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V.—POLAR CONCEPTS AND METAPHYSICAL ARGUMENTS.

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IN these remarks I propose to examine the credentials of an argument that enjoys a considerable vogue in contemporary philosophy. I shall be concerned with a logical principle about the nature of polar concepts, which for the sake of brevity I shall call the polar principle. It is not so much an argument as a dogma that is employed in discussing and, I hope to show, distorting different kinds of philosophical problems. I shall therefore first say something about the principle itself, and then consider how it has been applied to three philosophical issues, for it is only by examining how the principle operates in detail that its shortcomings can be detected.

The earliest and clearest formulation of the polar principle with which I am acquainted has been made by Mr. N. Malcolm as follows: " Certain words of our language operate in pairs, *e.g.*, ' large ' and ' small ', ' animate ' and ' inanimate ', ' vague ' and ' clear ', ' certain ' and ' probable '. In their use in ordinary language a member of a pair *requires* its opposite—for animate is *contrasted* with inanimate, probability with certainty, vagueness with clearness. Now there are certain features about the criteria for the use of the words in these pairs which tempt philosophers to wish to remove from use one member of the pair. When the philosopher says that all words are really vague, he is proposing that we never apply the word ' clear ' any more, *i.e.*, he is proposing that we abolish its use. But suppose that we did *change* our language in such a way that we made the philosophical statements true—that is, made it true that it was no longer correct to call any empirical statement certain, no longer correct to say of any word that its meaning is clear. Would this be an improve-

ment ? It is important to see that by such a move we should have gained nothing whatever. The word in our revised language would have to do double duty. The word ' vague ' would have to perform the function previously performed by two words, ' vague ' and ' clear '. But it could not perform this function. For it was essential to the meaning of the word ' vague ' in its previous use, that vagueness was *contrasted* with clearness. In the revised language vagueness could be contrasted with nothing. The word ' vague ' would simply be dropped as a useless word. And we should be compelled to adopt into the revised language a new pair of words with which to express the same distinctions formerly expressed by the words ' clear ' and ' vague '. The revision of our language would have accomplished nothing."[1]

There are two serious weaknesses in this argument. I shall summarize them now, and consider them in greater detail when we consider the three uses of the polar principle.

I. It is clear that Malcolm holds that the only purpose a philosopher can have in generalising a polar term in the way that he describes (*e.g.*, by saying ' All words are vague ') is that he wishes to alter our use of language in order to make it more ' precise ' or ' accurate '. Malcolm has no difficulty in showing that the philosopher's statement, so interpreted, achieves nothing. But we must ask why Malcolm is so confident that the philosophical observation is intended to be taken as a linguistic recommendation. In fact no philosopher who made a statement of this kind would accept Malcolm's account of what he is attempting to do; hence he does not feel abashed when Malcolm points out that he fails. Perhaps Malcolm is right and the philosopher wrong; how can this be decided ? Before vexing ourselves with this question we should consider the following two points.

(*a*) The two standpoints can perhaps be reconciled in this way. A polar generalisation, although not itself a rule

[1] N. Malcolm: *Moore and Ordinary Language* in *The Philosophy of G. E. Moore.* (Living Philosophers Library), pp. 364–365.

of language, entails a modification of language rules. Certainly Malcolm is right in saying that if we accept the truth of ' All words are vague ', then we are committed to a language in which there is no use for the expression ' a word with a clear (or vague) meaning '.

In parenthesis, I should point out that there are ambiguities in the expression ' use of an expression '. This may refer merely to the place of a symbolic form within a language system of some kind; this notion is rather like that of an uninterpreted proposition in mathematics. On the other hand ' use ' may mean ' *actual* ' rather than ' possible ' use; in this case we are referring to the specific rôle, not necessarily descriptive, of an expression within a natural language. Failure to notice this ambiguity can lead to trouble, especially if it is coupled with an uncritical adherence to what may be called an extensional theory of meaning. The following quotation illustrates this. " For an *established* linguistic practice is one which we know to be taught, so to speak, and learned, and used accordingly, and which must therefore have at least *some* occurrences in which it is free from error. . . ."[2] Since the phrase ' honest broker ' is part of an ' established linguistic practice ', as presumably it is, it follows from Rollins' argument that there *must be* honest brokers, *i.e.*, there must be some occasions on which ' honest broker ' is correctly applied. This is a rather perverse form of the ontological argument.

Nevertheless the possibility remains open that the polar generalisation may be important and illuminating, even though it should entail redundant verbal reforms in the way that Malcolm describes.

(*b*) The significance of polar generalisations is partly explained by some further remarks of Malcolm, which are difficult to reconcile with those already quoted. He points out quite rightly that philosophical paradoxes of this kind arise from a " desire to emphasize similarities or differences

[2] C. D. Rollins. *Ordinary Language and Procrustean Beds.* Mind 1951, p. 230. Author's italics. Rollins goes on to say that this point is well known and refers to its formulation in Malcolm's article *Moore and Ordinary Language.*

between the criteria for applying the phrases 'absolutely certain' and 'highly probable' to empirical propositions; and also from the desire to stress the difference between the criteria for applying 'certain' to empirical statements, and for applying it to *a priori* statements." Malcolm is now saying that a polar generalisation is not just a suggestion about changing language, but is essentially a statement about an *analogy;* and since presumably the question of whether an analogy is helpful and illuminating is logically independent of the question whether or not it entails pointless syntactic changes of the kind illustrated, it follows that Malcolm's original linguistic criticisms are beside the point.

II. There is a more obvious and more serious objection to Malcolm's formulation of the polar principle; we shall see that this applies to various applications of the principle that have been made. The relevant sentence here is as follows: "When the philosopher says that all words are really vague, he is proposing that we never apply the word 'clear' any more, *i.e.*, he is proposing that we abolish its use." Now even if the philosopher *is* making a linguistic proposal, which we have seen to be very doubtful, it is certain that he is not making the one that Malcolm ascribes to him. Even if we accept 'All words are really vague', all that follows is that we cannot use 'vague' and 'clear' *to qualify words;* all the other manifold uses of these polar terms remain unaffected. For example, we can still significantly say things like 'I saw the vague outline of a figure', 'The water in the brook is clearer than that in the pond', etc. Now the importance of this resides in the fact that because there are accepted uses of the polar terms 'clear' and 'vague' for describing things other than words, then a generalisation of one of the terms that is restricted to a certain class, *e.g.*, words, is meaningful in so far as there is an analogy between the generalised polar concept and its other uses where it functions to point a certain contrast. Hence the legitimacy of polar generalisations is to be determined by whether or not they indicate a

genuine resemblance between the whole of a certain class that is qualified by a generalised polar term, and other classes to which the term applies as a contrast. It may appear from this that a polar generalisation is legitimate only in a restricted sense, *i.e.*, as applied to a class, and that it acquires its significance from the fact that there are other familiar and established uses of the polar term. Certain metaphysical arguments contrast a generalised and familiar polar term with a definition of the contrasted term that does not correspond to an accepted usage. The first two applications of the polar principle that we shall consider are to arguments of this type. The first of these is as follows:

A. Descartes believed that his methodological innovations would rescue him from a number of vexatious puzzles, amongst them the possibility that we may be always dreaming. This is not, according to the polar principle, a genuine problem, for its very formulation is without sense. The word ' dream ' refers to a state that is the opposite of waking, its function is to point a certain contrast. The Cartesian generalisation robs the word of this function and therefore of its meaning. A further consequence, as Malcolm indicates, is that the familiar and important distinction between dreaming and waking cannot be drawn, for we no longer have a terminology in which to do so. If in the metaphysical Cartesian sense I was dreaming while I ate my breakfast this morning, then I cannot describe my experiences while I slept as dreams in that same sense. Thus the only thing achieved is that a perfectly good word is deprived of its familiar meaning without being assigned any other.

Here, we must note for later consideration an assumption that underlies this argument. It is that if it has been shown that the *proposition* ' We are always dreaming ' is meaningless, then it follows that it must also be senseless to raise the *question* ' Are we always dreaming ? '

A propos Malcolm's formulation of the polar principle, I argued that a generalisation of a polar concept is to be

interpreted as an implicit statement of an analogy. It may of course be a good or a bad analogy, but the chief point that I wish to establish is that it is as an analogy that a metaphysical assertion of this kind must be considered—to dismiss it in cavalier fashion by invoking the polar principle is entirely to miss the point. Let us then re-state Descartes' problem along these lines.

In the first place it must be recognised that this metaphysical worry is not about dreams in the ordinary familiar sense of the word 'dream'; thus any argument that relies on the assumption that Descartes *is* using the word in this sense will be irrelevant. Nor is it the case that in order to state the problem it is necessary to use the word 'dream' in an extraordinary, meaningless sense. The question at stake may be put in this way: is there a kind of consciousness which stands to our normal waking experience in an identical (or similar) relation to that in which these waking experiences stand to our dreams? The problem is not whether we are perpetually dreaming in the ordinary sense of the word, but whether there is a resemblance or analogy between our waking life and our dream life *vis-à-vis* another sort of awareness. It is by contrast with this order of consciousness that Descartes gives a metaphysical definition of 'dream' that embraces waking experience. In this way the Cartesian difficulty can be stated without employing any verbal formulae in which a polar concept is generalised. Thus the polar principle does not 'dissolve' the problem at all; it is merely a not very well founded objection to a certain way of stating it.

My reformulation is open to a number of objections. For example, it may be urged that the notion of a more 'real' or profound kind of consciousness is nonsensical because it is unverifiable. This is not convincing. In the first place the verification principle itself is by no means beyond question, as is now generally recognised. Moreover it is not self-evident that the Cartesian problem is empirically untestable. We might say that it is verifiable on death; if it should be objected that this condition itself is nonsensical, then we can specify various operations that could give the

problem an empirical significance. Prayer, fasting, meditation and the consumption of mescaline may separately or together give rise to states of consciousness of such an intensity that in comparison with them ordinary waking experience is vague, disjointed—in fact, dreamlike. Again, it may be objected that the problem is a pointless one; there are no elements in human experience that give rise to it. This is surely to beg the question, for presumably a mystic would claim that he has experiences of illumination incomparably more vivid and intense than ordinary waking consciousness—and who is to gainsay him ? If he does have these experiences, by what right is he denied a language with which to compare them with more familiar ones ? It is worth remembering, I think, that Descartes himself had such an experience in November, 1619.

Nothing that has been said here has anything to do with the empirical issue of whether or not there is a more profound or ultimate sort of knowledge accessible to all or some human beings, although I am taking for granted the fact that people sometimes have peculiar experiences that seem to them profoundly or perhaps supernaturally illuminating. I am concerned to show only that it is not necessarily unintelligible to attempt to characterise such experiences by generalising the polar term ' dream '.

Polar terms, and generalisations of them, may occur in hypothetical as well as categorical sentences. (I am using ' hypothetical ' here rather loosely.) Philosophers are perplexed by the supposition that we *may* be always dreaming, as well as by the positive assertion that we are. Even if the polar principle were successful in demonstrating the meaninglessness of assertions that generalise polar concepts, it would not follow that suppositions of a similar form were also meaningless. It is a confusion of modalities to assume that the logical rules which govern polar terms in indicative sentences are identical with those that apply to these terms in suppositions or questions, where the inapplicability of one of the terms is raised only as a possibility. The most important logical difference between propositions and suppositions is this: if a polar term is

generalised in the former, then the whole expression can be given a meaning only if it is interpreted as an analogy, while a supposition may be meaningful even if it is taken in its literal, *i.e.*, familiar, sense. To make the *assertion* " We are always dreaming " is to commit oneself to a use of ' dream ' which is different from, though not unrelated to, its ordinary use, while to consider perpetual dreaming as a *possibility* is not necessarily to use the word ' dream ' in any unusual sense.

This distinction between suppositions and assertions indicates that it is important further to analyse suppositions in which a polar term is generalised, for as we shall see these sentences can bear different constructions. I shall illustrate the salient ambiguities of these by reference to the sentence ' We may be always dreaming.' This may be interpreted as raising issues that are primarily either epistemological, empirical or logical. They will be discussed in that order.

(A). The expression may be interpreted as raising the epistemological question of the nature of the tests and criteria by reference to which we answer the question ' Am I dreaming ? ' The particular point at stake here is whether or not there is a *decisive* test for determining which of two polar terms is to be applied to a given subject matter, in this case a certain state of consciousness. Many philosophers (perhaps Descartes amongst them) have mistakenly thought that if there is no decisive test, then the distinction in question is in some way ' unreal ' or ' irrational ' or ' illegitimate '. As Malcolm points out, the question here is essentially the same as that involved in the notion that we can never be completely certain of the truth of any empirical proposition, for theoretically such a proposition is testable by an infinite number of operations and is liable to be falsified by any one of them. This consideration does not entail, in either this case or that of Descartes, that the validity of the distinction is in any way impugned, for not all tests are acid tests. There is no standard criterion for baldness, yet the familiar differences between men who are bald and those who are not remain

unaffected, even though it follows from the lack of a decisive criterion that there may be borderline cases which cannot be classified *tout court*.

(B). From an empirical standpoint a supposition of this kind should be regarded as a statement either to the effect that there is no known empirical obstacle to the non-existence of one side of the polar distinction, or that the distinction is a factual and contingent one, so that either of the polar terms may be empirically inapplicable.

These suppositions may refer to either the present or the future. In the former case it is being stated that it is an empirical possibility that everyone is now dreaming. If so, then our present so-called waking experiences will be dreams in the same sense as are our so-called dreams. I am inclined to think that this possibility is untestable and strictly meaningless, but I suggest that it arises naturally from an experience which, though odd, is not uncommon—namely, dreaming that one is dreaming.

As applied to the future, the supposition may be taken to state, falsely, that there are no known empirical reasons why everyone should not in the next moment or later fall asleep and immediately begin to dream.

(C). Alternatively it could be taken to illustrate a logical point, *viz.*, that there is no logical contradiction in any expression that generalises a polar term. The proposition ' All conscious beings are dreaming ' is not logically absurd; although a *statement* to this effect may well involve a pragmatic paradox, the sentence gives rise to no difficulty from a formal point of view.

This brings us to the question: what is the logical status of polar terms ? It is not adequate to say simply, as does Malcolm, that certain words in our language operate in pairs, because this covers different logical relations, *e.g.*, those between contrary and correlative terms. Let us first consider a general definition of ' opposite ' terms, and then examine the different cases that it covers. A and B are ' opposed ' terms when : ' X is B ' entails ' X is not A ',

and ' X is A ' entails ' X is not B '.[3] This definition applies to the following:

(1). Philosophically puzzling polar concepts such as ' material ' and ' mental ', ' dreaming ' and ' waking ', ' absolute ' and ' relative '.

(2). Contrary terms that have, as Aristotle[4] puts it, an ' intermediate ' or ' mean ', *e.g.*, ' concave ' and ' convex ' (intermediate ' flat '), and ' past ' and ' future ' (intermediate ' present ').

(3). Contrary terms that do not have a mean, *i.e.*, contradictories, *e.g.*, ' husband ' and ' wife ', ' brother ' and ' sister ', ' necessary ' and ' contingent ', ' male ' and ' female ', and ' true ' and ' false '. (In these last two examples I am observing the ordinary rules for the use of these expressions; in a more elaborate language, such as that of biology where the phenomenon of hermaphroditism is of importance, the ' male-female ' distinction may come under heading (2). Similarly in a 3-valued logic the distinction between ' true ' and ' false ' would come into that category.)

The definition is a highly general one, since it applies to contrariety considered simply as incompatibility, that is, the view that ' contrary ' should be so used that ' blue ' and ' black ' are contraries of each other. A more restricted definition of ' contrary ', which rules out this case, is the following: A and B are contrary when ' X is B ' entails ' X is not A ', and ' X is not B ' entails ' X is A '. The generality of the first definition makes it preferable for our purposes.

' Opposite term ' is an expression that is not applicable to all predicates. Influenced by examples from formal logic we may be tempted to say that any predicate P is a

[3] These two conditions are interdependent.

[4] Aristotle. *Categories* 11b. Cf. also *Categories* 6 b. " By the term ' slave ' we mean the slave *of a master;* by the term ' master ', the master *of a slave* ". According to the polar principle it should follow that no meaning whatever can be attached to " All men are slaves "; yet this could have the perfectly good analogical meaning that all men (including masters and slaves in the ordinary sense) are in servitude to their passions—or perhaps to God.

contrary term of some kind, on the ground that we can construct its opposite by using some such symbol as ' not '. This logical triviality is of no importance here; what makes a term an opposite is whether it is in fact used as such, either in ordinary language or in a metaphysical system. Thus there are not, in ordinary discourse, any opposites of predicates like ' jealous ' or ' green ', while there are opposites of ' fast ' and ' intelligent '. It is not always easy to distinguish between those predicates that have opposites and those that do not. Thus should we say that ' angry ' is a polar concept ? If so, is its opposite ' good-tempered ', ' amiable ', or what ? These difficult cases do not, however, invalidate the general distinction.

Some polar concepts are used not to point a contrast within a certain subject matter, *e.g.*, words or states of consciousness, etc., but to indicate a universal distinction, for example ' mental ' and ' material '. Various theorists employ these expressions as exhaustive categories; it is supposed that anything you may care to name *must* fit into one or other of these pigeon-holes. Highly general terms of this kind are employed univocally; that is, the sense in which a tree is ' material ' is the same as that in which a brick is ' material '.[5] Now the polar concepts that we have so far considered mark similar distinctions within different but analogically related classes of entities, so that a generalisation of one of the terms as it applies in one region is meaningful because its opposite still retains a use elsewhere. As we have seen, this is not the case with distinctions like ' material ' and ' mental ', hence it may seem that the polar principle applies to them.

It is certainly meaningless to say ' Everything is material ' in the ordinary sense of ' material ', and for the reason adduced by the polar principle—namely that here ' material ' can be contrasted with nothing. Having conceded this, I must point out that very little follows from it. We cannot, for example, conclude that the ' mental-material ' distinction is in any mysterious way ' ultimate '

[5] Cf. Aristotle, *Categories* 1.

or 'irreducible'. Some have tried to put the polar principle in the service of metaphysics in this way; but from such a starting-point we cannot reach an ontological terminus. Let us ask: what is it to affirm or deny that a certain distinction is 'irreducible'? This may refer to many different things. One of them which is relevant here is the kind of theory represented by epiphenomenalism. This doctrine denies the irreducibility of the distinction between mental and physical processes by claiming, roughly speaking, that the laws of psychology are special cases of the laws of chemistry and physics. It is conceivable that one day this may be demonstrated, so that when the epiphenomenalist says 'Everything is matter' he is making a logically respectable assertion that may one day be shown to be empirically true. He is not, of course, denying that there are mental events in the ordinary sense, for his thesis presupposes their existence; and no one but a very literal-minded philosopher bemused by the polar principle would suppose that he was denying this.

This example of universal polar concepts illustrates a further point, which is that the polar principle is not confined to predicates. The temptation to think of all polar concepts as predicates arises from the fact that alleged irreducible ontological distinctions between kinds of substances can be expressed in the form of propositions about the applicability of certain predicates. Thus 'Matter (or mind) is the only reality' is equivalent to 'Everything is really material (or mental)'. This shows nothing, for neither form of expression is more 'fundamental' than the other. In any event, as we have seen, it would be extremely difficult to translate Descartes' problem into the terms of either of these formulae. From these considerations, then, we can draw only the conclusion that polar terms are non-sentential expressions, not necessarily predicates, that are used in a certain way, *i.e.*, as opposites, either in ordinary discourse or in the artificial language of a metaphysical system. This does not take us far, and indeed is not intended to, for one of the theses I wish to maintain is that there are important differences between polar concepts

which are obscured if the polar principle is applied to them blanket-fashion. This consideration is independent of the criticisms that I advance against particular uses of the principle.

As we have seen the polar principle expresses a theory about meaning, namely that the significance of a term that is used as an opposite depends upon a *contrast*. It is often supposed not only that this is clear but that it is clearly true. I wish to cast suspicion on these notions, which I propose to do by considering an example of two opposed terms which give rise to no philosophical difficulties. The distinction between 'concave' and 'convex' is sometimes cited as a paradigm of opposition. Let us imagine a world in which only one of these two kinds of surfaces is to be found in nature, say 'concave'. The polar principle entails that no inhabitant of such a world could have a name for this sort of surface. This is false. Admittedly if a certain word has a meaning its use must be contrasted with another word; *i.e.*, the rules for its use must differ from those governing the use of related expressions. But this is not to say that its use must be distinguishable from that of another *particular* word, in this case 'convex'. Suppose that in the hypothetical world all physical surfaces are either flat or concave; all surfaces are 'concavo-plane'. In the language of the inhabitants 'concave' would have a meaning because it is contrasted with 'flat'; here 'flat' and 'concave' are contradictories and not, as in our language, contraries. (It is not difficult to imagine different states of affairs; to describe some of these we would need a language with more complicated logical rules. Imagine that there are only flat and concave surfaces, and further that all—and only—flat surfaces are white while all the other colours are encountered only in concave surfaces. Then, presumably, 'flat' could be used as the contradictory of 'coloured', and 'white' as the contradictory of 'concave'. This is on the supposition that the language in question would be capable of doing the describing jobs that ordinary English does. There is no *necessity* that in this imaginary empirical situation the grammar of 'flat' and 'coloured'

etc. would be as I have suggested, any more than there is any compelling philosophical reason why we should use the 'concave-convex' distinction to describe the world that we know. There are reasons for this, of course, but they are scientific and perhaps biological ones. If we were interested only or primarily in the texture of surfaces there would be nothing in our language corresponding to the concave-convex distinction. In fact English is very poorly equipped for discriminating between differences in texture.)

It might now be objected that in my hypothetical language 'concave' could not have the same meaning as it does in ordinary English. But what does this mean? It may be simply a reiteration of the fact that in the imaginary language 'concave' is contrasted with 'flat' and not, as in ours, with 'convex'. This is true but trivial. If, on the other hand, it is taken to mean that in the language 'concave' *must* be used in accordance with rules that differ from those of English, then it is false. We would use the word to refer to precisely the same kinds of surfaces as it describes in ordinary English. To use a somewhat unhelpful idiom, semantic rules are not always logically dependent upon syntactic rules.

This discussion of the logical grammar of 'concave' has shown that its familiar meaning is not conditional upon its being used to point a particular contrast, for it retains this meaning if used as the contradictory of 'flat' or even 'coloured'. Hence this meaning is not, as the polar principle states, dependent upon its use as a contrast to 'convex'. It is true, but merely as a matter of definition, that a polar term is used as the opposite of *some* other expression; but its significance is not dependent upon its being contrasted with any other particular expression. The error here arises from confusing the definition of 'polar term' with a false theory about the meaning of these terms.

Our consideration of the 'concave-convex' distinction has shown also that what are incompatible properties in one world (or opposed terms in one language) are not necessarily so in another world or language. (Many valued

systems have made this a familiar notion in formal logic.) Hence we cannot allow the claim, which is implicit in the polar principle, that any rule to the effect that one term is the opposite of another can possess *a priori* universal validity. There is nothing *wrong* with a language in which 'concave' is used as the contradictory of 'flat', for it might describe perfectly well a certain sort of world. In this world philosophers who held the polar principle would presumably argue that there *could not be* a *tertium quid*, an idea that we know to be false because in our world physical surfaces can be concave or flat or convex. A language that can describe these differences is richer than the former; yet from the standpoint of the imaginary language the polar principle would lead us to the conclusion that the richer language was a logical impossibility.

I now wish to make two points to guard against possible misunderstanding of the philosophical moral that I wish to draw from the discussion of the 'concave-convex' distinction.

1. I have used the distinction as a purely empirical, descriptive one. It is quite possible, *pace* Rollins, that in a world which has only concave or concavo-plane surfaces the inhabitants would be able to imagine, define and name convexity. In that case they would be able to contrast empirical concavity with the *a priori* concept of convexity. This case therefore is easily covered by the polar principle, hence I have interpreted the distinction as an entirely empirical one.

From this an interesting question arises. Suppose an inhabitant of the concavo-plane world, who has not envisaged convexity and who therefore uses 'concave' and 'flat' descriptively, is confronted with a convex surface. Will he say 'This is a flat surface', *i.e.*, a 'non-concave surface', or will he be at a loss, knowing that he has no vacabulary to describe it? What happens will depend entirely upon the meaning that he has attached to the expressions 'concave' and 'flat'; if he uses 'flat' as simply the equivalent of 'not concave' then he is likely to

say the former, while if he has discriminated between the two kinds of surface he will know that he does not know what to say.

Compare this with teaching a child the use of ' blue ' and ' red ' by confining it in a room that contains only red and blue objects.[6] The child is brought out, shown a yellow object and asked to name its colour. He will say ' blue ' if he has defined this as ' not red ' and ' red ' if he has defined this as ' not blue '. If discrimination has taken place he will have no expression for yellow. But what is one to understand by ' discrimination ' here ? Simply the ability to use ' red ' and ' blue ' not merely as the contraries of each other but of other colours also; *ex hypothesi* this ability cannot be demonstrated while the child is confined in the room.[7]

2. It may be thought that I have misrepresented the ordinary idea of the relations between ' concave ' and ' convex ' on the ground that any object which is concave on one side (such as a lens) *must be* convex on the other. Convexity is concavity looked at from the other side, as it were. But how are we to regard the ' must ' here ? It certainly refers to no logical necessity, and indeed this notion is empirically true only provided that we are thinking of an object like a lens. There is no reason at all why objects that are concave on one side should be convex on the other, which might be flat. And an object might be concave on one side without having another side at all, *e.g.*, a cliff. My question, then, was: in a world without empirical instances of ' convex ', what would be the logical rules governing the relation between ' flat ' and ' concave ' in the language which describes this world ? In answer to this I argued that although the logical relations between the expressions would be altered, their meaning would be

[6] This example was suggested to me by Mr. J. L. Ackrill.

[7] This is connected with a problem raised by Wittgenstein: " Could we define ' red ' by pointing to something that was *not red* ? That would be as if one were supposed to explain the word ' modest ' to someone whose English was weak, and one pointed to an arrogant man and said ' That man is *not* modest '. " *Philosophical Investigations*, p. 14.

unaffected. Hence as a doctrine of meaning the polar principle is false.

B.[8] Certain arguments which do not explicitly invoke the polar principle are based upon an essentially similar theory of meaning. A sophisticated example of this is to be found in Chapter VII of Professor Ryle's book *Dilemmas*, where he deals with the general inference from " the notorious limitations and fallibilities of our senses to the impossibility of our getting to know anything at all by looking, listening and touching ".[9] We shall soon see that with little alteration Ryle's argument could be re-stated in terms of the polarity of ' true ' and ' erroneous ' (or related expressions) as applied to propositions that embody sensory observations. However, Ryle employs an original analogy to make this point, so that his treatment of the topic requires separate consideration.

Ryle considers the notion of the systematic delusiveness of the senses in the light of this analogy. " A country which had no coinage would offer no scope to counterfeiters. There would be nothing for them to manufacture or pass counterfeits of."[10] He develops this idea in the following way. " In a country where there is a coinage, false coins can be manufactured and passed; and counterfeiting might be so efficient that an ordinary citizen, unable to tell which are false and which were genuine coins, might become suspicious of the genuineness of any particular coin that he received. But however general his suspicions might be, there remains one proposition that he cannot entertain, the proposition, namely, that it is possible that all coins are counterfeits. For there must be an answer to the question ' Counterfeits of what ? ' "[11]

Is Ryle here denying that we can *always* be mistaken on

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[8] This is the second example of a metaphysical argument which contrasts a familiar polar term with a novel definition of the contrasted term. For A, see page 87 *supra*.

[9] loc. cit. p. 94.

[10] loc. cit. p. 94.

[11] loc. cit. p. 94–5.

the ground that if this were the case we could never *find out* that we were mistaken ? If he is maintaining this, we might object that it is a common experience to discover, in retrospect, that we have made a mistake in observation, although at the time of making the error we were not able to avoid or correct the mistake. Indeed, if knowing how to correct a mistake is a necessary condition of making it, we would presumably commit fewer errors than we do. This criticism is without foundation, for it rests on a confusion about the concept of ' finding out a mistake '. Ryle is saying nothing about the particular cases where we make an error of observation and are at the same time in ignorance of how to rectify it. What is being maintained is that a mistake is to be defined, in part, as something that is in principle detectable. Detection is ruled out by the notion of universal and perpetual error, so that in these circumstances a mistake is a logical impossibility. An *in principle* undiscoverable mistake is not a mistake at all.

With this conclusion one must agree; yet we shall see that the parable about counterfeiting is not as immediately relevant to establishing it as Ryle supposes. I shall try to show that this analogy throws no light on general scepticism about the senses, and furthermore that it leads Ryle to misrepresent the philosophical issue that is at stake.

The sceptic's statement ' The senses always deceive us ' is more like ' All the paintings attributed to Vermeer are false ' than it is like ' All coins are counterfeits '. In my proposed analogy I do not mean by ' false ', ' fake ' *i.e.*, a forgery intended to deceive experts and the public about their authorship, for in that case Ryle's question ' Fakes of what ? ' would arise. I am envisaging the possibility that art historians might discover that the individual Vermeer painted none of the ' Vermeer ' pictures. In that case the phrase ' genuine Vermeer ' would lack any empirical application. The following line of argument is now relevant. Since it is the function of the phrase ' genuine Vermeer ' to mark off a certain class of paintings from another class (the works of all other artists and in particular the forgeries of Van Meegeren), it therefore follows from the

polar principle that the expression 'false Vermeer' is without significance and *a fortiori* that the sentence 'All Vermeers are false' is meaningless. This is absurd, for it was with precisely this supposition that we constructed our imaginary case. And as we have seen, this sentence is a perfectly good description of an empirically possible state of affairs. What has gone wrong ? How is it that the phrase 'genuine Vermeer' can retain its meaning even when it points to no contrast ?

The explanation is simple. It is that the contrast between 'false' and 'genuine' is highly general, and is relevant to a vast number of contexts other than that of the paintings of Vermeer. These polar terms indicate contrasts elsewhere, and in fact many different kinds of contrasts. Compare 'a genuine (or false) banknote' with 'a genuine antique', 'a genuine aristocrat', 'a genuine person' 'genuine craftsmanship'. Because the polar terms have these manifold other uses, the phrase 'genuine Vermeer' remains significant even when it is deprived of possible descriptive employment.

How is this relevant to Ryle's treatment of the sentence 'The senses always deceive us' ? The connexion is this. Ryle assumes, quite naturally but, as I hope to show, unjustifiably, that the verbs 'to know' and 'to make a mistake' as applied to our experience of material objects, refer always to our having sensations of some kind. Thus he is restricting the empirical uses of 'know' and 'make a mistake' to the level of sense experience in a way that is in important respects similar to that in which 'genuine' and 'false' were confined in our example to the paintings attributed to Vermeer.

In order to clarify this we should first recall that Ryle describes the sceptical philosopher's problem as whether we can get to know anything at all by "*looking, listening and touching*". If this is denied, says Ryle, there follows the absurd consequence that we are continually making in principle undiscoverable mistakes. But these mistakes are undiscoverable only if it is tacitly assumed that the only way of disclosing and correcting observational errors is by making

further observations. Now there is no doubt at all that this is how we in fact detect and rectify errors of perception, and therefore Ryle is quite correct in his analysis of ordinary perceptual judgments. Nevertheless those philosophers who cast doubt on the reliability of all sense experience do so in order to question this very notion. Hence the counterfeiting analogy, which rests upon it, is a *petitio principii*. Descartes doubted all empirical propositions based on sense perception. He came to this conclusion, and was logically entitled to state it, only because he held (no doubt wrongly) that we can acquire knowledge about material things by the clear and distinct ideas of reason. This is the burden of the well-known discussion concerning the piece of wax. If, for the moment, we grant this to Descartes, it is clear that he is entitled to cast general doubt on the senses because he holds that there is a non-sensuous source of empirical knowledge by reference to which the deceptiveness of sense experience is exposed. He is thus advocating a use of 'know' and 'discover a mistake' which, though empirical, does not refer to sensations. Thus although Descartes denies that we can find out anything by looking, listening and touching, he is not committed, as Ryle believes, to the idea that we can never find out anything by any means at all. Because the deliverances of sense perception are contrasted with the knowledge obtained by clear and distinct ideas, it makes sense for Descartes to argue that sense experience is systematically deceptive.

In a similar way to that in which the meaningfulness of 'genuine Vermeer' is guaranteed by the fact that the 'genuine-false' distinction can be drawn elsewhere, so for Descartes the sentence 'The senses always deceive us' is significant because he is contrasting deception with self-evident, clear and distinct ideas. The important difference between these two cases is that in the Vermeer example there are numerous familiar and established other uses of the 'genuine-false' distinction, but there is no corresponding use of 'know' to refer to an empirical but non-sensuous cognition, hence Descartes is compelled to make this innovation. There are no parallel uses of 'counterfeit' which

could give the expression 'universal counterfeiting' a meaning because counterfeiting is defined *simpliciter* as copying coins.

Therefore the counterfeiting analogy does not, in my submission, do the job that Ryle gives to it. I am not, of course, defending Descartes' general scepticism, but attempting only to clarify its nature and to show that it is not vulnerable to Ryle's form of attack. Descartes does not make the logical blunder of defining a perceptual mistake as something in principle undiscoverable, but he does commit the epistemological error of supposing that there can be non-sensuous knowledge of facts. This epistemological mistake undermines his proposed alteration in the logical grammar of 'know', but it does not render logically inappropriate his doubt of the senses because it is the very purpose of the appeal to clear and distinct ideas to specify a form of knowledge that shows up the illusions of sense experience. This consideration applies, I think, to all metaphysical and religious systems in which the *general* trustworthiness of the senses is impugned; in all these doctrines sense experience is contrasted with another alleged type of knowledge or awareness.

If I am correct, the conclusion to be drawn from this discussion is that the complexity of the rules for the use of philosophically puzzling expressions like 'know' and 'mistake' is sufficiently great to render analogies like 'counterfeit' (and other popular ones such as those drawn from games like chess and poker) as dangerous as they are on occasion illuminating. Under the influence of an oversimple analogy Ryle has been led not only to misrepresent philosophical scepticism concerning the senses but also to give a false diagnosis of the error upon which it is based.

Mr. I. Berlin has invoked the polar principle on various occasions. Let us examine briefly one use that he makes of it.

"Propositions about the past were required by the more uncompromising among the early positivists to become ('in some sense') propositions about the future—or else to be eliminated. Propositions about the present underwent

the same drastic treatment, and this, incidentally, was soon seen to provide two senses of 'about the future'—the normal sense in which propositions about the future were distinguished from those about the present and past, and an abnormal sense in which all propositions were 'in some sense' or 'for methodological purposes' propositions about the future; in this sense 'the future' could no longer be contrasted with the past or present, or indeed with anything else, and so in the end turned out to be devoid of meaning."[12]

If the preceding argument has been on the right lines, enough has been said to show that this argument is a misleading oversimplification. Here I wish to draw attention only to Berlin's account of the view which he is criticising. He asserts that early positivists held that *all* propositions are in an abnormal sense 'about the future', with the result that 'the future' can be contrasted with nothing and is therefore meaningless. No positivist, to my knowledge, has ever believed this; what has been maintained is that all *empirical* propositions are 'about the future'. The point behind this paradox is that all factual propositions, even historical ones, are liable to falsification by empirical information that may become available in the future, unlike logical and mathematical propositions that are not empirically falsifiable—or verifiable either. There is thus a contrast between propositions that are 'about the future' in this sense, and propositions that are not about facts at all. The positivist thesis is thus far from meaningless. It is simply a legitimate but not very clearly expressed attempt to stress the analogy between 'The sun is shining' and 'The Battle of Waterloo was fought in 1815', and the difference between both of these and '7 + 5 = 12'.

In conclusion let us try to tie the threads of this paper together by asking why it is that philosophical problems arise from only certain 'opposed terms' (*i.e.*, 'polar terms'

[12] This quotation is from: Berlin. *Logical Translation.* Proceedings of the Aristotelian Society, 1950, pp. 167–8. The principle is employed again on p. 186. See also Berlin's Auguste Comte Memorial Lecture: *Historical Inevitability*, pp. 61–2.

as we have called them) such as ' dreaming ' and ' waking ', ' clear ' and ' vague ', ' mental ' and ' material ', while no such puzzles arise from opposites like ' concave ' and ' convex ', ' husband ' and ' wife ', and ' hot ' and ' cold '. I have argued that the polar principle is based on a misunderstanding of the nature of polar concepts and that it leads to a misrepresentation of the philosophical problems to which they give rise. If this is correct it becomes important to see why these difficulties are occasioned only by certain sorts of opposites.

The clue to this is given by Malcolm in the quotation with which we began. He there says " There are certain features about the criteria for the use of words in these pairs which tempt philosophers to wish to remove from use one member of the pair." Malcolm does not explain what it is about the criteria for the use of polar terms which tempts philosophers in this way. Let us try to repair this omission. The most obvious characteristic of polar terms, as distinct from non-puzzling opposites, is their abstractness and the consequent generality of their application. Such terms are thus applied to many different sorts of entities; furthermore, there is not one but many ' criteria ' or, as I should prefer to say, rules, for their use. A polar distinction changes to a greater or lesser extent according to the phenomena which it is employed to classify. Consider, for example, the senses of ' genuine ' and ' false ' illustrated on p. 101 *supra*, or the many different distinctions marked by ' real ' in expressions like ' a real friend ' (not a sycophant), ' a real mountain ' (not a cloud), ' a real tiger ' (not a stuffed one), ' a real oasis ' (not a mirage), etc. (These shifts in the meaning of a polar distinction are not a consequence of the generality and abstractness of the terms. ' Concave ' and ' convex ' are abstract terms which refer to properties shared by many different sorts of things, but they are simple and univocal opposed terms.) It could be misleading to lay great stress on the differences between the manifold senses of a polar distinction—to say, for instance, that ' real ' or ' genuine ' is used *ambiguously*. On the other hand it is a mistake to think of such expressions as univocal, *i.e.*,

invariably used in precisely the same sense. Ordinary opposed terms are, with certain exceptions like 'concave' and 'convex', not only relatively restricted in their range of application, but none of them shift their meaning as do polar concepts. There is one fairly clear condition or set of conditions that must be fulfilled if an entity is to be described as 'a husband' or 'concave'.

From the shifts in the meaning of polar distinctions some philosophers derive an impression of logical confusion and untidiness. The commonest method of rectifying this is somehow to show that polar terms are employed in accordance with rules similar to those that govern the use of univocal terms. This is one of the chief motives behind what I have called the 'generalisation' of a polar term, *i.e.*, its extension to cover its opposite. At the same time it must be remembered that propositions of this kind are by no means invariably nonsensical, and can be illuminating if they draw attention to an important or neglected analogy. I am not claiming that philosophical statements of this kind are the clearest or the best ways of bringing out analogies, but only that they are sometimes meaningful and sometimes helpful.

This consideration brings out further difficulties in the view that metaphysical propositions are disguised linguistic recommendations. This doctrine postulates a very heavy disguise indeed, for metaphysical statements are *prima facie* entirely different from suggestions that we change our language in certain ways, although as I have pointed out, literally to accept such a proposition is also to adopt new linguistic rules. It is not, however, correct to assume that metaphysical statements are to be understood, or intended to be understood, literally. It is also wrong to suppose that if p, a metaphysical proposition, entails q, a new rule of language, this relation can be adequately described by saying that p is really a disguised (or 'covert' or 'implicit') formulation of q.

The view that the purpose of metaphysics is to modify language habits leaves the matter obscure, because it then appears that the metaphysician is trying to alter our ways of

talking *for no reason whatsoever*. If the analogical foundation of metaphysical statements is ignored, it throws little light to say that they are recommendations about language; to adopt, and *a fortiori* to advise the adoption of, new rules of language is to do something for or against which reasons can be given. Frequently these reasons consist in good or bad analogies, both positive and negative, between various concepts or, if preferred, types of expression. (An adherent of the disguised linguistic recommendation theory has recently maintained[13] that philosophers advocate their linguistic reforms not on rational or objective grounds but as a consequence of predisposing psychological causes such as hidden fears and anxieties. There is doubtless something in this, though it seems premature to search for the psychological causes behind the statements of philosophers before we have investigated whether there are any reasons, *e.g.*, tacit analogies, for what they say. In any event, this view is compatible with mine, for it could be argued that a psychological quirk can help as well as hinder a philosopher in recognising a certain analogy.)

It may be objected that although metaphysical propositions are not like proposals to reform language, neither are they like statements of analogies, so that my position is no improvement on the one that I have been criticising. The answer to this is that metaphysical arguments do not state, but rather *draw attention to*, analogies. They do this in many different ways, as Professor Wisdom has shown. I have been considering only a certain class of metaphysical propositions, namely those that generalise polar terms. In so far as these are linguistic recommendations they rest on, and thus attract attention to, the analogies that are the reasons for advocating the linguistic innovation. The proposal about language is thus made on the strength of an unstated but not necessarily unstatable analogy of some kind. It follows that it is plausible to describe a metaphysical proposition which generalises polar terms as a linguistic recommendation only if it is further admitted that reasons

[13] M. Lazerowitz. *The Structure of Metaphysics*, Chapter Two. See especially pages 64 to 79.

(*i.e.*, analogies) good or bad can be given for it. If this is conceded, and the analogical foundation of the statement exposed, it is no longer necessary to regard it as a linguistic proposal at all, still less one that is pointless and redundant, as the polar principle claims.

Further, the polar principle itself represents an attempt to reduce the complexity of polar distinctions to the simplicity of straightforward opposites like 'husband' and 'wife'. But it is precisely because polar terms are not used in accordance with rules of this kind that they are philosophically puzzling in the first place, so that when devotees of the polar principle refuse to see certain problems about these concepts it is because they hold a theory which not only does not allow the difficulties to be stated, but which rests upon an over-simplified notion of the concepts that give rise to them. Furthermore, even if the programme of interpreting polar terms like ordinary univocal opposites were feasible, it still would not lead to the desired conclusion. As our discussion of the very simple distinction between 'concave' and 'convex' showed, the significance of either term does not depend upon its use as a contrast to the other.

It is no longer fashionable for philosophers to try to fix the limits of thought, but dogmatism is still at work in the form of some recent attempts to lay down *a priori* the boundaries of significant language. I hope I have exposed, or at least cast doubt upon, one of the crudest of these.