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THEORETICAL PHENOMENALISM

by
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A dissertation submitted in partial fulfillment
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TABLE OF CONTENTS

ACKNOWLEDGEMENTS ii

INTRODUCTION 1

Chapter I- Threads of Phenomenalist Thought (I).. 7

Chapter II- Threads of Phenomenalist Thought (II). 22

Chapter III- The Dilemma of Intersubjectivity and Solipcism..... 34

Chapter IV- Sense-Data Re-examined..... 45

Chapter V- Phenomenalism and the 'Traditional Model' of Scientific Theories (Theoretical Phenomenalism)..... 55

Chapter VI- Theoretical Phenomenalism and the Instrumentalism-Realism Controversy... 76

Chapter VII- Evaluation of Theoretical Phenomenalism..... 89

Chapter VIII- Why be a Phenomenalist?.....103

Bibliography 114

INTRODUCTION

Persuaded usually by the argument from illusion, perceptual relativity, and the presence of hallucinations, many philosophers have claimed that the realm of material objects and the realm of sensory experience are separate and distinct. This bifurcation, though easily postulated, introduces a welter of complexities many of which seem every bit as baffling today as they did centuries ago. For acceptance of such a split immediately raises questions regarding the relations between these two realms. And these questions are in no way eased when one realizes that the 'material' -by being defined in contrast to what one 'directly' perceives- always seems to elude sensory description. Within such a framework, material objects become describable and hence explicable only by inference, theoretical construction, or, on occasion, by sheer speculation.

The necessity of such indirect approaches has led many philosophers to question the ontological status of material objects. For, it is argued, in the interests of ontological economy and epistemological certainty, material objects might be dispensable in favor of sense-data as the fundamental ontological entities it was necessary to countenance. Thus did phenomenalists and their spiritual predecessors come to hold that the distinction between the sensory and

the material realm was warranted but that the latter was ontologically ancillary to the former.

Phenomenalism, then, is the claim that sense-data are all that there is/ that exists and all else, especially material objects, are somehow derivative or subordinate by virtue of their being either collections of or cognitive constructions from sense-data. Although there are conceptual varieties of phenomenalism which, on the face, seem to be linguistic theses, it will be argued later that they too involve claims regarding the ontological status and behavior of sense-data.

Note that the split between the material and the sensory realm has two considerations militating in its favor. The first -and by far the most important- is the quest for certainty. Considering material objects as the given, the possibility of perceptual error and the existence of perceptual relativity has been taken to imply that one can never be absolutely certain as to the nature of what is perceived thus prompting a search for some other error-free base from which to begin. Second, hallucinations - the perception of certain things which 'really' are not there - inexorably forces one to ask what <u>is</u> there and hence the postulation of sense-data or something like it.

The most traditional way of coming to grips with the notion of sense-data is the now classical approach of Price who one day looked philosophically at a tomato.[1] Perhaps,

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[1] H. H. Price, <u>Perception</u> (London: Methuen and Co., Ltd., 1950), p.3.

Price thought, it's not a tomato but a 'cleverly painted piece of wax, or a reflection, or an hallucination.' But, he claimed[2]

> One thing...I cannot doubt: that there exists a red patch of a round and somewhat bulgy shape ...that this whole field is directly present to my consciousness...that something is red and round then and there I cannot doubt. Whether the something persists even for a moment before and after it is present to my consciousness, whether other minds can be conscious of it as well as I, may be doubted. But that it now exists, and that I am conscious of it... cannot possibly be doubted.

Sense-data here are entities which are epistemically primary and whose existence is indubitable. Such unquestionable existence has been expressed variously as 'immediate awareness,' 'directly given,' etc. Ayer puts the idea in a slightly different way. If one assumes that everyone has sensory fields, then the constituents of such fields are, in the error-free sense, sense-data.[3]

Several issues should be clarified at this point. First, the postulation of the existence of sense-data is not meant to prejudge their exact nature.[4] Second, there are numerous

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[2] Ibid.

[3] A.J. Ayer, "Phenomenalism," in Philosophical Essays (London: MacMillan and Co., Ltd., 1965), p.130.

[4] "Thus the term sense-data is meant to be a neutral term. The use of it does not imply the acceptance of any particular theory. The term is meant to stand for something from which all theories of perception ought to start, however much they may diverge from the latter." Price, Perception, p.19.

"The use of the term'sense-datum' is not intended to carry any factual implications about the character of these appearances. It is not designed, for example, to beg the question in favor of an atomic as opposed to a gestalt theory of perception." Ayer, "Phenomenalism," p.130.

objections to, and a flood of discussion around, the validity of the concept of sense-data. Of this little will be said since phenomenalistic arguments presuppose the notion of sense-data and anything much less than such a presupposition would lead the discussion too far afield. Finally the acceptance of sense-data and claims based upon their existence has itself engendered considerable discussion. For purposes here, the view advanced will be what R. Firth calls the 'sensory core' view of the sense-data theory, which holds that 'perceptual consciousness is a twofold state consisting of (1) direct awareness of a sense-datum, and (2) an element of interpretation (and)...these two parts exist simultaneously.'[5]

These assumptions about sense-data, though somewhat sketchy, are essentially those with which most varieties of phenomenalism begin. And they are sufficient to understand the three crucial problems faced by all phenomenalist theories, viz. (1) the persistence of material objects (2) the status of perceivers, and (3) the publicity of material objects i.e. intersubjectivity. It is in attempting to come to grips with these problems that phenomenalists must try and elucidate the relations between sense-data and material objects.

Persistence: If sense-data are all that there is, as phenomenalists claim, and if their existence is as transitory and short-lived as the fluctuations of one's perceptual

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[5]R. Firth, "Sense-Data and the Percept Theory," Mind, LVIII (July, 1949), 444.

field would seem to indicate, then some way must be found to reconcile their ephemeral nature with the assumed durability and permanence of material objects. Put another way, if material objects, which are believed to endure when unperceived, are composed of or constructed from sense-data whose life span, by definition, does not extend into periods of non-perception, then phenomenalists must find some way of accounting for this.

Observer: To speak of perception or appearances of sense-data focuses upon that entity which perceives or is appeared to i.e. the observer. But if all that there is is sense-data, then so is such an observing entity, if one's ontological committment is not to be enlarged beyond sense-data. Phenomenalists, it is argued, must also find an adequate way of accounting for the observer along with some explanation of how sense-data provide evidence for such observers and any mental properties such an observer must possess (or is alleged to possess.)

Intersubjectivity: Finally, and this has been felt to be the downfall of most phenomenalist theories, Phenomenalism, its critics argue, must either provide an account of how its claims do not entail solipcism or - in the alternative - an account of how solipcistic implications do not vitiate or are not incompatible with the conceptual framework of intersubjectivity upon which traditional science is based. For if all that there is is sense-data, then the existence of others is dependent upon and ancillary to one

observer's sense-data and hence become subsumed within a solipcistic rubric. The world, at first approximation, then, is but the world of one while others are less 'real' than the one - an implication which flies in the face of intersubjectivity and equality of observers. More paradoxically, a phenomenalist account of reality could, on some interpretations, entail a host of solipcistic worlds where in one, I am fundamental and you are derivative, and simultaneously in others you and you and you are fundamental and I am derivative. Solipcism, some believe, is phenomenalism's greatest challange or perhaps its undoing.

These problems have formed the nucleus of most phenomenalistic discussion. When set in their historical and dialectical perspective, they do hint at - it will be argued - a possible alternative to phenomenalistic dilemmas, which suggestions, though already made by some have never been worked out in any detail. Discussion of this alternative is one task of the thesis while the historical perspective and the important clues contained in already attempted answers to the problems outlined above will be the focus of the first chapter.

The historical outline of Chapter I is not designed as a precis of phenomenalism's development. It is instead an effort to extract several important threads of thought which must somehow be harmonized for an adequate phenomenalistic theory of perception.

CHAPTER I

THREADS OF PHENOMENALIST THOUGHT (I)

Accepting the division between the realm of objects and the realm of the senses (which he called ideas), Locke claimed that the relation between these two realms was causal. He characterized perception as the 'having of ideas' which ideas were in the mind and the only possible immediate objects of the mind.[1] Such ideas were caused by physical objects which were independent of any mind. The qualities of physical objects were seen by Locke to be their power to cause observers to have an idea and were subdivided into primary and secondary qualities. Primary qualities such as size, shape, speed, number, and solidity did resemble the objects while secondary qualities such as color, odor, temperature, etc. did not.

In addition to physical objects which Locke saw as particular substances perceived as regularly occurring combinations of 'simple' ideas occurring in experience, he also

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[1]For purposes here, Locke's concept of an idea may be equated with sense-data. Though not strictly correct, this in no way effects the exegesis that follows.

postulated a general idea of substance i.e. the material substrate. Locke's open admission that the substrate's nature was enigmatic - that beyond recognition of its support of qualities, he knew nothing - in no way lessened his conviction that it did exist. For Locke believed that there must be something in which qualities inhere which itself is not a quality. Since the description of physical objects was a listing of qualities, to ask what has these qualities led either to a further ennumeration of qualities or to a belief in the existence of something about which nothing could be said. For to say more would only be to list more qualities.[2]

Warnock sees Locke as in error regarding his notion of the subtrate when Locke interprets[3]

> as a baffling fact about the world what is really a quite straightforward fact about language...(Locke) must be mistaken in deriving from the fact that 'something' can be made to emerge as the only substantive, the conclusion that there exists some 'common subject' to be called 'substance'... in using the expression 'something', we do not say what has the qualities. And not saying what has the qualities does not entail that 'substance' has then not yet admitting that we do not know what has them.

For purposes here, Locke's view is extremely illuminating. First, the primacy he gives to causal processes - the view that ideas must be 'caused' by something else-remains the

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[2]G.J. Warnock, Berkeley (Baltimore: Penguin Books, 1953), Chapter V.

[3]Ibid., pp.107-8.

central contention of causal theories, phenomenalism's chief rival at present. Locke never examined in any detail the nature of causation (perhaps the 'idea' of causation) beyond assuming that it was somehow fundamental to perception and hence one's knowledge of the external world. The concept of causation in perceptual theories will be examined in Chapter VIII.

Berkeley's views serve both as a rejoinder to Locke and anticipate many of phenomenalism's later claims. Berkeley, though not strictly a phenomenalist himself, does play a crucial role in the unfolding of the phenomenalist dialogue. This is perhaps best seen if one recognizes that Warnock's criticism of Locke, cited above, entails that Locke's substrate is not necessary for his (Locke's) claims about perception. But, then, if substrate is not necessary, it is vulnerable to Occam's Razor, and this is precisely one line that Berkeley took.

Before attacking Locke's notion of substrate, Berkeley first argued that all qualities, both primary and secondary, exist only as properties of ideas in the mind. Locke had maintained that an observer has ideas in his mind which were caused by physical objects 'external to the mind.' Here Berkeley asks how one can know that there are physical objects since they are not perceived. The existence of ideas such as dreams which are <u>not</u> caused by physical objects indicates that there is no necessary causal connection between objects and idea(s). Further, Locke's distinction

between primary and secondary qualities seems untenable since any allegation of resemblance implies at least the possibility of comparison which is not possible in the case of Locke's physical objects. Finally, Berkeley holds that the postulation of physical objects is superfluous since their existence is simply not necessary. He argued that if all we perceive are ideas, why introduce physical objects? We cannot know of their existence and nothing seems to turn on whether they exist or not.

Berkeley, as noted, also attacks Locke's notion of the material substrate as an empty concept. For he claims that we know nothing about it except that it 'supports' qualities. Yet, Berkeley wonders, what does 'support' mean here? What clarity can be given to the relation between substance and qualities if - by Locke's admission - we can know nothing about substance? In other words, there appears to be no reason whatever to assume that there is a substrate. Its postulation seems based only upon the erroneous assumption that qualities must inhere in something and cannot be just properties of ideas which are in the mind and nowhere else. But it is one thing to revel in the discovery of excess ontological baggage, to rejoice in the extirpation of another common sense prejudice - and quite another to construct a theory which will do justice to the facts of perception. Berkeley's positive account, which we will now consider, is one such attempt.

Berkeley's view, while perhaps bizarre, is definitely a philosophical tour de force. He argued that the world consisted fundamentally of ideas and their repositories, minds, of which there were numerous finite and one infinite example. What were taken to be material objects were to be seen as various congeries of ideas arranged in coherent patterns. Hallucinations became patterns of ideas incoherent with any of the more prevalent patterns (later called 'wild sense-data') while illusion was but a few incoherent patterns juxtaposed to some set(s) of regularities.[5]

For those of his persuasion, Berkeley's account of the permanence of material objects would be obvious and gratifying. Since, for Berkeley, all ideas perforce belonged to some mind, the absence of finite minds (observers) might seem to imply that, say, the table ceased to exist (ceased being an idea in some mind) when no mind was present. But the existence of one infinite mind insured against this possibility. All ideas, though perhaps not present to a finite mind, were always present in the infinite mind of the Diety. Thus did material objects - so construed - remain permanent without succumbing to the embarrassment of frequent anhilliation and re-creation necessitated by the

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[5]Note that Berkeley, because of his inclusion of mind (spirit) into his basic ontology, is not a phenomenalist as defined above. The 'spirit' of his views is, however, clearly phenomenalistic.

comings and goings of finite minds.[6] Such a view, while filling the perceptual gaps, clearly presupposes certain theistic claims. Berkeley never did discuss or elaborate such claims in any great detail.

This theistic underpinning allows Berkeley to claim that esse est percipii, that is was self-contradictory to speak of an object as existing when unperceived. And this he could claim without ever tangling with the issue of unperceived existence which has come to haunt phenomenalists. Note that Berkeley did not believe that an unperceived object existed if this was taken to mean that under certain circumstances, it would be perceived. Existence, for Berkeley, meant only actual belonging of an idea to some mind.[7]

The problem of observers is thus solved for Berkeley by ontological fiat. Postulation of spirits seemed necessary to counter the - for him - absurd consequence of there being idea(s) in the absence of some entity to which the ideas belonged.

There is, however, in Berkeley, precious little discussion upon the nature of, or evidence for, the existence

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[6]The publicity of material objects, though never discussed as such, seemed guaranteed by Berkeley's belief that different minds would have similar patterns of ideas under similar conditions.

[7]This is the standard interpretation of Berkeley. On one occasion, however, he does mention that unperceived existence could be analyzed in counterfactual language. This suggestion was never repeated. For comments on this point see Warnock, Berkeley, p. 115.

of spirit. Nor did he seem to examine carefully the view that an idea had to belong to some mind. His discussions here, as Warnock notes, are obscure and perfunctory.[8] He believed that the mind is an 'immaterial substance' without delineating how this substance was any clearer a notion than Locke's substrate. Here the similarity to Locke's view that qualities had to be the qualities of 'something' is quite apparant.

But aside from presageing later phenomenalistic thinking, Berkeley's view reveals one crucial aspect of phenomenalistic theories of perception rarely, if ever, discussed - the nature of the mental. What Berkeley did by fiat, phenomenalists, having only sense-data must do with only sense-data i.e. provide an explanation for mental phenomena. A discussion of this problem will be found in Chapter VI. It was Hume who carried Berkeley's views one step further along to their logical limits.

It has been claimed that Hume was '...impressed as no other philosopher before him had been, by the interrupted and fragmentary character of human sense-experience.'[9] Loath to accept Berkeley's theistic presuppositions but agreeing in principle that all evidence of material objects is sensory, Hume was forced to face anew the problem of persistence of material objects. And in so doing, Hume became

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[8] Ibid., p.205.

[9] Henry H. Price, Hume's Theory of the External World (Oxford: Oxford University Press, 1940), p.20

the first modern phenomenalist.

To face the problem was, for Hume, to argue that any belief in the continued existence of material objects based upon the evidence of the senses was unjustifiable. For the evidence about sense-data is that they exist only when perceived and hence extrapolative inductive inference is inadequate to warrant a conclusion of unperceived existence. Nor can one argue causally, Hume claimed, to the continued existence of material objects (or unperceived sense-data) for postulation of a causal connection is legitimate only when it has been or could actually be perceived that e.g. A caused B. But the direct observation of that which is unobservable is logically impossible precluding this kind of causal justification of the claim that an unobservable A caused an observable B.

Since material objects which are construed by Hume to be collections of sense-data cannot legitimately be inferred by causal or extrapolative reasoning to exist unperceived, Hume is thus forced to conclude that 'imagination' or some other creative operation of the mind upon certain features of sense-impression (constancy and coherence) does suggest a continuity of sense-data. Such continuity is what is taken to be permanence of material objects although, strictly speaking, it cannot be said that objects do, in fact, exist unperceived.

Thus Hume's official position is that material objects are as transitory as their sense-data constituents. The constant anhilliation and re-creation of material objects -

a somewhat bizarre state of affairs - is the case in this view. Such oddness is mitigated, at least pragmatically, by one's imaginative belief, falsely but apparantly universally held, that sense-data and hence material objects can and do exist unperceived.

Observers (the mind), Hume felt, had a status analagous to material objects being nothing but a 'bundle of perceptions' to which is imaginatively ascribed an identity. Other people, their bodies and their minds were to be similarly construed pushing Hume into a position essentially solipcistic. That is, other observers became as transitory as the sense-impressions from which imagination had created a temporally enduring entity. With his characteristic gift for bull-dozing philosophical garbage aside, Hume extended phenomenalism almost to its logical limits, a position from which many later phenomenalists generally retreated.

Another proffered solution to the dilemmas of phenomenalism was Mill's who conceived of physical objects as presently occurring sense-data and the permanent possibilities of other sense-data obtainable under certain circumstances.[10] To explain what he meant by permanent possibilities, Mill assumes that the 'mind' forms expectations of certain sense-data clusters based upon the actual experiencing of such clusters. Thus a table is the grouping of,

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[10]John Stuart Mill, An Examination of Sir William Hamilton's Philosophy (New York: Henry Holt and Co., 1874), Chaps. XI and XII.

say, certain visual and tactile sense-data. From previous conjunctions of table sense-data, the mind assumes that in the presence of one sense-data component, the other will be present as well, given the appropriate background conditions. To say that there is a table in the other room would mean that there would be certain table sense-data if one went into the other room - realizing, of course, that both the 'observer' and the 'other room' were also sense-data and describable as such. The problem of the persistence of objects is thus dealt with by filling in the perceptual gaps with 'permanent possibilities of sensation.'

It is not always clear when reading Mill what the exact ontological status of these 'permanent possibilities' is. On the one hand, if they are merely creations (expectations) of the mind based upon previous experienced association, Mill's view is ontologically akin to Hume's. But on another reading, 'permanent possibilities' do have ontological status and material objects are to be seen as sense-data and the permanent possibility of other sense-data, both of which are real.[11] And this later interpretation foreshadows subsequent theories which postulate the existence of 'sensibilia.' In this case, the ontological committment is broadened slightly with the addition of 'permanent possibilities.' We will focus upon this latter

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[11]"But though the sensations cease, the possibilities remain in existence; they are independent of our will, our presence, and everything which belongs to us." Ibid., p. 241.

interpretation, not because it is necessarily the correct one, but because of its difference from the Humean position.

Mind, for Mill, was conceived of as somewhat analagous to material objects - 'The belief I entertain that my mind exists, when it is not feeling, nor thinking nor conscious of its own existence, resolves itself into the belief of a permanent possibility of these states.'[12] Note here that by so conceiving mind, Mill must explain how something which is a series of actual and possible sense-data can be aware of and anticipate other actual and possible sense-data. And this is an issue which Mill never really seemed to consider in any detail.

Publicity is presumably accounted for by the 'permanent possibilities' as well, for as Mill says, 'We find other people gounding their expectation and conduct upon the same permanent possibilities on which we found ours... other people do not have our sensations exactly when as we have them: but they have our possibilities of sensations.'[13] But note again that other people are actual and possible sense-data also. It is not clear here how Mill has avoided the spectre of solipcism.

If Mill enlarges his ontological committment with possibilities, this would seem to be both a step back and a step forward. It is a step back (as we will later claim) since it yields to the common sense view that 'persistence'

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[12] Ibid., p.253.

[13] Ibid., p.253.

must be preserved. It is a step forward (arguably) by utilizing again the postulation of 'unobservable entities' for explanatory purposes. For while such a move smacks of Berkeley and Locke's similar moves, it also allows for integration of unobservable entities into an evolving body of scientific methodological doctrine - a move which was gaining in prominence. Bertrand Russell was to begin the steps of such an integration.

Russell also postulated the existence of unsensed sense-data which he called 'sensibilia' and not possible sense-data. Sensibilia were defined as 'those objects which have the same metaphysical and physical status as sense-data, without necessarily being data to any mind.'[14] On this view, the fundamental entities of the world are sensibilia which, when 'partaking' in a perceiving relationship, are sense-data. All sense-data are thus sensibilia while it is not necessarily the case that all sensibilia are sense-data.

Russell, however, regarded sensibilia as, in principle, dispensable for of them he said[15]

> ...'sensibilia' which are not data to anyone are therefore to be taken rather as illustrative hypotheses and as an aid in preliminary statement rather than as a dogmatic part of the philosophy of physics in its final form.

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[14]Bertrand Russell, Mysticism and Logic (London: Longmans, Green and Co., 1919), p. 148.

[15]Ibid., p.158.

Although he never offers a program for the explanation of 'enduring existence' after the hypothetical scaffolding has been removed, other of his remarks seem to indicate that, at that time, he preferred the solipcistic approach.[16] His views do, however, introduce the possibility that postulated entities can both be explanatorily useful yet theoretically dispensable as existents.

Both of these moves were extremely important in that they reflect the growth and increased influence which advances in physics (especially atomic theory) and other emprical sciences had on philosophy at the turn of the century. Previous postulations of unperceivable entities always floundered on their ad hoc nature and the apparent extraneousness of their existence. Atomic particles, though unseen, escaped these criticisms for two reasons. First their postulation allowed for prediction of new phenomena as yet unnoticed whereas Locke's substrate and Mill's possibilities seemed only able to account for that which was already known. Second, atomic particles fit into a comprehensive picture of the universe which was unfolding at that time. Their unifying character and their theoretical comprehensiveness also helped preclude the ad hoc tint which inferred entities previously possessed.

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[16] 'But those - and I fear they are the majority - in whom the affections are stronger than the desire for logical economy, will, no doubt not share my desire to render solipcism scientifically satisfactory.' Ibid., p.158. Russell later abondoned this position.

The point is that where inferred entities were once vulnerable by their arguable superfluousness, scientific progress offered solid methodological reasons for countenancing them in one's theories. It is another question whether such entities are 'real' or only 'convenient fictions,' yet their use and possible 'reality' were now viable concerns. And by being viable concerns, theories which incorporated them no longer needed to suffer at the hands of Occam's Razor.

The views of Hume, Mill and Russell - phenomenalists all - presuppose the ontological claim that there is some sort of sensory base which is fundamental and indubitable and from which material objects are to be seen as somehow derivative. They are derivative in that they are construed as 'less real' by virtue of being literal or cognitive constructions. That is, only sense-data are real/exist and all other presumed existing entities are not real - they are 'convenient fictions, etc.[17] If this form of phenomenalism is to survive, however, in a form compatible with an ontological committment to sense-data only, then the problems of solipcism and persistence need a more adequate resolution. For it is not enough to say that the view is solipcistic without indicating the status of intersubjectivity within such a framework. That is, any adequate account of phenomenalism must go between the horns of the solipcistic and the

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[17]Note here that Price in his classic work, Perception (Introduction,n.1, supra.) although ab initio a phenomenalist comes to reject phenomenalism because of its alleged inability to explain the causal properties of material objects.

intersubjective dilemma. This will be a recurring theme of much of the ensuing discussion and will be considered in detail in Chapter III.

Such problems coupled with the fact that the relation of sense-data to material objects has never been considered in light of the advances in philosophy of science regarding theoretical entities, etc. seem to indicate a possible way to reexamine phenomenalism. But such an examination will also reveal that phenomenalism seems rarely, if ever, to have been carried to the logical limits implied by its core claims. These tasks will also be undertaken later, but first it is necessary to discuss the changes in phenomenalistic theorizing which occurred under the influence to the Vienna Circle and other positivists.

CHAPTER II

THREADS OF PHENOMENALIST THOUGHT (II)

With the rise of Logical Positivism in the '30s, philosophy as conceptual analysis came to the fore. Especially in the Philosophy of Science, analysis was justified as protection against the misuse of scientific concepts, which misuse could plunge one into what was seen as the metaphysical abyss. Thus did the philosophical project become one of illustrating the logical connections in the language of science and not the structure of the world.[1]

Given this conceptual orientation, a new kind of phenomenalism arose unconcerned in an ontological sense with the basic constituents of the world. Phenomenalists directed their efforts instead toward definition and elucidation of the nature of material objects. Often called 'linguistic phenomenalism,' the project was one of 'translating' statements referring to material objects into statements containing reference to sense-data only. The

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[1]On these points see J. O. Urmson, Philosophical Analysis (London: Oxford University Press, 1956), Part III.

claim, generally, was that with such a translation, a complete 'reduction' of all material object statements was, in principle, possible. If true, the benefits of such a program would have been enormous.[2] As for an ontological view of the world, linguistic phenomenalists saw this as somewhat beyond the task of philosophy. What follows will be an examination of linguistic phenomenalism which, it will be claimed, was essentially a failure thus conceived.

The earliest formulation of linguistic phenomenalism sought to provide a fully equivalent translation of material object statements in terms of sense-data statements. The catchphrase here was that material object statements 'meant no more' than did a certain specifiable conjunction of sense-data statements. On these early views, full equivalence meant that any material object statement entailed and was entailed by some conjunction or series of disjunctive conjuncts which referred only to sense-data. Furniture and fruit are the favorite examples of such a program and a typical claim might be that the statement 'there is a banana' entailed some of the following:

(1)yellow, lunate sense-data appears

(2)if there were the sense-data of a certain reaching motion, there would then be smooth, mushy(tactile) sense-data.

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[2]Note the short step from theoretical to ontological economy. The success of linguistic phenomenalism would almost have guaranteed its extension into an ontological claim.

Hypotheticals were also used to express in sense-data terms those statements referring to material objects not within the perceptual range of the observer. Thus, 'there is a banana in the next room' became

> (3)if there appeared the sense-data appropriate to going from this room to the next, then (1) and (2).

Note here that all of the other references to material objects in (3) e.g. 'room', are to be rendered into sense-data language as well.

One argument against full equivalence is that no material object statement can be conclusively entailed by any finite group of sense-data statements. This is clear because no matter what history of sense-data has already occurred, any material object statement could, in principle, be falsified by one's next sense-datum.[3]

This objection might be met by claiming that there is (or could be) and infinite group of sense-data statements which would entail some material object statement. And if the infinite ennumeration were complete enough, it could provide for safeguards against such possible problems as hallucinations, etc. But such a total listing of possible sense-data combinations - were it ever achieved - would

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[3]Note the close parallel between this problem and the so-called 'inductive dillema.' That is, scientists' inability to verify conclusively the laws of nature is the same problem if, as was the case under earlier positivistic views of meaning, mode of verification and meaning were the same.

still not allow for full equivalence since, as will be argued, the entailment cannot go in the other direction i.e. from material object statement to sense-data statement.

And without full equivalence, the 'translation' project of linguistic phenomenalism can neither rely upon synonomy nor stipulation to underpin the relation between material objects and sense-data language. Synonomy is precluded by lack of equivalence while stipulation obviously begs the question at issue.

Ayer reconstrued the linguistic phenomenalist scheme as follows:[4]

> ...one can construct a scheme which shows what sort of relations must obtain between sense-contents for it to be true in any case that a material object exists and while this process can't properly speaking be said to yield a definition, it does have the effect of showing how the one type of statement, is related to the other...In such cases as these, one does indeed arrive at something that approaches a definition in use.

If one could specify certain relations among sense-data necessary for the existence of the material object in question, then the entailment from material object statement to the sense-data statement would remain. This is Ayer's program, the logical upshot of which was the claim that material object statements entail some conjunction of sense-data statements. Such a claim, however, has not had an

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[4]Alfred J. Ayer, Language Truth and Logic (London: Gollancz, 1936 (2d Edition, 1946), p. 24.

easy time. Linguistic Phenomenalists who once argued in this way have, in the view of many, been routed by the 'Argument from Perceptual Relativity.'

Perceptual Relativity is the claim that for any statement, P, about the physical world, some conditions of observation are logically possible such that any statement or series of statements referring only to sense-data could be false even if P were the case. It is assumed that any material object statement is incomplete without a statement of its observation conditions. The statement P, then, is to be seen as the conjunction of P.O where O contains those statements referring to observation conditions. Thus it is argued, one could cook up for any claimed entailment from a P statement to sense-data statement(s) some O statements which would entail the falsity of the sense-data statements alleged to hold.

For example, if 'there is a banana' is claimed to entail 'yellow, lunate sense-data appears,' the conjunction of this statement with O (O = 'red light only now' (expressed as a sense-data statement)) would entail 'not yellow sense-data' i.e. -S. One proposed answer to this problem has been that the absence of normal light could be built into the antecedent of the sense-data hypothetical i.e. 'If there are normal viewing conditions, then...' But the argument persists that there is always the logical possibility of some state of affairs as yet uncaptured by the normalizing hypothetical antecedent - that could obtain such

that statements about such conditions conjoined with P would entail -S. A brief review of the arguments and counter-arguments involved here now follows.

The above formulation of the argument is essentially, though abbreviated, that proffered by Chisolm.[5] Lewis, countering Chisolm, claimed that the relationship between P and S was not deductive but probabilistic.[6] From P, he argued, one may conclude without fear of error that 'in all probability S.' The qualification 'in all probability' is inserted to cover just those cases of unusual viewing conditions upon which the perceptual relativity argument relies. To assert P and to discover -S, then, is not a sufficient counterexample against the relationship which Lewis claims to obtain between P and S. What would be a sufficient counterexample given this 'in all probability' relation is some state of affairs wherein P and -S obtained more often than not. And this is just what Firth argues - and persuasively it seems. He claims that since there is always this logical possibility - that given P, -S might be more probable than S, Lewis's reformulation has not escaped from the clutches of the argument from perceptual relativity. In Firth's words, 'Even if it seemed doubtful

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[5]Roderick Chisolm, Perceiving (Ithaca: Cornell University Press, 1957), Appendix.

[6]C. I. Lewis, "Professor Chisolm and Empiricism," Journal of Philosophy, XLV (September 9, 1948), 517-24.

that there actually existed (such) distorting conditions... it is surely possible to conceive of such conditions (e.g. a recurrent abnormal state of the brain which affects the sense of touch).'[7]

Lewis's rejoinder to this rebuttal invokes what he calls the 'relativity of probability statements.'[8] He claims that the inconsistency between P and S is apparent only since the probability statements must be relativized to their premises. For example, if O_n.P 'entails in all probability' S (O_n=normal viewing conditions), then S and -S are relative to different premises for -S has P. O_a as its premise (O_a=abnormal viewing conditions). The two inferences are not incompatible since, when their premises are spelled out in detail, it becomes clear that there are two different inferences involved.

But, Firth continues, even if S is relativized to certain premises reflecting the observation conditions, it is still logically possible that S could be false. And this could be due either to the falsity of P or the presence of certain other unusual observation conditions. That is, under any circumstances, one could believe that P is true and S could still be false. The argument to be refuted has, in this situation, returned like a spectre to plague the alleged refutation.

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[7]Roderick Firth, "Radical Empiricism and Perceptual Relativity," Philosophical Review, LIX, (April, 1950), p. 179.

[8]Ibid., pp. 319-32.

Firth offers his own proposals as a solutions to the perceptual relativity dilemma. He agrees with Lewis that there are crucial ambiguities in the analysis of material object statements.[9] Essentially, Firth contends, the problem is that the linguistic phenomenalist refused to admit that P is false even though the S1, S2, S3,... associated with it turn out not to obtain despite his claim that there is some 'entailment' relation holding between P and the Ss. As a way out of this problem, Firth argues that P really stands for a whole family of P statements, call them P1, P2, etc. Each of these members of the P family 'entail' some but not all of the S statements alleged to be associated with P. The claim is that P expresses numerous logically independent expectations 'any of which could conceivably exist without the rest.' If, for example, 'knowing that our fingers are affected by a temporary numbness... we should probably not expect to have the sense-data characteristics of touching.'[10]

One would, of course, still expect to have all of the other sense-data associated with that material object i.e. visual, olfactory, etc. Thus P1 might be 'there is a banana present' and coupled with the knowledge that there is such a temporary numbness, P1 would entail S2, S3, and not S1 (S1=tactile sense-data). P2 could thus be 'there is

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[9] Ibid., p. 321

[10] Ibid., p. 322

a banana present' also, and with the knowledge, say, that there is only red light, P2 would thus entail S1, S3 and not S2 (S2=yellow sense-data), etc. Thus, to analyze P phenomenalistically, one must take cognizance of those particular expectations associated with that particular member of the P family which is being asserted at the time. In this way, capital S could be false (because, say, S1 did not obtain) but some member of the P family is saved since some member does not entail S1 but only S2, S3, etc. It is thus an error, on Firth's view, to analyze P simpliciter. The S statements necessary for the assertion of some P statement are guided by the particular expectations which are involved.

The important question to consider, if one accepts Firth's view, is just what sort of entailment he has in mind when he claims that the analysis of a material object statement may be construed in one instance as some member of a P family entailing some unique conjunction of S statements traditionally associated with P. Pap has noted that to speak of a 'formal' entailment in this situation is circular in that no previous definitions of material object statements exist. Hence there is no way to judge the semantic adequacy of the phenomenalist proposal without presupposing that which the program was explicitly designed to show.[11]

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[11]Arthur Pap, Semantics and Necessary Truth, (New Haven: Yale University Press, 1958), p. 321.

Firth's assertions that some member of the P family entails certain S statements seems grounded upon an inductive base wherein certain correlations come to be expected because of their occurrence in the past. Furthermore, those expectations of as yet unwitnessed correlations but based upon the knowledge of empirical laws e.g. the effects of anaesthetic, colored lighting, etc. are clearly determinative of the particular 'entailment' Firth would claim to hold.

From the recurrence, then, of certain groups of sense-data, material object terms such as $Pl_1,\ldots,Pl_n;P2_1,\ldots,P2_n$ (where Pl might be the banana family and P2 the apple family) are introduced, which terms arguably allow for the desired entailments. And thus it is claimed that the meaning of such terms is fully explicated by their definition in the sense-data language.

Recognizing this, an interesting feature of Firth's program emerges. For at this point the material object language must be broken down into either Firthian terms or some other way must be found to encompass his claims. Here, it would seem as though one might now try and construe P statements as analagous to theoretical statements in science with each relating to their own respective observation base - sense-data for phenomenalism and material objects for science. The system of interpretive statements in science which, on the traditional view of scientific theories,

combines semantic and empirical features would seem to be made to order for the type of project Firth's program is aimed at.[12] Firth, however, ignores this possibility and construes instead each set of expectations separately. That is, each P statement implies some set of S statements yet any connection between the individual P statements and the overriding P concept is given short shrift. Capital P (banana) remains unanalysed in Firth's project except perhaps as the sire of the P family - and is related to all of the other little Ps only by the preanalytic notion of banana - P.

And here a parallel which suggests problems with the Firthian program becomes very tempting. By breaking up one 'large' preanalytic notion into separate meaning slices which gain significance by the observation and expectations associated with them, Firth's program smacks of operationalism.[13] And what must be noted is that operationalism has been criticized for its failure to unify all of the separate concepts its analysis entails. Not surprisingly, Firth's project seems to have similar consequences.

Now just as operationalism has been supplanted by the 'traditional view' of scientific theories which links theoretical concepts to the observation base by means of inter-

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[12] Carl Hempel, "The Theoretician's Dilemma," in Aspects of Scientific Explanation (New York: The Free Press, 1965), p. 209.

[13] Carl Hempel, "A Logical Appraisal of Operationalism," in Aspects, pp. 123-35.

pretive sentences, Firth's project, as already noted, might benefit by a similar approach. Thus, the suggestion is that the phenomenalist project be reconstrued along such lines, where the sense-data base becomes the observation base and material object language parallels the theoretical language. Linguistic phenomenalism has thus arrived at the same point where ontological views of phenomenalism were left at the conclusion of Chapter One. The outer reaches of phenomenalistic theorizing in both varieties seem to recommend strongly an approach somewhat analagous to the 'traditional model' of scientific theories.[14]

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[14]To show, as has been the effort here, that all extant attempts at a purely conceptual variety of phenomenalism are wanting does not prove that the linguistic phenomenalistic project cannot succeed. The arguments are only designed to express substantial reason to believe that the approach is wrong-headed. Note also that the use of the 'traditional model' of scientific theories need not be limited to phenomenalism. Certain forms of realism could, presumably, be construed along such lines as well. This point will be discussed more completely in Chapter Seven.

CHAPTER III

THE DILEMMA OF INTERSUBJECTIVITY

It has been argued in the preceeding chapter that extant ontological forms of phenomenalism failed to come to grips with the three chief problems of phenomenalism. Similarly it was claimed that linguistic theories fail to recognize the empirical underpinnings of what is supposed to be a purely conceptual endeavor. It was also suggested that reconstrual of the phenomenalist project in a manner similar to the 'traditional model' of scientific theories might be helpful. Before considering such a project, several implications of a thoroughgoing phenomenalism must be discussed. In this chapter, various aspects of phenomenalism's dilemma with solpcism and intersubjectivity will be noted.

1. The Problem of General Laws:

One problem which current theories of phenomenalism face is how to reconcile considerations of scientific intersubjectivity with phenomenalist claims that the only fundamental reality is the sense-data of one person. To understand the thrust of such a problem, consider the nature of general laws based upon sense-data.

As is the case with its physicalistic counterparts, phenomenalistic theories assume that an observer can pick out certain relations - usually 'resemblance' - of properties, processes, etc. - upon which certain generalizations may be based.[1] For a phenomenalist, this is the claim that certain subsets of the entire set of sense-data are so related. Indeed some such assumption is necessary for the sensory core theory.[2] For if interpretation is to be based upon 'raw' sense-data, then such data must be alike in some ways so that interpretation is possible. For the uniqueness of each sense-datum would preclude such generalizing interpretation. For a phenomenalist, then, the notion of various material objects is presumably based upon the prevalence of some such relation among sense-data. Note here that prior to any interpretation, the world of sense-data must be - for the observer - something like a 'confusing buzz of sensation,' which sensations are, however, the most basic reality - that of which one is indubitably certain.

Examples of generalization which a phenomenalist might express about sense-data might be some of the following. First, one could speak of the laws of sense-data in general i.e. the ways in which they group, the way such groups generally behave, etc. To cite one such instance (without

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[1]For some interesting comments upon the nature of primitive categorization and resemblance, see W.V.O. Quine, "Natural Kinds," Ontological Relativity, (New York: Columbia University Press, 1969).

[2]On the sensory core theory, see Chapter I and the material noted in n. 5.

making any claims for its truth), H.H. Price has argued that amongst all sense-data, there is a subgroup having a 'remarkable property.' These subgroups (families) are such that '... all the members fit together to form a single solid i.e. that taken together they form a closed three-dimensional surface, totally enclosing a certain region.'[3]

Second, there could be generalizations about particular sense-data such as the following hypothetical about the banana: 'whenever yellow, lunate visual sense-data; then soft, mushy tactile sense-data.' This second form of generalization should be seen relative to problems posed by perceptual relativity.

But to call such generalizations empirical does not - at least not without some explanation - imply that they are intersubjectively verifiable. This is contrary to the traditional view of such laws which hold that there are regularities which obtain under 'normal conditions' for any viewer at any time and place. The traditional notion of intersubjectivity where no observer or vantage point enjoys preferential status is clearly incompatible (at least ab initio) with a thoroughgoing phenomenalism. For within a phenomenalist rubric, other observers and their observations are similar in status to material objects i.e. ancillary to sense-data in some way determined by the particular

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[3]H. H. Price, Perception, p. 218.

brand of phenomenalism one endorses. Thus one aspect of the intersubjectivity - solipcism dilemma is that it cannot be said that a generalization from one's own sense-data is such that others would have it under similar conditions unless it is realized that the reference to others is phenomenalistically based, that the ontological status of other observers and their sense-data is derivable and hence subordinate in some way to one's own.

Here the implication for phenomenalists should be that they should include within their project some explanation of how intersubjectivity must be reconstrued so as to be reconciled with a phenomenalistic base of one 'observing entity.' The implication should not - without begging the question against phenomenalism - be that such generalizations are impossible. But here as elsewhere the insidious spectre of solipcism has appeared to lead phenomenalism off the main track.

Sellars distinguishes between two possible types of sense-content generalizations, the essential (E) and the autobiographical (A). Sellars asks the reader to consider the following statement:[4]

> Whenever (or for the most part whenever) I have such and such a pattern of sense-contents, I have (also) a sense-content of the kind in question.

Sellars claims that when, in the above statement, it makes

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[4]Wilfred Sellars, Science, Perception and Reality, (New York: Humanities Press, 1963), p. 82.

good sense to suppose that the generalization remains true if 'anybody' is substituted for 'I', then this exemplifies an E generalization. If the generalization would not obtain when the subject was changed to 'anybody', it is an A generalization. Now, Sellars argues, the inherent individuality and uniqueness of each person's experiences is such that any single observer's sense-content generalizations[5]

> ...will be tied to the peculiarities of his environment in such a way that they cannot be transferred to other things in other places...a generalization which is an extension of the contingencies of my existence can scarcely be one of the generalizations which, in the intersubjective conceptual heritage of the race, support the phenomenally conditional sense-contents postulated by the phenomenalist.

Sellars seems to have assumed that phenomenalism must take the notion of intersubjectivity - as traditionally understood - and reconcile it with phenomenalism <u>at the expense of phenomenalistic assumptions</u>. But this does beg the question against phenomenalism for it assumes <u>inter alia</u> that there are other times and other places and other observers somehow existing separately or individually from what is constructed from one single set of sense-data. And this is precisely what phenomenalism denies - or denies until such notions are adequately reconstrued within a phenomenalistic framework. That no such adequate reconstrual presently exists does not refute phenomenalism as Sellars would have us believe but does provide a difficult challenge for the phenomenalist - a challenge considered as part of the third key

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[5]<u>Ibid.</u>, pp. 81-2

problem mentioned in the Introduction.

It was mentioned above that here phenomenalism gets off the track. What Sellars (and others) might be heard as claiming is that phenomenalism is essentially solipcistic and solipcism is incompatible - nay contradictory - to intersubjectivity as we know it and hence phenomenalism fails. But this surely does not follow, for clearly it is logically possible that intersubjectivity could 'fail' - if failure there must be. The suppressed premise in Sellars's argument (similar we'll see to the arguments of others) seems to be that solipcism isn't a viable alternative, and since phenomenalism seems to have solipcistic consequences, phenomenalism is therefore not viable either. Of course, this argument's validity is predicated upon the truth of the major premise.

Again, what should follow from all these considerations is not that phenomenalism has been decisively refuted but that its solipcistic implications must be reconciled with intersubjectivity. Now such reconciliation implies examination of both solipcism and intersubjectivity and this is rarely done in such contexts. These considerations will be discussed more thoroughly in Chapter VI.

2. The Problem of Objective Time:

Perhaps the above argument seems trivial. If so, then one beholds with wonder as one philosopher after another waddles into the same mire. Consider now the status of objective time.

Aune claims that '...one of the public things smuggled into the phenomenalist's austere picture is an objective time, a kind of time not definable wholly on a phenomenal basis.'[6] Aune argues that the only basic phenomenal temporal relation which the phenomenalist can admit is 'later' which the phenomenalist must regard as having a 'private ostensive component.' Now this implies, Aune continues, that the relation 'later' is applicable only between temporal events of which the particular person involved is aware. This being the case, it follows that statements like 'he felt sorrow before I did' (even if 'he' is taken to be a construction of one's own sense-data), or any other statement about the private data of others can only be asserted in their own '...phenomenal time, not definable by the phenomenal predicate 'later' in which all phenomenal series are located.' The phenomenalist, Aune concludes, '...cannot therefore speak of a common time in which both his experiences and the experiences of others might co-exist as occurrent phenomenal items.'[7]

Now if this argument is construed as a challenge to phenomenalists - as a problem with which they must deal for their project to succeed - it is another valuable contribution to the phenomenalistic dialectic, for few phenomenalists (or philosophers in general) have discussed the

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[6]Bruce Aune, Knowledge, Mind and Nature, (New York: Random House, 1967), p. 74.

[7]Ibid., p. 75

problems of time.[8] And in fairness to Aune, this might be one interpretation of his remarks. A less charitable interpretation of this argument is that it takes various failings of some traditional phenomenalist arguments and does not consider that they might be rectified. Aune, for example, does not say that 'if phenomenalists smuggle in objective time, it is incompatible with their program unless objective time is reconstrued within a phenomenalist framework.' He does, however say that phenomenalism is 'wedded to a theory which is essentially solipcistic.' And this conclusion, he continues, implies that[9]

> I cannot, strictly speaking, even conceive of the possibility that I have a view of things that is limited, peculiar, or perhaps from an objective standpoint, entirely accurate and complete.

And more important, he concludes

> To speak of the phenomena of others in any non-solipcistic way, in particular to talk about the phenomena one would have if...involves a tacit but entirely clear rejection of the fundamental principle of phenomenalism ...without the forbidden impersonal 'one,' however, there is absolutely no plausibility to the idea that a world of public things can be characterized wholly in phenomenal terms.

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[8]Notable exceptions are Bertrand Russell in his Mysticism and Logic (London: Longmans, Green and Co., 1919), pp. 141-44,167-68. See also Nelson Goodman, The Structure of Appearance, (Indianapolis: Bobbs-Merril Co., Inc., 1966), Chap xiii.

[9]Bruce Aune, Knowledge, Mind and Nature, p. 77.

Now these remarks do assume the primacy of the public world. For the implication that there is an objective framework, and an inability to compare and contrast one's own view and theories within this framework is seen as a shortcoming. Further, this public world is one which any successful phenomenalist project must capture in order to succeed. But this is a view deficient in several respects. First, why is the notion of an objective world assumed without examination? For that is what phenomenalists are (or should be) at pains to deny or at least explicate from their own point of view. Second, assuming that there is some cluster of concepts referring to an objective world, why is there 'no plausibility' to the idea that they are characterizable in phenomenal terms unless one construes phenomenalism in the very narrow sense in which Aune does, viz.: that which is not observable is not comprehensible. It should be clear that phenomenalists need not claim this to preserve the ontological sanctity and primacy of sense-data. Finally, it must be noted that Aune's views are, in great part, attributable to the shortcomings of the phenomenalists themselves. For they too seem terrified of solipcism and blithely ignore some rather blatant implications of their own programs. To believe that such ignorance is not fear-inspired leads to the less satisfactory conclusion that a considerable number of otherwise very intelligent men have all missed an important and rather obvious point.

Aune and Sellars's prejudices toward empirical intersubjectivity notwithstanding, their arguments - though not conclusive refutations of phenomenalism as they would have us believe - are valuable by way of limning another important dimension of the problem of intersubjectivity and solipcism which phenomenalists must face.

3. The Problem of Objective Space:

Another dimension of this problem is the issue of space. For to accept phenomenalism is also to reject - at least at first - the notion of an objective space within which the observer is only one entity among many, whose point of view is but one possible point of view and is in no way privileged. In place of a public space, phenomenalists must postulate a private space containing only one's own sense-data and any constructions obtained therefrom. Russell has argued that since[10]

> no sensible is ever a datum to two people at once, then each person, so far as his sense-data are concerned, lives in a private world.

Coupled with the fact that one's own sense-data is all that there is according to ontological varieties of phenomenalism, and assuming

> as logical economy demands, that all position is relative, a place is only definable by the things in or around it,

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[10]Bertrand Russell, Mysticism and Logic, p. 77.

> and hence the same place cannot occur in two private worlds which have no common constituent.

Thus, a sense-datum is in a place in private space 'different from any place in the private space of another percipient.' If phenomenalists wish to explicate the notion of public space, then this is dependent upon a satisfactory explication of other observers with their own spaces, the readjustment of the observer's point of view as one among many, and the integration of numerous private spaces into one 'public space.' Here again, the fundamental tenets of phenomenalism require that such concepts be built upon a solipcistic base. To the extent that such a framework can be satisfactorily reconciled with a notion of public space without floundering upon what many see as an inherent contradiction - to this extent the phenomenalist project will have a chance to succeed.

Thus the third chief problem of phenomenalism - the status of other observers in what appears to be an essentially solipcistic framework, this problem manifests itself <u>inter alia</u> as a cluster of problems regarding the nature of space, time and general laws. Any satisfactory theory of phenomenalism must, in some way come to grips with such issues which are particular instances of this overarching issue of intersubjectivity.

CHAPTER IV

SENSE-DATA REEXAMINED

In the preceeding chapter, the problems of intersubjectivity and solipcism were explored. Such problems are of two radically different sorts. First, any theory of phenomenalism must explain how a workable concept of space, time and 'empirical generalizations' can be constructed from a sense-data base. Second, it must be shown that such concepts can in some satisfactory way account for the notion of intersubjectivity which permeates traditional scientific analyses of such concepts. But there are additional complexities to note regarding the foundation for any such phenomenalistic theory.

1. Further Notes on Sense-Data:

At least some philosophers have claimed that just as colour, shape, etc. are indubitable properties of sense-data, so are depth and solidity. In other words, some argue that sense-data are three-dimensional. One such arguement is that of Price who said:[1]

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[1]H.H. Price, Perception, p. 218. On this point see also C.D. Broad, Scientific Thought (New York: Humanities Press, 1959), pp. 285, 303.

> It is obvious that all visual sense-data have the same characteristic of depth or 'outness'. This characteristic of them is just as much 'given' as colour or shape, whether we can explain it or not. It seems to be no more in need of explanation than colour or shape and no more likely to get it.

Others have claimed that such an argument rests upon false analogies.[2] What no philosopher seems to have devoted much time to are the empirical facts regarding perception and their implications for sense-data theorizing.[3] Both the findings of psychologists of perception and the theoretical frameworks of cognitive developmental psychologists seem to indicate that depth perception - that is perception of objects as three-dimensional, having solidity and in space - is not 'given' of perception but is gradually learned or constructed during infancy.

Theoretically, Piaget has argued that every infant proceeds through several developmental stages during which, three-dimensional space as we know it is gradually 'elaborated' or 'constructed.' During the first four months of life, he argues, the infant perceives no single space and 'there are no permanent spatial relations among things any more than there are permanent things in space.'[4] That is,

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[2]Robert G. Meyers, "Sense-Data and Depth Perception," Mind, LXXX (July, 1971), 437-40.

[3]That such considerations are not circular, see Chapter V.

[4]Jean Piaget, The Construction of Reality in the Child, (New York: Basic Books, Inc., 1954), p. 108.

just as during the first weeks of life, the object is confused with sensory impressions, 'so also at birth there is no concept of space...perception of shapes, of sizes, distances, positions, etc. is elaborated little by little at the same time as the objects themselves.'[5] Note that although the point at issue here regards only three-dimensional space, Piaget's arguments also militate against the 'givenness' of size and shape as well - two features of sense-data which phenomenalists hold indubitable and therefore as real.

It could be argued that three-dimensional space, size, and shape are real and are 'discovered' by the infant and not 'elaborated' as Piaget has argued. Such a claim, if successful, would save sense-data theories as generally postulated. But to argue for 'discovery' implies that prior to verification or conviction of such a discovery, sense-data simply do not provide the indubitable marks of reality phenomenalists would have us believe.[6]

The great fallacy in sense-data theorists' arguments, especially as expostulated by Firth, is that they believe

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[5]Ibid., p. 98.

[6]Note here that phenomenalistic ontological theories must assume that there can be but one 'given' which is invarient for both infants and adults. For if one assumed that the adult's 'given' was different from the infant's, then the phenomenalistic distinction between what was 'real' and what was cognitively elaborated would be undercut. Realists need not make such an assumption yet still must take cognizance of the cognitive contributions, noted above, which are built into any conception of 'reality.'

that they have, in their armchairs, successfully stripped away all vestiges of cognitive elaborations, of interpretation. But such elaboration occurs so early and becomes to entrenched in later perceptual experience that the epistemic criteria of reality i.e. 'that which is perceived indubitably' is seen to hinge upon already completed interpretations.[7] This criteria need not fail but should be relativized to the time in life at which it is applicable.

Further and compelling empirical evidence of such a view is provided by Von Senden who tested congenitally blind subjects whose sight was restored during adulthood after an operation.[8] Although colour was found to dominate in the first vision, these patients had to learn to discriminate various parts of their visual field. One patient, trained for thirteen days to discriminate a circle from a square, still could not distinguish them at that time without counting the corners.

Scarcely any phenomenalists have come to realize the implications of such findings and theorizing. First, such

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[7] 'It is possible then that...we are able to see a square as such in a single glance only as the result of complex learning. The notion seems unlikely because of the utter simplicity of such a perception to the normal adult. But no such argument can be valid, since Lashley has shown that subjective simplicity and immediacy may be very deceptive as an index of physiological simplicity.' D.O. Hebb, The Organization of Behavior (New York: John Wiley and Sons, Inc., 1949), p. 33.

[8] Cited in Ibid., p. 32.

findings in no way undercut the basic phenomenalist premise that most of what adults habitually perceive are cognitive constructions out of sensory input. To the contrary, this evidence, if anything, strongly supports such a position. But, second, the notion of sense-data as traditionally construed must be seen as inadequate and should be thought through again as something more diffuse and pristine than they are normally considered to be. This is an extremely complicated task which must rely heavily upon experimental findings and cognitive theorizing. Finally and most important for the phenomenalist, even with the projected success of such a task, the relation between such a reconstituted notion of sense-data and material objects must be carefully considered. For it is clear that objects cannot be seen as actual collections of sense-data and to the extent that they will be viewed as cognitive constructions out of them, the logical relations of such constructions must be further examined.

Despite this necessary reconstrual of sense-data, what can be claimed is that 'physical three-dimensional space' and 'physical time' can be viewed as theoretical frameworks constructed to account for the various sensory experiences one has.[9] Upon the construction (elaboration) of such frame-

[9]Little has been written about time. Piaget does argue that the notion of 'physical time' as possessed by adults is also an elaboration out of sensations and is most clearly linked to the child's apprenhension of the displacement of objects. See Piaget, Construction of Reality, p.108. See also Klaus Riegel, "Time and Change in the Development of the Individual and Society," (Ann Arbor, University of Michigan Center for Research on Conflict Resolution - History of Science Program, February 1971 (unpublished)), pp. 9-10.

works, the constructed physical objects may be embedded. To put it another way; public time and public space and physical objects are all integral parts of the overarching theoretical framework ('reality'-if you will) postulated to account for, predict, and interrelate sensory experience. It is thus no objection to claim that material objects interpreted along phenomenalist lines presuppose objective space or objective time. What must be shown - or at least sketched out - is how sense-data statements are logically related to the statements of the theory - the 'supertheory' - which theory could yield as some of its deductive consequences, theorems (generalizations) about sense-experiences applicable to space, time and material objects.

If public, three-dimensional space and public time are themselves cognitive elaborations out of sense-data observations, then according to phenomenalist premises they are not real. That is, they have the status of 'convenient fictions' useful for organizing sense-data. Clearly, sense-data observations are not - at least originally describable in terms referring to 'objective' space and 'objective' time. But this simply is not the way most sense-data observations have been described by philosophers. Recalling again the banana, it was said that a banana observation might be described as 'yellow, lunate sense-data now.' This is all right if one assumes that 'lunate' is not constructed. But as soon as one attempts to generalize or to speak hypothetically, then there are problems. For as was noted, one

possible generalization about banana sense-data is 'if there were to appear yellow, lunate sense-data and if there were to appear sense-data of certain grasping motions, then there would appear soft, squashy, tactile sense-data.' But this generalization clearly does presuppose some notion of physical space, not to mention certain kinaesthetic sensations. Sense-data of 'certain grasping motions' followed by certain tactile sense-data here assume conclusions about body displacements, length of limbs, distance of the banana from the observer, etc. If we consider for a moment that favorite of phenomenalists 'there is an X in the next room' partially interpretable as 'if one were to have going-into-the-next-room sense-data, then...', then the tacit assumptions about space, depth, body displacement, etc. are obvious. But 'raw' sense-data, according to phenomenalists are all that is 'real', and thus public space and public time are not. Thus, formulations using such notions must be recognized for what they are i.e. convenient fictions themselves.

Sense-data thus must be reconstrued in a somewhat more pristine form, a form about which we can only speculate since all of our own sense-data are tainted with interpretations. Raw sense-data can, perhaps could, be seen as flat 'occurring' two-dimensional images, sounds, etc. parading by the screen of consciousness in a somewhat kalideoscopic, if not chaotic fashion. The reliance upon metaphor here indicates just how murky and speculative such a picture is. But one can still

recognize at this point the inadequacies of previous phenomenalists' descriptions of sense-data. These inadequacies may not be subsumed under the traditional rationative umbrella phenomenalists have such a penchant for using i.e. 'the language, descriptions, etc. haven't been worked out and only seem parasitic upon notions of physical objects - and this won't be the case when the program is worked out in detail.' These inadequacies miss the important point made above regarding the cognitive contributions to the concepts of objective space and public time.

2. Organic Sense-Data:

A further addition and clarification must be made for the picture of sense-data presented above. According to phenomenalists, that which is real is sense-data only. The ambit of such sense-data has traditionally been taken to mean that which is provided by the five senses. Above we have seen how visual sense-data (especially) must be reconstrued so that certain elements customarily believed to be 'given' and hence 'real' are filtered off from what is truly given. In this case, the scope of the 'given'/'real' must be somewhat narrowed.

But, paradoxically, the scope of the 'given' must be enlarged as well. There is no, in principle, bar to limiting the scope of sense-data to visual, aural, olfactory, gustatory and tactile; and surely it is logically possible that other forms of sense-data are also given and hence

'real' by phenomenalistic standards.

One need not stop here for from the evidence, this logical possibility seems to be an empirical reality. There are numerous 'sensations' of which one is continually, directly aware which do not fall within the rubric of the five senses. Specifically the reference here is to what might be called 'awareness of one's own physical activities,' which include sensations such as muscle tone, body position, etc. This is not quite the tactile sensation but does play a role in the sensory picture. From it, elaboration of weight, body displacement, and - more important- constructions of self are, in part, made. One can, if he so desires, include such kinaesthetic sensation under tactile sense-data but the point is not so much how the rubric is realigned as it is the cognizance that sense-data theorists rarely, if ever, speak of such sensations.[10] They are mentioned here by way of recognizing that the permissible scope of sense-data must be widened.

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Given the picture of sense-data presented above, there seem to be complexities beyond the 'three chief problems'

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[10]One exception to this is A.J. Ayer who refers to such sensations as 'another form of sense perception...One's organic awareness of the physical activities of one's own body.' Alfred J. Ayer, "Privacy," in The Concept of a Person, (New York: St. Martins Press, 1963), p. 54. See also Jerome Bruner, Studies in Cognitive Growth, (New York, John Wiley and Sons, Inc., 1967), pp. 13-21

mentioned in the Introduction which phenomenalists must face. It seems now that public time and public, three-dimensional space are not 'real' by phenomenalistic criteria since they are cognitive elaborations upon the 'given.' But this odd picture is only the beginning and must be extended even further.

Consider, for example, the distinction between internal and external, that which is public and that which is private. It seems as though there is nothing given in the 'raw' sense-data which corresponds to such a distinction. The distinction, by considerations advanced above, is apparently itself a cognitive construction and hence the realms to which it refers - especially the notion of an 'external world' is also a 'convenient fiction.' A similar argument may be made for the distinction between the mental and the physical.

The phenomenalist's world, then, is odd indeed. We will elaborate upon these last points in Chapter VI and see just how odd. For the moment, however, it is necessary to offer some explanation of the relationship between sense-data and these numerous 'convenient fictions' which even phenomenalists themselves have until now countenanced as real. We are now ready to embark upon such a project.

CHAPTER V

PHENOMENALISM AND THE 'TRADITIONAL MODEL' OF SCIENTIFIC THEORIES (THEORETICAL PHENOMENALISM)

It was argued in Chapters I and II that neither ontological nor linguistic phenomenalism can provide satisfactory solutions to the three chief problems of phenomenalism: persistence of material objects, the status of observers, and the question of intersubjectivity. It was further claimed there that linguistic varieties of phenomenalism, when the implications of perceptual relativity are drawn out, contains empirical components essentially and is not merely a matter of conceptual analysis. In Chapter III, it was claimed that intersubjectivity is the crucial issue for phenomenalists and yet that consideration of it should be, but rarely is divorced from theories of phenomenalism per se. In the chapter that follows, it will be claimed that phenomenalism may indeed be reconstrued

along lines suggested by the 'traditional' model of scientific theories (Theoretical Phenomenalism) if several essential qualifications to this model are made. More specifically, the nature of one's perception of the 'given' and the role of partial interpretation must, for theoretical phenomenalism, be amended somewhat from the traditional account.

The suggestion to so construe phenomenalism is not novel but, strangely, has received virtually no examination. Sellars, though eventually arguing against such a view, speaks of a 'new' phenomenalism where[1]

> ...the framework of physical objects is analagous to a theory. Just as it is reasonable to suppose that there are molecules although we don't perceive them...it is reasonable to suppose that physical objects exist although we do not directly perceive them, because the hypothesis that there are such things enables us to understand why our sense-contents occur in the order that they do.

Ayer, historically one of the staunchest supporters of linguistic phenomenalism finally arrived at the point where he concluded that[2]

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[1]Wilfred Sellars, Science, Perception and Reality, p. 185. Phenomenalists, however, must assume that physical objects are 'convenient fictions.' See Chapter VI infra.

[2]A.J. Ayer, The Problem of Knowledge (Baltimore: Penguin Books, 1956), p. 132. Ayer remained neutral, however, on the issue of whether such a program should be construed realistically or phenomenalistically.

> ...in referring as we do to physical objects, we are elaborating a theory with respect to the evidence of our sense. The statements which belong to the theory transcend their evidence...the theory is richer than anything that could be yielded by an attempt to reformulate it at the sensory level. But this does not mean that it has any other supply of wealth than the phenomena over which it ranges.

Finally, Quine, who is also not a phenomenalist, remarked that[3]

> Considered relative to our surface irritations, which exhaust our clues to an external world, the molecules and their extraordinaly ilk are thus much on a par with the most ordinary physical objects. The positing of these extraordinary things is just a vivid analogue of the positing or acknowledging of ordinary things...

Before considering the possible analogy between phenomenalism and the structure of scientific theories under the 'received view,' it is first necessary to recapitulate this view.[4]

The 'traditional model' sees a scientific theory containing, as its skeleton, a formalized uninterpreted calculus, a set of statements devoid of semantic content having axioms and theorems derivable from them by the rules of

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[3]W.V.O. Quine, Word and Object, (Cambridge, MIT Press, 1960), p. 22.

[4]For elucidation of the model in greater detail than that which follows see Carl Hempel, "The Theoretician's Dilemma," in Aspects and Ernest Nagel, The Structure of Science, (New York: Harcourt, Brace and World, 1961), Chaps, IV-VI.

deductive logic. The non-logical vocabulary of the theory consists of V_t and subdivides into those terms that are primitive and those that are defined from them. V_t is supplemented by the vocabulary of pure logic. Some examples of such axiomatized systems offered in the literature include Euclidian geometry, utility schemas in economic theory, and parts of classical and relativistic mechanics.

For this 'meaningless' axiomatization to serve as a scientific theory and have empirical content, it is necessary to link it to observed phenomena. An interpretation is generally construed to be a specification of interpretive sentences, each of which contains at least one term from V_t and one term from the observation language, V_o. Theoretical terms must somehow be linked to observation terms or else no way would exist to confirm or disconfirm laws containing such terms nor could one base prediction of future empirical phenomena by use of them.

One move toward clarifying the nature of interpretive sentences was attempted explicit definition of theoretical terms on the basis of observational terms. It was suggested that such a definition might be of the form

$$(1)\quad Tx \equiv (Cx \supset Ex)$$

Here T = some theoretical property, C = some observable conditions, and O = some observable effect. The standard

example offered here was 'solubility', a dispositional predicate, which according to the scheme (1) above was defined in the following way:

(2) x is soluble in water (T) $\equiv_{df}$ if x is placed in water (C), then x dissolves (O).

But in a now famous argument, Carnap claimed that definitions of the form (1) under the customary extensional interpretation - were inadequate to deal with a false antecedent in the definiens.[5] In other words, to interpret the conditional used in this type of definition as the horseshoe was not satisfactory. For, any x, not placed under condition C, would nonetheless be said to have the theoretical property T. One suggestion here has been that the problem might be solved by reconstruing the relation between the definiens and the definiendum as causal or nomological necessity. Such projects, however, have encountered enormous difficulties in trying to explicate these logical notions.[6]

But even if one had an acceptable theory of the subjunctive conditional or causal necessity, it is not clear

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[5]Rudolph Carnap, "Testability and Meaning," Philosophy of Science, III (1939), pp. 436 ff.

[6]Hempel, "Theoretician's Dilemma," p. 183.

that all theoretical concepts could be adequately captured by this type of dispositional construal. For in the case of disposition terms, if an object is placed under condition C and E does not occur, then one has conclusive evidence that not-Tx. In the case of theoretical terms, however, the correspondence rules do not always allow for conclusive evidence for or against ascription of the theoretical term on the basis of some set of observation data. This is the case because some theoretical terms are not covered by correspondence rules e.g. when the object is so small that it's not 'directly observable.' Also to interpret a theoretical term by means of correspondence rules, there must be the tacit assumption that normal observation conditions prevail. More on this point below.[7]

Carnap suggested that one way to introduce theoretical terms by way of the observational vocabulary would be by using reduction sentences of the form

$$(3) \quad Cx \supset (Tx \equiv Ox)$$

Here, it is said, a term introduced by one or more reduction sentences has its meaning specified only partially. This does not mean that some of the meaning has been left out of the definition. It does mean that to apply the term

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[7] Ibid., p. 195.

meaningfully, there must be the satisfaction of a condition antecedent, so there are objects which cannot be said to be either T or not-T.

Note also that two or more reduction sentences involve empirical claims. For example, the following two reduction sentences

$$(4)\ Cl_x \supset (Tx \equiv Ol_x)$$

$$(5)\ C2_x \supset (Tx \equiv O2_x)$$

imply the empirical law

$$(6)\quad (x)(Cl_x \cdot Ol_x) \supset (C2_x \supset O2_x)$$

Thus, as Hempel has noted, chains of reduction sentences combine both a stipulative and an empirical role.[8]

Another suggestion, mentioned by Hempel, has been to generalize the notion of 'interpretive sentences' to that of 'interpretive systems' whose statements probably do, but need not, contain reduction sentences. Such systems have been generally seen to be a set of sentences that are finite, logically compatible with the axiomatization, and

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[8] Ibid., p. 207.

containing essentially, every element of V_o and V_t. Such a generalized concept does not limit the statements allowable to reduction sentences, biconditionals, etc.[9]

Recall now that one essential implication of linguistic phenomenalism, generally unrecognized, was that clarification of material object terms involved empirical assertions which assertions could not be dealt with by the various forms of 'explicit definition' proposed. Here was one of the hints that the logic of partial definition might be a more fruitful approach. Another such clue can be found in the discussion regarding the distinction between observational and theoretical terms. For reasons mentioned on p. 60, Carnap has suggested that[10]

> if a scientist has decided to use a certain term 'M' in such a way, that for certain sentences about M, any possible observational results can never be absolutely conclusive evidence...then the appropriate place for 'M' is in the theoretical vocabulary.

Here the problem of perceptual relativity - though not explicated as such - with which linguistic phenomenalists have struggled to heroically is thrown into sharp relief. For if material object terms are to be used in a way such

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[9] Ibid., pp. 206-10.

[10] Quoted in Ibid., p. 195.

that 'normal' observation conditions must be presupposed (and this is one implication of the argument), then an obvious next move should have been to construe material object terms as theoretical terms, the logic of which had already received substantial attention. But no, phenomenalists persisted in their conceptual enterprises somewhat oblivious to such discussions.

For some inexplicable historical quirk, the relationship between sense-data and material objects has always been felt to be 'direct' - logical derivation or physical composition for ontological phenomenalists or translation as seen in the history of linguistic phenomenalism. The entire drift of philosophy of science toward theoretical entities and partially interpreted systems seems to have been generally ignored by phenomenalists. What seems to have happened is that the phenomenalist, having split with the philosophers of science on the intersubjectivity issue, never really came to grips with the fact that the relationship between sense-data and material objects was one problem and intersubjectivity was another. Had this been done (and this was one object of Chapter III), the progress of one area could have fertilized the other and the dilemma of intersubjectivity could then have received separate consideration. But intersubjectivity was never discussed as a separate issue in any great detail - it seeming to be ob-

vious to many that the solipcistic implications of phenomenalism rendered it untenable for any kind of scientific theorizing.

2. Theoretical Phenomenalism and Its Implications:

To examine Theoretical Phenomenalism along lines suggested by the traditional model of scientific theories is, by and large to make an 'in principle possible' case. For most of the formal components of phenomenalism considered as a theory are, at present, unelaborated. But the skepticism accompanying this type of argument can be mitigated to a great extent. First, as noted in Chapters I and II, Theoretical Phenomenalism is a stronger claim because it avoids those criticisms leveled against it as a linguistic or (in the old sense) an ontological theory. Second, the case for Theoretical Phenomenalism can be strengthened immeasurably if, as we will argue in Chapter VII, it can effectively parry virtually every extant criticism leveled against phenomenalism per se. Finally, such an argument is no weaker than any other phenomenalist program virtually all of which have been advanced with only sketches of a project offered as promissory notes for the full-blown elaboration which was to follow. Let us examine the implications of phenomenalism construed theoretically.

Although the hypotheses of Piaget and other cognitive psychologists regarding the infant's elaboration of 'reality' are not rigorously formalized into what is customarily construed as a 'developed scientific theory,' the claim that there could be such a theory is not so far-fetched. It is, in fact, one of the avowed tasks of cognitive psychologists and psychologists of perception to trace the relationship between the stimulus (sense-data) and the cognitive elaboration constructed around such stimulii. Put another way, the theory already exists in an operative sense for every cognitively mature human being to whom sense-data appear and who interprets some of them as some object in three-dimensional space, etc. The task is not, then, to create the theory but to formalize the relationships between sense-data and that which is extrapolated and/or postulated from them. What must be done - and the claim here is only that it can be done - is to put on a rigorous scientific footing those facts of perception which demonstrate that sense-data are interpreted as material objects within a framework of public, three-dimensional space and objective time.

Those theories with which one is already familiar qua theories (e.g. atomic theory) contain reference to theoretical entities, which entities are said to be at present,

or in principle, unobservable, and either (1) do exist, or (2) do not exist because they are merely 'convenient fictions.' Either way, and more will be said about this later - a demarcation exists between the 'given' is said to be evidence. Though the line between observable and theoretical entities is not always clear, it is clear that those entities of 'observation' which are evidence for theoretical entities cannot themselves be theoretical entities or the distinction would collapse.[11]

But, arguably, this does not seem to be the case with Theoretical Phenomenalism. For here one's 'direct' perception is, in an important sense, of material objects (or, at least certain indubitable features of them) which on the Theoretical Phenomenalistic construal are the theoretical entities. It is as though, in atomic theory, one were to perceive nothing but atoms, etc. swirling about and had to construct/interpret from what he 'saw' material objects and then claim that the material objects were the given.

But such an argument overlooks what was claimed in Chapter IV. The fact that adults consider material objects to be given and may reconstruct sense-data from them

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[11]For an interesting discussion regarding some of the problems involved in this distinction, see Peter Achinstein, "The Problem of Theoretical Terms," in Readings in the Philosophy of Science, ed. by Baruch Brody (Englewood Cliffs: Prentice-Hall, Inc., 1970), pp. 234-50.

surely does not entail that they are given. We have noted, in fact, reasons to believe that they are not given and that the construction of sense-data along these lines is really a reconstruction. Such arguments err by ascribing an unwarranted 'truth' or 'reality' to mature perception overlooking the cognitive elaborations of infancy. Paradoxically, what is originally given - instead of enjoying the primacy all sense-data theorists say is due it - here mistakenly is assumed to be a construction itself and constructions elaborated from it become the basic perceptual units. But this primaevel 'given' is no less so because we lose 'sight' of it in later life.

There are other arguments which overlook this point as well. It has often been claimed that the separation of sense-data from the elaborated theory for which it is evidence is viciously circular in that any theory which claims sense-data are basic must itself be a construction from sense-data. In other words, one begs the question by claiming that sense-data are basic and that such sense-data are discovered by means of theories and assumptions which perforce assume the existence of sense-data. Quine has replied to such arguments and his gift of expression makes one loath to paraphrase.

> If we are out simply to understand the link between observation and science, we are well advised to use any available information, including that provided by the very science whose

> link with observation we are seeking to understand...the empiricist made one major concession when he despaired of deducing the truths of nature from sensory evidence. In despairing now even of translating those truths into terms of observation and logico-mathematical auxiliaries, he makes another major concession ...If all we hope for is a reconstruction that links science to experience in explicit ways short of translation, then it would seem more sensible to settle for psychology. Better to discover how science is, in fact, developed and learned than to fabricate a fictitious structure to a similar effect.[12]

To further illuminate the analogy between Theoretical Phenomenalism and the traditional model of scientific theories, note that the comparison commits one to the view that there are inductively established generalizations about sense-data to each of which corresponds a theorem in the calculus when interpreted. It is clear that such generalizations are not all of the extrapolative variety. For, to the extent that public, three-dimensional space and objective time are cognitive elaborations based upon phenomenal data as has been argued, they must be constructed by way of transcendental hypotheses and not by ennumeration. For one does not, like black ravens, count pieces of space or temporal slices, find similarities among then, and generalize such similarities. One does, on the view suggested here, utilize the evidence available and, in order to

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[12]W.V.O. Quine, "Epistemology Naturalized," Ontological Relativity, pp. 75-77.

organize and make predictions from it, postulate a three-dimensional space and a continuous temporal dimension... It is yet another postulation upon this which makes such spatial and temporal dimensions 'objective.' Ennumerative inductions do occur in the elaboration of reality but should be given a less important role than has sometimes been assumed.[13] Perhaps the most clearcut example of the role of ennumerative induction here is the co-ordination of various sense fields i.e. the constant conjunction, say, of certain aural with certain visual sensations.[14]

Finally there must be interpretive sentences or correspondence rules which hold between V_o and V_t where V_t is the language of material objects and V_o is the language of sense-data. Obviously, without a sense-datum language and hence a rigorous formulation of the theory, it is difficult to give examples of such rules. It is the case that in the absence of such a sense-datum language, much of the terminology utilized to describe sense-data is parasitic upon

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[13] One blatant example of the failure to consider the role of hypothetical induction may be found in A.C. Ewing, Idealism, (London: Methuen and Co., Ltd., 1934), Chapter IV.

[14] See Russell's comments on this point in Mysticism and Logic, p. 147. Some fascinating recent research has suggested, however, that some connections between various sensory stimulii are not so learned but appear, in some unknown way, to be inherent. See T.G.R. Bower, "The Object in the World of the Infant," Scientific American, CCXXV (Oct. 1971), 32.

material object language. This was noted frequently by opponents of linguistic phenomenalism when they argued that 'translation' from the material object to the sense-data language was shot through with impurities from the former. The point to note here is that the project of Theoretical Phenomenalism is further complicated, though not necessarily vitiated in principle, by the dearth of such a language.

Considered under a Theoretical Phenomenalistic rubric, the absence of a sense-datum language raises interesting questions regarding the meaning of material object terms (i.e. terms in V_t) and the statements in which they occur. For, under the traditional model, V_t terms acquire their 'empirical' meaning by means of partial interpretation from terms in V_o which are 'fully interpreted.'[15] Thus, in the absence of a sense-datum language - indeed, in the absence of any clear conception of what sense-data are 'really like' - one must, if he is a Theoretical Phenomenalist, conclude that Theoretical Phenomenalism here runs counter to the received view of scientific theories. For how can

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[15]For some comments upon other kinds of meaning which theoretical terms can have see Carl Hempel, "Implications of Carnap's work for the Philosophy of Science," in The Philosophy of Rudolph Carnap, ed. by Paul Schilpp (La Salle: Open Court, 1963), 693ff. See also the discussion of F. Suppe, "On Partial Interpretation," Journal of Philosophy, LXVIII, (February 2, 1971), pp. 57-76.

the meaning of material object terms 'seep up' from the fully interpreted observation language if there is no such language? From the tradition of Philosophy of Science where material objects were considered the 'given,' it has been felt that full interpretation pertained to them. In the phenomenalist literature, the task has always been one of translation or rational reconstruction. What has received scant consideration is the relation of the material object language to the prelinguistic cognitive elaborations of the infant.

Quine has noted that '...the truths that can be said even in common sense terms about ordinary things are themselves, in turn, far in excess of any available data.'[16] 'Epistemology...faces the fact that society teaches us our physicalistic language by training us to associate physicalistic sentences directly, in multifarious ways, with irritations of our sensory surfaces, and by training us also to associate various such sentences with one another.'[17] What should be emphasized here is the amount of theorizing which occurs prior to the learning of language.

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[16]W.V.O. Quine, Word and Object, p.22.

[17]W.V.O. Quine, Posits and Reality," The Ways of Paradox (New York: Random House, Inc., 1966), p. 240.

Consider, for example, a two year old confronted by a ball - an object he has never seen before. By ostention and repetition, the term 'ball' becomes associated with those 'surface irritations' corresponding to the ball i.e. its visual, tactile, olfactory properties, etc. But the child in this situation is not associating the term 'ball' with various unclassified sensory stimulii. When learning by ostention, the child is already at the developmental point where confrontation with the ball occurs within a framework of three-dimensional space and a partially elaborated temporal continuum. In other words, some theory construction antedates language although language surely does aid and influence further theory construction. When language is learned, it is to the interpretations - the theoretical constructs - and not the 'given' to which meanings are attached.[18]

If the relationship between sense-data and material objects is as that of observed entity to theoretical entity, then the traditional model's account of how the theoretical terms acquire observational meaning must, in this case, be qualified. For here, empirical meaning does not

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[18]For an introductory but thorough account of the relationship between concept information, language acquisition and pre-verbal logical operations, see Roger Brown, Social Psychology, (New York: The Free Press, 1965), Chapter VIII.

filter up from observational bedrock along lines suggested by the logic of partial definition. What seems to happen instead is that material objects, theoretical though they may be in reference to the original given, are postulated with a definite observational component vis-a-vis testable consequences and ability to predict. The infant who has just attained object constancy, for example, demonstrates the organizing empirical and predictive content of the preverbal notion of 'permanent three dimensional object' when, in a methodical fashion, he looks for and immediately finds objects hidden before his eyes - something he was unable to do a month before. Thus, the meanings of such terms are in part empirical although assigned directly at a theoretical level for, in this case, object constancy well preceeds the infant's learning of the term which comes to be associated with the object.

The fact that one cannot, at present, elucidate the logical linkages between preverbal and verbal theorizing about empirical matters need not stigmatize one's utterances about various material objects qua theoretical entities as pure metaphysics without an observational component. That theories can be constructed in the absence of language is a developmental fact.[19] And the world of

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[19]This will be discussed in greater detail in Chapter VIII.

material objects, three-dimensional public space and objective time (as we know it) is no less a theoretical construction because it is done prior to language acquisition. The further fact that labels designating these theoretical entities become the vehicle of primary empirical semantic content need not vitiate their status as terms containing acceptable empirical content.

Theoretical phenomenalism also has those non-structual properties believed to be necessary for any scientific theory. Beginning with a base of unorganized sense-data, its postulation effectuates systematic connections between them, and - most important - provides for prediction of future events. Theoretical phenomenalism is also heuristically fruitful in the accepted sense in that further theories and predictions may and are derivible from it. Finally, Theoretical Phenomenalism differs from the received view of scientific theories - as has been argued in this Chapter - in two important respects.[20]

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[20]It is also substantially different from the projects of rational reconstruction exemplified by Carnap's Aufbau and Goodman's Structure of Appearance. It is the task of rational reconstruction to illustrate how one might, not necessarily how one does, derive an elaboration of reality in material object terms from primitive(s) and certain logical operations. Thus, the short shrift given to these two important works more reflects the different emphasis of the project here than it does any judgment as to their worth.

First, the 'given', the so-called bedrock of any scientific theory is not 'directly' available to mature perceivers without cognitive reconstruction. Nor can such reconstruction be done in one's armchair utilizing epistemic doubt and certainty as many old line phenomenalists have maintained. What is seen by such observers is already a theoretical elaboration upon the 'given.'

Second, the meanings of the theoretical terms in Theoretical Phenomenalism i.e. material objects - do not accrue by way of partial interpretation from meanings attached to the ostensive given as the received view claims for other empirical theories. In Theoretical Phenomenalism, at least part of the theoretical language, V_t, is directly interpreted and such meaning can be seen to have observational content in the absence of partial interpretation despite these entities' theoretical status. Though such differences do indicate Theoretical Phenomenalism's divergence from the traditional model, it has been argued that they do not vitiate the Theoretical Phenomenalistic project. If anything, they seem to indicate that the traditional model might fruitfully be reconstrued in certain ways without undue violation to the spirit of its aims. It remains now to discuss the 'reality' of material objects as theoretical entities.

CHAPTER VI

THEORETICAL PHENOMENALISM AND THE INSTRUMENTALISM-REALISM CONTROVERSY

Given the definition of Phenomenalism offered in the Introduction, it is clear that the possible success of a theoretical construal raised important issues regarding the 'existence' of theoretical entities - here the material objects. In particular, phenomenalistic claims that only sense-data exist, and all else is a construction from them, with lesser ontological status, preclude interpretation of material objects (considered as theoretical entities) as 'real' - as least as real as sense-data.

Discussion of the ontological status of theoretical entities in the received view of scientific theories has come to be known as the Instrumentalist-Realist controversy. These two positions see theoretical entities either as 'convenient fictions' essential to a comprehensive theory

but whose existence is not supposed (Instrumentalism) or as having as much reality as the entities of the theory's observation base (Realism). In this chapter, these two positions will be reviewed with special reference to Theoretical Phenomenalism. More specifically, it will be argued that phenomenalism construed theoretically must be viewed Instrumentally, that the consequences of an instrumental interpretation are bizarre indeed, and that the Instrumentalist-Realist debate parallels closely certain problems in philosophical theories of perception.

According to the Instrumentalist, a scientific theory is a set of rules by means of which one may systematically proceed from statements referring to certain observable states of affairs which are, have been or can be observed to other such states. A theory is seen as an instrument which aids in the organization of raw data but does not constitute a factual shorthand of such data. Nagel likens a scientific theory - Instrumentally construed - to a hammer. A hammer is not equivalent to, or a generalized form of, the things which its use aids production of nor is it legitimate to ask if the hammer is an adequate reflection of those things its use has an effect upon.[1]

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[1]Ernest Nagel, The Structure of Science, pp. 129-40.

A theoretical entity, for the Instrumentalist, is not shown to exist by accepted scientific theories. Theoretical statements referring to such entities have no factual reference. So atoms, for example, should be construed as 'convenient fictions' - they are entities, the supposed existence of which renders more convenient the operation, manipulation and heuristic value of the theory. As applied to Theoretical Phenomenalism, Instrumentalism is the claim that material objects have the same status as do theoretical entities. Such a supposition has benefits for common sense ways of elaborating reality similar to the heuristic value of utilizing atomic particles in scientific theory.

On the realist conception, theories do have factual reference and serve as a kind of generalized description of events. Theoretical terms contained in the premises of such theories refer to entities which do exist as do theoretical terms in conclusions derived from such premises. Theoretical entities here are every bit as real as the entities of the observation base and theories are either true or false. It is the realist view which common sense and most scientists, when doing science, endorse.[2]

It is clear that the Theoretical Phenomenalist cannot opt for Realism for he would find himself in the embarrassing position of endorsing two different criteria of phys-

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[2] Ibid., pp. 140-52.

ical reality: the error-free observationality criteria and the notion that existence may be ascribed to any theoretical entity of a well-accepted scientific theory.[3] To the extent - then - that the Theoretical Phenomenalist preserves his error-free notion, he must be an Instrumentalist.

Instrumentally construed, the world of the theoretical phenomenalist turns out to be bizarre indeed. So far as the persistence of material objects is concerned (Problem I), there is no longer a problem in the traditional sense since material objects no longer exist. They, along with three-dimensional, public space and objective time, become 'convenient fictions.' In fact, the very notion of 'persistence' itself must be seen as part of the elaborated theory by means of which some coherence is constructed from the kalideoscope of sense-data.

The question is not why material objects 'endure' but what purpose it serves to suppose that they do. It is no argument to say, as Hirst does of Hume's view, that the idea of persistence as mythological is 'incredible.'[4] The only incredible feature of such an idea is how deeply the

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[3]This latter criteria, as has been noted, also weakens his claims to include various forms of representative realism.

[4]Rodney Hirst, "Phenomenalism," Encyclopedia of Philosophy, ed. Paul Edwards, VI, 131.

claim cuts against common-sense - a fact of little probabitive force. Nor can one argue that 'persistence' is not a cognitive creation but is somehow 'discovered' or 'discerned'. For this is only to assume what the phenomenalist argues against, thus begging the question from the outset.

But the more bizarre aspect of Theoretical Phenomenalism is to be seen when the status of the observer - that to which sense-data appear - is discussed (Problem II). More traditional phenomenalists seems always to assume that the observer could also be described in sense-data language for if he could not, then the program was saddled, from the outset, with an additional assumption as to what there was i.e. something which perceived or to which sense-data appeared. The problem of the observer, however, has received little attention in phenomenalist literature.

But if all that there is, is sense-data, then the observer is nothing but a collection of sense-data somewhat in the way the Hume conceived of a self as a 'bundle of perceptions.' It no longer makes sense, without prematurely begging the question against phenomenalism to call the observer 'that which is appeared to' or 'that which perceives.' For the referent of 'that' is unclear. If only sense-data are real, then the observer is either a 'convenient fiction' or is sense-data. And since one never has the sense-data of a substantival soul or of a 'person' (himself), his exis-

tence must be inferred and is hence 'unreal.' One does not have direct access to an observing entity, only to that which is observed. Ultimate reality, on this view, is the panoply of sense-data. And this is worse than solipcism for solipcistic positions have traditionally been unified by some concept of 'I' or of the 'self.'[5] Theoretical phenomenalism has no such unifying possibilities even if one allows for 'organic' sense-data (Chapter IV). For though such sense-data may be 'bodily,' they are not of a unified observing entity in the desired sense.

Even if one wished to modify phenomenalism by introducing some perceiving mental entity into his ontology as did Berkeley, there would be problems. For a thoroughgoing phenomenalistic interpretation would entail that the distinction between mind and matter is itself a theoretical construction. Again it seems clear from studies of the development of infant cognition that such a division is elaborated gradually and is based upon a whole host of other concepts e.g. internal-external, controllable by will - not so controllable, etc. Thus to posit some observing

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[5]Presumably similar arguments could be made against solipcism if its claims are such that the existence of anything which is not 'immediately' experienced is doubtful. This depends on the particular assumption of the position (see following footnote).

entity as primitive and existing in addition to sense-data, one could not say of it that it was mental or physical. In fact, one could probably say nothing of it beyond what has just been said.[6]

Ontological phenomenalism, instrumentally construed, thus flies in the face of virtually every common sense notion of reality. The self, others, material objects - to name a few things - none of these are what one traditionally assumes them to be. In fact, they are not even 'real.' Nothing is real except sense-data and it is not even possible to say with much precision what sense-data are or to specify some of their prototypical contents. Phenomenalists arrive at this point by claiming that any inference to the reality of theoretical entities is unjustified and by using 'absolute certainty' as a criteria of what there is. To the extent that such conclusions appear unacceptable or untenable, one is prompted to reexamine the premises which led to them.

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[6] 5.632 The subject does not belong to the world: rather it is a limit of the world.
5.633 (1) Where in the world is a metaphysical subject to be found?
5.64 Here it can be seen that solipcism, when its implications are followed out strictly, coincides with pure realism. The self of solipcism shrinks to a point without extension and there remains the reality co-ordinated with it.
Ludwig Wittgenstein, Tractatus Logico-Philosophicus (London: Routledge and Kegan Paul, 1961).

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Scheffler characterizes the Instrumentalist-Realist dispute as essentially a choice between attitudes, one of which he labels 'pragmatic' the other 'fictionalist'. Claiming that significance is related 'both to the idea of intuitive clarity and to the idea of an effective systematic account of the world,' he sees Instrumentalism as retaining the link between significance and intuitive clarity at the expense of systematicity, while Realism sacrifices the link between significance and such clarity but retains a connection between significance and systematicity.[7] What this means is that Instrumentalism which finds 'observationality' as a necessary condition for intuitive clarity construes as significant only that which is intuitively clear and hence only statements referring to observable entities are significant in this sense. All of science, instrumentally considered, is intuitively clear but a substantial portion of scientific theory as commonly known - the part containing theoretical terms - is not significant. With this claim, all non-observational statements can be neither true nor false and therefore cannot serve as belief vehicles. The Instrumentalist must ask instead whether scientific theories 'hold or fail', are 'supported or violated,' are 'employed or abandoned,' or are 'rejected or revised.'

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[7]Israel Scheffler, The Anatomy of Inquiry (New York, Alfred A. Knopf, 1967), p. 181.

It is this terminology which reflects how the Instrumentalist sacrifices the systematicity of science at the altar of his own particular conception of significance.

Realism, by constrast, retains all scientific discourse as significant. Yet its inclusion of theoretical, non-observational terms has the consequence that many of its concepts are intuitively vague by the observational criteria. Here significance yields intuitive clarity to a notion of total systematicity.

Scheffler's key point is that the 'opposition between pragmatism and fictionalism thus seems to lack important substance.'[8] For the issue appears to involve nothing more than alternative decisions as to the application of epistemic labels. Whereas the Instrumentalist refuses to label non-observational terms as 'significant', he readily admits the utility, comprehensiveness and heuristic fruitfulness of the theoretical superstructure.[9] The Realist, on the other hand, is not so reticent to ascribe significance to his theoretical machinery without gainsaying that

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[8] Ibid., p. 187. It could be argued that such a claim is itself a fictionalist position. For the Realist does not agree that the distinction between him and the Instrumentalist is without 'importance substance.' The denial of such a view could thus be seen as instrumentalistic.

[9] One strong argument for the fictionalist point of view is the possibility of having two incompatible theories, both of which account for all possible observational data in an equal fashion. In Chapter VIII, we will discuss how Phenomenalism and Realism might be so construed.

some of his concepts lack a kind of intuitive clarity. The upshot of the issue, then, so far as Scheffler is concerned, resolves itself to which group of epistemic appelations one prefers.

Nagel too sees the Instrumentalist-Realist dispute as essentially ' a conflict over preferred modes of speech.'[10] Claiming that the crucial underlying difference between the two views is the existence or non-existence of theoretical entities, 'what', he asks,' does the notion of 'existence' or 'physical reality' come to?' Limning the critical ambiguities in such concepts, Nagel argues that 'reality' might mean 'observability,' designation by a term which enters into more than one experimental law, designation by a term occurring in a well-established causal law, or even invariance 'under some stipulated set of transformations, changes, projections, or perspectives.' It is, he concludes, a conceptual choice on this score which inclines one to either of the two positions in the controversy.[11]

Note here that the 'basicness' of reality which phenomenalists have traditionally ascribed to sense-data, indeed this is the cornerstone of their view, is error-free

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[10]Ernest Nagel, The Structure of Science, p. 152.

[11]Ibid., pp. 145-52.

observation. In other words, the ontological stance is inextricably connected to a particular epistemic stance. Also, we have seen in Chapter I that linguistic varieties of phenomenalism contain empirical assertions and that such assertions carry with them, as reflected in the 'sensory core' theory, the same epistemic presuppositions.

Note further that some naive views of the scientific enterprise still include the belief that empirical theories are constructed upon a 'given' - an observational bedrock of certainty upon which all theorizing rests. It has, however, been noted frequently that any efforts to filter out this 'given' from interpretations based upon it encounter a 'slippery slope' where one begins skidding downward without fixed handholds. In other words, attempts to distinguish the 'given' from interpretation - now in common sense terms of everyday objects - have failed so completely that the concept of this kind of 'given' seems rather dubious. This inability to precise the notion of the scientific given has always served as a buttress for the epistemic presuppositions found in phenomenalist theorizing.

The relevance of Scheffler's and Nagel's conclusions for phenomenalism can now be clearly seen. For, in a sense, phenomenalism as a theory of perception is no more than a choice of one preferred mode of speech. But in another important sense, it is far more than a semantic squabble. To see this, however, it is first necessary to

see how the Instrumentalist-Realist debate is linked to phenomenalistic and realistic theories of perception.

Note first that phenomenalists retain observationality (error free) as their keystone supposition. Realists, by contrast (these are realists in perceptual theories - call them Perceptual Realists), ascribe as much reality to those things which cannot be observed as to those which can. In so doing, the perceptual realist is able to claim that that which is perceived and the act of perception itself is but one step in a physical process. The Perceptual Realist, though realizing that one can't say much descriptively about the origins of perception (this ranges from no possibility of description to various kinds of 'resemblance'), does claim that there is an origin (in the sense of temporal causation), that there is more to the world than mere contents of sense-fields, and that unobserved entities countenanced by such theories are as ontologically fundamental as those which are perceived. Of course, the Instrumentalists (or Theoretical Phenomenalists) may offer a theoretical, physical account of the perceptual process provided that such an account is construed Instrumentally.

So the Perceptual Realist, desirious of retaining science as we know it in its comprehensive totality, brooks no ontological gradations regarding his basic reality. The phenomenalist, committed as he is to observationality, is

prepared to relegate most of science and the entities entailed by its theories to the realm of computational machinery. Using Schefflerian terminology, the phenomenalist equated reality with observation (error free) and hence what is not observed is neither significant nor real. The Perceptual Realist equated reality with the variables of a comprehensive scientific theory thus placing no ontological premium upon that which is observed. The parallels with Instrumentalism and Realism (here scientific, not perceptual) are obvious.

The drawing of such parallels is not a novel suggestion. But if such parallels obtain, then the conclusion that phenomenalism is, at bottom, distinguished only by certain conceptual choices becomes persuasive. This, coupled with the fact that phenomenalism's conclusions are so bizarre, would militate in favor of science where realistic choices of 'preferred modes of speech' prevail.

The question thus becomes why prefer phenomenalism and to what extent does Theoretical Phenomenalism's alternative ontological formulation provide one with anything beyond its own outré consequences. This will be the task of the next two chapters.

CHAPTER VII

EVALUATION OF THEORETICAL PHENOMENALISM

It has been claimed and argued in the first three chapters that phenomenalism can be construed as an ontological theory, and that perhaps the most fruitful rubric within which to so construe it is provided by the 'received view' of scientific theories. It was also noted that realism (perceptual) may also be so construed. In this way the relationship between the observation base and the theoretical superstructure could be clarified and the implications of a thoroughgoing radical phenomenalism could be seen. Assuming then that an adequate account of ontological phenomenalism has been made along such lines, one is now left with two competing ontological theories. And it becomes appropriate to try and evaluate the two views in an attempt to find the 'correct' or 'better' one. One answer to such a question has already been suggested in the previous

chapter i.e. it's purely a matter of conceptual choice. In this chapter, the aim will be to explore the ramifications of such a claim and also to examine other possible criteria under which the two rival ontological theories may be evaluated.

Note first, however, that there seem to be no testable, empirical differences which would allow for persuasive adjudication between the two theories. They do not allow for a crucial experiment. For one may characterize the conflicting claims of Theoretical Phenomenalism and Perceptual Realism as follows: Sense-data and only sense-data exist/are real ((Theoretical) Phenomenalism is true and Perceptual Realism is false) or sense-data and other entities exist/are real (Perceptual Realism is true and (Theoretical) Phenomenalism is false.) And no crucial experiment or testable difference is available here unless it were agreed upon in advance just what one's criteria of existence/reality was. And this is precisely where the two theories diverge as has been mentioned in previous chapters.

But some philosophers have claimed that the Instrumentalism-Realism dispute is, at bottom a contingent issue and not merely a matter of conceptual choice. And if such arguments are viable, then given the parallels noted above between Instrumentalism-Realism and (Theoretical) Phenomenalism-Perceptual Realism, it might be the case that similar claims

are applicable to phenomenalism and realism. For this reason, we will examine such arguments in some detail.

Maxwell has been one chief proponent of such contingency claims. Arguing against Nagel's claim (see Chapter IV) that the Instrumentalism-Realism dispute is but 'a conflict over preferred modes of speech,' Maxwell claims that[1]

> ...it seems to me that it (Nagel's view)commits the old mistake of confusing meaning with evidence. To be sure, the fact that a kind of entity is mentioned in well-confirmed laws or that such entities are publicly perceptible, etc. - such facts are evidence...for the existence or 'reality' of the entities in question. But I cannot see how a prima-facie - or any other kind of - case can be made to taking such conditions as defining characteristics of existence.

Unfortunately, this line of reasoning seems to beg the question at issue so far as Phenomenalism and Realism are concerned. For to claim that the meaning of the terms 'existence' and 'reality' are different from the evidence for the ascription of existence or reality is to presuppose that what is real and the evidence for it are related just as the realist claims they are. But this is not the relationship which the phenomenalist has in mind at all. The phenomenalist claims that reality and existence may be ascribed only

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[1]Grover Maxwell, "Theories, Perception and Structural Realism," in The Nature and Function of Scientific Theories, ed. by Robert G. Colodny (Pittsburgh: University of Pittsburgh Press, 1970), p. 12.

to that which is directly observable; the standard of evidence is the criteria of reality. Now surely one may argue that the phenomenalist is incorrect, that he has altered the standard notion of evidence and the distinctions which characterize it. Quine has so argued when he said[2]

> Unless we change meanings in midstream, the familiar bodies around us are as real as can be...Having noted that man has no evidence for the existence of bodies beyond the fact that their assumption helps him organize experience, we should have done well, instead of disclaiming evidence for the existence of bodies, to conclude; such, then at bottom, is what evidence is, both for ordinary bodies and for molecules.

But the phenomenalist can argue that although this is one way of regarding evidence, his is quite another. And if such a construal twists the standard meaning of evidence, that, in part, is what his program is all about. The phenomenalist defines reality in a particular way due to his predilection for direct observability and it begs the question against phenomenalism to argue that such a predilection conflicts with realistic standards of evidence. For the phenomenalist is not a realist, a truism which too many realist arguments ignore.

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[2]W.V.O. Quine, "Posits and Reality," in The Ways of Paradox, (New York: Random House, Inc., 1966), p. 238.

Maxwell also argues that Instrumentalism and Realism are contingent theories akin to scientific hypotheses since it is possible that there could be future evidence which would tend to disconfirm Instrumentalism and confirm Realism. In particular, Maxwell mentions the situation where entities which were once unobservable become observable such as has been the case with various bacteria, various molecules, etc. But this argument won't apply here either. For it suggests that there are entities which are now theoretical that might become directly observable. But there is no way acceptable to phenomenalists in which entities can become directly observable in the manner Maxwell suggests. For their discovery and observation will perforce utilize either theoretical construction and/or instrumentation which themselves are not real by phenomenalistic criteria.

Maxwell also maintains that competitors to realism find their theories getting weaker and weaker as scientific progress advances. Phenomenalists, for example, '...do not explain why the theories which they maintain are mere, cognitively meaningless instruments are so successful, or how it is that they can make such powerful, successful predictions.'[3]

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[3]Maxwell, "Theories, Perception and Structural Realism," p. 12. This argument applies to Instrumentalist theories which have a sense-data basis and not to those with a physical object observation basis. For it is the former which is relevant to phenomenalism.

This argument is not applicable to the phenomenalism-realism dispute either. For it presupposes a relationship between success and reality/existence which the phenomenalist denies. In other words, it assumes that predictive power supports claims of existence. But this is a realistic assumption and phenomenalists allow no such link in their ascription of ontological status to entities.

Although Maxwell is arguing against phenomenalism only indirectly, these kinds of arguments abound when realists attempt to argue against instrumentalists and phenomenalists. And this is a point which deserves constant repetition since it is overlooked so frequently and reappears constantly in numerous different disguises. It simply will not do, in attempting to argue against phenomenalism, to ignore basic phenomenalistic assumptions which are <u>from the outset</u> characterized by a different set of conceptual choices - choices which inevitably fly in the face of virtually all realistic assumptions. Such arguments invariably presuppose precisely what phenomenalists deny. Thus, if one chooses to define his position phenomenalistically, counter arguments must invoke standards or criteria which transcend both views. One cannot be persuaded fairly by considerations rooted in the framework of one view against which the opposing view was conceived.

There are, in fact, a host of such second order criteria which may be invoked when assessing competing theories. In the literature, mention is frequently made of such factors as comprehensiveness, systematicity, simplicity, etc. It has been argued that two theories can often be weighed on the merits of their fulfillment of one or some combination of these indirect criteria. Though such criteria are extremely difficult to analyze, judgments based upon them can be compelling nonetheless.

But if one compares Perceptual Realism and Theoretical Phenomenalism against a backdrop of these indirect criteria, it seems as though no conclusive argument can be made either way. So far as comprehensiveness is concerned, both theories purport to cover the same range of facts - their realms are seen as exactly equal in scope. In terms of systematicity, no real comparison is possible since one of the two theories (theoretical phenomenalism) simply does not exist beyond the skeleton provided by various promissory sketches. It may or may not be the case that Theoretical Phenomenalism could be more or as systematic as Perceptual Realism, there is simply no way of knowing. Note, however, that the fleshing out of theoretical phenomenalism does not thereby entail that comparison utilizing such criteria will then be any more successful.

Simplicity, in this case, is not very helpful either. Since both theories are identical in predictive and explanatory power (and hence these two concepts cannot be used for comparison either), any simplicity will be purely 'descriptive' and not inductive'. And this, as Reichenbach notes, is purely a 'matter of taste' and bears no relation to the 'truth-character' of the theory.[4]

Having assessed arguments favoring a contingent interpretation of Theoretical Phenomenalism and Perceptual Realism and rejected them, and also having discovered that virtually all meta-criteria traditionally invoked are inapplicable, one seems to be left with only the 'philosophical' arguments pro and con. We will now consider some of these and argue that most of them miss the mark as well. Prototypical of arguments purporting to 'refute phenomenalism' are those of Armstrong in his Perception and the Physical World and Hirst in his Problems of Perception.[5]

One series of arguments directed against phenomenalists regard their account of space and time as erroneous. Armstrong claims[6]

> However elaborate a construction the individual may build up out of his primitive visual

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[4]Hans Reichenbach, Experience and Prediction (Chicago: University of Chicago Press, 1938), pp. 373-87 (esp. pp. 374-6).

[5]Hirst, R.J. The Problem of Perception. and D.M. Armstrong, Perception and the Physical World (New York: The Humanities Press, 1961), Chaps. V and VI.

[6]Armstrong, Ibid., p. 63.

> and tactual spatial experiences, we have to remember that space is something public, that the positions and spatial relations assigned to physical objects do not depend on the individual alone. If his 'construction' clashes with the 'constructions' of other people, then his construction is not space.

These kinds of claims have already been examined in Chapter II, and, as noted there, they presuppose some notion of 'publicness' which phenomenalists deny from the beginning. Such a concept is, for a phenomenalist, a theoretical construction just as are material objects and is elaborated in a similar manner. It is true that the phenomenalistic idea of public space and public time which emerges from such a project is extraordinary by realistic lights, but this does not constitute a criticism so much as a description.

But arguments based upon realistic notions of publicity do not stop here. Hirst, for example, claims that if sense-data are 'private', then the agreement of descriptions by various observers is unbelievable unless one assumes that sense data are public. It is, in Hirst's words, an 'incredible series of coincidences.'[7] But such arguments seem to miss the point. For the 'coincidences' which the realist

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[7]A similar more eloquent argument is made by A.O. Lovejoy in his Revolt against Dualism (LaSalle: Open Court, 1930), Chapter VIII.

perceives are based upon prior acceptance of the public-private dimension. If, however, one recognizes that such a dimension is itself a construction, then it becomes apparent that the regularities in each domain are no accident. For the very concept of publicity is designed to account for certain regularities in the sense-data of "the" observer. What realists do is assume that because the distinction is so successful, then the entities and concepts captured within this framework must be the case or be real. It is similar to Maxwell's arguments regarding the high probability of the existence of atomic particles based upon the success of the predictions which their formulations entail. In other words, realists are here arguing that there must be a public space or else the phenomenalist postulation of such couldn't account as well as it does for the evidence at hand (i.e. sense-data).

But, at bottom such arguments come to the same thing - a particular construal of reality. To construe as real that upon which successful explanation and prediction is based is pure realism. But, again, the phenomenalist simply does not define reality in this way. Hence the success of his model may not imply either coincidence or reality since he eschews the outlook which leads to such a distinction.[8]

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[8]Here one can see, in another way, what intersubjectivity comes to for phenomenalists. Realists build intersubjective agreement of observers into their notion of truth. But there is no reason why truth must be so defined.

And this same problem occurs in other ways as well. Hirst argues, for example, that the regularities which phenomenalists perceive in their sense-data are incomprehensible unless one assumes that such sense-data or the entities they represent (cause them?) are in some way permanent. That is, if sense-data are transitory and ephemeral, there must be something that is permanent to account for their regularities. But why should the only explanation for regularity be permanence? It seems here as if the success of permanence as an explanation again has led to the conclusion that permanence in some way must be the case. And packed into the notion of permanence is the realist's conception of existence. For in realistic parlance, permanence is a euphemism for 'real' and thus the regularities of sense-data are incomprehensible unless that which is invoked to explain them is real.

It has also been argued that the nature of mind cannot be explained by phenomenalistic arguments. Armstrong claims that phenomenalists have no way of saying that all sense-impressions 'belong to one mind' which entails the 'shipwrecking' conclusion that[9]

> ...the only way left to the Phenomenalist is to argue that there is nothing impossible

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[9]Armstrong, Perception and the Physical World, p. 78.

> about an item of consciousness, such as a sense-impression, existing independently of any consciousness.

But this presupposes that sense-data must belong to some mind. And this, in turn, assumes that minds are necessary in the phenomenalistic ontology. But we have already seen that neither assumption need be the case. This approach is not necessary for the phenomenalist.

It is submitted that virtually every objection to phenomenalism (which is not linguistic) falls into one of the above categories of arguments. It is true that phenomenalists open themselves up to these kinds of criticisms by failing to explore the logical limits of their own views. It is not just that realists presuppose their own norms when evaluating phenomenalism, they are aided and abetted by the phenomenalists themselves who have never traced out the consequences of their own position as has been done in Chapters III and IV above.

The upshot, then, is that there seems to be no way whatever in which to choose between Theoretical Phenomenalism and Perceptual Realism. If this last series of criticisms fail to aid in evaluation of the two theories, then one is left with two alternative ontological positions characterizable by disagreement as to certain basic conceptual choices. If the arguments thus far are persuasive,

then phenomenalism as construed here is (1) every bit as viable a theory internally as is perceptual realism i.e. it's coherent-albeit weird, and (2) extant criticisms of phenomenalism miss the mark, and (3) relevant standards for adjudicating between rival theories are apparently inapplicable. Where now is one to go, or better, how is one to be guided in his choice of theories in this matter?

Given a situation where both theories appear to stand on an equal footing by all of the above criteria, the question of evaluation becomes somewhat ill-put. A better way of looking at the matter might be to ask instead 'why be a phenomenalist?' In other words, one is left with two differing conceptual frameworks and the modes of speech appropriate to each. And unless choice here is to be based upon some kind of emotive consideration for a particular conceptual predilection, it becomes incumbent upon the phenomenalist to offer reasons why his particular rubric should be preferred.

And it does seem as if the burden of proof is upon the phenomenalist at this point. His view is contrary to common-sense and in a philosophical minority group. The phenomenalist, lest he be ignored, forgotten or ridiculed, must provide some considerations which militate in favor of his particular frame of reference. If he does not, then phenomenalism is just a possible alternative with nothing

to say for itself except its possibility and a great deal (psychologically) to say against it. But few phenomenalists take such a tack. Instead they either busily patch up their programs - sometimes ingeniously against realistic attack - or cling dogmatically to their own presuppositions as if they were self-evident.

CHAPTER VIII

WHY BE A PHENOMENALIST?

While it can and has been argued that phenomenalism is viable and that criticisms directed against it are almost - without exception - misguided, phenomenalism as an over-arching ontological framework has precious little to recommend for itself. But the very adoption of a phenomenalist perspective, has some fruitful implications, the surface of which has barely been scratched. Such implications may be separated roughly into two parts. The first part has been the task of this thesis. One must come to philosophical terms with the fact that most conceptions about the nature of reality are either hopelessly facile, erroneously warped by common sense, or flatly wrong. It will no longer suffice to glean the nature of reality by looking at a tomato with a philosophical eye.

One way of recognizing that the issues with which phenomenalism deals are pertinent and unresolved is to free it

from its own errors and timidity. The fact that phenomenalism can be so clarified speaks to the confusion in previous formulations and critiques of them. To clear up such confusions is to reveal that one's conception of public space, public time, material objects, intersubjectivity, mind, matter and person must be thought through again. For all of these notions are, in a crucial sense, derivative from one's own primordial phenomenal awareness. When this is recognized, then the second and probably more valuable lesson of phenomenalism may be undertaken: - trying to make some logical sense out of the relationship between phenomenal data and the concepts based upon them. In the concluding pages, some thoughts along these lines will be offered.

In Chapters II and III, it was argued that developmental studies indicate how infants elaborate reality from a foundation of 'sense-data' only. Every child at birth can be characterized as an entity which perceives primaeval, unelaborated sense-data. What is interesting to note here is that the more infant cognition is investigated, the more it becomes apparent how bizarre the infant's world is by adult standards (especially before the age of eighteen months.) And this is a difference which is not captured by conceiving of infants as miniature adults who know less because they have been exposed to, been taught or have learned less. The infant's world is strange because in it,

there is no difference recognized between internal and external, no distinction made between mind and matter, and no utilization of or belief in cause and effect or means-end relationships.

> Objects are constructed...from the complete and unconscious egocentrism of the first stages to the localization of the body itself in an external universe. To the extent that things are detached from action and that action is placed among the totality of the series of surrounding events, the subject has the power to construct a system of relations to understand these series and to understand himself in relation to them. To organize such series is to form simultaneously a spatio-temporal network and a system consisting of substances and of relations of cause to effect. Hence the construction of the object is inseparable from that of space, of time, and of causality...consequently the elaboration of the object is bound up with that of the universe as a whole.[1]

And in an important sense, this is precisely the phenomenalist construal of what is 'real'.

The point is that the bizarreness of phenomenalism is, in many ways, analogous to the infant's early picture of reality. It is the case that what the infant gradually elaborates, he begins to take as real which the phenomenalist never does. But at the outset where phenomenalists

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[1]Jean Piaget, The Construction of Reality in the Child (New York: Basic Books, Inc., 1954), pp. 92-3. One might still argue that Piaget's picture of infant cognition is a 'reading into' of the facts. Much more observation and research is necessary to determine to what extent this is the case. What is the case, however, is that Piaget is several steps further along the empirical road than virtually all of the 'armchair' psychology done by philosophers.

and infants have only raw sense-data with which to work, their evidential base and picture of the world is similar.[2] To realize this enables phenomenalists to utilize bizarreness arguments for their own ends. They would agree with realists that a phenomenalistic construal of reality is odd, but they can add that it is no odder than the infant's early picture of the world. And in thus relating their picture to a naturalistic analog, the aura of fantasy which realists attribute to the phenomenalist view vanishes.

And this, in turn, suggests one possible use to which the conceptual choices embodied in phenomenalism may be put. Phenomenalism has the terminology and rudiments of conceptualization with which one may begin to flesh out the cognitive superstructure based upon a bedrock of phenomenal data. Here seems to be one of the few reasons why one would wish to consider phenomenalism's series of conceptual choices. For examination of phenomenalist problems and the byways into which its formulation leads can provide philosophers with handholds into areas rarely recognized and less discussed. Phenomenalism, if anything, may have some important heuristic value. It matters little whether one

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[2]Phenomenalists also have a developed logic to use which infants do not. This raises interesting problems that will be discussed below.

believes that material objects are as real as sense-data for although this is phenomenalistic bedrock, the import of phenomenalism, I submit, is quite independent of how one wishes to view the reality and existence of various entities. Paradoxical though it may appear, there seem to be no good reasons to be a phenomenalist, but there are persuasive considerations for utilizing a phenomenalistic point of view.

The principal suggestion for understanding the relationship between sense-data and material objects[3] has been to use the traditional model of scientific theories as a starting point. It must be recognized that this model is every bit as applicable for a realistic ontological theory as it is for a phenomenalistic one. And this has been an issue deliberately skirted up until now. Simply put, there is no reason whatever why the 'received view' is any more appropriate for understanding the logical interconnections between sense-data and material objects than it is for tracing the relationships between sensations and that which might cause them as the causal theorist or representative realist might argue. What is the case, however, is that realism forces orientation toward what is 'out there' and how one can know what that is. The point of orienting one's

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[3]Mention of material objects will be taken to include all of the other related constructions as well.

self phenomenalistically, as has been done here, is to redirect these questions and ask not what is 'really there' but how one elaborated reality from the evidence available. The issue is not really the nature of the external world but the nature of the mind. For if the former is a legitimate question at all, it seems unanswerable until the cognitive contributions to reality construction are understood.

Any attempt, then, to trace the relations between sense-data and the cognitive elaborations based upon them is indifferent to a realistic or phenomenalistic construal. A phenomenalistic outlook perhaps frames the pertinent issues in a more salutory way, but the differences between the two positions remains, nonetheless, a matter of conceptual choice. And this is one benefit of construing such relations along lines suggested by the received view. For by admitting either a realistic (scientific here, not perceptual) or an instrumental interpretation, utilization of the received view does not prejudge the conflicting conceptual committments entailed by theoretical phenomenalism and perceptual realism. Second, the received view offers a comprehensive framework within which one can unite manifold and multifarious sensations into a theoretical totality which yields prediction and explanation. Finally, the empirical aspects of the infant's construction of reality are captured by the received view whereas programs of translation and conceptual

analysis of perceptual terminology bypass this dimension entirely.

There are thus compelling reasons to investigate the possibilities of utilizing the received view in such situations. It is, however, just at those points where provisional adaptation of the received view seems most fruitful that qualification and amendment of it seems necessary. These are the areas of the 'given', the nature of prelinguistic theories, and the transmission of meaning from the observational terms to the theoretical terms.

The traditional model of scientific theories postulates a relationship between the observation base and the theoretical superstructure. Terms referring to observed entities and those referring to theoretical entities are linked by means of interpretive sentences which contain terms from both the observational and theoretical vocabulary (Chapter III). In the case of cognition, there is no observational vocabulary for primary sense-data. Further, the 'given', construed as that untainted by theory, is directly perceivable only by infants. Unlike material objects which remain the basic furniture of adult perception, pristine sense-data are soon replaced by a series of ever refined constructions which successively become that which is 'directly perceived.' Although this in no way implies that the given is irretrievably lost (for it can and must be reconstructed if one is to understand how theories are

elaborated from sensory evidence), it does suggest that the relationship between observation base and theoretical overlay must be reconstrued - at least in this type of situation. Thus any meanings which, say, material object terms have are not analyzable solely by the model of simple observation. In other words, to decide if x has the property p, it will not do (except in the first instance) to look at x and see. For what is seen will be itself a theoretical construction. Observation at any stage is fine so long as it is recognized that what is 'directly observed' already has certain theoretical assumptions built into it and the meanings of such terms must be understood in the light of such assumptions.

And this problem is further complicated by the fact that such theorizing occurs prior to language acquisition. That an infant is gradually elaborating a world view in the absence of linguistic activity is a developmental fact. But at present there exists no models whatsoever for characterizing such theory construction. The model suggested by the 'received view' is wedded to a picture of interpretation of a scheme of symbols which interpretation occurs by the transmission of meaning from observational vocabulary to theoretical vocabulary. In the case of infant cognition, this picture must be revised.

Such a model could, perhaps, be fruitfully based upon an investigation and patterning of motor activity, sensation

and expectation. Prelinguistic theories, it is suggested, might be viewed as configurations of behavior aligned with actual and anticipated perceptions.[4] Needless to say the technical problems are enormous, but the philosophical problems are every bit as challanging. For example, the evolution of the theory is here not totally separate from the logical linkages within the theory. For an infant's elaboration of reality occurs simultaneous with his elaboration of logic itself. The laws of logic which adults take for granted seem to be gradually developed as well. It is the case that the infant's cognitive system may, at any stage, be describable in terms of 'adult logic', but to understand the linkages, formulation and generalizations of the infant require a construction of new and different logical networks. Piaget and his followers have been almost alone in their recognition of and attempts to formulate such systems.[5] It is surprising that logically trained

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[4]Such terms are not as vague as they might appear. For example, there is a substantial body of literature regarding the use of surprise to tap expected perceptions. See W. R. Charlesworth "The Role of Surprise in Cognitive Development", in Elkind, D. and Flavell, J.H., (eds) Studies in Cognitive Development (New York: Oxford University Press, 1969), pp. 257-314.

[5]For an excellent summary of Piaget's work in this area, see J.H. Flavell, The Developmental Psychology of Jean Piaget (Princeton: D. Van Nostrand Co., Inc., 1963), chaps. 4-6. Regarding Piaget and Philosophy see H.G. Furth "Piaget in Uses and Abuses of Philosophy, Acta Psychologic, 29, (1969) N. Holland Publ Co.

philosophers who are so superbly equipped to deal with such problems have been totally uninterested in such a task.

Another cluster of philosophical problems raised when dealing with the relations between sense-data and theory is the nature, status and description of 'organic sense-data' (Chapter II). For it seems clear that an infant's inner bodily sensations - his body position, muscle tone, etc. - are crucial variables in his elaboration of space, understanding the concept of a person, etc. For the infant only discovers gradually that he exists and that his arms and legs belong to him, and much of this discovery is based upon such 'inner' sensations. Here there are few, if any, paradigms, models, or even suggestions as to how one might proceed. It matters little, at this point, whether one is a Phenomenalist or Realist to recognize that the relation of sensory evidence to theory cannot ignore such data.

Finally, and getting back to the original suggestion regarding the use of the 'received view', it remains to be explained how the structure of prelinguistic theories gets packed into the meanings of what are traditionally taken to be observation terms. Such an explanation must perforce await some work and developments in the area of prelinguistic theories. It is clear that the traditional model will here have to be qualified. And it may even be the case that the traditional model cannot be adequately qualified. Or

perhaps a better schema might be advanced. But until then, and for the reasons offered above, it is probably the best jumping off point.

This, then, is the final step in the project of construing phenomenalism along lines suggested by the 'traditional model of scientific theories.' We have concluded that there is little reason to be a phenomenalist and now, perhaps, that the traditional model may not be applicable either. But in so doing, it has become abundantly clear how fragmented, ill-put, and incomplete is the problem of the 'external world' as traditionally conceived by analytic philosophers. To clarify such issues poses a whole range of virtually unexplored philosophical problems. And these problems, I submit, are far more exciting and important than giving phenomenalism a new lease on life.

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