificial dichotomy between reason and imagination is found not only defective but misguiding and confusing. The antimetaphysical stance of logical positivists and the analysts has robbed philosophy of its most rewarding function simply due to the misconceived notion of reason which proved as grotesque as it was inadequate.

The particular concept of reason which narrowed down its field of operation to ratiocination and linear deductive reasoning ruled the Anglo-Saxon domain of philosophy with such an air of bravado that it appeared to have swept away all metaphysical rumblings and protests to almost a vanishing point. This trend owed allegiance to Hume whose indomitable protest against thinkers like Wollaston and Clarke had given rise to the view that no significant knowledge can be accomplished by reason. Hume, unfortunately, played into the hands of his intellectual opponents by identifying 'rational' with

merely logical/deductive and by denying to reason certain important functions which had been convincingly argued for long back by Aristotle. But even in Hume, this extreme attitude was adumbrated with a vengeance in the polemical *Treatise* and it was considerably toned down in the more mature *Enquiries*. How this concept of reason was transplanted in the soil of scientific/new empiricism and how it became the inalienable part of the legacy inherited by the analytic philosophers is well known. The concept of reasoning which the early analysts dogmatically accepted ruled out the possibility of creative philosophical imagination by branding it as purely fanciful and speculative and making it suspect from the very beginning.

One of the important points that Margaret Chatterjee makes in favour of an enlarged view of reason is the close relation between our understanding of language and that of reasoning. The greater sophistication our linguistic expressions achieve, the more insightful and penetrative our reason becomes. That reasoning is not always cast in the logical (i.e. deductive/inferential) mould has been the burden of many a thinker of various persuasions. The age-old classification of reasoning as deductive, inductive and analogical has been a pointer to the Janus-natured multifunctional reason to which thinkers from the analytic tradition (cf. Wittgenstein, Waismann, Toulmin et al.) themselves, have been alive. The relation between language and reality could not be adequately understood in descriptivist terms. Nevertheless, Wittgenstein's insight concerning language as expressive of a form of life has not been fully realized and developed by the Wittgensteinians themselves. In spite of him, the dichotomy between reason and imagination or between philosophy and poetry is emphasized to the detriment of the former. In the great divide between the Anglo-Saxon and the continental thinkers the mantle of salvaging the metaphysical tradition and of showing how the use of language defies the pervasive claim of categorial and linear thinking falls on the broad shoulders of the continentals wherein the spirit of Platonism and Kantianism still reigns supreme. (Whitehead is a notable but unfortunately ignored name.) The book under review has tried to show with great gusto how any verbalisation of our understanding of the world uses the huge wealth of our experience and feelings which underscore any understanding and expression. With remarkable acumen Chatterjee has tried to meet the analytic philosophers on their own ground and has tried to show how the extra-linguistic factors in the language of analytic philosophers belie the positivist slogan to be on our guard against the bewitchment of language. It is surely not in all cases the villain of the piece. The role of figurative language in exciting our imagination and in drawing parallels from various spheres of feeling, believing, understanding and imagining should not be lost sight of.

Within the short span of this review, it is difficult to do justice to this highly original and exciting work in which Margaret Chatterjee has not only used her vast gamut of knowledge of philosophical literature since Plato to Sartre but has also brought into full play her own judgements and insights in the domains of philosophy, poetry and music. The finesse with which she has

used and organised her materials is an eloquent testimony to her ability to present her case with precision, lucidity and force. However, on my part it should suffice to mention the titles of some of the chapters which should provide a rough idea as to the content of her discussions and to make some general observations concerning a few points randomly selected from an otherwise long list of very interesting and provocative points covered within the ambit of this work. Some of the chapters are: 'Reason and Imagination', 'Language Games and Linguistic Imagination', 'Metaphor and Meaning', 'Philosophy and Poetry' and 'The Myth of Description'.

The author adopts an existentialist outlook on man whose being is rooted in temporality and yet transcends his limits in and through his actions, projects, commitments, hopes and fears. Reason and imagination both come to his aid in this task of self-transcendence. That one can reason imaginatively and imagine rationally are not two self contradictory modes of expression but are perfectly intelligible and meaningful assertions. Historical, scientific or linguistic imagination are only a few cases in point which prove that the alleged unbridgable chasm between reason and imagination has nothing to do with the nature of man's being within which both have their locus but is only a creation of a particular philosophical outlook that does justice neither to reason nor to imagination. Indeed, both reason and imagination have their own respective limitations but at the same time they have the power to transcend these. The credit goes to Kant for setting the record straight but in the present century the task has been accomplished more authentically by the phenomenologists and the existentialists. Chatterjee has successfully shown (Ch. II) how in the poetic genius of Plato reason and imagination found their serene fusion which has been surpassed only in Hegel's treatment of *Vorstellung* (pictorial or imaginative thinking). The use of myths, metaphors and models in science and philosophy brings out the importance of imagination which, instead of being a rival to reason, spurs it to creative heights, goading it through the labyrinth of non-linear thinking. This point is brought home with remarkable exploitation of a wide range of samples taken from the works of Schlegel, Schelling, Schopenhauer, Hegel, Marx, Dilthey, Husserl and others. The parallel that she draws between formal and informal reasoning on the one hand and tonal and atonal thinking on the other, picturesquely sets the significance and creativity of non-linear thinking in proper perspective. It is at the level of informal reasoning that one can go beyond the bounds of language. Wittgenstein's suggestion concerning certain forms of expression as thrust against the boundaries of language is in line with the irreducibility of creative thinking to ordinary rules of language or the former's non-conformity to categorial thinking. But it is Friedrich Waismann who, surprisingly enough, seems to be on the wrong side of the fence from the point of view of the analytic philosophers. On p. 38 she quotes from Waismann "It is all very well to talk of clarity, but when it becomes an obsession it is liable to nip the living thought in the bud....For my part I've always suspected that clarity is the last refuge of those who have nothing to say".

Chatterjee's work contains quite an illuminating discussion on the role of metaphors in philosophical discourse (Ch. IV and V) and on the relation between philosophy and poetry (Ch. VII). On metaphors, she has shown that the phenomenological approach to language illustrates the directive use of language through the use of metaphors. Metaphors, like metaphysics, lead us beyond, expressing something which cannot be simply referred to (pp. 47-8). Talking of cognitive aspects and functions of metaphors, she draws enough support from Max Black, Oakeshott, Kenneth Burke and Turbayne, but she finds Paul Ricoeur's treatment of metaphors as "heuristic fictions" adequately accounting for the creative dimension of metaphorical discourse. Within a non-static or fluid form of language "sort-crossing" (not sort-trespassing) or category-fusion (not category-blurring) is a virtue of the metaphors. The reasoning and thinking conducted within the purview of such a language is sure to be an anathema to the votaries of description but an asset for those who, like the existentialists, consider "elucidation" (cf. Heidegger and Jaspers) as the proper task of philosophy. The author has tried to explode the myth of description (Ch. VIII) by leaning heavily upon the phenomenological and the existentialist approaches to philosophy though she has made it amply clear that men like Wittgenstein, Waismann, Wisdom and Black have also expressed themselves in a manner which suggests the inadequacy of the purely descriptivist approach.

On the relation between philosophy and poetry, the views of Coleridge and Heidegger come in for detailed examination and are used with sympathy and understanding. In Coleridge's distinction between imagination and fancy, the author finds a chord sympathetic to her own views concerning the role of reason and imagination in philosophical thinking. His concern for the passionate recovery of man's lost wholeness leads him to assert the significance of concrete imagination (intuition) which is made possible by man's total psychic endowment. However, his 'nature mysticism' is not necessarily the only conclusion that can be derived. The works of the Romantics, Tennyson, Browning, the metaphysical poets, T. S. Eliot and a host of others have shown how poetry, without being dialectic, can rise to metaphysical heights and the metaphysicians in general prove that their poetic vision is not an exception but the rule. The poets and philosophers both, in the words of T. S. Eliot, "wrestle with words and meanings". This fusion of form and power has been beautifully accomplished by Pindar in whose poetry, as the author points out, "there is a triumphant fusion of elevated thought, highly figurative language and command of form" (p. 99). That philosophers like Sartre and Heidegger have had to say so much about poets (e.g. Auden and Hölderlin) is full of philosophical meaning. They obviously did not equate poetry and philosophy but were deeply conscious of the close relation between the two. Heidegger has said "Only poetry stands in the same order of philosophy and its thinking, though poetry and thought are not the same thing." (*Introduction to Metaphysics*, p. 21) Further, "Thinking is...poetizing...the thinking of Being is the fundamental manner of poetizing". (*Holzwege*, p. 303). Indeed for

Heidegger, thought, in the primary sense, is "devotion to Being" and logical reasoning is one of the masks which thinking (in his sense) on some occasions puts up.

The Language of Philosophy has brought into focus some of the exciting aspects of philosophical thinking which have been underplayed by many for various intellectual and extra-intellectual reasons. On the one hand, this work is a reassurance for all those who are cast in the metaphysical mould, and, on the other, it is an invitation to the analysts to be introspective enough to recognize the roots of their own "rational" stance. It reminds us of Whitehead's *Science and the Modern World.* In addition to its philosophical and literary merits, the volume also contains the mundane merits of a beautiful get-up and a near flawless printing.

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DAVID BOHM, *Wholeness and the Implicate Order*, Routledge and Kegan Paul, London, 1982, Paperback, xv+224 pp., £ 3.95.

It is always a pleasure to read David Bohm—both his technical writings as well as his philosophical ones. One can look for a rich harvest of unconventional ideas and philosophical approaches in David Bohm's writings. The present book under review is no exception. Bohm's *Wholeness and the Implicate Order* is basically a book on speculative philosophy based on the theoretical ideas in the frontiers of contemporary science. In this book Bohm tries to achieve two things simultaneously. One is to show the inadequacy of, what may be called, the uncritically accepted scientific world-view allegedly engendered by modern science. The other objective is to put forward an alternative world-view consistently with the findings of modern science—a holistic view, as against the standard atomistic one, which the author proposes and aptly argues for. In order to appreciate the philosophical significance of this book it is necessary to view it in its proper historico-conceptual background. The two predominant tendencies implicit in the so-called scientific world-view are, what may be called atomism and sectarianism, for the sake of brevity. Atomism is a view which is quite predominant in contemporary scientific thought or at least was the most predominant one in the scientific thought of the recent past. According to this view the secret of understanding the complex workings of nature lies in decomposing each complex whole into its ultimate constituents and to find out their laws of combination. A complex whole, a totality, on this view is nothing if not a particular collection of some atomic units and completely intelligible in terms of the latter. There are no laws of wholes which are not explainable in terms of the laws of combination of its constituents. This atomistic world-view regards the universe as consisting of discrete bits and pieces and regards the laws of science as nothing but

attempts to find out how the bits and pieces constituting nature can be put together—very much in the fashion in which patterns in a mosaic are to be discerned.

By sectarianism, on the other hand, we mean that tendency which emphasizes one aspect of reality at the cost of all the others. One extreme form of sectarianism is uncritical idealism which denies the reality of matter and posits thought or spirit or idea as the sole constituent of reality. On the other extreme we find the so-called scientific materialism which denies any role or place to thought, mind, consciousness, etc., emphasizing only the inert material particles governed by blind mechanical laws as the sole constituents of reality. So, atomism emphasizes discreteness at the cost of totality or wholeness. Materialistic sectarianism denies consciousness a legitimate place in the scheme of reality while idealistic sectarianism denies any place to matter in it. A widely held belief of today is that only an atomistic-materialistic view of the world is consistent with the general findings of contemporary science and it is on the basis of these two assumptions alone that one can hope to build a no-nonsense comprehensive world-view. Bohm's fundamental concern in this book is to challenge this assumption and to propose a wholistic (as against atomistic) and a comprehensive (as against sectarianistic) world-view as an alternative. Such an alternative, Bohm claims, is not only consistent with the findings of contemporary science but is even required by it. It is interesting to note in this connection that a similar attack against atomism and sectarianism came from such other thinkers as Merleau-Ponty. (*The Structure of Behaviour*), A. N. Whitehead (*Process and Reality*), and E. P. Wigner (*Symmetries and Reflections*), etc.

A short historical reference at this point would help us to relate the philosophical ideas expressed by Bohm in this book with his works as a theoretical physicist. The celebrated Einstein-Heisenberg controversy regarding the foundations of Quantum Mechanics and the ultimacy of the laws of Quantum Mechanics is well known in the history of science. Einstein could not accept the idea that the non-deterministic or probabilistic laws are the ultimate laws governing nature. Naturally, if God does not play dice with nature then underlying the purely probabilistic laws there must be some discernible deterministic laws at play at a deeper level. David Bohm as a student of Einstein took this idea seriously and finally developed the celebrated 'Hidden Variable Theory' (HVT). However, in view of von Neumann's completeness proof of quantum mechanics such an HVT would be inconstituent unless some of the basic postulates of science are given up and it was shown by Bell in his celebrated theorem that the so-called HVT, if it is to be consistent, must be non-local, i.e., could not be punctually located as 'here-now' or 'there-then'. A straight implication of this non-locality principle is that the atomistic view of the world must be given up, because atomism presupposes localizability of the ultimate constituents. Hence, Bohm's wholistic theory is a direct consequence of his HVT. In this respect his position is worth comparing with that of Leibniz. Leibniz started with his idea of monads and to justify the postulation of such

indivisible, unextended, atoms had developed the idea of calculus along with the notion of infinitesimals which, like the monads, were different from zero in magnitude and yet not further diminishable in magnitude or divisible in smaller parts. So Leibniz's idea of monads led to the development of his mathematics whereas the formal requirements of HVT led Bohm to give up nonlocality and to develop his wholistic metaphysics. In other words, Leibniz's metaphysics motivated his mathematics while for Bohm, it is mathematics, i.e., the conceptual implications of the formal structure of the HVT, that motivated his metaphysics.

The other view that Bohm challenges and rejects is the kind of sectarianism according to which consciousness cannot be allowed to have any legitimate place in the scheme of reality. Bohm emphasizes repeatedly that any comprehensive world-view must be non-sectarian and should allow both consciousness and matter their due shares in the constitution of reality. It is a mistake to regard everything connected with subjective experience as unreal. The influence of Whitehead's organismic process-philosophy is clearly discernible in Bohm's book under review. Whitehead also opposed atomism and regarded it as due to, what he called, the fallacy of misplaced concreteness. This corresponds to Bohm's critique of atomism because according to Bohm also the belief in the atomistic world-view may be regarded as due to a sort of fallacy which may be dubbed 'the fallacy of non-rheomodal use of language'. Similarly, Whitehead's *critique of* '*bifurcation of nature*' is essentially an analogue of Bohm's *critique of* '*sectarianism*'.

Let us grant that Bohm is right in his critique of atomism and sectarianism. Still the question remains as to why these two tendencies are so predominant in our thought and seem so natural to common man. Bohm's answer to this is that our language determines our conceptual framework. Consequently, the structure of the language normally used being atomistic in its core, causes the illusion of fragmentation and imposes its own constraints on our conceptual structure. Hence, to avoid fragmentive tendency so deeply imbedded in our conceptuo-linguistic make up and, consequently, to avoid the atomistic world-view, we have to modify our conceptuo-linguistic framework through a modification of the habitual mode of our language-usage, which, being non-rheomodal, engenders a static atomistic world-view. This, according to Bohm, does not mean using "a new language as such but rather a new *mode* of using the existing language—the rheomode (flowing mode)". It is interesting to note in this connection that Bohm regards not only quantum mechanics as atomistic but even relativity theory as basically atomistic in its commitment (Chapter 5).

With the above background we may now bring to focus the overall structure of the book as a whole. In doing this we will follow the words of the author as far as possible.

As the author himself points out his main aim in both scientific and philosophical work is to understand "the nature of reality in general and of consciousness in particular as a coherent whole which is never static or complete".

The further question that he asks is: What is the relationship of thinking to reality? May not thought itself be a part of reality as a whole? How are we to think coherently of a single, unbroken, flowing actuality of existence as a whole containing both thought (consciousness) and external reality as we experience it? Naturally, consistently with his anti-sectarianistic stance Bohm maintains that our notions of cosmology and of the general nature of reality must have room in them to promote a consistent account of consciousness. With this background, Bohm discusses the problem of fragmentation of human consciousness in Chapter 1 and in the Appendix of that chapter gives a resumé of the Eastern and Western views about wholeness. In Chapter 2 he concentrates on the role of language in bringing about fragmentation of thought. In this connection he recommends the use of a new language form in which the basic role will be given to the verb rather than to the noun. This is his proposal of using the existing language in the flowing mode or *rheomode*. The primacy given to the verb element in the rheomodic use, naturally brings to mind a similar view held by the Grammarian school of philosophy in India. In Chapter 3 he discusses how reality can be considered as in essence a set of forms in an underlying universal movement or process. Chapters 4, 5 and 6 deal respectively with the discussion of the Hidden Variable Theory (HVT) *vis-a-vis* the classical theory of Quantum Mechanics, and Quantum theory as an indication of a new order in physics. These chapters are a little more technical than the previous ones, yet they would more than repay the effort spent on studying them thoroughly. Chapter 4 contains a very lucid and yet reasonably rigorous presentation of the HVT, the underlying assumptions of classical Quantum Mechanics, von Neumann's completeness proof and Einstein-Podolsky-Rosen paradox. Chapter 6 develops the notion of a new kind of order that may be appropriate to a universe of unbroken wholeness. This is the *implicate* or *Enfolded* order, Chapter 7, the last chapter, is a more developed presentation of the implicate order along with its relationship to consciousness.

The book undoubtedly is a very clear and highly insightful presentation of profound thought and deep philosophical insight. But apart from clarity and depth of insight this book deserves special mention as a bold and unapologetic expression of Bohm's highly unconventional views. Thus "my suggestion is that at each stage the proper order of operation of the mind requires an overall grasp of what is generally known, not only in formal, logical, mathematical terms, but also intuitively, in images feelings, poetic usage of language."

Similarly, he also suggests that "a proper world-view, appropriate for its time, is generally one of the basic factors that is essential for harmony in the individual and in society as a whole."

This clearly indicates that Bohm does not fight shy of admitting that such comprehensive metaphysical speculations are not only justified for a scientist to make, rather it is unavoidable for any deep and scientific thinking. At the same time it also shows, in unequivocal terms, Bohm's convictism that the language of poetry and literature is not an inferior type of language

but is, rather, complementary to the one-sided formalistic language of science so far as the understanding of the reality as a whole is concerned.

In sum, the book is a highly readable product from the pen of a first-rate thinker which deserves a place on the book-shelf of anyone interested in doing speculative philosophy of science.

The publishers also deserve praise for bringing out this beautifully produced paperback at an affordable price.

Indian Council of Philosophical Research TUSHAR K. SARKAR
Lucknow

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(a) All illustrations, line diagrams, graphs and charts should be submitted in duplicate. The amount of lettering on a drawing should be minimized as far as possible by transferring it to the legend. Each illustration must be numbered on the reverse side using Arabic numerals corresponding to those in the text.

(b) References to published works are to be made in the body of the paper and *not* in footnotes. The references, written in parentheses, should include the name of the author and the year of publication, e.g., (Thinès 1977); where necessary the page(s) referred to can be made part of the reference as follows: (Thinès 1977: 50-51). When a citation refers to two or more works written by an author in the same year, letters 'a', 'b', etc. are to be added, e.g. (Thinès 1977a, 1977b). The first reference to a work written by two or more authors should include all names, e.g., (Whyte, Wilson, Wilson 1969) in the subsequent citations to the same work 'et al.' should be added to the first name, e.g., (Whyte et al. 1969). If a citation at a particular point in the text alludes to separate works the latter should be put in a single pair of parentheses; works by the same author are to be put together separated by commas and are to be separated from others by semicolons, e.g., (Elsasser 1958, 1966; Eccles 1970; Centore 1966).

(c) All works cited in the paper are to be listed at the end of the paper in alphabetical order. Here is an example, with punctuation marks, to show the listing of references at the end of the paper. Journal titles must *not be* abbreviated.

Thinès, G. 1977.
Phenomenology and the science of behaviour. London: George Allen & Unwin.

Whyte, L. L., Wilson, D. 1969 (eds.)
Hierarchical structures. New York: American Elsevier Press.

Whyte, J., Krippner, S. (eds.) 1977
Future science. New York: Doubleday & Co.

Russell, E. W. *The fields of life*. In Whyte, Krippner (eds.) 1977.

(d) For Book Reviews, the title page should contain the title of the book under review with the sub-title, if any, and the name of the publisher along with the year of publication, number of pages, price, e.g.,

George Thinès.
Phenomenology and the science of behaviour: an historical and epistemological approach. London: George Allen & Unwin, 1977, 174 pp., £ 8.95.

The name of the reviewer with his affiliation is to appear at the end of the review article.

Printed by
SHRI SHANTILAL JAIN
at Shri Jainendra Press
A 45 Naraina, Phase I
New Delhi 110 028
and
published by
SHRI KIREET JOSHI
on behalf of
Indian Council of Philosophical Research
14-AB Lal Bahadur Shastri Marg
New Delhi 110 001