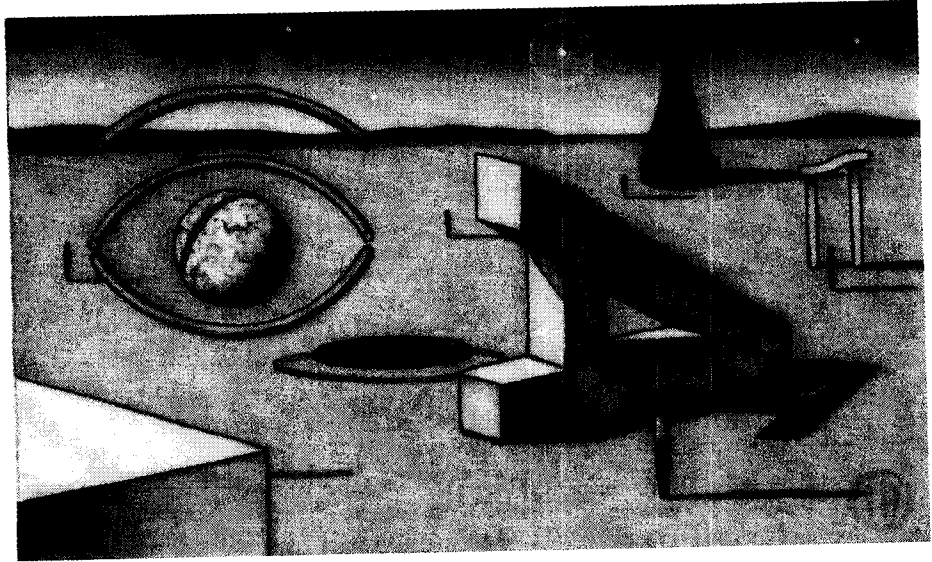


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The pioneering work about the science of symbolism,  
and about how language influences thought

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**M E A N I N G**  
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**M E A N I N G**



“A seminal book, whose merit was to say certain things  
well in advance of its time” — Umberto Eco

A Harvest/HBJ Book

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**C.K. OGDEN AND I.A. RICHARDS**  
With a new introduction by Umberto Eco

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"All life comes back to the question of our speech—the medium through which we communicate."

—HENRY JAMES.

"Error is never so difficult to be destroyed as when it has its root in Language."

—BENTHAM.

"We have to make use of language, which is made up necessarily of preconceived ideas. Such ideas unconsciously held are the most dangerous of all."

—POINCARÉ.

"By the grammatical structure of a group of languages everything runs smoothly for one kind of philosophical system, whereas the way is as it were barred for certain other possibilities."

—NIETZSCHE.

"An Englishman, a Frenchman, a German, and an Italian cannot by any means bring themselves to think quite alike, at least on subjects that involve any depth of sentiment: they have not the verbal means."

—Prof. J. S. MACKENZIE.

"In Primitive Thought the name and object named are associated in such wise that the one is regarded as a part of the other. The imperfect separation of words from things characterizes Greek speculation in general."

—HERBERT SPENCER.

"The tendency has always been strong to believe that whatever receives a name must be an entity or being, having an independent existence of its own: and if no real entity answering to the name could be found, men did not for that reason suppose that none existed, but imagined that it was something peculiarly abstruse and mysterious, too high to be an object of sense."

—J. S. MILL.

"Nothing is more usual than for philosophers to encroach on the province of grammarians, and to engage in disputes of words, while they imagine they are handling controversies of the deepest importance and concern."

—HUME.

"Men content themselves with the same words as other people use, as if the very sound necessarily carried the same meaning."

—LOCKE.

"A verbal discussion may be important or unimportant, but it is at least desirable to know that it is verbal."

—Sir G. CORNEWALL LEWIS.

"Scientific controversies constantly resolve themselves into differences about the meaning of words."

—Prof. A. SCHUSTER.

## CHAPTER I

### THOUGHTS, WORDS AND THINGS

Let us get nearer to the fire, so that we can see what we are saying.  
—*The Bubi of Fernando Po.*

THE influence of Language upon Thought has attracted the attention of the wise and foolish alike, since Lao Tse came long ago to the conclusion—

"He who knows does not speak, he who speaks does not know."

Sometimes, in fact, the wise have in this field proved themselves the most foolish. Was it not the great Bentley, Master of Trinity College, Cambridge, Archdeacon of Bristol, and holder of two other livings besides, who declared: "We are sure, from the names of persons and places mentioned in Scripture before the Deluge, not to insist upon other arguments, that Hebrew was the primitive language of mankind"? On the opposite page are collected other remarks on the subject of language and its Meaning, and whether wise or foolish, they at least raise questions to which, sooner or later, an answer is desirable. In recent years, indeed, the existence and importance of this problem of Meaning have been generally admitted, but by some sad chance those who have attempted a solution have too often been forced to relinquish their ambition—whether through old age, like Leibnitz, or penury, like C. S. Peirce, or both. Even the methods by which it is to be attacked have remained in doubt. Each science has tended to delegate the unpleasant task to

another. With the errors and omissions of metaphysicians we shall be much concerned in the sequel, and philologists must bear their share of the guilt. Yet it is a philologist who, of recent years, has, perhaps, realized most clearly the necessity of a broader treatment.

"Throughout the whole history of the human race," wrote the late Dr Postgate, "there have been no questions which have caused more heart-searchings, tumults, and devastation than questions of the correspondence of words to facts. The mere mention of such words as 'religion,' 'patriotism,' and 'property' is sufficient to demonstrate this truth. Now, it is the investigation of the nature of the correspondence between word and fact, to use these terms in the widest sense, which is the proper and the highest problem of the science of meaning. That every living word is rooted in facts of our mental consciousness and history it would be impossible to gainsay; but it is a very different matter to determine what these facts may be. The primitive conception is undoubtedly that the name is indicative, or descriptive, of the thing. From which it would follow at once that from the presence of the name you could argue to the existence of the thing. This is the simple conception of the savage."

In thus stressing the need for a clear analysis of the relation between words and facts as the essential of a theory of Meaning, Dr Postgate himself was fully aware that at some point the philosophical and psychological aspects of that theory cannot be avoided. When he wrote (1896), the hope was not unreasonable that the science of Semantics would do something to bridge the gulf. But, although M. Bréal's researches drew attention to a number of fascinating phenomena in the history of language, and awakened a fresh interest in the educational possibilities of etymology, the net result was disappointing. That such disappointment was inevitable may be seen, if we consider the attitude to

language implied by such a passage as the following. The use of words as though their meaning were fixed, the constant resort to loose metaphor, the hypostatization of leading terms, all indicate an unsuitable attitude in which to approach the question.

"Substantives are signs attached to things: they contain exactly that amount of truth which can be contained by a name, an amount which is of necessity small in proportion to the reality of the object. That which is most adequate to its object is the abstract noun, since it represents a simple operation of the mind. When I use the two words *compressibility*, *immortality*, all that is to be found in the idea is to be found also in the word. But if I take a real entity, an object existing in nature, it will be impossible for language to introduce into the word all the ideas which this entity or object awakens in the mind. Language is therefore compelled to choose. Out of all the ideas it can choose one only; it thus creates a name which is not long in becoming a mere sign.

For this name to be accepted it must, no doubt, originally possess some true and striking characteristic on one side or another; it must satisfy the minds of those to whom it is first submitted. But this condition is imperative only at the outset. Once accepted, it rids itself rapidly of its etymological signification; otherwise this signification might become an embarrassment. Many objects are inaccurately named, whether through the ignorance of the original authors, or by some intervening change which disturbs the harmony between the sign and the thing signified. Nevertheless, words answer the same purpose as though they were of faultless accuracy. No one dreams of revising them. They are accepted by a tacit consent of which we are not even conscious" (Bréal's *Semantics*, pp. 171-2).

What exactly is to be made of substantives which "contain" truth, "that amount of truth which can be contained by a name"? How can "all that is found in the idea be also found in the word"? The conception of language as "compelled to choose an idea," and thereby creating "a name, which is not long in becoming a sign," is an odd one; while 'accuracy' and 'harmony' are sadly in need of elucidation when applied to naming and to the relation between sign and thing signified respectively. This is not mere captious criticism. The locutions objected to

conceal the very facts which the science of language is concerned to elucidate. The real task before that science cannot be successfully attempted without a far more critical consciousness of the dangers of such loose verbiage. It is impossible to handle a scientific matter in such metaphorical terms, and the training of philologists has not, as a rule, been such as to increase their command of analytic and abstract language. The logician would be far better equipped in this respect were it not that his command of language tends to conceal from him what he is talking about and renders him prone to accept purely linguistic constructions, which serve well enough for his special purposes, as ultimates.

How great is the tyranny of language over those who propose to inquire into its workings is well shown in the speculations of the late F. de Saussure, a writer regarded by perhaps a majority of French and Swiss students as having for the first time placed linguistic upon a scientific basis. This author begins by inquiring, "What is the object at once integral and concrete of linguistic?" He does not ask whether it has one, he obeys blindly the primitive impulse to infer from a word some object for which it stands, and sets out determined to find it. But, he continues, speech (*le langage*), though concrete enough, as a set of events is not integral. Its sounds imply movements of speech, and both, as instruments of thought, imply ideas. Ideas, he adds, have a social as well as an individual side, and at each instant language implies both an established system and an evolution. "Thus, from whatever side we approach the question, we nowhere find the integral object of linguistic." De Saussure does not pause at this point to ask himself what he is looking for, or whether there is any reason why there should be such a thing. He proceeds instead in a fashion familiar in the beginnings of all sciences, and concocts a suitable object—'*la langue*,' the language, as opposed to speech.

"What is *la langue*? For us, it is not to be confounded with speech (*le langage*); it is only a determinate part of this, an essential part, it is true. It is at once a social product of the faculty, of speech, and a collection of necessary conventions adopted by the social body to allow the exercise of this faculty by individuals. . . . It is a whole in itself and a principle of classification. As soon as we give it the first place among the facts of speech we introduce a natural order in a whole which does not lend itself to any other classification." *La langue* is further "the sum of the verbal images stored up in all the individuals, a treasure deposited by the practice of speaking in the members of a given community; a grammatical system, virtually existing in each brain, or more exactly in the brains of a body of individuals; for *la langue* is not complete in any one of them, it exists in perfection only in the mass."<sup>1</sup>

Such an elaborate construction as *la langue* might, no doubt, be arrived at by some Method of Intensive Distraction analogous to that with which Dr Whitehead's name is associated, but as a guiding principle for a young science it is fantastic. Moreover, the same device of inventing verbal entities outside the range of possible investigation proved fatal to the theory of signs which followed.<sup>2</sup>

<sup>1</sup> *Cours de Linguistique Générale*, pp. 23-31.

<sup>2</sup> A sign for de Saussure is twofold, made up of a concept (*signifié*) and an acoustic image (*signifiant*), both psychical entities. Without the concept, he says, the acoustic image would not be a sign (p. 100). The disadvantage of this account is, as we shall see, that the process of interpretation is included by definition in the sign!

De Saussure actually prided himself upon having "defined things and not words." The definitions thus established "have nothing to fear," he writes, "from certain ambiguous terms which do not coincide in one language and another. Thus in German *Sprache* means '*langue*' and '*langage*.' . . . In Latin *sermo* rather signifies *langage et parole* while *lingua* designates '*la langue*,' and so on. No word corresponds exactly to any of the notions made precise above; this is why every definition made apropos of a word is idle; it is a bad method, to start from words to define things" (*ibid.*, p. 32). The view of definition here adopted implies, as will be shown later, remarkable ignorance of the normal procedure—the substitution, namely, of better understood for obscure symbols. Another specimen of this naivety is found in the rejection of the term 'symbol' to designate the linguistic sign (p. 103). "The symbol has the character of never being quite arbitrary. It

As a philologist with an inordinate respect for linguistic convention, de Saussure could not bear to tamper with what he imagined to be a fixed meaning, a part of *la langue*. This scrupulous regard for fictitious 'accepted' uses of words is a frequent trait in philologists. Its roots go down very deep into human nature, as we shall see in the two chapters which follow. It is especially regrettable that a technical equipment, otherwise excellent, should have been so weak at this point, for the initial recognition of a general science of signs, 'semiology,' of which linguistic would be a branch, and the most important branch, was a very notable attempt in the right direction. Unfortunately this theory of signs, by neglecting entirely the things for which signs stand, was from the beginning cut off from any contact with scientific methods of verification. De Saussure, however, does not appear to have pursued the matter far enough for this defect to become obvious. The same neglect also renders the more recent treatise of Professor Delacroix, *Le Langage et la Pensée*, ineffective as a study of the influence of language upon thought.

Philosophers and philologists alike have failed in their attempts. There remains a third group of inquirers with an interest in linguistic theory, the ethnologists, many of whom have come to their subject after a preliminary training in psychology. An adequate account of primitive peoples is impossible without an insight into the essentials of their languages, which cannot be gained through a mere transfer of current Indo-European grammatical distinctions, a procedure only too often positively misleading. In the circumstances, each field investigator might be supposed to reconstruct the grammar of a primitive tongue from his own observations of the behaviour of a speaker in a given situation. Unfortunately this is rarely done,

is not empty; there is the rudiment of a natural tie between the signifying and the signified. The symbol for justice, the scales, could not be replaced by something else at random, a carriage for instance."

since the difficulties are very great; and perhaps owing to accidents of psychological terminology, the worker tends to neglect the concrete environment of the speaker and to consider only the 'ideas' which are regarded as 'expressed.' Thus Dr Boas, the most suggestive and influential of the group of ethnologists which is dealing with the vast subject-matter provided by the American-Indian languages, formulates as the three points to be considered in the objective discussion of languages—

First, the constituent phonetic elements of the language;

Second, the groups of ideas expressed by phonetic groups;

Third, the method of combining and modifying phonetic groups.

"All speech," says Dr Boas explicitly, "is intended to serve for the communication of ideas." Ideas, however, are only remotely accessible to outside inquirers, and we need a theory which connects words with things through the ideas, if any, which they symbolize. We require, that is to say, separate analyses of the relations of words to ideas and of ideas to things. Further, much language, especially primitive language, is not primarily concerned with ideas at all, unless under 'ideas' are included emotions and attitudes—a procedure which would involve terminological inconveniences. The omission of all separate treatment of the ways in which speech, besides conveying ideas, also expresses attitudes, desires and intentions,<sup>1</sup> is another point at which the work of this active school is at present defective.

<sup>1</sup> Not that definitions are lacking which include more than ideas. Thus in one of the ablest and most interesting of modern linguistic studies, that of E. Sapir, Chief of the Anthropological Section, Geological Survey of Canada, an ethnologist closely connected with the American school, language is defined as "a purely human and non-instinctive method of communicating ideas, emotions and desires by means of a system of voluntarily produced symbols" (*Language*, 1922, p. 7). But so little is the emotive element considered that in a discussion of grammatical form, as shown by the great variation of word-order in Latin, we find it stated that the change from 'hominem femina videt'

In yet another respect all these specialists fail to realize the deficiencies of current linguistic theory. Pre-occupied as they are—ethnologists with recording the details of fast vanishing languages; philologists with an elaborate technique of phonetic laws and principles of derivation; philosophers with 'philosophy'—all have overlooked the pressing need for a better understanding of what actually occurs in discussion. The analysis of the process of communication is partly psychological, and psychology has now reached a stage at which this part may be successfully undertaken. Until this had happened the science of Symbolism necessarily remained in abeyance, but there is no longer any excuse for vague talk about Meaning, and ignorance of the ways in which words deceive us.

Throughout the Western world it is agreed that people must meet frequently, and that it is not only agreeable to talk, but that it is a matter of common courtesy to say something even when there is hardly anything to say. "Every civilized man," continues the late Professor Mahaffy, to whose *Principles of the Art of Conversation* we owe this observation, "feels, or ought to feel, this duty; it is the universal accomplishment which all must practise"; those who fail are punished by the dislike or neglect of society.

There is no doubt an Art in saying something when to 'videt femina hominem' makes "little or no difference beyond, possibly, a rhetorical or a stylistic one" (p. 65). The italics are ours; and the same writer sums up his discussion of the complex symbol 'The farmer kills the duckling,' with the remark: "In this short sentence of five words there are expressed thirteen distinct concepts" (p. 93). As will be noted at a later stage, the use of the term 'concept' is particularly unfortunate in such an analysis, and a vocabulary so infested with current metaphysical confusions leads unavoidably to incompleteness of treatment.

By being forced to include under 'concepts' both 'concrete concepts'—material objects, and 'Pure relational concepts' (abstract ways of referring), Sapir is unable in this work—which was unfortunately never followed by his projected volume on Linguistics—to make even the distinctions which are essential in symbolic language (cf. Chapter V., p. 101 *infra*); and when we come to deal with translation (Chapter X., p. 228) we shall find that this vocabulary has proved equally unserviceable to him.

there is nothing to be said, but it is equally certain that there is an Art no less important of saying clearly what one wishes to say when there is an abundance of material; and conversation will seldom attain even the level of an intellectual pastime if adequate methods of Interpretation are not also available.

Symbolism is the study of the part played in human affairs by language and symbols of all kinds, and especially of their influence on Thought. It singles out for special inquiry the ways in which symbols help us and hinder us in reflecting on things.

Symbols direct and organize, record and communicate. In stating what they direct and organize, record and communicate we have to distinguish as always between Thoughts and Things.<sup>1</sup> It is Thought (or, as we shall usually say, *reference*) which is directed and organized, and it is also Thought which is recorded and communicated. But just as we say that the gardener mows the lawn when we know that it is the lawn-mower which actually does the cutting, so, though we know that the direct relation of symbols is with thought, we also say that symbols record events and communicate facts.

By leaving out essential elements in the language situation we easily raise problems and difficulties which vanish when the whole transaction is considered in greater detail. Words, as every one now knows, 'mean' nothing by themselves, although the belief

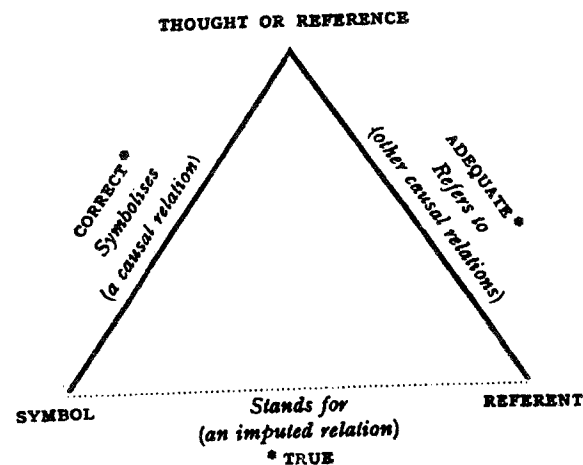
<sup>1</sup> The word 'thing' is unsuitable for the analysis here undertaken, because in popular usage it is restricted to material substances—a fact which has led philosophers to favour the terms 'entity,' 'ens' or 'object' as the general name for whatever is. It has seemed desirable, therefore, to introduce a technical term to stand for whatever we may be thinking of or referring to. 'Object,' though this is its original use, has had an unfortunate history. The word 'referent,' therefore, has been adopted, though its etymological form is open to question when considered in relation to other participial derivatives, such as agent or reagent. But even in Latin the present participle occasionally (e.g. *vehens* in equo) admitted of variation in use; and in English an analogy with substantives, such as 'reagent,' 'extent,' and 'incident' may be urged. Thus the fact that 'referent' in what follows stands for a thing and not an active person, should cause no confusion.

that they did, as we shall see in the next chapter, was once equally universal. It is only when a thinker makes use of them that they stand for anything, or, in one sense, have 'meaning.' They are instruments. But besides this referential use which for all reflective, intellectual use of language should be paramount, words have other functions which may be grouped together as emotive. These can best be examined when the framework of the problem of strict statement and intellectual communication has been set up. The importance of the emotive aspects of language is not thereby minimized, and anyone chiefly concerned with popular or primitive speech might well be led to reverse this order of approach. Many difficulties, indeed, arising through the behaviour of words in discussion, even amongst scientists, force us at an early stage to take into account these 'non-symbolic' influences. But for the analysis of the senses of 'meaning' with which we are here chiefly concerned, it is desirable to begin with the relations of thoughts, words and things as they are found in cases of reflective speech uncomplicated by emotional, diplomatic, or other disturbances; and with regard to these, the indirectness of the relations between words and things is the feature which first deserves attention.

This may be simply illustrated by a diagram, in which the three factors involved whenever any statement is made, or understood, are placed at the corners of the triangle, the relations which hold between them being represented by the sides. The point just made can be restated by saying that in this respect the base of the triangle is quite different in composition from either of the other sides.

Between a thought and a symbol causal relations hold. When we speak, the symbolism we employ is caused partly by the reference we are making and partly by social and psychological factors—the purpose for which we are making the reference, the proposed

effect of our symbols on other persons, and our own attitude. When we hear what is said, the symbols both cause us to perform an act of reference and to assume an attitude which will, according to circumstances, be more or less similar to the act and the attitude of the speaker.



Between the Thought and the Referent there is also a relation; more or less direct (as when we think about or attend to a coloured surface we see), or indirect (as when we 'think of' or 'refer to' Napoleon), in which case there may be a very long chain of sign-situations intervening between the act and its referent: word—historian—contemporary record—eye-witness—referent (Napoleon).

Between the symbol and the referent there is no relevant relation other than the indirect one, which consists in its being used by someone to stand for a referent. Symbol and Referent, that is to say, are not connected directly (and when, for grammatical reasons, we imply such a relation, it will merely be an imputed,<sup>1</sup>

\* Cf. Chapter V., pp. 101-2.

<sup>1</sup> See Chapter VI., p. 116.



as opposed to a real, relation) but only indirectly round the two sides of the triangle.<sup>1</sup>

It may appear unnecessary to insist that there is no direct connection between say 'dog,' the word, and certain common objects in our streets, and that the only connection which holds is that which consists in our using the word when we refer to the animal. We shall find, however, that the kind of simplification typified by this once universal theory of direct meaning relations between words and things is the source of almost all the difficulties which thought encounters. As will appear at a later stage, the power to confuse and obstruct, which such simplifications possess, is largely due to the conditions of communication. Language if it is to be used must be a *ready* instrument. The handiness and ease of a phrase is always more important in deciding whether it will be extensively used than its accuracy. Thus such shorthand as the word 'means' is constantly used so as to imply a direct simple relation between words and things, phrases and situations. If such relations could be admitted then there would of course be no problem as to the nature

<sup>1</sup> An exceptional case occurs when the symbol used is more or less directly like the referent for which it is used, as for instance, it may be when it is an onomatopœic word, or an image, or a gesture, or a drawing. In this case the triangle is completed; its base is supplied, and a great simplification of the problem involved appears to result. For this reason many attempts have been made to reduce the normal language situation to this possibly more primitive form. Its greater completeness does no doubt account for the immense superiority in efficiency of gesture languages, within their appropriate field, to other languages not supportable by gesture within *their* fields. Hence we know far more perfectly what has occurred if a scene is well re-enacted than if it be merely described. But in the normal situation we have to recognize that our triangle is without its base, that between Symbol and Referent no direct relation holds; and, further, that it is through this lack that most of the problems of language arise. Simulative and non-simulative languages are entirely distinct in principle. Standing for and representing are different relations. It is, however, convenient to speak at times as though there were some direct relation holding between Symbol and Referent. We then say, on the analogy of the lawn-mower, that a Symbol refers to a Referent. Provided that the telescopic nature of the phrase is not forgotten, confusion need not arise. In Supplement I., Part V. *infra*, Dr Malinowski gives a valuable account of the development of the speech situation in relation to the above diagram.

of Meaning, and the vast majority of those who have been concerned with it would have been right in their refusal to discuss it. But too many interesting developments have been occurring in the sciences, through the rejection of everyday symbolizations and the endeavour to replace them by more accurate accounts, for any naive theory that 'meaning' is just 'meaning' to be popular at the moment. As a rule new facts in startling disagreement with accepted explanations of other facts are required before such critical analyses of what are generally regarded as simple satisfactory notions are undertaken. This has been the case with the recent revolutions in physics. But in addition great reluctance to postulate anything *sui generis* and of necessity undetectable<sup>1</sup> was needed before the simple natural notion of simultaneity, for instance, as a two-termed relation came to be questioned. Yet to such questionings the theory of Relativity was due. The same two motives, new discrepant facts, and distaste for the use of obscure kinds of entities in eking out explanations, have led to disturbances in psychology, though here the required restatements have not yet been provided. No Copernican revolution has yet occurred, although several are due if psychology is to be brought into line with its fellow sciences.

It is noteworthy, however, that recent stirrings in psychology have been mainly if not altogether concerned with feeling and volition. The popular success of Psycho-analysis has tended to divert attention from the older problem of thinking. Yet in so far as progress here has consequences for all the other sciences and for the whole technique of investigation in psychology itself, this central problem of knowing or of 'meaning' is perhaps better worth scrutiny and more likely to promote fresh orientations than any other that can be suggested. As the Behaviorists have also very

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<sup>1</sup> Places and instants are very typical entities of verbal origin.

properly pointed out, this question is closely connected with the use of words.

But the approach to Meaning, far more than the approach to such problems as those of physics, requires a thorough-going investigation of language. Every great advance in physics has been at the expense of some generally accepted piece of metaphysical explanation which had enshrined itself in a convenient, universally practised, symbolic shorthand. But the confusion and obstruction due to such shorthand expressions and to the naïve theories they protect and keep alive, is greater in psychology, and especially in the theory of knowledge, than elsewhere; because no problem is so infected with so-called metaphysical difficulties—due here, as always, to an approach to a question through symbols without an initial investigation of their functions.

We have now to consider more closely what the causes and effects of symbols are.<sup>1</sup> Whatever may be the services, other than conservative and retentive, of symbolization, all experience shows that there are also disservices. The grosser forms of verbal confusion have long been recognized; but less attention has been paid to those that are more subtle and more frequent. In the following chapters many examples of these will be given, chosen in great part from philosophical fields, for it is here that such confusions become, with the passage of time, most apparent. The root of the trouble will be traced to the superstition that words are in some way parts of things or always imply things corresponding to them, historical instances of this still potent

<sup>1</sup> Whether symbols in some form or other are necessary to thought itself is a difficult problem, and is discussed in *The Meaning of Psychology* (Chapter XIII.) as well as in Chapter X. of the present work. But certainly the recording and the communication of thought (telepathy apart) require symbols. It seems that thought, so far as it is transitive and not in the form of an internal dialogue, can dispense with symbols, and that they only appear when thought takes on this monologue form. In the normal case the actual development of thought is very closely bound up with the symbolization which accompanies it.

instinctive belief being given from many sources. The fundamental and most prolific fallacy is, in other words, that the base of the triangle given above is filled in.

The completeness of any reference varies; it is more or less close and clear, it 'grasps' its object in greater or less degree. Such symbolization as accompanies it—images of all sorts, words, sentences whole and in pieces—is in no very close observable connection with the variation in the perfection of the reference. Since, then, in any discussion we cannot immediately settle from the nature of a person's remarks what his opinion is, we need some technique to keep the parties to an argument in contact and to clear up misunderstandings—or, in other words, a Theory of Definition. Such a technique can only be provided by a theory of knowing, or of reference, which will avoid, as current theories do not, the attribution to the knower of powers which it may be pleasant for him to suppose himself to possess, but which are not open to the only kind of investigation hitherto profitably pursued, the kind generally known as scientific investigation.

Normally, whenever we hear anything said we spring spontaneously to an immediate conclusion, namely, that the speaker is referring to what we should be referring to were we speaking the words ourselves. In some cases this interpretation may be correct; this will prove to be what he has referred to. But in most discussions which attempt greater subtleties than could be handled in a gesture language this will not be so. To suppose otherwise is to neglect our subsidiary gesture languages, whose accuracy within their own limited provinces is far higher than that yet reached by any system of spoken or written symbols, with the exception of the quite special and peculiar case of mathematical, scientific and musical notations. Words, whenever they cannot directly ally themselves with and support themselves upon gestures, are at present a very imperfect means of communication. Even for private

thinking thought is often ready to advance, and only held back by the treachery of its natural symbolism; and for conversational purposes the latitude acquired constantly shows itself to all those who make any serious attempts to compare opinions.

We have not here in view the more familiar ways in which words may be used to deceive. In a later chapter, when the function of language as an instrument for the *promotion of purposes* rather than as a means of *symbolizing references* is fully discussed, we shall see how the intention of the speaker may complicate the situation. But the *honnête homme* may be unprepared for the lengths to which verbal ingenuity can be carried. At all times these possibilities have been exploited to the full by interpreters of Holy Writ who desire to enjoy the best of both worlds. Here, for example, is a specimen of the exegetic of the late Dr Lyman Abbott, pastor, publicist, and editor, which, through the efforts of Mr Upton Sinclair, has now become classic. Does Christianity condemn the methods of twentieth-century finance? Doubtless there are some awkward words in the Gospels, but a little 'interpretation' is all that is necessary.

"Jesus did not say 'Lay not up for yourselves treasures upon earth.' He said 'Lay not up for yourselves treasures upon earth where moth and rust doth corrupt and where thieves break through and steal.' And no sensible American does. Moth and rust do not get at Mr Rockefeller's oil wells, and thieves do not often break through and steal a railway. What Jesus condemned was hoarding wealth."

Each investment, therefore, every worldly acquisition, according to one of the leading divines of the New World, may be judged on its merits. There is no hard and fast rule. When moth and rust have been eliminated by science the Christian investor will presumably have no problem, but in the meantime it would seem that Camphorated Oil fulfils most nearly the synoptic requirements. Burglars are not partial

to it; it is anathema to moth; and the risk of rust is completely obviated.

Another variety of verbal ingenuity closely allied to this, is the deliberate use of symbols to misdirect the listener. Apologies for such a practice in the case of the madman from whom we desire to conceal the whereabouts of his razor are well known, but a wider justification has also been attempted. In the Christian era we hear of "falsifications of documents, inventions of legends, and forgeries of every description which made the Catholic Church a veritable seat of lying."<sup>1</sup> A play upon words in which one sense is taken by one speaker and another sense intended by him for the hearer was permitted.<sup>2</sup> Indeed, three sorts of equivocations were distinguished by Alfonso de Liguori, who was beatified in the nineteenth century, which might be used with good reason; a good reason being "any honest object, such as keeping our goods, spiritual or temporal."<sup>3</sup> In the twentieth century the intensification of militant nationalism has added further 'good reason'; for the military code includes all transactions with hostile nations or individuals as part of the process of keeping spiritual and temporal goods. In war-time words become a normal part of the mechanism of deceit, and the ethics of the situation have been aptly summed up by Lord Wolseley: "We will keep hammering along with the conviction that 'honesty is the best policy,' and that truth always wins in the long run. These pretty sentences do well for a child's copy-book, but the man who acts upon them in war had better sheathe his sword for ever."<sup>4</sup>

<sup>1</sup> Westermarck, *The Origin and Development of Moral Ideas*, Vol. II., p. 100.

<sup>2</sup> Alagona, *Compendium Manualis D. Navarri* XII., 88, p. 94.

<sup>3</sup> Alfonso di Liguori, *Theologia Moralis*, III., 151, Vol. I., p. 249.

<sup>4</sup> Meyrick, *Moral and Devotional Theology of the Church of Rome*, Vol. I., p. 3. Cf. further Westermarck, *loc. cit.*

<sup>5</sup> *Soldier's Pocket Book for Field Service*, p. 69.

The Greeks, as we shall see, were in many ways not far from the attitude of primitive man towards words. And it is not surprising to read that after the Peloponnesian war the verbal machinery of peace had got completely out of gear, and, says Thucydides, could not be brought back into use—"The meaning of words had no longer the same relation to things, but was changed by men as they thought proper." The Greeks were powerless to cope with such a situation. We in our wisdom seem to have created institutions which render us more powerless still.<sup>1</sup>

On a less gigantic scale the technique of deliberate misdirection can profitably be studied with a view to corrective measures. In accounting for Newman's *Grammar of Assent* Dr E. A. Abbott had occasion to describe the process of 'lubrication,' the art of greasing the descent from the premises to the conclusion, which his namesake cited above so aptly employs. In order to lubricate well, various qualifications are necessary :

"First a nice discrimination of words, enabling you to form, easily and naturally, a great number of finely graduated propositions, shading away, as it were, from the assertion 'x is white' to the assertion 'x is black.' Secondly an inward and absolute contempt for logic and for words. . . . And what are words but toys and sweetmeats for grown-up babies who call themselves men?"<sup>2</sup>

But even where the actual referents are not in doubt, it is perhaps hardly realized how widespread is the

<sup>1</sup> As the late C. E. Montague (*Disenchantment*, p. 101) well put it, "the only new thing about deception in war is modern man's more perfect means for its practice. The thing has become, in his hand, a trumpet more efficacious than Gideon's own. . . . To match the Lewis gun with which he now fires his solids, he has to his hand the newspaper Press, to let fly at the enemy's head the thing which is not." But this was a temporary use of the modern technique of misdirection, and with the return of peace the habit is lost? Not so, says Mr Montague. "Any weapon you use in a war leaves some bill to be settled in peace, and the Propaganda arm has its cost like another." The return of the exploiters of the verbal machine to their civil posts is a return in triumph, and its effects will be felt for many years in all countries where the power of the word amongst the masses remains paramount.

<sup>2</sup> *Philomythus*, p. 214.

habit of using the power of words not only for *bona fide* communications, but also as a method of misdirection; and in the world as it is to-day the naïve interpreter is likely on many occasions to be seriously misled if the existence of this unpleasing trait—equally prevalent amongst the classes and the masses without distinction of race, creed, sex, or colour—is overlooked.

Throughout this work, however, we are treating of *bona fide* communication only, except in so far as we shall find it necessary in Chapter IX. to discuss that derivate use of Meaning to which misdirection gives rise. For the rest, the verbal treachery with which we are concerned is only that involved by the use of symbols as such. As we proceed to examine the conditions of communication we shall see why any symbolic apparatus which is in general use is liable to incompleteness and defect.

But if our linguistic outfit is treacherous, it nevertheless is indispensable, nor would another complete outfit necessarily improve matters, even if it were ten times as complete. It is not always new words that are needed, but a means of controlling them as symbols, a means of readily discovering to what in the world on any occasion they are used to refer, and this is what an adequate theory of definition should provide.

But a theory of Definition must follow, not precede, a theory of Signs, and it is little realized how large a place is taken both in abstract thought and in practical affairs by sign-situations. But if an account of sign-situations is to be scientific it must take its observations from the most suitable instances, and must not derive its general principles from an exceptional case. The person actually interpreting a sign is not well placed for observing what is happening. We should develop our theory of signs from observations of other people, and only admit evidence drawn from introspection when we know how to appraise it. The adoption of the other method, on the ground that all our knowledge of

others is inferred from knowledge of our own states, can only lead to the *impasse* of solipsism from which modern speculation has yet to recoil. Those who allow beyond question that there are people like themselves also interpreting signs and open to study should not find it difficult to admit that their observation of the behaviour of others may provide at least a framework within which their own introspection, that special and deceptive case, may be fitted. That this is the practice of all the sciences need hardly be pointed out. Any sensible doctor when stricken by disease distrusts his own introspective diagnosis and calls in a colleague.

There are, indeed, good reasons why what is happening in ourselves should be partially hidden from us, and we are generally better judges of what other people are doing than of what we are doing ourselves. Before we looked carefully into other people's heads it was commonly believed that an entity called the soul resided therein, just as children commonly believe that there is a little man inside the skull who looks out at the eyes, the windows of the soul, and listens at the ears. The child has the strongest introspective evidence for this belief, which, but for scalpels and microscopes, it would be difficult to disturb. The tacitly solipsistic presumption that this naïve approach is in some way a necessity of method disqualifies the majority of philosophical and psychological discussions of Interpretation. If we restrict the subject-matter of the inquiry to 'ideas' and words, *i.e.*, to the left side of our triangle, and omit all frank recognition of the world outside us, we inevitably introduce confusion on such subjects as knowledge in perception, verification and Meaning itself.<sup>1</sup>

<sup>1</sup> This tendency is particularly noticeable in such works as Baldwin's elaborate treatise on *Thoughts and Things*, where a psychological apparatus of 'controls' and 'contents' is hard to reconcile with the subsequent claim to discuss communication. The twist given to grammatical analysis by Aristotle's similar neglect of Reference is dealt with in Appendix A.

If we stand in the neighbourhood of a cross road and observe a pedestrian confronted by a notice *To Grantchester* displayed on a post, we commonly distinguish three important factors in the situation. There is, we are sure, (1) a Sign which (2) refers to a Place and (3) is being interpreted by a person. All situations in which Signs are considered are similar to this. A doctor noting that his patient has a temperature and so forth is said to diagnose his disease as influenza. If we talk like this we do not make it clear that signs are here also involved. Even when we speak of symptoms we often do not think of these as closely related to other groups of signs. But if we say that the doctor interprets the temperature, etc., as a Sign of influenza, we are at any rate on the way to an inquiry as to whether there is anything in common between the manner in which the pedestrian treated the object at the cross road and that in which the doctor treated his thermometer and the flushed countenance.

On close examination it will be found that very many situations which we do not ordinarily regard as Sign-situations are essentially of the same nature. The chemist dips litmus paper in his test-tube, and interprets the sign red or the sign blue as meaning acid or base. A Hebrew prophet notes a small black cloud, and remarks "We shall have rain." Lessing scrutinizes the Laocoön, and concludes that the features of Laocoön *père* are in repose. A New Zealand school-girl looks at certain letters on a page in her *Historical Manual for the use of Lower Grades* and knows that Queen Anne is dead.

The method which recognizes the common feature of sign-interpretation<sup>1</sup> has its dangers, but opens the

<sup>1</sup> In all these cases a sign has been interpreted rightly or wrongly, *i.e.*, something has been not only experienced or enjoyed, but understood as referring to something else. Anything which can be experienced can also be thus understood, *i.e.*, can also be a sign; and it is important to remember that interpretation, or what happens to (or in the mind of) an Interpreter is quite distinct both from the sign and from that for which the sign stands or to which it refers. If then

way to a fresh treatment of many widely different topics.

As an instance of an occasion in which the theory of signs is of special use, the subject dealt with in our fourth chapter may be cited. If we realize that in *all* perception, as distinguished from mere awareness, sign-situations are involved, we shall have a new method of approaching problems where a verbal deadlock seems to have arisen. Whenever we 'perceive' what we name 'a chair,' we are interpreting a certain group of data (modifications of the sense-organs), and treating them as signs of a referent. Similarly, even before the interpretation of a word, there is the almost automatic interpretation of a group of successive noises or letters as a word. And in addition to the external world we can also explore with a new technique the sign-situations involved by mental events, the 'goings on' or processes of interpretation themselves. We need neither confine ourselves to arbitrary generalizations from introspection after the manner of classical psychology, nor deny the existence of images and other 'mental' occurrences to their signs with the extreme Behaviorists.<sup>1</sup> The Double language hypothesis, which is suggested by the theory of signs and supported by linguistic analysis, would absolve Dr Watson and his followers

we speak of the meaning of a sign we must not, as philosophers, psychologists and logicians are wont to do, confuse the (imputed) relation between a sign and that to which it refers, either with the referent (what is referred to) or with the process of interpretation (the 'goings on' in the mind of the interpreter). It is this sort of confusion which has made so much previous work on the subject of signs and their meaning unfruitful. In particular, by using the same term 'meaning' both for the 'Goings on' inside their heads (the images, associations, etc., which enabled them to interpret signs) and for the Referents (the things to which the signs refer) philosophers have been forced to locate Grantchester, Influenza, Queen Anne, and indeed the whole Universe equally inside their heads—or, if alarmed by the prospect of cerebral congestion, at least 'in their minds' in such wise that all these objects become conveniently 'mental.' Great care, therefore, is required in the use of the term 'meaning,' since its associations are dangerous.

<sup>1</sup> That the mind-body problem is due to a duplication of symbolic machinery is maintained in Chapter IV., p. 81. Cf. also *The Meaning of Psychology*, by C. K. Ogden (1926), Chapter II., where this view is supported with reference to contemporary authorities who hold it.

from the logical necessity of affecting general anæsthesia. Images, etc., are often most useful signs of our present and future behaviour—notably in the modern interpretation of dreams.<sup>1</sup> An improved Behaviorism will have much to say concerning the chaotic attempts at symbolic interpretation and construction by which Psycho-analysts discredit their valuable labours.

The problems which arise in connection with any 'sign-situation' are of the same general form. The relations between the elements concerned are no doubt different, but they are of the same sort. A thorough classification of these problems in one field, such as the field of symbols, may be expected, therefore, to throw light upon analogous problems in fields at first sight of a very different order.

When we consider the various kinds of Sign-situations instanced above, we find that those signs which men use to communicate one with another and as instruments of thought, occupy a peculiar place. It is convenient to group these under a distinctive name; and for words, arrangements of words, images, gestures, and such representations as drawings or mimetic sounds we use the term *symbols*. The influence of Symbols upon human life and thought in numberless unexpected ways has never been fully recognized, and to this chapter of history we now proceed.

<sup>1</sup> In the terminology of the present work, many of the analyst's 'symbols' are, of course, signs only; they are not used for purposes of communication. But in the literature of psycho-analysis there is much valuable insistence on the need of wider forms of interpretation, especially in relation to emotional overcharge. Cf., e.g. the late Dr Jelliffe's "The Symbol as an Energy Condenser" (*Journal of Nervous and Mental Diseases*, December 1919), though the metaphor, like many other psycho-analytic locutions, must not be stretched too far in view of what has been said above and of what is to follow (cf. pages 102-3 and 200 *infra*).



## CHAPTER III

## SIGN-SITUATIONS

Studium linguarum in universis, in ipsis primordiis triste est et ingratum; sed primis difficultatibus labore improbo et ardore nobili perruptis, postea cumulatissime beamur.—*Valcknaer.*

\* MEANING, that pivotal term of every theory of language, cannot be treated without a satisfactory theory of signs. With some of its senses (in which 'my meaning' = 'what I am thinking of') the question to be answered is, in brief, "What happens when we judge, or believe, or think of something: of what kind of entities does the something consist: and how is it related to the mental event which is our judging, our believing, our thinking?" The traditional approach to this question has been through introspection and through the logical analysis of Judgment, with the result that all the many answers which have been given from this angle will be found, in contrast to that which is outlined below, to be variants of one opinion. They agree, that is, in holding that, when we think of anything, we have to it (or sometimes to something else) a relation of a quite unique kind. In other words thinking is regarded as an unparalleled happening. Thus the problems of symbolization and reference come to be discussed in isolation as though there were no allied fields of inquiry.

This assumption of the uniqueness of the relation between the mind and its objects is the central tenet in views which otherwise have no point of agreement. Thus it is plausibly held by some that when we are believing (say) that we are alive, we are in a direct

relation of a unique kind to an entity which is neither in time nor in space, to be called the proposition 'that we are alive.' Others pretend that there is nothing of this sort, but that instead we are then related by a multiple relation, again of an unique kind, with a variety of entities—among which are (perhaps) we ourselves and certainly something to be called a 'concept' (or 'universal' or 'property'), namely aliveness or being alive. On both views the uniqueness in kind of the relation between a thought as a mental event and the things, whatever they may be, which the thought is 'of,' is too obvious to be questioned.

As a representative of the realist school which claims to have assimilated the modern scientific outlook, we may cite Keynes, who adopted the view that philosophically we must start from various classes of things with which we have direct acquaintance. "The most important classes of things with which we have direct acquaintance are our own sensations, which we may be said to *experience*, the ideas and meanings, about which we have thoughts and which we may be said to *understand*, and facts or characteristics or relations of sense data or meanings, which we may be said to *perceive*. . . . The objects of knowledge and belief—as opposed to the objects of direct acquaintance which I term sensations, meanings, and perceptions—I shall term *propositions*." As an example of direct knowledge we are told that from acquaintance with a sensation of yellow "I can pass directly to a knowledge of the proposition 'I have a sensation of yellow.'"<sup>1</sup> Lest it should be supposed that this odd, but very prevalent, doctrine is peculiar to a school, we may refer to the justification of *das Urteil*, "spaceless, timeless and impersonal," the specific object of logical inquiry, elaborated by Lipps;<sup>2</sup>

<sup>1</sup> *A Treatise on Probability* (1921), pp. 12-13.

<sup>2</sup> *Psychologische Untersuchungen*, Vol. II., section 1, "Zur 'Psychologie' und 'Philosophie,'" pp. 4-10.



to the similar doctrine which vitiates so much of Husserl's analysis of language;<sup>1</sup> and to the still more extraordinary phantasies of van Ginneken, a subtle linguistic psychologist who, influenced doubtless by Meinong as well as by Theology, advances the same view as a theory of 'adhesion.' No account of thinking in terms of verbal images and representations of things is, according to this author, sufficient. "We find ourselves confronted by a new force: something non-sensible, transcendental . . . by means of which we understand and know in a new manner, and a more perfect one than we could through our animal nature. We . . . adhere to the present reality, to that which is really and actually there . . . and also to the possible, the *essence*."<sup>2</sup> It is plain that on any such view a scientific account of thinking is ruled out from the very beginning.

"What happens when we think?" is a question which should be of interest to every thinker. The triteness of the answer "When we think, we think," offered by such views may help to explain the smallness of the interest which is shown. In the following pages an attempt is made to outline an account of thinking in purely causal terms, without any introduction of unique relations invented *ad hoc*. It is with this end in view, the provision of a natural as opposed to an artificial theory of thinking, that we begin with the consideration of signs.

Throughout almost all our life we are treating things as signs. All experience, using the word in the widest possible sense, is either enjoyed or interpreted (*i.e.*, treated as a sign) or both, and very little of it escapes some degree of interpretation. An account of the process of Interpretation is thus the key to the understanding of the Sign-situation, and therefore the be-

<sup>1</sup> See Appendix D, where Mr Russell's similar (1903) view will also be found.

<sup>2</sup> *Principles de Linguistique Psychologique*, pp. 52, 55, 68-9.

ginning of wisdom. It is astonishing that although the need for such an account has long been a commonplace in psychology, those concerned with the criticism and organization of our knowledge have with few exceptions entirely ignored the consequences of its neglect.

Attempts to provide this account have been given in many different vocabularies. The doctrines of the associationists,<sup>1</sup> of apperception,<sup>2</sup> of suggestion,<sup>3</sup> have led up to restatements in terms of process rather than of content: 'instinctive sequences'<sup>4</sup> taking the place of 'mental chemistry,' with advantage but without essential change in the views maintained. The most recent form in which the account appears is that adopted by Semon, the novelty of whose vocabulary seems to have attracted attention once more to considerations which were no doubt too familiar to be thought of any importance.

These otherwise valuable methods of approach tend to separate the treatment of fundamental laws of mental process from that of sign-interpretation, which is unfortunate for psychology. They have led not only to the discussion in isolation of problems essentially the same, but also to a failure to realize the extent of the ground already covered by earlier thinkers.

Since the formulation has always been given in causal terms, it will be convenient to use that terminology. Its use is indeed almost unavoidable in the interests of intelligibility, and *need* not be misleading if the correct expansion is remembered. Thus in this preliminary account we are merely using causal language as an expository convenience for the sake of its brevity and its verbs. The fuller statement which follows avoids all mention of causes, effects, and dependence,

<sup>1</sup> D. Hartley, *Observations on Man*, Prop. X.

<sup>2</sup> G. C. Lange, *Apperception*, Part I, §§ 1, 2.

<sup>3</sup> I. Miller, *The Psychology of Thinking*, p. 154.

<sup>4</sup> C. Lloyd Morgan, *Instinct and Experience*, p. 194.

and deals merely with observable correlations or contextual uniformities among events.

The effects upon the organism due to any sign, which may be any stimulus from without, or any process taking place within, depend upon the past history of the organism, both generally and in a more precise fashion. In a sense, no doubt, the whole past history is relevant: but there will be some among the past events in that history which more directly determine the nature of the present agitation than others. Thus when we strike a match, the movements we make and the sound of the scrape are present stimuli. But the excitation which results is different from what it would be had we never struck matches before. Past strikings have left, in our organization, engrams,<sup>1</sup> residual traces, which help to determine what the mental process will be. For instance, this mental process is among other things an awareness that we are striking a *match*. Apart from the effects of similar previous situations we should have no such awareness. Suppose further that the awareness is accompanied by an expectation of a flame. This expectation again will be due to the effects of situations in which the striking of a match has been followed by a flame. The expectation is the excitation of part of an engram complex, which is called up by a stimulus (the scrape) similar to a part only of the original stimulus-situation.

A further example will serve to make this clearer. The most celebrated of all caterpillars, whose history is in part recorded in the late Professor Lloyd Morgan's *Habit and Instinct*, p. 41, was striped yellow and black and was seized by one of the professor's chickens. Being offensive in taste to the chicken he was rejected. Thenceforth the chicken refrained from seizing similar caterpillars. Why? Because the sight of such a cater-

<sup>1</sup> Semon's terminology: *Die Mneme*, particularly Part II. (English translation, p. 138 ff.). For a critique of Semon's theory, see *op. cit.*, *Principles of Literary Criticism*, Chapter XIV., and *op. cit.*, *The Meaning of Psychology*, Chapter IV.

pillar, a part that is of the whole sight-seize-taste context of the original experience, now excites the chicken in a way sufficiently<sup>1</sup> like that in which the whole context did, for the seizing at least not to occur, whether the tasting (in images) does or not.

This simple case is typical of all interpretation, the peculiarity of interpretation being that when a context has affected us in the past the recurrence of merely a part of the context will cause us to react in the way in which we reacted before.<sup>2</sup> A sign is always a stimulus similar to some part of an original stimulus and sufficient to call up the engram<sup>3</sup> formed by that stimulus.

An engram is the residual trace of an adaptation<sup>4</sup> made by the organism to a stimulus. The mental process<sup>5</sup> due to the calling up of an engram is a similar adaptation: so far as it is cognitive, what it is adapted to is its referent, and is what the sign which excites it stands for or signifies.

The term 'adapted,' though convenient, requires expansion if this account is to be made clear—and to this expansion the remainder of the present chapter is devoted. Returning to our instance, we will suppose that the match ignites and that we have been expecting a flame. In this case the flame is what we

<sup>1</sup> The degree of likeness necessary is a matter of dispute. Yellow and black thus becomes a *sign* for offensiveness in taste.

<sup>2</sup> To use the terminology of the Gestalt school, when a 'gestalt' or 'configuration' has been formed, a system that has been disturbed will tend towards the 'end-state' determined by former occurrences. This view and terminology are discussed in *op. cit.*, *The Meaning of Psychology*, pp. 108-11, and 114-15 where a paragraph will be found in which six different phrases could all be replaced by the word *gestalt*, if desired (though the paragraph seems clearer as it is).

<sup>3</sup> If the reader is doubtful about engrams he may read "to call up an excitation similar to that caused by the original stimulus."

<sup>4</sup> This is not necessarily a right or appropriate adaptation. We are here only considering adaptation so far as it is cognitive, and may disregard the affective-volitional character of the process.

<sup>5</sup> The account here given may be read as neutral in regard to psychoneural parallelism, interaction, and double aspect hypotheses, since the problem of the relation of mind and body is—in so far as it is not itself a phantom problem—a later one. Cf. Chapter IV., p. 81, and *op. cit.*, *The Meaning of Psychology*, Chapter II.

Sign Interpretation  
= recall of contexts based on sign or probe

are adapted to. More fully, the mental process which is the expectation is similar to processes which have been caused by flames in the past, and further it is 'directed to' the future. If we can discover what this 'directed to' stands for we shall have filled in the chief part of our account of interpretation.

Besides being 'directed to' the future our expectation is also 'directed to' flame. But here 'directed to' stands for nothing more than 'similar to what has been caused by.' A thought is directed to flame when it is similar in certain respects to thoughts which have been caused by flame. As has been pointed out above, we must not allow the defects of causal language either to mislead us here or alternatively to make us abandon the method of approach so indicated. We shall find, if we improve this language, both that this kind of substitute for 'directed to' loses its strangeness, and also that the same kind of substitution will meet the case of 'direction to the future' and will in fact explain the 'direction' or *reference* of thinking processes in general.

The unpurified notion of cause is especially misleading in this connection since it has led even the hardest thinkers<sup>1</sup> to shrink from the identification of

<sup>1</sup> Exceptions such as Mr E. B. Holt and Mr Russell, who have independently adopted causal theories of reference, have not succeeded in giving precision to this view. The former, who holds (*The Freudian Wish*, p. 168) that in behaviour there is "a genuine objective reference to the environment," yet continues—"Even when one is conscious of things that are not there, as in hallucination, one's body is adjusted to them as if they were there," or again (p. 202), "Why does a boy go fishing? . . . Because the behaviour of the growing organism is so far integrated as to respond specifically to such an environmental object as fish in the pond. . . . The boy's thought (content) is the fish." It will be seen that the contextual theory of reference outlined in the present chapter provides an account of specific response which applies, as Mr Holt's does not, to erroneous and to truly adapted behaviour alike. Mr Russell, on the other hand, who, like Mr Holt, has now abandoned the theory of direct knowledge relations between minds and things, obscures the formulation of the causal account in his *Analysis of Mind* by introducing considerations which arise from a quite incompatible treatment. "It is a very singular thing," he says (p. 235), "that meaning which is single should generate objective reference, which is dual, namely, true and false." When we come to the analysis of complex references we shall see how this anomaly disappears. The supposed distinction between 'meaning' in this sense and objective reference is one merely of degree of complexity accentuated by symbolic

'thinking of' with 'being caused by.' The suggestion that to say 'I am thinking of A' is the same thing as to say 'My thought is being caused by A,' will shock every right-minded person; and yet when for 'caused' we substitute an expanded account, this strange suggestion will be found to be the solution.

A Cause indeed, in the sense of a something which forces another something called an effect to occur, is so obvious a phantom that it has been rejected even by metaphysicians. The current scientific account, on the other hand, which reduces causation to correlation, is awkward for purposes of exposition, since in the absence of a 'conjugating' vocabulary constant periphrasis is unavoidable. If we recognize, however, as the basis of this account the fact that experience has the character of recurrence, that is, comes to us in more or less uniform contexts, we have in this all that is required for the theory of signs and all that the old theory of causes was entitled to maintain. Some of these contexts are temporally and spatially closer than others: the contexts investigated by physics for instance narrow themselves down until differential equations are invoked; those which psychology has hitherto succeeded in detecting are wide, the uniformly linked events being often far apart in time. Interpretation, however, is only possible thanks to these recurrent contexts, a statement which is very generally admitted

conventions. It will be further noticed that Mr Russell's causal account of meaning, especially pp. 197 ff. and 231 ff., differs from that developed here in the importance assigned to images, meaning or reference being defined either through the similarity of images to what they mean or through their 'causal efficacy,' the 'appropriateness' of their effects. The chief objections to this view are the obscurity of 'appropriateness,' the variation of 'causal efficacy' with identity of meaning, and the complexities which result in connection with the problem of Truth. Professor Eaton in his *Symbolism and Truth* (1925), p. 23, adopts a view somewhat similar to that of Mr Russell: "The simplest solution for the purposes of the theory of knowledge is to accept as unique a *meaning activity*. . . . Towards every object certain activities are appropriate." The contention of the present chapter, on the other hand, is that it is possible and profitable to go behind this 'appropriateness.'

Mr. Russell's less accessible exposition (*The Dial*, August, 1926, pp. 117-119) admits that images should not be introduced to explain meaning.

but which if examined will be found to be far more fundamental than has been supposed. To say, indeed, that anything is an interpretation is to say that it is a member of a psychological context of a certain kind. An interpretation is itself a recurrence.

A concrete illustration may be considered at this point. There is a well-known dog in most books upon animal behaviour which, on hearing the dinner-bell, runs, even from parts of the house quite out of reach of scents and savours, into the dining-room, so as to be well placed, should any kind thoughts towards him arise in the diners. Such a dog *interprets* the sound of the gong as a sign. How does this happen? We shall all agree about the answer; that it is through the dog's past experience. In this experience there have been so to speak recurrent clumps of events, and one such clump has been made up roughly as follows: Gong, savoury odour, longing contemplation of consumption of viands by diners, donations, gratification. Such a clump recurring from time to time we shall call an *external* context. Now on a particular occasion the gong is heard out of reach of savours. But thanks to past experience of gong-sounds together with savours in the interpretative dog, this present gong-sound gets into a peculiar relation to past gongs and savours, longings, etc., so that he acts in the sagacious manner described, and is in evidence at the meal. Now this set of mental events—his present hearing of the gong, his past hearings of similar sounds, his past savourings together with gongs, etc., and also his present mental process owing to which he runs into the dining-room—such a set we shall call *psychological* context. A context of this sort may plainly recur as regards its more general features. It is also clear that the members of it may be indefinitely numerous and may be widely separated in time, and that it is through this separateness in time that such a psychological context is able to link together external contexts, the recurrent clumps of experiences

of the gong-savour kind above mentioned. In a similar fashion all learning by experience will illustrate the point that to be an act of interpretation is merely to be a peculiar<sup>1</sup> member of a psychological context of a certain kind; a psychological context being a recurrent set of mental events peculiarly related to one another so as to recur, as regards their main features, with partial uniformity.

Little hesitation will be felt in granting that without such recurrence or partial uniformity no prediction, no inference, no recognition, no inductive generalization, no knowledge or probable opinion as to what is not immediately given, would be possible. What is more difficult to realize is that this is so only because these processes, recognitions, inferences or thinkings are members of certain recurrent psychological contexts. To say that I recognize something before me as a strawberry and expect it to be luscious, is to say that a present process in me belongs to a determinative psychological context together with certain past processes (past perceptions and consumptions of strawberries). These psychological contexts recur whenever we recognize or infer. Usually they link up with (or form wider contexts with) external<sup>2</sup> contexts in a peculiar fashion.<sup>3</sup> When they do not, we are said to have been mistaken.

The simplest terminology in which this kind of linkage can be stated is that of signs. Behind all interpretation we have the fact that when part of an external context recurs in experience this part is, through its linkage with a member of some psychological context (i.e., of a causally connected group of mental events often widely separated in time) sometimes a sign of the rest of the external context.

Two points require elucidation if this outline is to

<sup>1</sup> A further analysis of the peculiarity appears in Appendix B.

<sup>2</sup> If we never discussed psychology 'external' might be read as 'physical.'

<sup>3</sup> Cf. p. 62 *infra*, and Appendix B.

rep.  
error

be filled in. The first concerns Contexts;<sup>1</sup> the second the sense in which they are Uniform.

(1) *A context is a set of entities (things or events) related in a certain way; these entities have each a character such that other sets of entities occur having the same characters and related by the same relation; and these occur 'nearly uniformly.'* In our instance of the match-scrape event and the flame event the uniting relation evidently includes proximity in time and space—a scrape in America and a flame in China would not constitute such a context—but it is important to realize that no restriction need be initially imposed as to the kind of relation which may occur as the uniting relation in a context, since which relations actually occur will be discovered only by experience. Contexts, moreover, may have any number of members; dual contexts containing only two members seem to be rare, though for purposes of exposition it is convenient to suppose them to occur. The constitutive characters involved present a certain difficulty. In our instance of the match-scrape event and the flame event they may be written 'being a scrape' and 'being a flame,' but these are plainly shorthand names for very elaborate sets of properties. It is not all scrapes from which we expect flames, and we would be surprised if our match flamed like magnesium ribbon.

<sup>1</sup> Throughout the present volume the term context is used in the strictly technical sense defined below, which differs from the ordinary use. A literary context is a group of words, incidents, ideas, etc., which on a given occasion accompanies or surrounds whatever is said to have the context, whereas a determinative context is a group of this kind which both recurs and is such that one at least of its members is determined, given the others. A somewhat similar but vaguer use appears to have been adopted by Professor Baldwin (*Thought and Things*, Vol. I., p. 48), though it becomes clear as his exposition proceeds (cf. also Appendix D) that the resemblance is illusory, since, e.g., an image (Vol. I., p. 81) can be "convertible into a context," and we read of "the development within a content itself of the enlarged context of predicated and implicated meanings." (Vol. II., p. 246.) Such uses have more in common with that of Professor Titchener, who after the second passage which we quote in Chapter VIII., says, "I understand by context simply the mental process or complex of mental processes which accrues to the original idea through the situation in which the organism finds itself."

(2) The difficulty here suggested in choosing constitutive characters is connected with the problem 'In what sense do contexts occur *nearly uniformly*?' It is plain that if sufficiently general characters are taken and sufficiently general uniting relations, contexts not 'nearly' but perfectly uniform can easily be found. For instance, the context constituted by two entities having each the character of 'being an event' and related by the relation of 'succession.'<sup>1</sup> On the other hand if we make the constitutive characters and uniting relation too specific, recurrence becomes uncertain. For this reason our account has to be in terms of probability. In our instance, to say that the context of which 'scrape' and 'flame' are constitutive characters recurs (or is a context) is to say:—

- either* that whenever there is a scrape there will probably be a flame having the required relation to the scrape;  
*or* that whenever there is a flame there was probably a scrape having the converse relation to the flame;  
*or* both these statements.

In the first case the context is said to be determinative in respect of the character flame; in the second in respect of the character scrape; in the third in respect of both characters.

A dual context is here taken for the sake of simplicity, a fact which tends to make the account appear artificial. Multiple contexts of three or more terms involve no further problems. They must be determinative in respect of one constitutive character, and may be so in respect of any number.

In this account we have carefully avoided all mention

<sup>1</sup> It should be noted that it is not necessary for the characters in respect of which a sign is interpreted to be 'given,' *i. e.*, for us to know that they belong to it. This circumstance is of importance in considering the processes of interpretation by which we arrive at knowledge of other entities than sensations. It should be further observed that a constitutive character may be of the form 'being either A or B or C, etc.'

of images—those revivals or copies of sensory experience which figure so prominently in most accounts of thinking. There are good reasons why attempts to build a theory of interpretation upon images must be hazardous. One of these is the grave doubt whether in some minds they ever occur or ever have occurred. Another is that in very many interpretations where words play no recognizable part, introspection, unless excessively subtle and therefore of doubtful value as evidence, fails to show that imagery is present. A third and stronger reason is that images seem to a great extent to be mental luxuries. Before the appearance of an image, say, of an afanc, something can be observed to occur which is often misleadingly described as 'an intention of imagining' an afanc. But that this is not *merely* an intention becomes plain upon reflection. When we speak of an intention in this way we are speaking of affective-volitional characters, those, roughly speaking, on account of which a state of mind changes from a relatively inchoate to a relatively organized and articulate condition. An intention by itself is as impossible as an excitement. There has to be something which is excited, and there has to be something for the intention to belong to. Now what is this in such cases as we are examining?

Whatever it is it has that peculiar character of being directed towards one thing rather than another, which we here call reference. This reference may be uncertain and vague, but seems to be the same in kind as that which occurs in more articulate and clear-cut cases of thinking, where symbols in the form of images or words have been provided. In the initial stages of such references it is hard to suppose that images are playing any essential part. Any image which does arise is at once accepted or rejected as it accords or disaccords with the reference, and this accordance is not a question of matching between images or of similarity in any intrinsic characters. If images of any sort are involved

in these states of beginning to think of things, it is certain that they are not always involved *qua* images, *i.e.*, as copying or representing the things to which the reference points, but in a looser capacity as mere signs and not in their capacity as mimetic or simulative signs.

Indeed, it may be questioned whether mimetic imagery is not really a late, sporadic product in mental development. We are so accustomed to beginning psychology with images that we tend to think that minds must have begun with them too. But there is no good reason to suppose that the mind could not work equally well without them. They have certain oddly limited uses as economizing effort in certain restricted fields. The artist, the chess-player, the mathematician find them convenient. But these are hardly primitive mental occupations. Hunger rarely excites taste images, the salivary flow occurs without them. Route-finding in pathless wilds or Metropolitan suburbs is best done by sense of direction and perception alone. On the whole, a mimetic sign is not the kind of thing that a primitive mind would be able to make much use of. Other signs would serve equally well for most purposes, and the few advantages of images would be more than counterbalanced by 'the risk of danger' to which their users expose themselves. An inaccurate or irrelevant image is worse than no image at all. Such arguments as there are in favour of images as very primitive and fundamental products, the argument from dreams, for example, or the alleged prevalence of images among children and primitive peoples, are obviously difficult to estimate. Imagery may be prevalent without necessarily serving any important function; in day-dreaming, for instance, the gratifications which it affords are no proof that the references concerned could not occur without it. Similarly those who naturally produce exhaustive images of their breakfast-table can often know all about it without a glimmer of

an image, unless too much indulgence in images has impaired their natural ability.

For these reasons, any theory of interpretation which can refrain from making images a corner-stone has clear advantages over those which cannot. It is mainly on this point that the view here developed differs from Mr Russell's account<sup>1</sup> of meaning, which should, however, be consulted by those who desire a more simple discussion of the part played by Mnemonic causation in knowledge than our brief outline provides.

Suppose now that we have struck our match and have expected a flame. We need some means of deciding whether our expectation has been true or false. Actually we look to see whether there was a flame or not, but the question we have to answer is, how do we pick out, amongst all the other possible events which we might have selected, this particular flame as the event on which the truth or falsity of our expectation depended.<sup>2</sup> We pick it out by means of certain external contexts to which it belongs: namely, it is that event, if any, which completes the context whose other member in this case is the scrape, and thus comes to be linked to the expectation through the psychological context made up of that expectation and past experiences of scrapes and flames.

If now there be an event which completes the external context in question, the reference is true and the event is its referent. If there be no such event, the reference is false, and the expectation is disappointed.

The above account covers beliefs of the form 'a flame will follow this scrape' prompted by a present

<sup>1</sup> See *The Analysis of Mind*, especially pp. 207-210. One point in this treatment is of extreme importance. "Generality and particularity," according to Mr Russell, "are a matter of degree" (p. 209). For a causal theory of reference no other conclusion appears possible. Absolute particulars and absolute universals ought therefore to be out of court and beneath discussion.

<sup>2</sup> A more formal and elaborate account of this crucial step in the theory of interpretation will be found in Appendix B, to which those who appreciate the complexity of the subject are directed.

sensation. Instead of a present sensation a belief may itself be a sign for a further belief which will then be an interpretation of this belief. The only cases of this which appear to occur are introspective beliefs of the form 'I believe that I am believing, etc.' which may, it is important to recognize, be false as often as, or more often than, other beliefs. As a rule a belief not prompted by a sensation requires a number of beliefs simultaneous or successive for its signs. The beliefs, 'There will be a flame' and 'I am in a powder factory,' will, for most believers, be signs together interpreted by the belief 'The end is at hand.' Such is one of the psychological contexts determinative in respect of the character of this last belief.<sup>1</sup> Whether the belief in question is true or not will depend upon whether there is or is not some entity forming together with the referents of the two sign beliefs, in virtue of its characters and their characters and a multiple relation, a context determinative in respect of their characters. In other words—upon whether the place does blow up.

In this way the account given can be extended to all cases of particular expectations. Further, since the uniting relations of contexts are not restricted to successions it will also apply to all cases of inference or interpretation from particular to particular. The next step, therefore, is to inquire what kind of account can be given of general references.

The abstract language which it is necessary to employ raises certain difficulties. In a later chapter arguments will be brought in favour of regarding such apparent symbols as 'character,' 'relation,' 'property,'

<sup>1</sup> The additional assumption required here is that the effects of a belief are often similar, in respect of derivative beliefs, to the effects of the verifying sensation. Few people will deny that the belief that an unseen man in a bush is shooting at me will have effects (in respect of such derivative beliefs as that it would be better for me to be elsewhere) similar to those which would be occasioned by the sight of the man so shooting. Such contexts, in which a belief in the occurrence of A and A's occurrence itself are alternative signs for interpretations the same in these respects, are as well established as any in psychology.

from  
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'concept,' etc., as standing for nothing beyond (indirectly) the individuals to which the alleged character would be applicable. The most important of these arguments is the natural incredibility of there being such universal denizens of a world of being. As we shall see, these apparent symbols are indispensable as machinery, and thus for some purposes such credulity is harmless. But for other purposes these baseless (or purely symbolically based) beliefs are dangerous impediments. Thus a chief source of opposition to an extension of the account here outlined to general references, is phantom difficulties deriving from faith in this other world.

Such references may be formulated in a variety of ways:—'All  $S$  is  $P$ ' and ' $(x): \phi(x) \supset \psi(x)$ ' are favourites. What we have to discover is what happens when we have a belief which can be symbolized in these ways. Let us take as an instance the belief 'All match-scrapes are followed by flames.' There is good reason to suppose that such beliefs are a later psychological development than beliefs of the form which we have been considering. It is plausible to suppose that some animals and infants have particular expectations but not any general beliefs. General beliefs, it is said, arise by reflection upon particular beliefs. Thus we may expect to find that general beliefs arise in some way out of particular beliefs. But the generality and particularity to be attributed to simple or primordial references are certainly not those which logical formulation endeavours to introduce. Nor should it be supposed that genetically a stage or era of particular reference precedes general thinking. It is rather the case that in all thought processes two tendencies are present, one towards greater definiteness or precision, the other towards wider scope and range. It is the conditions under which this second tendency takes effect that we are here considering.

Following this clue let us try to set down some of the

conditions under which a general belief might develop from such particular references as we have been considering. To begin with we may suppose

- (1) that a number of true and verified interpretations of match-scrapes have occurred in the same organism, and
- (2) that no interpretation which has been shown to be false, by the absence in the related sensation of the expected flame character, is concerned in the genesis of the general belief.

The second of these conditions is plainly more important than the first. We often seem to pass to general beliefs from single experiences and not to require a plurality, but (exceptionally powerful thinkers apart) we do not base general beliefs upon directly contradictory evidence. We may therefore retain the second condition, but must revise the first. In some cases, no doubt, repeated verified expectations do condition the general expectation, but they condition its degree rather than its reference. On the other hand some experience of repetition would seem to be required. A primordial mind's first thought could hardly be a general thought in the sense here considered. It seems justifiable to assume that some series of similar verified interpretations should be included in the context of a general belief, though how closely this need be connected with the particular interpretation which is being generalized must at present be left uncertain.

Another condition which can only be put rather vaguely concerns the inclusiveness of a general reference. The togetherness involved in such a reference does not seem to require any properties in a 'mind' beyond those already assumed and stated, but the inclusiveness might be thought to raise an additional problem. The kind of experience required, however, is not difficult to discover. On many occasions so far as the verifying stimuli are concerned it is



indifferent whether we think of all of a given set of objects or of each of them in turn. The child who finds all his fingers sticky might equally well have found each of them sticky. On other occasions his smallest fingers will not need to be washed. Thus the difference between inclusive and non-inclusive sets of objects as referents, the difference between 'some' and 'all' references, will early develop appropriate signs. Individuals can be found who throughout their lives 'think' of these differences by means of such images, *i.e.*, use such images as adjunct-signs in their interpretations. In other cases no such imagery nor even the use of the words 'all' or 'some,' or any equivalents, is discoverable. Yet even in these cases some lingering trace of the engraphic action due to situations of this sort may reasonably be supposed as conditioning interpretations which 'employ these notions.' In attempting therefore to set out the kind of psychological context of which a general reference consists, terms representing them would require inclusion.

Such in very tentative outline is the account which the causal theory of reference would give of general beliefs. The detailed investigation of such contexts is a task to which sooner or later psychology must address itself, but the methods required are of a kind for which the science has only recently begun to seek. Much may be expected when the theory of the conditioned reflex, due to Pavlov, has been further developed.<sup>1</sup>

It remains to discuss in what sense, if any, a false belief, particular or general, has a referent. From the definitions given it will be plain that the sense in which a false belief may be said to have a referent must be quite other than that in which a true belief has a referent. Thus the arguments now to be given for a more extended use of the term in no way affect what has been said; and it will also be purely as a matter

<sup>1</sup> For an account of this method and its applications see *op. cit.*, *The Meaning of Psychology*, Chapter IV.

of convenience that we shall use the term in connection with false beliefs.

In the first place it is clear that true and false references alike agree in a respect in which processes such as sensing, breathing, contracting muscles, secreting, desiring, etc., do not agree with them. It is convenient to have a term, such as reference, to stand for this respect in which they agree. The term 'belief' which might at first appear most suitable is less convenient, both because of its association with doctrines such as those above discussed which postulate a unique relation 'thinking of,' and because it is becoming more and more often used with special reference to the affective-volitional characters of the process. A second and stronger reason derives from what may be called the analysis of references. If we compare, say, the references symbolized by 'There will be a flash soon,' and 'There will be a noise soon,' it is at least plausible to suppose that they are compounds containing some similar and some dissimilar parts. The parts symbolized by 'flash' and 'noise' we may suppose to be dissimilar, and the remaining parts to be similar in the two cases. The question then arises: "What are these parts from which it would seem references can be compounded?"

The answer which we shall give will be that they are themselves references, that every compound reference is composed wholly of simple references united in such a way as will give the required structure to the compound reference they compose. But in attempting to carry out this analysis a special difficulty has to be guarded against. We must not suppose that the structure of the symbol by which we symbolize the reference to be analysed does in any regular fashion reflect its structure. Thus in speaking of the parts symbolized by 'flash' and 'noise' above we are running a risk. Illegitimate analyses of symbols are the source of nearly all the difficulties in these subjects.

Another point which must first be made clear concerns the sense in which references may be compounded. To speak of a reference is to speak of the contexts psychological and external by which a sign is linked to its referent. Thus a discussion of the compounding of references is a discussion of the relations of contexts to one another.

What are usually called the 'logical forms' of propositions, and what we may call the forms of references, are, for the view here maintained, forms or structures of the determinative contexts of interpretations. They are at present approached by logicians mainly through the study of symbolic procedure. A more direct approach appears however to be possible, though, as yet, difficult. Thus the remaining portions of the complete contextual theory of reference, namely the accounts of references of the forms 'p or q,' 'p and q,' 'not p,' and of the difference between 'all S' and 'some S,' regarded as concerned with the interweaving of contexts, are, if still conjectural, plainly not beyond conjecture.

With this proviso, we may resume the consideration of the referents of false and of the analysis of compound beliefs.

We have seen that true and false beliefs are members of the same kinds of psychological contexts, and that they differ only in respect of external contexts.<sup>1</sup> Let

<sup>1</sup> A complex of things as united in a context may be called a 'fact.' There need be no harm in this, but as a rule the verbal habits thus incited overpower the sense of actuality even in the best philosophers. Out of facts spring 'negative facts'; 'that no flame occurs' becomes a negative fact with which our expectation fails to correspond when we are in error. It is then natural to suppose that there are two modes of reference, towards a fact for a true reference, away from it for a false. In this way the theory of reference can be made very complicated and difficult, as for instance by Mr Russell in his *Analysis of Mind*, pp. 271-78. As regards negative facts, Mr Russell has allowed his earlier theories to remain undisturbed by his recent study of Meaning. The general question of 'negative facts' is discussed in Appendix E; and we shall find, when we come to distinguish the various senses of meaning, that to raise the question of the correspondence of belief with fact is for a causal theory of reference to attempt to solve the problem twice over. When the problem of reference is settled that of truth is found to be solved as well.

us consider this difference again, taking for the sake of simplicity the case of particular beliefs. Suppose that of two possible beliefs, 'There will be something green here in a moment,' 'There will be something red here in a moment,' the first is true and the second false. But the second, if it can be regarded, as having contained or included the belief, 'There will be something here in a moment,' will have included a belief which is true and similar to a belief included in the first belief. Reverting now to our definition of a context let us see in what sense this belief is included and how it can be true.

In such a case the external context may consist of two entities, say *s* (a sign) and *g* (something green), having the characters *S*, *G*, and related by space and time relations which may be taken together. But it is clear that both *s* and *g* will have other characters besides *S* and *G*. For instance, *s* has succeeded other entities and may be interpreted in respect of this character as well as in respect of *S*, so<sup>1</sup> interpreted it gives rise to the belief, 'There will be something here in a moment'; interpreted also in the further respect of *S* it gives rise to the complex belief, 'There will be something green here in a moment,' or to the complex belief, 'There will be something red here in a moment,' true and false interpretation of *s* in this further respect as the case may be. In either case, however, the contained belief, 'There will be something here in a moment,' will be true if there is something (say *g*) which forms with *s*, in virtue of *s*'s character of being a successor (or other temporal characters) and *g*'s temporal characters, a context determinative of this character of *s*. Thanks to the generality of these characters such contexts never fail to recur, a fact which accounts for the ease with which true predictions of this unspecific kind can be made.

<sup>1</sup> Whether this is a sufficient character for the interpretation need not be considered in this brief outline of the theory.

It appears then that a belief may contain other less specific beliefs, and that a compound definite belief is composed of simpler, less specific beliefs, united by such relations as will yield the required structure.<sup>1</sup>

One objection to such a view derives from language. It is usual to restrict the term belief to such processes as are naturally symbolized by propositions and further to those among such processes as have certain affective-volitional characters in addition to their characters as cognitions. The simple references which would be required if the analysis suggested were adopted would rarely lend themselves to propositional formulation and would be lacking as a rule in accompanying belief, feelings and promptings to action. Thus the terms 'idea' and 'conception' would often be more suitable for such processes. To extend a metaphor which is becoming familiar, these might be regarded as 'electronic' references. But the ideas or conception with which we are here concerned would have to be clearly distinguished from the 'concepts' of those metaphysicians who believe in a world of universals. We shall deal at greater length with the question in Chapter V.

Let us consider the idea or conception of green. It arises in the reader in this case through the occurrence of the word 'green.' On many occasions this word has been accompanied by presentations of green things. Thus the occurrence of the word causes in him a certain process which we may call the idea of green. But this process is not the idea of any one green thing; such an idea would be more complex and would require a sign (or symbol in this case) with further characters for him to interpret—only so will his idea be specific.

<sup>1</sup> The important and intricate problems raised by these relations are to be approached in the same fashion as the problem of the generality of references, which is in fact an instance. The great question 'What is logical form?' left at present to logicians whose only method is the superstitious rite 'direct inspection,' must in time be made amenable to investigation.

The psychological context to which it belongs is not of a form to link any one green thing with the sign rather than any other. If now we write instead, 'a green thing,' the same process occurs—unless the reader is a logician or philosopher with special theories (*i.e.*, peculiar linguistic contexts). In both cases the idea can be said to be 'of' any sensation similar to certain sensations which have accompanied in the past the occurrence of the sensation taken as a sign. Compare now the indefinite belief symbolized by 'There are green things.' Here any one of the same set of sensations that the idea was said to be 'of' will verify the belief. For if there be one or more entities similar to certain entities which are members of its psychological context, it will be true; otherwise it will be false. We may therefore extend the term 'referent' to cover these entities, if there be any such, without the usage leading to confusion.

It will be noticed that strictly simple indefinite beliefs (illustrated by, 'There are green things' as opposed to 'There are green things now') only require for their truth a condition which is present among their psychological contexts. This happy state of things has its parallel in the fact that strictly simple ideas raise no problem as to whether they are ideas 'of' anything or not. But complex ideas, such as glass mountains, phoenixes, round squares, and virtuous triangles may be made to bristle with such problems. The distinction between an idea and a belief is, however, one of degree, although through symbolic conventions it can sometimes appear insuperable.

We can now define the usage of the term 'referent' for false beliefs. All beliefs whether true or false are theoretically analysable into compounds whose constituents are simple references, either definite or indefinite, united by the relations which give its 'logical form' to the reference.

Definite simple references are not very common.

Sometimes when we say 'this!' 'there!' 'now!' we seem to have them. But usually, even when our reference is such that it can have but one referent, it can be analysed. Even references for which we use simple symbols (names), *e.g.*, Dostoevski, are perhaps always compound, distinct contexts being involved severally determinative of distinct characters of the referent.<sup>1</sup> What is more important is to understand the peculiar dispersion which occurs in false reference. Illustrations perhaps make this clearer than do arguments.

Thus, if we say, 'This is a book' and are in error, our reference will be composed of a simple indefinite reference to any book, another to anything now, another to anything which may be here, and so on. These constituents will all be true, but the whole reference to this book which they together make up (by cancelling out, as it were, all but the one referent which can be a book and here and now) will be false, if we are in error and what is there is actually a box or something which fails to complete the three contexts, book, here, and now. To take a slightly more intricate case, a golfer may exclaim, "Nicely over!" and it may be obvious to the onlooker that his reference is to a divot and its flight, to his stroke, to a bunker, and to a ball. Yet the ball remains stationary, and these constituent or component references, each adequate in itself, are combined in his complex reference otherwise than are their separate referents in actual fact. There is clearly no case for a non-occurrent flight of a golf-ball as an object of his belief; though he may have been referring to the feel of his stroke, or to an image of a travelling ball. In these last cases we should have to suppose him to be shortening his own interpretative chain instead of breaking loose and venturing a step too far

<sup>1</sup> This sentence like all sentences containing words such as 'character,' is redundant and should rather read . . . "distinct contexts being involved severally, indefinitely, determinative of the referent." But this pruning of its redundancies would lead to failure in its communicative function. Cf. p. 96 *infra*.

by what may be called saltatory interpretation. His language (cf. also Canon IV., page 103 *infra*) does not bind us to either alternative. Thus we see in outline how compound false beliefs may be analysed.

The referent of a compound false belief will be the set of the scattered referents of the true simple beliefs which it contains. We shall, in what follows, speak of beliefs, and interpretations, whether true or false, and of ideas, as references, implying that in the senses above defined they have referents.

We thus see how the contextual theory of reference can be extended to cover all beliefs, ideas, conceptions and 'thinkings of.' The details of its application to special cases remain to be worked out. Logicians will no doubt be able to propound many puzzles,<sup>1</sup> the solving of which will provide healthy exercise for psychologists. The general hypothesis that thinking or reference is reducible to causal relations ought however to commend itself more and more to those who take up (at least sometimes) a scientific attitude to the world. Subject to the proviso that some satisfactory account of probability can be given, 'meaning' in the sense of reference becomes according to this theory a matter open to experimental methods.

A satisfactory account of probability, however, though very desirable, does not seem likely to be forthcoming by current methods. Evidently a change of attack is required. The late Lord Keynes' *Treatise* starting as it does with an unanalysable logical relation, called probability, which holds between equally mysterious and unapproachable entities, called propositions, is too mediæval in its outlook to be fruitful; and it remains to be seen whether scientists will be able to profit by Reichenbach's more empirical *Wahrscheinlichkeitslehre*.

It seems possible on the contextual theory of refer-

<sup>1</sup> As, for instance, whether in the example taken above, if one or both of the sign beliefs were false, and yet the room we were in did blow up through other causes, our belief could be true? This problem is easily solved if we notice that although the belief symbolized in the speaker would be false, a belief incited in a hearer might be true.

ence to suggest an expansion of this kind of obscure shorthand and so come nearer the formulation of the yet undiscovered central question of probability. What are talked about by logicians as propositions are, according to this theory, relational characters of acts of referring—those relational characters for which the term 'references' is used. Thus to believe, or entertain, or think of, a proposition, is on this view simply to refer, and the proposition as a separate entity is to be regarded as nothing but a linguistic fiction foisted upon us by the utraquistic subterfuge.<sup>1</sup> Two 'thinkings of' the same 'proposition' are two thinkings with the same reference, the same relational property, namely 'being contextually linked in the same way with the same referent.' It will be noted that on this account of propositions the logical relations of propositions to one another must be dealt with far less summarily and formally than has hitherto been the case.

With propositions so understood there occurs a sense in which a single proposition by itself without relation to other propositions, can intelligibly be said to be probable. Probability here has still a relational aspect, and it is only because propositions (*i.e.*, references) are relational that they can be said to be probable. This very fundamental sense is that in which the uniformity of the context upon which the truth of a reference depends is probable.

We have seen that by taking very general constitutive characters and uniting relation, we obtain contexts of the highest probability. Similarly by taking too specific characters and relation the probability of the context dwindles until we should no longer call it a context. In this way, whether a context is probable can be seen to be a question about the degree of generality of its constitutive characters and uniting relation; about the number of its members, the other contexts to which they belong and so on . . . a question

<sup>1</sup> Cf. Chapter VI., p. 134.

not about one feature of the context but about many. We can always for instance raise the probability of a context by adding suitable members. But this last though a natural remark suffers from the linguistic redundancy to which the difficulties of the problem are chiefly due. 'Probability' in the fundamental sense in which a context is probable is a shorthand symbol for all those of its features upon which the degree of its uniformity depends.

In considering conscious and critical processes of interpretation we must not fail to realize that all such activity, *e.g.*, of the kind discussed in the theory of induction, rests upon 'instinctive' interpretations. If we recognize how essential 'instinctive' interpretation is throughout, we shall be able to pursue our investigations undisturbed by the doubts of causal purists or the delay of the mathematicians in bringing their differential equations into action. For the working of a differential equation itself, that most rational process of interpretation, will break down unless many 'instinctive' interpretations, which are not at present capable of any mathematical treatment, are successfully performed.

It is sometimes very easy by experimental methods to discover what a thought process is referring to. If for instance we ask a subject to 'think of' magenta we shall, by showing various colours to him, as often as not find that he is thinking of some other colour. It is this kind of consideration which makes the phrase 'adapted to' so convenient an equivalent for 'referring to,' and if we bear in mind that 'being adapted to' something is only a shorthand symbol for being linked with it in the manner described, through external and psychological contexts, we may be able to use the term without its purposive and biological associations leading to misunderstanding.

We have still to give an account of misinterpretation, and to explain how unfounded beliefs can arise. To

begin with the first, a person is often said to have introduced *irrelevant*, or to have omitted relevant, considerations or notions when he has misinterpreted some sign. The notion of relevance is of great importance in the theory of meaning. A consideration (notion, idea) or an experience, we shall say, is *relevant* to an interpretation when it forms part of the psychological context which links other contexts together in the peculiar fashion in which interpretation so links them.<sup>1</sup> An irrelevant consideration is a non-linking member of a psychological context. The fact that 'baseless' convictions occur might be thought to be an objection to the view of thinking here maintained. The explanation is however to be found in the fact that mental processes are not determined purely psychologically but, for example, by blood pressure also. If our interpretation depended only upon purely psychological contexts it might be that we should always be justified in our beliefs, true or false. We misinterpret typically when we are asleep or tired. Misinterpretation therefore is due to interference with psychological contexts, to 'mistakes.' Whether an interpretation is true or false on the other hand does not depend only upon psychological contexts—unless we are discussing psychology. We may have had every reason to expect a flame when we struck our match, but this, alas! will not have made the flame certain to occur. That depends upon a physical not a psychological context.

<sup>1</sup> Other psychological linkings of external contexts are not essentially different from interpretation, but we are only here concerned with the cognitive aspect of mental process. The same sense of relevance would be appropriate in discussing conation. The context method of analysis is capable of throwing much light upon the problems of desire and motive.

## CHAPTER IV

### SIGNS IN PERCEPTION

La Nature est un temple où de vivants piliers  
Laissent parfois sortir de confuses paroles;  
L'homme y passe à travers des forêts de symboles  
Qui l'observent avec des regards familiers.—  
*Baudelaire.*

THOUGH with the growth of knowledge we have become much less certain than our ancestors about what chairs and tables are, physicists and philosophers have not yet succeeded in putting the question entirely beyond discussion. Every one agrees that chairs and tables are perfectly good things—they are there and can be touched—but all competent to form an opinion are equally agreed that whatever we see is certainly not them. What shall we do about it?

Why scientists and others are now agreed that what we see is not chairs and tables will be at once obvious if we consider what we do see when we look at such objects. On the other hand, the accounts given of what we do see have not taken the matter further, owing to bad habits, which we form in tender years, of misnaming things which interest us. The following, for example, is a common method of procedure illustrating the way in which these habits arise:—

“I remember on one occasion wanting the word for Table. There were five or six boys standing round, and, tapping the table with my forefinger, I asked, ‘What is this?’ One boy said it was a *dodela*, another that it was an *etanda*, a third stated that it was *bokali*, a fourth that it was *elamba*, and