CAN BELIEFS CORRESPOND TO REALITY?

MOST people hold that in some sense our beliefs should correspond to reality. Debates may arise as to just how one is to interpret this maxim and whether its truth is profound or trivial, but few people doubt that there must be some sort of correspondence. I am among those few, and in what follows I shall argue that there is no reasonable sense in which beliefs can correspond to reality. I shall proceed by first outlining a plausible attempt to show how beliefs might correspond to reality. An analysis of the failure of that attempt will then lead to a general argument denying the existence of any sort of correspondence. This last argument will rest in part on an analysis of the reasons why people, or at least philosophers, feel irresistibly drawn to correspondence theories.

In making these arguments, I shall not be blazing new trails; as will be shown in the concluding section, the territory seems to have been reconnoitered much earlier by Bishop Berkeley. In a famous passage in the *Principles,* Berkeley argued that one sort of correspondence, that of "likeness" or "resemblance," could not hold between ideas and nonideas. My own argument, though more general, will be motivated by the same sorts of insights as was Berkeley's. As is well known, Berkeley's argument was part of a general attack on the notion that there was anything out there to which ideas could possibly correspond. Here I have no wish to follow Berkeley's lead; I do not wish to suggest that there is no external reality. I *do* wish to argue that there is no plausible sense in which our beliefs could "correspond" to such an external reality.

As I will also try to show in the concluding section, there is lodged in the *New Theory of Vision* a little noted passage in which Berkeley gives a limited version of my own analysis of why people are drawn so irresistibly to correspondence theories. Thus, for those who find the prospective breakdown of correspondence theories depressing, there is at least the solace of maintaining continuity with our philosophical heritage.

THE MODEL

To facilitate discussion, I shall use a model that formalizes certain relations holding among people, their beliefs, and the containing world. Imagine a universe consisting of (1) the *brains* of a finite number of people, and (2) everything else, which remainder will be designated the *world.* Each brain will be capable of a number of *brain* states, and the world will be capable of a number of *world states.* The state of each brain at any instant will be deter-

mined jointly by the state of that brain and the state of the world at the preceding instant; similarly, the state of the world at any instant will be determined jointly by the state of the world and of each brain at the preceding instant. A person will be said to believe (at time t) that S, where S is an indicative sentence, if that person's brain state at t is an element of a certain set of brain states, which set will be designated BELIEF-S. The belief that S may thus be identified with the set of brain states BELIEF-S.

In the following I shall consistently speak of brain states, sets of brain states, and relations among sets of brain states, and I shall identify a person's belief that S with a certain set of brain states. Such talk is in line with my general metaphysical biases, but it is not strictly necessary for the argument. What will be necessary is that a belief be identical with a set of states; whether these states be formed of neural or mental "stuff" is unimportant. My own decision to use a materialist terminology simply reflects a willingness, common among materialists, to discuss the "microstructure" of certain "mental" states such as believing, wanting, etc. I would argue that this willingness to countenance such microanalyses, rather than questions about how many different kinds of "stuff" the world is built of, is what separates materialists from other schools, though I do not wish to argue for this view here.

Let us now assume that some beliefs correspond to reality in the following sense: There is a function C which maps certain beliefs—BELIEF-S_1, BELIEF-S_2, . . . , —into "corresponding" sets of world states, which sets of world states I shall designate REALITY-S_1, REALITY-S_2, . . . , such that a person's belief that S (BELIEF-S) at time t is true if and only if the state of the world at t is an element of the set REALITY-S. I shall call such a function C a *correspondence*. It should be noted that the beliefs in the domain of C will be only those which, roughly speaking, concern the current state of the world, do not involve any reference to any brain state, and are such that the truth of the belief does not depend on the particular situation of the believer; i.e., the belief is not context-dependent for its truth. Thus, I shall not consider beliefs such as that the door is open (context-dependent), that Harry believes it is raining (reference to Harry's brain state), or that George Washington chopped down a cherry tree (refers to past world state). Examples of beliefs that will be considered are that it is raining (now) in New York City, and that Richard Nixon is (now) eating dinner. The problem is to specify the nature of the correspondence C, i.e., to characterize the conditions under which a world state w is a member of that set of

world states REALITY-S which corresponds to the set of brain states BELIEF-S, and to do so without using (as I did a few sentences back) the concept of truth. If we cannot characterize C in an intuitively satisfying and non-ad-hoc way for these relatively simple types of case, it is difficult to see how any more widely applicable correspondence could be specified.

TWO CONDITIONS ON A CORRESPONDENCE

Two conditions might plausibly be required of any correspondence:

(I) If C is a correspondence, then there exist beliefs, BELIEF-S_{k1}, BELIEF-S_{k2}, . . . , in the domain of C such that virtually any person appropriately placed in a world state in REALITY-S_{ki} would virtually always come to believe that S_{ki}. Such a condition asserts that there are certain beliefs about which we are not usually wrong, while at the same time denying (via the "virtually" modifiers) that such beliefs are "incorrigible." Thus, anyone can be mistaken about anything, but with regard to BELIEF-S_{k1}, BELIEF-S_{k2}, . . . , most appropriately placed people are right most of the time.

(II) If C is a correspondence, then there exist relations holding among beliefs, which relations I shall designate BELIEF-LINKAGE-1, BELIEF-LINKAGE-2, . . . , and there exist relations holding among sets of world states, which relations I shall designate REALITY-LINKAGE-1, REALITY-LINKAGE-2, . . . , such that, for any beliefs, BELIEF-S_i and BELIEF-S_{ii} in the domain of C, the relation BELIEF-LINKAGE-k will hold between BELIEF-S_i and BELIEF-S_{ii} if and only if REALITY-LINKAGE-k holds between REALITY-S_i and REALITY-S_{ii}. (I shall assume for the sake of exposition that all BELIEF- and REALITY-LINKAGES are two-place relations.) This condition states that our beliefs must provide us with a "picture" or "map" of reality, in the sense that the correspondence C must be an isomorphism with respect to the relations BELIEF-LINKAGE-1, BELIEF-LINKAGE-2, . . . , and REALITY-LINKAGE-1, REALITY-LINKAGE-2, ... I myself would not know what to understand by 'correspondence' if some condition like (II) was not required. It may, however, help others to see the importance of the condition if we consider a few examples.

Example 1: Suppose we let BELIEF-LINKAGE-I (the 'I' is a mnemonic for 'implication') be a relation that holds between BELIEF-S_i and BELIEF-S_{ii} if and only if the sentence S_i logically implies (by any of the standard systems of natural deduction) the sentence S_{ii}, where both BELIEF-S_i and BELIEF-S_{ii} are in the domain of the correspondence C. Where S_i implies S_{ii}, we may expect that any world state corresponding to BELIEF-S_i should also be a world state corresponding to BELIEF-S_{ii}, and this expectation can be fulfilled by specifying that REALITY-LINKAGE-I be a relation that holds between two sets of

world states if and only if the first set is a subset of the second. Thus, whenever BELIEF-LINKAGE-I holds between BELIEF-S_i and BELIEF-S_{ii}, then REALITY-LINKAGE-I will hold between the corresponding sets of world states, REALITY-S_i and REALITY-S_{ii}, i.e., REALITY-S_i will be a subset of REALITY-S_{ii}. (As I shall demonstrate in the section "Natural Relations" below, this example is actually somewhat oversimple.)

Example 2: Consider the beliefs that Richard Nixon is President of the United States, and that Richard Nixon owns a house in Key Biscayne. We may imagine that a certain relationship exists between these beliefs in virtue of the fact that the sentences expressing these beliefs have the same named individual as subject. This will most likely lead us to expect that those world states corresponding to the first belief should have some parallel sorts of relations to those world states corresponding to the second belief in that the composition of both sets of world states will depend on the existence of a certain individual—Richard Nixon—possessing certain properties in those world states. In the technical language of my model, there should be a pair of relations, BELIEF-LINKAGE-N and REALITY-LINKAGE-N, (where 'N' is a mnemonic for "named individual," not for "Richard Nixon"), such that BELIEF-LINKAGE-N holds between BELIEF-"Richard Nixon is President of the United States" and BELIEF-"Richard Nixon owns a house in Key Biscayne" if and only if REALITY-LINKAGE-N holds between REALITY-"Richard Nixon is President of the United States" and REALITY-"Richard Nixon owns a house in Key Biscayne."

Example 3: Consider the beliefs that Wilt Chamberlain is taller than Dave Cowens, and that Don Chaney is taller than Gail Goodrich. These beliefs may be supposed to possess some sort of relationship in virtue of the fact that the same relationship is posited, though between different pairs of named individuals. We should expect that some sort of parallel relation will exist between the corresponding sets of world states. In the language of my model, we would expect there to exist a pair of relations, BELIEF-LINKAGE-T and REALITY-LINKAGE-T (where the 'T' is a mnemonic for "taller") such that BELIEF-LINKAGE-T holds between BELIEF-"Wilt Chamberlain is taller than Dave Cowens" and BELIEF-"Don Chaney is taller than Gail Goodrich" if and only if REALITY-LINKAGE-T holds between REALITY-"Wilt Chamberlain is taller than Dave Cowens" and REALITY-"Don Chaney is taller than Gail Goodrich."

INSUFFICIENCY OF THE CONDITIONS

Conditions (I) and (II) would seem to offer a promising start for the enterprise of building a correspondence: Condition (I) asserts the existence of a causal connection between those world states in

which certain beliefs are true and our coming to hold those beliefs, and condition (II) offers the possibility of being able to project the correspondence to other beliefs that lack such direct connections. But the two conditions will not by themselves enable us to characterize a correspondence even if we assume that the relations among beliefs, BELIEF-LINKAGE-1, BELIEF-LINKAGE-2, . . . , can be independently characterized. For let C be a mapping satisfying the two conditions with respect to the relations among beliefs, BELIEF-LINKAGE-1, BELIEF-LINKAGE-2, . . . , and the relations among sets of world states, REALITY-LINKAGE-1, REALITY-LINKAGE-2, . . . , and let BELIEF-S be any belief in the domain of C, and let w be any world state. Then we can construct a mapping C^* satisfying conditions (I) and (II) such that C^* maps each BELIEF-S_k into the set of world states REALITY(*)-S_k, where REALITY(*)-S_k = REALITY-S_k, save when $S_k = S$, in which case REALITY(*)-S_k contains the world state w if and only if REALITY-S does not contain w. Thus, if C declares w to be a world state in which the belief that S is true (false), i.e., if C maps BELIEF-S into a set REALITY-S, which contains (does not contain) w, then C^* will declare w to be a world state in which the belief that S is false (true); i.e., C^* will map BELIEF-S into a set, REALITY(*)-S, that does not (does) contain w. The mapping C^* will obviously satisfy condition (I), and condition (II) can be satisfied by simply introducing the relations REALITY-LINKAGE(*)-1, REALITY-LINKAGE(*)-2, . . . , in such a way that REALITY-LINKAGE(*)-k will hold between REALITY(*)-S_i and REALITY(*)-S_{ii} if and only if BELIEF-LINKAGE-k holds between BELIEF-S_i and BELIEF-S_{ii}. Obviously, if REALITY-LINKAGE-k is a decidable relation, then so is REALITY-LINKAGE(*)-k.

To see what is involved in the construction of REALITY-LINKAGE(*)-1, REALITY-LINKAGE(*)-2, . . . , consider Example 1 of the preceding section, where BELIEF-LINKAGE-I was a relation that held between BELIEF-S_i and BELIEF-S_{ii} whenever S_i logically implied S_{ii}, and REALITY-LINKAGE-I was a relation that held between REALITY-S_i and REALITY-S_{ii} whenever the former was a subset of the latter. Now suppose that world state w is an element of REALITY-S, and therefore not an element of REALITY(*)-S. In such a case, REALITY-LINKAGE(*)-I will hold between REALITY(*)-S_i and REALITY(*)-S_{ii} whenever BELIEF-LINKAGE-I holds between BELIEF-S_i and BELIEF-S_{ii}, which will in turn hold whenever the original REALITY-LINKAGE-I holds between REALITY-S_i and REALITY-S_{ii}. Thus, REALITY-LINKAGE(*)-I will hold between REALITY(*)-S_i and REALITY(*)-S_{ii} whenever

(1) neither S_i nor S_{ii}, or both S_i and S_{ii}, are identical with S, and REALITY(*)-S_i is a subset of REALITY(*)-S_{ii}, or

(2) $S_i = S$, but $S_{ii} \neq S$, and REALITY(*)-$S_i \cup \{w\}$ is a subset of REALITY(*)-S_{ii}, or

(3) $S_{ii} = S$, but $S_i \neq S$, and REALITY(*)-S_i is a subset of REALITY(*)-$S_{ii} \cup \{w\}$.

It should be obvious that the inadequacy of conditions (I) and (II) has nothing to do with any special features of the world state w or the sentence S; the same process could be repeated with any new world state w' and new sentence S' to produce a new correspondence C^{**}, and so on. Eventually, condition (I) may force an end to the process, but by then our troubles will already be deep and obvious.

NATURAL RELATIONS

As the preceding paragraphs may have indicated, the construction of C^* may seem extraordinarily ad hoc in that the relations REALITY-LINKAGE(*)-1, REALITY-LINKAGE(*)-2, . . . , reflect no "natural" relations among sets of world states; if REALITY-LINKAGE-1, REALITY-LINKAGE-2, . . . , are more "natural" relations than REALITY-LINKAGE(*)-1, REALITY-LINKAGE(*)-2, . . . , then we may legitimately prefer the more natural relations, and this would result in a preference for C over C^*. The obvious analogy is with the theory of confirmation: Many predicates may describe the cases actually observed, but only certain predicates may be projected to cover cases as yet unobserved. Those predicates considered "projectible" are those felt to be natural, simple, or otherwise psychologically salient. One may similarly expect that, of the many relations holding among sets of world states, only a very small number will be psychologically salient.

What can it mean to say that the relations REALITY-LINKAGE-1, REALITY-LINKAGE-2, . . . , are psychologically salient? REALITY-LINKAGE-1, REALITY-LINKAGE-2, . . . , are relations that hold among sets of world states, and world states are not psychological entities. If a relation, REALITY-LINKAGE-k, holding among sets of world states is to be psychologically salient, then within the limitations of my model it must be because REALITY-LINKAGE-k is related in the proper way to some sorts of brain states. I cannot think of what this relation could be unless it consists of there being some sort of relation that holds among brain states or sets of brain states (BELIEF-LINKAGE-k perhaps?) where the brain states so related correspond in some sense to the sets of world states related by REALITY-LINKAGE-k. Put this way, it should be obvious that the appeal to the psychological salience of certain relations among sets of world states does not solve the problem of how to eliminate "unnatural" relations among world states, but merely postpones it. In proposing that the relations REALITY-

LINKAGE-1, REALITY-LINKAGE-2, . . . , be psychologically salient, it seems that we are merely requiring that sets of world states and sets of brain states be isomorphic with respect to the relations REALITY-LINKAGE-1, REALITY-LINKAGE-2, . . . , which hold between sets of world states, and some other set of relations that hold between sets of brain states. There is a striking resemblance between this "psychological salience" condition and condition (II) of the section "Two Conditions on a Correspondence" above. The only difference is that condition (II) required only that the relations, which it dubbed BELIEF-LINKAGES, hold between those sets of brain states which constitute beliefs. It thus seems that our new "psychological salience" condition simply reduces to a somewhat modified version of condition (II) in which the relations BELIEF-LINKAGE-1, BELIEF-LINKAGE-2, . . . , are seen as possibly holding between sets of brain states that are not beliefs. As we have seen above, conditions (I) and (II) are by themselves not sufficient to characterize a correspondence. I can see no reason why the addition of a "psychological salience" condition, constituting as it does merely a slightly broadened version of condition (II), can repair this fundamental difficulty.

Despite the preceding argument, it may seem that some relations among sets of world states are so simple as to be virtually required regardless of any general difficulties with the concept of psychological salience. Consider once more the relation REALITY-LINKAGE-I of Example 1 above: This relation holds between two sets of world states whenever the first is a subset of the second. Decisions as to whether REALITY-LINKAGE-I holds between any two sets of world states can thus be made without any consideration of the internal relations among the elements constituting the sets. Moreover, there may be a feeling that REALITY-LINKAGE-I is virtually forced on us as the relation corresponding to BELIEF-LINKAGE-I, which holds between two beliefs whenever the sentence expressing the first belief logically implies the sentence expressing the second belief.

I would argue that, in general, appeals to the naturalness or inevitability of certain relations are merely disguised appeals to psychological salience. After all, it proved quite easy to specify a relation, REALITY-LINKAGE(*)-I, which could replace (however unnaturally) REALITY-LINKAGE-I. But in the case of Example 1 there also exists a convincing ad hoc argument. The plausibility of using REALITY-LINKAGE-I as the relation between sets of world states corresponding to BELIEF-LINKAGE-I rests squarely on the assumption that whenever a sentence expressing one belief logically implies a sentence expressing another belief, then any world state in which

the first belief is true will also be a world state in which the second belief is true. But I feel this assumption is unacceptable. As I have argued elsewhere,[1] a rational man who believes that S_i need not believe that S_{ii} even if he believes that S_i logically implies S_{ii}—we do not have to believe all the logical consequences of our beliefs. Beliefs, I hold, are applicable only in certain "contexts"; within its own context, we are bound as rational men to accept the logical consequences of any belief we hold, but outside that context we are free to disregard such consequences. It follows that the relation that would have to correspond to BELIEF-LINKAGE-I would be not REALITY-LINKAGE-I, but a more complex relation that would hold between two sets of world states whenever the first set is included not only in the second set, but also in that set of world states which gives the proper context for the belief that corresponds to the first set.

THE SOURCE OF THE PROBLEM

So far all that has been demonstrated is that a particular attempt to set up a correspondence between beliefs and world states will not work. The immediate source of the malfunction was that the attempt depended on there being certain "natural" relations among sets of world states that would be isomorphic to certain relations among beliefs. Put slightly differently, there would be a "natural" sort of isomorphism between the world outside our heads and the "map" of that world which we (should) carry inside our heads. Unfortunately, we were unable to specify the nature of this "natural" isomorphism.

The failure of one attempt may prove much or little. I would argue that the source of our failure—the inability to specify the "natural" isomorphism held to exist between inner and outer worlds—infects *every* such attempt to specify the nature of the desired correspondence. Indeed, I would claim that the assumption of some sort of "natural" isomorphism is not a problem with certain attempts to specify a correspondence; the assumption of a "natural" isomorphism *is* the correspondence theory.

To see just how formidable the barrier is to erecting any sort of reasonable correspondence, one may trace the general problem to its source, which lies in the very way in which the problem of setting up a correspondence is conceived. My model offers no more invitation to the particular kind of misconception to be described than do less formalized models, but it does enable us to trace our delusions with somewhat more facility. In formulating and using my

[1] "Consistency of Belief," this JOURNAL, LXVIII, No. 10 (May 20, 1971): 301–310.

model, it was tacitly assumed that we could "see from the outside" all the interactions of world and brain states. Thus, it was assumed that we could take a vantage point that the people in the model were incapable of taking. But at the same time, the people in the model were taken to be ourselves. This casual imagining of ourselves in two incompatible roles—the omniscient users of the model and the limited inhabitants talked about—does not make the model valueless. All models involve elements of simplification and make-believe. It is only necessary that we not mistake an element of the model's make-believe for an element of the subject matter being modeled. It is, of course, not always clear which elements of a model are to be taken seriously and which are merely expository devices, and certain elements of some models may be made deliberately ambiguous, it being left to experience to provide the final decision. But there is no ambiguity about the mistake lately made. It consisted in imagining that our true situation was that of the omniscient user of the model, rather than that of the persons whom the model talks about. As omniscient outsiders, we can imagine ourselves having some sort of "direct awareness" of the causal interactions between world states and brain states. It may then make sense to ask which relations among sets of world states are psychologically salient for ourselves-as-outsiders. It makes sense because both elements—the observed "insides" of the inhabitant's brain and the external world which is causally related to the inhabitant's brain state—may both be considered as elements of the outside observer's consciousness. Considered as elements of consciousness, we may legitimately see certain relations between them as being natural, in the sense of being psychologically salient. But it makes no sense to ask which relations are psychologically salient for the inhabitants of the model, for here one of the elements being related is not an element of the inhabitant's consciousness. But of course, the inhabitant's position represents our real position vis-à-vis the world; imagining ourselves as omniscient outside observers was a bit of stage setting, designed to help us to an understanding of the model, rather than a premise from which should follow any conclusions about the relation of man to his containing world.

The nature of the mistake may now be described in terms of my model as follows: What we desire is a correspondence C that will map sets of brain states, BELIEF-S_1, BELIEF-S_2, . . . , into sets of world states, REALITY-S_1, REALITY-S_2, . . . , in such a way that C will be an isomorphism with respect to the relations among beliefs, BELIEF-LINKAGE-1, BELIEF-LINKAGE-2, . . . , and the relations among

sets of world states, REALITY-LINKAGE-1, REALITY-LINKAGE-2, ... When it is required in addition that the relations among sets of world states be "natural" or "psychologically salient," what seems to be suggested is that we abandon all talk of REALITY-LINKAGES and instead talk solely in terms of an expanded set of BELIEF-LINKAGES. The requirement that *C* be an isomorphism must then reduce to the requirement that *C* map beliefs into sets of brain states, which may or may not be beliefs, in such a way that certain relations holding among beliefs in the domain of *C* be isomorphic to certain relations holding among sets of brain states in the range or counterdomain of *C*. At this point, as is quite obvious, *C* is no longer a correspondence of the desired sort; it does not relate beliefs to an external reality, but simply relates beliefs to (other?) sets of brain states. Within the context of my model, it would seem impossible for anyone to take the series of steps described, but without the framework of some sort of fairly rigorous model such journeys are quite commonplace.

Once we realize that any appeal to the psychological salience of certain relations among sets of world states is based on an overliteral approach to certain aspects of the model's make-believe, it becomes difficult to see just how beliefs could possibly correspond to reality. We tend, I think, to assume a correspondence because we picture ourselves having some direct awareness of both beliefs and world states, and imagine that, having this awareness, we will be similarly aware of certain natural ways in which beliefs parallel states of the world. But we cannot have this direct awareness, and without such an awareness it would appear impossible to specify any reasonable sense in which there could exist a "natural" isomorphism between beliefs and reality.

Perhaps other philosophers may discover some sort of correspondence that does not depend on assuming the psychological salience of certain relations among sets of world states. But it seems to me that such an assumption underlies not only attempts to characterize a correspondence, but the intuitive feeling that there must be a correspondence. Without the assumption, it is not obvious that there is anything for a correspondence to explain.

BERKELEY'S ARGUMENT

A limited version of the argument advanced in the preceding section appears in certain passages of Berkeley's work. Berkeley was intent on showing that there could be no resemblance between ideas and the causes of ideas. His argument consisted in simply pointing out that, as we can have access to only one end of the causal process of

perception, there is no sense in which we can possibly compare ideas with their supposed causes.

> But say you, though the ideas themselves do not exist without the mind, yet there may be things *like* them whereof they are copies or resemblances which things exist without the mind, in an unthinking substance. *I answer,* an idea can be like nothing but an idea; a colour or figure can be like nothing but another colour or figure. If we look but ever so little into our thoughts, we shall find it impossible for us to conceive a likeness except only between our ideas. Again, I ask whether those supposed originals or external things, of which our ideas are the pictures or representations, be themselves perceivable or no? if they are, *then they are ideas,* and we have gained our point; but if you say they are not, I appeal to any one whether it be sense, to assert a colour is like something which is invisible; hard or soft, like something which is intangible; and so of the rest.
>
> (*Principles of Human Knowledge,* VIII, italics in the original)

Restated somewhat in the terminology of this paper, Berkeley is arguing against the claim that a particular type of "natural" relation, that of likeness or resemblance, exists between inner and outer states. He does this by simply asserting that the notion of likeness or resemblance makes no sense except when applied between inner states. I have argued that this type of mistake arises from our tendency to imagine ourselves as being both sometimes outside the model and sometimes inside the model, and then illegitimately transferring into one role certain distinctions and comparisons which are applicable only in the other. At times Berkeley seems to be aware that this shuttling back and forth between imagining ourselves as perceivers and imagining ourselves as outside the processes of perception can be the source of various philosophical confusions. Consider the following passage from the *New Theory of Vision,* which immediately follows Berkeley's discussion of the famous problem of the inverted retinal image. (I must apologize for quoting at such length, but I am unaware that anyone has heretofore made the connection between these paragraphs and any of Berkeley's more general epistemological concerns.)

> 116. Further, what greatly contributes to make us mistake in this matter is that when we think of the pictures in the fund of the eye, we imagine ourselves looking on the fund of another's eye, or another looking on the fund of our own eye, and beholding the pictures painted thereon. Suppose two eyes, A and B. A from some distance

looking on the pictures in B sees them inverted, and for that reason concludes that they are inverted in B. But this is wrong. There are projected in little on the bottom of A the images of the pictures of, suppose, man, earth, etc., which are painted on B. And besides these, the eye B itself, and the objects which environ it, together with another earth, are projected in a larger size on A. Now, by the eye A these larger images are deemed the true objects and the lesser only pictures in miniature. And it is with respect to those greater images that it determines the situation of the smaller images; so that, comparing the little man with the great earth, A judges him inverted, or that the feet are farthest from and the head nearest to the great earth. Whereas, if A compare the little man with the little earth, then he will appear erect, i.e., his head shall seem farthest from and his feet nearest to the little earth. But we must consider that B does not see two earths as A does. It sees only what is represented by the little pictures in A, and consequently shall judge the man erect. For, in truth, the man in B is not inverted, for there the feet are next to the earth; but it is the representation of it in A which is inverted, for there the head of the representation of the picture of the man in B is next the earth, and the feet farthest from the earth—meaning the earth which is without the representation of the pictures in B. For, if you take the little images of the pictures in B, and consider them by themselves, and with respect only to one another, they are all erect and in their natural posture.

117. Further, there lies a mistake in our imagining that the pictures of external objects are painted on the bottom of the eye. It has been shown there is no resemblance between the ideas of sight and things tangible. It has likewise been demonstrated that the proper objects of sight do not exist without the mind. Whence it clearly follows that the pictures painted on the bottom of the eye are not the pictures of external objects. Let anyone consult his own thoughts, and then say what affinity, what likeness, there is between that certain variety and disposition of colors, which constitute the visible man, or picture of a man, and that other combination of far different ideas, sensible by touch, which compose the tangible man. But if this be the case, how come they to be accounted pictures or images, since that supposes them to copy or represent some originals or other?

118. To which I answer: In the forementioned instance, the eye A takes the little images, included within the representation of the other eye B, to be pictures or copies whereof the archetypes are not things existing without, but the larger pictures projected on its own fund; and which by A are not thought pictures, but the originals or true things themselves. Though if we suppose a third eye C, from a due distance, to behold the fund of A, then indeed the things projected thereon shall, to C, seem pictures or images, in the same sense that those projected on B do to A.

Berkeley's analysis of the source of the "problem" of the inverted retinal image in section 118 is that it is due to our imagining ourselves as "outside" the processes of perception and as thus being able to compare directly the pictures in our heads with the reality outside our heads in degree of "likeness" or "resemblance." Once it is realized, however, that we can compare only ideas, then the "problem" of the inverted image vanishes. Berkeley applies his arguments only to show that one particular type of correspondence —that based on a notion of likeness or resemblance—is unworkable. But the limitation seems to lie only in Berkeley's application; the arguments themselves seem to imply much broader consequences, as I hope I have demonstrated in the preceding sections. If my arguments fail, then they fail in good company.[2]

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NOTES AND NEWS

The editors are grieved to report the death on April 14, 1974, of Thomas Munro, Professor of Art Emeritus at Case Western University and Curator of Education at the Cleveland Museum of Art. Professor Munro was an organizer and long-term president of the American Society for Aesthetics, and an organizer of the International Congresses for Aesthetics after World War II. In 1941 he was the first contributor to the *Journal of Aesthetics and Art Criticism;* he was its editor from 1945 till his retirement in 1963. At the time of his death he was 77 years old.

The editors report with deep regret the death of Father H. L. van Breda, OFM, Director of the Husserl Archives in Louvain and Professor of Philosophy at the University of Louvain, where he had taught since 1941. Father van Breda died on March 4, 1974; he was 63 years old.

The editors report with sorrow the death on April 12, 1974, of Abraham Robinson, professor of mathematics at Yale University. Professor Robinson was President of the Association for Symbolic Logic from 1968 to 1971. He had taught at UCLA, at the University of Toronto, and at the Hebrew University in Jerusalem. At the time of his death he was 55 years old.

[2] Berkeleian arguments have not been entirely neglected by modern philosophers. Nelson Goodman has developed similar points in "The Way the World Is," in *Problems and Projects* (Indianapolis: Bobbs-Merrill, 1972), pp. 24–32, and in ch. 1 of *Languages of Art* (Indianapolis: Bobbs-Merrill, 1968), pp. 3–43.