

CONTEMPORARY PHILOSOPHY

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PERCEIVING:
A Philosophical Study

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Cornell University Press

ITHACA AND LONDON

*This work has been brought to publication with
the assistance of a grant from the Ford Foundation.*

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Cornell University Press

First published 1957

Second printing 1961

Third printing 1963

Fourth printing 1966

Fifth printing 1968

Sixth printing 1969

STANDARD BOOK NUMBER 8014-0077-5

PRINTED IN THE UNITED STATES OF AMERICA

BY VALLEY OFFSET, INC.

BOUND BY VAIL-BALLOU PRESS, INC.

Preface

THIS book is about some of the philosophical puzzles or problems that arise when we think and talk about perceiving. I propose ways of dealing with these puzzles or problems; I attempt either to solve them or to correct what seem to me to be the mistakes which give rise to them. The book is not polemical; I did not set out with the intention of defending any particular philosophical theses or techniques. Some of the views of other philosophers are discussed, but only to throw light upon what I have wanted to say.

Many but not all of the puzzles or problems discussed here arise because of our failure to understand the interrelations among the words we use when we talk about perceiving. There are two methods of dealing with such puzzles or problems. We might examine in detail the ways in which people talk about perceiving and then try to show that our philosophical questions arise because of our failure to use our own language consistently or unambiguously. Or we might propose ways of

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1. I have suggested that the locution "There is something that *S* perceives to be *f*" may be defined as meaning: there is something such that it is *f*, it appears to *S* in some way, *S* takes it to be *f*, and *S* has adequate evidence for so doing. And I have suggested that "*S* takes something to be *f*" may be defined by reference to what *S* assumes, or accepts. I have now said all that I can about the philosophic questions which the concepts of *adequate evidence* and of *appearing* involve. Let us finally turn, then, to the concept of *assuming*, or *accepting*. The principal philosophic questions which this concept involves may be formulated by reference to a thesis proposed by Franz Brentano.

Psychological phenomena, according to Brentano, are characterized "by what the scholastics of the Middle Ages referred to as the intentional (also the mental) inexistence of the object, and what we, although with not quite unambiguous expressions, would call relation to a content, direction upon an object (which is not here to be understood as a reality), or im-

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manent objectivity."¹ This "intentional inexistence," Brentano added, is peculiar to what is psychical; things which are merely physical show nothing like it.

Assuming, or *accepting*, is one of the phenomena Brentano would have called intentional. I will first try to formulate Brentano's thesis somewhat more exactly; then I will ask whether it is true of assuming.

2. The phenomena most clearly illustrating the concept of "intentional inexistence" are what are sometimes called psychological attitudes; for example, desiring, hoping, wishing, seeking, believing, and assuming. When Brentano said that these attitudes "intentionally contain an object in themselves," he was referring to the fact that they can be truly said to "have objects" even though the objects which they can be said to have do not in fact exist. Diogenes could have looked for an honest man even if there hadn't been any honest men. The horse can desire to be fed even though he won't be fed. James could believe there are tigers in India, and *take* something there to be a tiger, even if there aren't any tigers in India.

But *physical*—or nonpsychological—phenomena, according to Brentano's thesis, cannot thus "intentionally contain objects in themselves." In order for Diogenes to sit in his tub, for example, there must be a tub for him to sit in; in order for the horse to eat his oats, there must be oats for him to eat; and in order for James to shoot a tiger, there must be a tiger there to shoot.

The statements used in these examples seem to have the form of relational statements. "Diogenes sits in his tub" is concerned with a relation between Diogenes and his tub. Syntactically, at least, "Diogenes looks for an honest man" is simi-

¹ Franz Brentano, *Psychologie vom empirischen Standpunkte* (Leipzig, 1924), I, 124-125.

lar: Diogenes' quest seems to relate him in a certain way to honest men. But the relations described in this and in our other psychological statements, if they can properly be called "relations," are of a peculiar sort. They can hold even though one of their terms, if it can properly be called a "term," does not exist. It may seem, therefore, that one can be "intentionally related" to something which does not exist.²

These points can be put somewhat more precisely by referring to the language we have used. We may say that, in our language, the expressions "looks for," "expects," and "believes" occur in sentences which are intentional, or are used intentionally, whereas "sits in," "eats," and "shoots" do not. We can formulate a working criterion by means of which we can distinguish sentences that are intentional, or are used intentionally, in a certain language from sentences that are not. It is easy to see, I think, what this criterion would be like, if stated for ordinary English.

First, let us say that a simple declarative sentence is intentional if it uses a substantival expression—a name or a description—in such a way that neither the sentence nor its contradictory implies either that there is or that there isn't anything to which the substantival expression truly applies. "Diogenes looked for an honest man" is intentional by this criterion. Neither "Diogenes looked for an honest man" nor its contradictory—"Diogenes did *not* look for an honest man"—implies either that there are, or that there are not, any honest men. But "Diogenes sits in his tub" is not intentional by this criterion, for it implies that there *is* a tub in which he sits.

Secondly, let us say, of any noncompound sentence which

² But the point of talking about "intentionality" is not that there is a peculiar type of "inexistent" object; it is rather that there is a type of psychological phenomenon which is unlike anything purely physical. In his later writings Brentano explicitly rejected the view that there are "inexistent objects"; see his *Psychologie*, II, 133 ff., and *Wahrheit und Evidenz* (Leipzig, 1930), pp. 87, 89.

contains a propositional clause, that it is intentional provided that neither the sentence nor its contradictory implies either that the propositional clause is true or that it is false. "James believes there are tigers in India" is intentional by this criterion, because neither it nor its contradictory implies either that there are, or that there are not, any tigers in India. "He succeeded in visiting India," since it implies that he did visit India, is not intentional. "He is able to visit India," although it does not imply that he will visit India, is also not intentional. For its contradictory—"He is not able to visit India"—implies that he does *not* visit India.

A third mark of intentionality may be described in this way. Suppose there are two names or descriptions which designate the same things and that *E* is a sentence obtained merely by separating these two names or descriptions by means of "is identical with" (or "are identical with" if the first word is plural). Suppose also that *A* is a sentence using one of those names or descriptions and that *B* is like *A* except that, where *A* uses the one, *B* uses the other. Let us say that *A* is intentional if the conjunction of *A* and *E* does not imply *B*.³ We can now say of certain cognitive sentences—sentences using "know," "see," "perceive," and the like in one of the ways which have interested us here—that they, too, are intentional. Most of us knew in 1944 that Eisenhower was the one in command (*A*); but although he was (identical with) the man who was to succeed Truman (*E*), it is not true that we knew in 1944 that the man who was to succeed Truman was the one in command (*B*).

Let us say that a *compound* sentence is one compounded

³ This third mark is essentially the same as Frege's concept of "indirect reference." See Gottlob Frege, "Über Sinn und Bedeutung," *Zeitschrift für Philosophie und philosophische Kritik*, n.s. C (1892), 25–50, especially 38; reprinted in Herbert Feigl and W. S. Sellars, eds., *Readings in Philosophical Analysis* (New York, 1949), and Peter Geach and Max Black, eds., *Philosophical Writings of Gottlob Frege* (Oxford, 1952).

from two or more sentences by means of propositional connectives, such as "and," "or," "if-then," "although," "because," and the like. The three foregoing marks of intentionality apply to sentences which are *not* compound. We may now say that a compound declarative sentence is intentional if and only if one or more of its component sentences is intentional. Thus the antecedent of "If Parsifal sought the Holy Grail, he was a Christian" enables us to say that the whole statement is intentional.

When we use perception words propositionally, our sentences display the third of the above marks of intentionality. I may see that John is the man in the corner and John may be someone who is ill; but I do not now *see* that John is someone who is ill. Perception sentences, as we have seen, entail sentences about taking and assuming. And sentences about taking and assuming display the second of the above marks of intentionality. "He takes—and therefore assumes—those rocks to be the reef" does not imply that the rocks *are* the reef and it does not imply that they are not. And similarly for its contradiction: "He does not take—or assume—those rocks to be the reef."

We may now re-express Brentano's thesis—or a thesis resembling that of Brentano—by reference to intentional sentences. Let us say (1) that we do not need to use intentional sentences when we describe nonpsychological phenomena; we can express all of our beliefs about what is merely "physical" in sentences which are not intentional.⁴ But (2) when we wish to describe perceiving, assuming, believing, knowing, want-

⁴ There are sentences describing relations of comparison—for example, "Some lizards look like dragons"—which may constitute an exception to (1). If they are exceptions, then we may qualify (1) to read: "We do not need any intentional sentences, other than those describing relations of comparison, when we describe nonpsychological phenomena." This qualification would not affect any of the points to be made here.

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ing, hoping, and other such attitudes, then either (a) we must use sentences which are intentional or (b) we must use terms we do not need to use when we describe nonpsychological phenomena.

In describing nonpsychological phenomena, we do, on occasion, use sentences which are intentional by one or more of the above criteria. One may say, "This weapon, suitably placed, is capable of causing the destruction of Boston" and "The cash register knows that 7 and 5 are 12." But although these sentences are intentional according to our criteria, we can readily transform them into others which are not: "If this weapon were suitably placed, then Boston would be destroyed" and "If you press the key marked '7' and the one marked '5', the cash register will yield a slip marked '12.'"

It would be an easy matter, of course, to invent a psychological terminology enabling us to describe perceiving, taking, and assuming in sentences which are not intentional. Instead of saying, for example, that a man *takes* something to be a deer, we could say "His perceptual environment is deer-inclusive." But in so doing, we are using technical terms—"perceptual environment" and "deer-inclusive"—which, presumably, are not needed for the description of nonpsychological phenomena. And unless we can re-express the deer-sentence once again, this time as a nonintentional sentence containing no such technical terms, what we say about the man and the deer will conform to our present version of Brentano's thesis.

How would we go about showing that Brentano was wrong? I shall consider the three most likely methods. None of them seems to be satisfactory.

3. Some philosophers have tried to describe psychological attitudes in terms of *linguistic* behavior. In his inaugural lecture, *Thinking and Meaning*, Professor Ayer tried to define the

locution "thinking of *x*" by reference to the use of symbols which designate *x*. A man is *thinking of* a unicorn, Ayer suggested, if (among other things) the man is disposed to use symbols which *designate* unicorns; he *believes* that there are unicorns if (among other things) he is disposed to utter sentences containing words which *designate* or *refer to* unicorns.⁵ And perhaps one might try to define "taking" and "assuming" in a similar way. But this type of definition leaves us with our problem.

When we talk about what is "designated" or "referred to" by words or sentences, our own sentences are intentional. When we affirm the sentence "In German, *Einhorn* designates, or refers to, unicorns," we do not imply that there are any unicorns and we do not imply that there are not; and similarly when we deny the sentence. If we think of words and sentences as classes of noises and marks, then we may say that words and sentences are "physical" (nonpsychological) phenomena. But we must not suppose the meaning of words and sentences to be a property which they have apart from their relations to the psychological attitudes of the people who *use* them.

For we know, as Schlick once put it, "that meaning does not inhere in a sentence where it might be discovered"; meaning "must be bestowed upon" the sentence.⁶ Instead of say-

⁵ A. J. Ayer, *Thinking and Meaning*, p. 13. Compare W. S. Sellars, "Mind, Meaning, and Behavior," *Philosophical Studies*, III (1952) 83-95; "A Semantical Solution of the Mind-Body Problem," *Methodos* (1953), pp. 45-85; and "Empiricism and the Philosophy of Mind," in Herbert Feigl and Michael Scriven, eds., *The Foundations of Science and the Concepts of Psychology and Psychoanalysis* (Minneapolis, 1956). See also Leonard Bloomfield, *Linguistic Aspects of Science* (Chicago, 1939), pp. 17-19.

⁶ Moritz Schlick, "Meaning and Verification," *Philosophical Review*, XLV (1936), 348; reprinted in Feigl and Sellars, eds., *Readings in Philosophical Analysis*. Compare this analogy, in "Meaning and Free Will," by John Hospers: "Sentences in themselves do not possess meaning; it is mis-

ing, "In German, *Einhorn* designates, or refers to, unicorns," we could say, less misleadingly, "German-speaking people use the word *Einhorn* in order to designate, or refer to, unicorns." A word or sentence designates so-and-so only if people *use* it to designate so-and-so.

Or can we describe "linguistic behavior" by means of sentences which are not intentional? Can we define such locutions as "the word '*Q*' designates so-and-so" in language which is not intentional? If we can do these things, and if, as Ayer suggested, we can define "believing," or "assuming," in terms of linguistic behavior, then we must reject our version of Brentano's thesis. But I do not believe that we can do these things; I do not believe that we can define such locutions as "The word '*Q*' designates so-and-so" or "The word '*Q*' has such-and-such a *use*" in language which is not intentional.

Let us consider, briefly, the difficulties involved in one attempt to formulate such a definition.

Instead of saying, of a certain word or predicate "*Q*," that it designates or refers to so-and-so's, we may say that, if there were any so-and-so's, they would satisfy or fulfill the *intension* of the predicate "*Q*." But how are we to define "intension"? Professor Carnap once proposed a behavioristic definition of this use of "intension" which, if it were adequate, might enable us to formulate a behavioristic, nonintentional definition of "believe" and "assume." Although Carnap later conceded that his account was oversimplified, it is instructive, I think, to note the difficulties which stand in the way of

leading to speak of 'the meaning of sentences' at all; meaning being conferred in every case by the speaker, the sentence's meaning is only like the light of the moon: without the sun to give it light, it would possess none. And for an analysis of the light we must go to the sun" (*Philosophy and Phenomenological Research*, X [1950], 308).

defining "intension"—as well as "designates" and "refers to"—in nonintentional terms.⁷

Carnap had suggested that the "intension" of a predicate in a natural language may be defined in essentially this way: "The intension of a predicate '*Q*' for a speaker *X* is the general condition which an object *y* must fulfill in order for *X* to be willing to ascribe the predicate '*Q*' to *y*." Carnap did not define the term "ascribe" which appears in this definition, but from his general discussion we can see, I think, that he would have said something very much like this: "A person *X* ascribes '*Q*' to an object *y*, provided that, in the presence of *y*, *X* gives an affirmative response to the question '*Q*?' " (Let us assume that the expressions "is willing to," "in the presence of," "affirmative response," and "question" present no difficulties.)

Such a definition of "intension" is adequate only if it allows us to say of Karl, who speaks German, that an object *y* fulfills the intension of "*Hund*" for Karl if and only if *y* is a dog. Let us consider, then, a situation in which Karl mistakes something for a dog; he is in the presence of a fox, say, and takes it to be a dog. In this case, Karl would be willing to give an affirmative response to the question "*Hund*?" Hence the fox fulfills the condition which an object must fulfill for Karl to be willing to ascribe "*Hund*" to it. And therefore the definition is inadequate.

Perhaps we can assume that Karl is usually right when he takes something to be a dog. And perhaps, therefore, we can say this: "The intension of '*Hund*' for Karl is the general condition which, more often than not, an object *y* must fulfill in

⁷ Carnap's definition appeared on p. 42 of "Meaning and Synonymy in Natural Languages," *Philosophical Studies*, IV (1955), 33-47. In "On Some Concepts of Pragmatics," *Philosophical Studies*, VI, 89-91, he conceded that "designates" should be defined in terms of "believes." The second article was written in reply to my "A Note on Carnap's Meaning Analysis," which appeared in the same issue (pp. 87-89).

order for Karl to be willing to ascribe '*Hund*' to *y*." But if the occasion we have considered is the only one on which Karl has been in the presence of a fox, then, according to the present suggestion, we must say, falsely, that the fox does not fulfill the intension of Karl's word "*Fuchs*." Moreover, if Karl believes there are unicorns and, on the sole occasion when he thinks he sees one, mistakes a horse for a unicorn, then the present suggestion would require us to say, falsely, that the horse fulfills the intension, for Karl, of his word "*Einhorn*."

The obvious way to qualify Carnap's definition would be to reintroduce the term "believe" and say something of this sort: "The intension of a predicate '*Q*' for a speaker *X* is the general condition which *X* must believe an object *y* to fulfill in order for *X* to be willing to ascribe the predicate '*Q*' to *y*." And, in general, when we say, "People use such and such a word to refer to so-and-so," at least part of what we mean to say is that people use that word when they wish to express or convey something they *know* or *believe*—or *perceive* or *take*—with respect to so-and-so. But if we define "intension" and "designates" in terms of "believe" and "assume," we can no longer hope, of course, to define "believe" and "assume" in terms of "intension" or "designates."

4. The second way in which we might try to show that Brentano was wrong may be described by reference to a familiar conception of "sign behavior." Many philosophers and psychologists have suggested, in effect, that a man may be said to *perceive* an object *x*, or to *take* some object *x* to have a certain property *f*, provided only that there is something which *signifies* *x* to him, or which signifies to him that *x* is *f*. But what does "signify" mean?

We cannot be satisfied with the traditional descriptions of "sign behavior," for these, almost invariably, define such terms

as "sign" by means of intentional concepts. We cannot say, for instance, that an object is a sign provided it causes someone to *believe*, or *expect*, or *think of* something; for sentences using "believe," "expect," and "think of" are clearly intentional. Nor can we say merely that an object is a sign provided it causes someone to be *set for*, or to be *ready for*, or to *behave appropriately* to something, for sentences using "set for," "ready for," and "behave appropriately to," despite their behavioristic overtones, are also intentional. Similar objections apply to such statements as "One object is a sign of another provided it *introduces* the other object *into the behaviorial environment*, as contrasted with the physical environment, of some organism."

If we are to show that Brentano's thesis as applied to *sign* phenomena is mistaken, then we must not introduce any new technical terms into our analysis of sign behavior unless we can show that these terms apply also to nonpsychological situations.

Most attempts at nonintentional definitions of "sign" make use of the concept of *substitute stimulus*. If we use "referent" as short for "what is signified," we may say that, according to such definitions, the sign is described as a substitute for the referent. It is a substitute in the sense that, as stimulus, it has effects upon the subject which are similar to those the referent would have had. Such definitions usually take this form: V is a *sign* of R for a subject S if and only if V affects S in a manner similar to that in which R would have affected S.⁸ The bell is

⁸ Compare Charles E. Osgood, *Method and Theory in Experimental Psychology* (New York, 1953), p. 696: "A pattern of stimulation which is not the object is a sign of the object if it evokes in an organism a mediating reaction, this (a) being some fractional part of the total behavior elicited by the object and (b) producing distinctive self-stimulation that mediates responses which would not occur without the previous association of non-object and object patterns of stimulation. All of these limiting conditions seem necessary. The mediation process must include part of the same be-

a sign of food to the dog, because the bell affects the dog's responses, or his dispositions to respond, in a way similar to that in which the food would have affected them.

This type of definition involves numerous difficulties of which we need mention but one—that of specifying the respect or degree of similarity which must obtain between the effects attributed to the sign and those attributed to the referent. This difficulty is involved in every version of the substitute-stimulus theory. Shall we say that, given the conditions in the above definition, V is a sign of R to a subject S provided only that those responses of S which are stimulated by V are similar in *some* respect to those which have been (or would be) stimulated by R? In other words, should we say that V is a sign of R provided that V has some of the effects which R has had or would have had? This would have the unacceptable consequence that all stimuli signify each other, since any two stimuli have at least some effect in common. Every stimulus causes neural activity, for example; hence, to that extent at least, any two stimuli will have similar effects. Shall we say that V is a sign of R provided that V has *all* the effects which R would have had? If the bell is to have all the effects which the food would have had, then, as Morris notes, the dog must start to eat the bell.⁹ Shall we say that V is a sign of R provided that V has the effects which *only* R would have had? If the sign has

havior made to the object if the sign is to have its representing property." Some of the difficulties of the substitute stimulus concept [qualification (a) in this definition] are met by qualification (b), which implies that the subject must once have perceived the thing signified. But (b) introduces new difficulties. Since I have never seen the President of the United States, no announcement, according to this definition, could signify to me that the President is about to arrive.

⁹ See Charles Morris, *Signs, Language, and Behavior*, p. 12, and Max Black, "The Limitations of a Behavioristic Semiotic," *Philosophical Review*, LVI (1947), 258-272.

effects which only the referent can have, then the sign is the referent and only food can be a sign of food. The other methods of specifying the degree or respect of similarity required by the substitute-stimulus definition, so far as I can see, have equally unacceptable consequences.

Reichenbach, in his *Elements of Symbolic Logic*, has applied this type of analysis to the concept of taking; but the consequences are similar. To say of a subject S, according to Reichenbach, that S *takes* something to be a dog is to say: "There is a *z* which is a bodily state of S and which is such that, whenever S is sensibly stimulated by a dog, S is in this bodily state *z*." ¹⁰ In other words, there are certain bodily conditions which S must fulfill in order for S to be sensibly stimulated by a dog; and whenever S satisfies any of these conditions, then S is taking something to be a dog.

But among the many conditions one must fulfill if one is to be sensibly stimulated by a dog is that of being alive. Hence if we know that S is alive, we can say that S is taking something to be a dog. The difficulty is that the bodily state *z*, of Reichenbach's formula, is not specified strictly enough. And the problem is to find an acceptable modification.

In reply to this objection, Reichenbach suggested, in effect, that "S takes something to be a dog" means that S's bodily state has all those neural properties which it must have—which are "physically necessary" for it to have—whenever S is sensibly stimulated by a dog.¹¹ But this definition has the

¹⁰ This is a paraphrase of what Hans Reichenbach formulated in special symbols on p. 275 of *Elements of Symbolic Logic* (New York, 1947).

¹¹ Reichenbach suggests this modification in "On Observing and Perceiving," *Philosophical Studies*, II (1951), pp. 92–93. This paper was written in reply to my "Reichenbach on Observing and Perceiving" (*Philosophical Studies*, II, 45–48), which contains some of the above criticisms. In these papers, as well as in Reichenbach's original discussion, the word "perceive" was used in the way in which we have been using "take." Reichenbach used

unacceptable consequence that, whenever S is sensibly stimulated by a dog, then S *takes* the thing to be a dog. Thus, although we can say that a man may be stimulated by a fox and yet take it to be a dog, we can never say that he may be stimulated by a dog and *not* take it to be a dog.¹²

Similar objections apply to definitions using such expressions as "dog responses," "responses specific to dogs," "responses appropriate to dogs," and the like. For the problem of specifying what a man's "dog responses" might be is essentially that of specifying the bodily state to which Reichenbach referred.

5. Of all intentional phenomena, expectation is one of the most simple and, I think, one which is most likely to be definable in terms which are not intentional. If we could define, in nonintentional terms, what it means to say of a man, or an animal, that he expects something—that he expects some state of affairs to come about—then, perhaps, we could define "believing" and "assuming," nonintentionally, in terms of this sense of "expecting." If we are to show that Brentano is wrong, our hope lies here, I think.

For every expectancy, there is some possible state of affairs which would *fulfill* or *satisfy* it, and another possible state of affairs which would *frustrate* or *disrupt* it. If I expect the car

the term "immediate existence" in place of Brentano's "intentional inexistence"; see *Elements of Symbolic Logic*, p. 274.

¹² This sort of modification may suggest itself: Consider those bodily states which are such that (i) S is in those states whenever he is sensibly stimulated by a dog and (ii) S cannot be in those states whenever he is *not* being stimulated by a dog. Shall we say "S takes something to be a dog" means that S is in this particular class of states? If we define "taking" in this way, then, we must say that, in the present state of psychology and physiology, we have no way of knowing whether anyone ever *does* take anything to be a dog, much less whether people take things to be dogs on just those occasions on which we want to be able to say that they take things to be dogs.

to stop, then, it would seem, I am in a state which would be fulfilled or satisfied if and only if the car were to stop—and which would be frustrated or disrupted if and only if the car were not to stop. Hence we might consider defining “expects” in this way:

“S *expects* E to occur” means that S is in a bodily state *b* such that either (i) *b* would be fulfilled if and only if E were to occur or (ii) *b* would be disrupted if and only if E were not to occur.

Our problem now becomes that of finding appropriate meanings for “fulfill” and “disrupt.”

Perhaps there is a way of defining “fulfill” in terms of the psychological concept of *re-enforcement* and of defining “disrupt” in terms of *disequilibrium*, *surprise*, or *shock*. And perhaps we can then provide an account of the dog and the bell and the food in terms which will show that this elementary situation is not intentional. It is possible that the dog, because of the sound of the bell, is in a state which is such that either (i) his state will be re-enforced if he receives food or (ii) it will be disequilibrated if he does not. And it is possible that this state can be specified in physiological terms. Whether this is so, of course, is a psychological question which no one, apparently, is yet in a position to answer. But even if it is so, there are difficulties in principle which appear when we try to apply this type of definition to human behavior.

If we apply “expects,” as defined, to human behavior, then we must say that the appropriate fulfillments or disruptions must be caused by the occurrence, or nonoccurrence, of the “intentional object”—of *what* it is that is expected. But it is easy to think of situations which, antecedently, we should want to describe as instances of expectation, but in which the fulfillments or disruptions do not occur in the manner required. And

to accommodate our definition to such cases, we must make qualifications which can be expressed only by reintroducing the intentional concepts we are trying to eliminate.

This difficulty may be illustrated as follows: Jones, let us suppose, *expects* to meet his aunt at the railroad station within twenty-five minutes. Our formulation, as applied to this situation, would yield: “Jones is in a bodily state which would be fulfilled if he were to meet his aunt at the station within twenty-five minutes or which would be disrupted if he were not to meet her there within that time.” But what if he were to meet his aunt and yet *take* her to be someone else? Or if he were to meet someone else and yet *take* her to be his aunt? In such cases, the fulfillments and disruptions would not occur in the manner required by our definition.

If we introduce the intentional term “perceives” or “takes” into our definition of “expects,” in order to say, in this instance, that Jones *perceives* his aunt, or *takes* someone to be his aunt, then, of course, we can no longer define “assume”—or “perceive” and “take”—in terms of “expects.” It is worth noting, moreover, that even if we allow ourselves the intentional term “perceive” our definition will be inadequate. Suppose that Jones were to visit the bus terminal, believing it to be the railroad station, or that he were to visit the railroad station believing it to be the bus terminal. If he met his aunt at the railroad station, believing it to be the bus terminal, then, contrary to our formula, he may be frustrated or surprised, and, if he fails to meet her there, his state may be fulfilled. Hence we must add further qualifications about what he believes or doesn’t believe.¹³

¹³ R. B. Braithwaite in “Belief and Action” (*Aristotelian Society*, suppl. vol. XX [1946] p. 10) suggests that a man may be said to believe a proposition *p* provided this condition obtains: “If at a time when an occasion arises relevant to *p*, his springs of action are *s*, he will perform an action which

If his visit to the station is brief and if he is not concerned about his aunt, the requisite re-enforcement or frustration may still fail to occur. Shall we add ". . . provided he *looks for* his aunt"? But now we have an intentional expression again. And even if we allow him to look for her, the re-enforcement or frustration may fail to occur if he finds himself able to satisfy desires which are more compelling than that of finding his aunt.

We seem to be led back, then, to the intentional language with which we began. In attempting to apply our definition of "expects" to a situation in which "expects" is ordinarily applicable, we find that we must make certain qualifications and that these qualifications can be formulated only by using intentional terms. We have had to introduce qualifications wherein we speak of the subject *perceiving* or *taking* something to be the object expected; hence we cannot now define "perceive" and "assume" in terms of "expect." We have had to add that the subject has certain *beliefs* concerning the nature of the conditions under which he perceives, or fails to perceive, the ob-

is such that, if *p* is true, it will tend to fulfill *s*, and which is such that, if *p* is false, it will not tend to satisfy *s*." But the definition needs qualifications in order to exclude those people who, believing truly (*p*) that the water is deep at the base of Niagara Falls and wishing (*s*) to survive a trip over the falls, have yet acted in a way which has not tended to satisfy *s*. Moreover, if we are to use such a definition to show that Brentano was wrong, we must provide a nonintentional definition of the present use of "wish" or "spring of action." And, with Braithwaite's definition of "believe," it would be difficult to preserve the distinction which, apparently, we ought to make between *believing* a proposition and *acting upon* it (see Chapter One, Section 2). I have proposed detailed criticisms of a number of such definitions of "believe" in "Sentences about Believing," *Proceedings of the Aristotelian Society*, LVI (1955-1956), 125-148. Some of the difficulties involved in defining *purpose* nonintentionally are pointed out by Richard Taylor in "Comments on a Mechanistic Conception of Purpose," *Philosophy of Science*, XVII (1950), 310-317, and "Purposeful and Non-purposeful Behavior: A Rejoinder," *ibid.*, 327-332.

ject. And we have referred to what he is *looking for* and to his other possible *desires*.

It may be that some of the simple "expectancies" we attribute to infants or to animals can be described, nonintentionally, in terms of re-enforcement or frustration. And possibly, as Ogden and Richards intimated, someone may yet find a way of showing that believing, perceiving, and taking are somehow "theoretically analysable" into such expectancies.¹⁴ But until such programs are carried out, there is, I believe, some justification for saying that Brentano's thesis does apply to the concept of *perceiving*.

¹⁴ C. K. Ogden and I. A. Richards, *The Meaning of Meaning*, 5th ed. (London, 1938), p. 71.