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Signs, Interpretants, and Significata

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table procedure; for, in the last analysis, it is for the users of the language themselves to determine in concrete cases what they mean by "consistency" and "inconsistency."

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## COMMENTS AND CRITICISM

## SIGNS, INTERPRETANTS, AND SIGNIFICATA

In the present paper I propose to consider certain aspects of the conception of the sign-process outlined in Charles Morris's recent book, Signs, Language, and Behavior, in the light of questions which an intelligible account of this process must answer. The analysis will focus about two issues: (a) Does Morris's theory come to terms with these questions? (b) Can the questions be answered without serious modification of the principles of the theory? The formulation of a warranted judgment on this matter requires a rather careful analysis of Morris's views. If this judgment turns out to be critical, it should not be assumed that the writer is unappreciative of what Morris achieves in his book or unaware of the difficulty of the project he undertook.

In Signs, Language, and Behavior the basic terminology of "semiotic" is identical with that employed in the Foundations of the Theory of Signs, with the exception that Morris substitutes for the terms "designatum" and "designates" the terms "significatum" and "signifies." The assumption concerning the basic semiotic factors has not undergone significant alteration; these are sign, interpretant, and significatum. It is about these factors internal to the sign-process, their nature, their relationship, and function within the process that the questions referred to above are concerned.

In discussing the interpretant Morris introduces the expression "disposition to respond." There are "dispositions to respond" which are not interpretants although there is no sign which is not functionally correlated with such a disposition. But, if a sign has an interpretant, which it must, its interpretant is such a disposition. When correlated in the required manner with a sign such a disposition is an interpretant. Being an interpretant re-

<sup>&</sup>lt;sup>1</sup> In writing this paper, I have benefitted much from previous discussions with Professor L. Wittgenstein and Mr. Rush Rhees. Neither of them is to be held responsible for what I have written.

<sup>1</sup> New York: Prentice-Hall, Inc., 1946.

quires that such a disposition enter into certain relations with other factors.

Now the question of the character of this relationship is a critical one. But consideration of it in the light of Morris's thinking will be deferred. For the time being attention will be focused on the assumption that the interpretant is a disposition to respond. Our initial interest is not that of challenging this assumption; it is rather that of determining, if possible, what it implies. The question of what it implies is particularly critical, since Morris suggests that "interpretant" is synonymous with "idea" (p. 30).

One thing made clear in the discussion is that "disposition to respond" in certain ways is to be distinguished from a stimulus-response-sequence. The "disposition" may manifest itself in a concrete, overt response, but it is by no means necessary that it do so. Hence, whatever a "disposition to respond" may in fact be, it appears that the words, if they have any identifiable referent, must refer to some "state" or "set of circumstances" occurring within the organism. Assuming that this is the case, it becomes pertinent to ask, is a disposition to act a cortical phenomenon? If not, is it a peripheral phenomenon?

These questions need elucidation, if the issue is to be comprehended. The first may be broken down into three. (a) Is the response disposition a determinate patterned cortical process subserved by a determinate organization of cortical elements (which may be conceived as the cortical surrogate of antecedent acts of a like character), the occurrence of which does not necessarily innervate any set of motor response mechanisms: i.e., that does not necessarily incite any muscular or glandular reaction? (b) Is it a cortical process of such character, that when it occurs, it necessarily leads to the innervation of motor mechanisms? (c) Does the term refer on the other hand to some peculiar property of a cortical process or pattern of cortical elements, which may be thought of as the cortical organization of a system of motor reactions, such as "set," "preparedness to act," "determining tendency," etc.

The second question is simple. It asks, is a disposition to respond a motor affair, rather than a central or cortical one, say, an organized recurrent system of "implicit" responses, or even an organization of motor mechanisms, which when activated determines a given response-sequence? An affirmative answer to this question commits one to a motor theory of the interpretant, to a radical behaviorism.

Despite the fact that Morris's use of the term "disposition to respond" to characterize the interpretant seems to be prima facie

evidence of his commitment to a motor or peripheral theory, it is possible that he is not rejecting a cortical theory, but insisting rather that the action or behavior phase of the behavior-environment complex is represented by some cortical function involved in the sign-process. If this is his intention he is on sound ground. That the action side of the complex is represented in cortical organization and function is a hypothesis the mass of relevant evidence makes difficult to reject.

There are passages to be found in Signs, Language, and Behavior which are not incompatible with this interpretation. And then there are statements which some readers may interpret as suggesting that "disposition to respond" refers to a cortical function of the sort mentioned. But the writer finds no positive evidence suggesting a cortical theory of the interpretant, that the action phase of the behavior-environment complex is represented by a cortical function, or that any cortical function is implicated in the representation of the action phase. On the contrary, it is difficult to see how Morris could legitimately reject the characterization of his conception of interpretant as a motor or peripheral conception. Whatever disposition to respond in certain ways may refer to, it does not appear to refer to any process or function of a cortical nature.

The writer would not argue that Morris is open to criticism for identifying the interpretant of the sign with a disposition to respond and for not identifying a disposition to respond with a cortical function. He would argue, however, that since there is a large mass of evidence to the effect that the sign-process involves as an essential phase a complex and patterned cortical process presumably "representative" of the action phase of the behavior-environment complex, and that since there is considerable experimental evidence supporting the assumption that the sign-process in its higher manifestation, at least, is a cortical phenomenon, a theory that ignores this evidence is inadequate, to say the least.

In the light of the evidence bearing on the issue, a motor theory seems at best to be an over-simplification. Whether such a process be called the "interpretant of" the sign or not, the evidence supports the hypothesis that the sign-process involves as an essential phase of itself a complex pattern of cortical processes of motor derivation. It is in terms of such processes and their correlation with behavior, implicit or overt, that we are to understand the organization manifested in behavior as well as such aspects of the sign-process as "expectancy," "futurity," etc. This pattern of processes I have elsewhere called the "response-process." The evidence supporting the assumption of such a process is available to

anyone who will acquaint himself with the current experimental literature bearing on this subject. If Morris is committed to a motor theory, as he seems to be, his theory must be modified if it is to provide the foundations for a science of sign-action.

Since the concepts "significatum" and "denotatum" obviously have to do with the aspect phase of the sign-process, it might be well to begin the analysis of Morris's treatment of the former and its relation to the interpretant by fixing attention on two issues:

(a) the difference between denotatum and significatum, and (b) the reasons for introducing the latter concept.

Let us first note some formulations supposedly clarifying the concept "denotatum."

Anything which would permit the completion of the response-sequences to which the interpreter is disposed because of a sign will be called a denotatum of the sign. . . . So in the example of the dog, the buzzer is the sign; the dog is the interpreter; the disposition to seek food at a certain place, when caused by the buzzer, is the interpretant; food in the place sought which permits the completion of the response-sequences to which the dog is disposed is a denotatum and is denoted by the buzzer [pp. 17–18]. . . . According to this usage of terms [Morris continues], while a sign must signify, it may or may not denote. The buzzer can signify to the dog food at a given place without there being food at the place in question, and the land-slide signified by the spoken words may not in fact exist. [P. 18.]

As these passages indicate, Morris's treatment of the issue is hardly more instructive and certainly no less elementary than that contained in the Foundations. Certain points, of course, are clear. A denotatum is necessary to the completion of the responsesequences to which the interpreter is disposed. It is thus a necessary condition for the carrying out of overt expressions of the action tendencies which constitute the interpretant of the sign. But a denotatum is obviously not something necessary to the occurrence of a given sign-process. It is independent of the sign-process. It transcends it. A significatum on the contrary appears to be something necessary to the sign-process; i.e., a necessary condition of the sign-process, but not a sufficient condition for the overt expression of the response-sequence instigated by the sign. Since a sign must have a significatum even though it may not have a denotatum and has both when it has the latter, the two can hardly belong under the same category. They must be of a different order of being. The question before us then is this: What sort of entity is a significatum? What does the term refer to? Does it refer to something which, like a "disposition to respond," may or may not be a factor in semiosis, and is such a factor only on the condition of entering into certain relations with other factors? Or does it refer to some entity, process, or what not, which, unlike

the interpretant, requires the sign-process as a condition necessary to its being? If Morris can not tell us what the referent of the term, i.e., what a significatum is, it would appear that there is little point in using the term. And this would suggest very strongly that he has not even faced one of the basic problems of semiosis.

Morris warns against the temptation to conceive of the significatum as a "special kind of thing," a subsistent, Platonic idea, or what not, as if such verbalization were anything more than meaningless jargon. And he apparently thinks that he has avoided such a pitfall by asserting that the sign does not denote its significatum, but rather "signifies" it. But to tell us that a significatum, which after all is quite different from a denotatum although in some manner related to it, is not a "special kind of thing," and that a sign signifies rather than denotes it, is hardly to tell us what "kind of thing" a significatum is, or to cast any light on its relation to an action tendency, i.e., to a "disposition to respond." If a significatum is not such a special sort of thing, and is also not the ordinary sort of thing, such as a chair, table, piece of orange, which would permit the carrying out of an act, such as sitting, eating, etc., precisely what sort of thing is it? Morris offers the following elucidation: "Those conditions which are such that whatever fulfills them is a denotatum will be called a significatum of the sign" (ibid., p. 17). For instance, if the denotatum of a sign is food in a certain place, "the condition of being an edible object (perhaps of a certain sort) in a given place is the significatum . . . and is what the sign signifies" (ibid., p. 18). In other words, if a denotatum of a sign is an orange in one's hip pocket, the significatum of this sign is the condition of being an orange in one's hip pocket, or a set of conditions which are fulfilled by the orange. But what do the words "condition of being an object," those conditions which are such that anything that fulfills them is a denotatum" stand for, refer to, unless to a set of characteristics which may or may not be exemplified by some concrete object? If the words are meaningful they must stand for some set of circumstances different from the concrete objects which fulfill these Moreover, since there are significata without there conditions. necessarily being denotata the status of significata can not be identical with that of the denotata; they must have some sort of reality different from that enjoyed by denotata. From the assumptions

<sup>2</sup> In distinguishing between being a particular object, a denotatum, and the condition of being such an object, a significatum, Morris of course is stressing the obvious, namely, the multiple extension function of the average sign.

of the theory it also follows that whatever the words refer to they must refer to some sort of set of circumstances which enters into determinate relations with concrete events, e.g., signs and interpretants. A significatum must be a relatum.

Aside from denying that a significatum—the conditions of being a concrete object as contrasted with being such an object is a unique thing of any sort, Morris fails unfortunately to elucidate the meaning of his critical terms. His treatment of the issue is as ambiguous as that contained in the Foundations. His employment of the expression "condition of being" such and such an object as the verbal equivalent of significatum is no more or less enlightening than was his use of the words "class of objects" as the verbal equivalent of designatum in that essay. In fact the theory of the significatum in Signs, Language, and Behavior has not been advanced beyond the theory of the "designatum" proposed in the former work. And until Morris does present an intelligible discussion of the issue it can hardly be claimed that he has laid the foundations for a science of signs. This treatment of the object-phase of the sign-process violates one of the basic canons of scientific discourse.

The ambiguity manifest in Morris's handling of the issue, his failure at any point really to come to grips with the problem, is understandable, however. It is a function of two sets of circumstances. The first is his effort to avoid any form of the unique entity theory. He sees clearly that such a theory, if not meaningless jargon, is flatly incompatible with a scientifically oriented theory of sign-action and will have none of it. The second is his failure to take full cognizance of two facts: (a) That the only alternative to some variant of the unique entity theory is a cortical theory, a theory which conceives the object-phase of the signprocess as a cortical "function." (b) That the mass of evidence from varied scientific sources not merely supports some such theory but also makes it compulsive. In view of his commitment to a scientifically oriented approach to the sign-process, and especially in view of his attempt to ground both his conception of sign and interpretant on current behavior theory, it is a little difficult to see why Morris has so consistently refused to adjust his thinking to the evidence in dealing with the object-phase of the sign-process.

If the project Morris has outlined in Signs, Language, and Behavior, and contributed substantially to therein, is to be carried out it must be recognized that the only theory of the object-phase of semiosis that is either intelligible or scientifically warranted is a cortical theory. Cortical function provides the key to an understanding of both the "response-phase" and the "object-phase" of

the sign-process. The significatum as such is a function performed by a complex cortical process. The only unique object is a "functional-object."

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## BOOK REVIEWS

Signs, Language, and Behavior. CHARLES W. MORRIS. New York: Prentice-Hall, Inc. 1946. xii + 365 pp. \$5.00.

Perhaps the most valuable, because most convincing, parts of this book by an eminent philosopher of language are the last two chapters (VII and VIII), on the "individual and social import of signs" and "the scope and import of semiotic." Philosophers who think philosophy fundamentally is lyrical soliloquizing on the one hand, or involvement in vital value-metaphysics on the other, and who despise any metaphysics-free analysis of sign-functions as inimical to the human spirit, will be surprised to hear Morris say: "An education which gave due place to semiotic would destroy at its foundations the cleavage and opposition of science and the humanities" (p. 246). On the whole, the book defends the humanities against "reduction" to scientific standing, by giving science itself a distinct and coördinate position (neither superior nor inferior) alongside them. It is thus also a defense of science against what we might call the "elevationist" tendency to volatilize it, in its higher reaches, into poetry and religion—i.e., into the humanities.

The book is a little encyclopedia in the field of the science of signs, and this is its chief merit. In a substantial appendix, the reader is introduced to the history (past and contemporary) of semiotic, which he is helped to pursue further by a large bibliography (thirty-two pages). And at numerous points in the body of the text (supplemented by references) he meets psychologists, sociologists, philosophers, linguists, logicians, via their remarks on meaning. Furthermore, the body of the book is a painstaking attempt to construct a copious terminology adequate to the discussion of the delicate issues in the theory of signs; a glossary of these key terms (a hundred and four) is appended.

In the glossary, the terms "meaning" and "mean" do not appear. Morris is proud of the omission and has made a point of it. His point is that these terms are hopelessly ambiguous, so in his semiotical system they are taboo. But a close inspection of the system shows that Morris has gained a very small advantage by the omission, since in place of "to mean" he uses "to signify," with practically