

tional expressions are sentences asserting that something is a such-and-such, or that something has such-and-such a property; in technical language, propositions of the forms " $x \epsilon \hat{y}(\phi y)$," and " ϕx ." The distinction between these two forms lies simply in *which aspect of the name we have first determined*, its connotation or its denotation; truth and falsity have the same basis for both kinds of proposition.

In a complex symbolic structure, such as a sentence connecting several elements with each other by a verb that expresses an elaborate pattern of relations, we have a "logical picture" whose applicability depends on the denotations of many words and the connotations of many relation-symbols (word-order, particles, cases, etc.). If the names have denotations, the sentence is about *something*; then its truth or falsity depends on whether any relations actually holding among the denoted things exemplify the relational concepts expressed by the sentence, i.e. whether the pattern of things (or properties, events, etc.) denoted is analogous to the syntactical pattern of the complex symbol.

There are many refinements of logic that give rise to special symbol-situations, to ambiguities and odd mathematical devices, and to the legion of distinctions which Charles Peirce was able to make. But the main lines of logical structure in all meaning-relations are those I have just discussed; the correlation of signs with their meanings by a selective mental process; the correlation of symbols with concepts and concepts with things, which gives rise to a "short-cut" relation between names and things, known as denotation; and the assignment of elaborately patterned symbols to certain analogues in experience, the basis of all interpretation and thought. These are, essentially, the relationships we use in weaving the intricate web of meaning which is the real fabric of human life.

4. *Discursive and Presentational Forms*

THE LOGICAL THEORY on which this whole study of symbols is based is essentially that which was set forth by Wittgenstein, some twenty years ago, in his *Tractatus Logico-Philosophicus*:

"One name stands for one thing, and another for another thing, and they are connected together. And so the whole, like a living picture, presents the atomic fact. (4.0311)

"At the first glance the proposition—say as it stands printed on paper—does not seem to be a picture of the reality of which it treats. But neither does the musical score appear at first sight to be a picture of a musical piece; nor does our phonetic spelling (letters) seem to be a picture of our spoken language. . . . (4.015)

"In the fact that there is a general rule by which the musician is able to read the symphony out of the score, and that there is a rule by which one could reconstruct the symphony from the line on a phonograph record and from this *again*—by means of the first rule—construct the score, herein lies the internal similarity between the things which at first sight seem to be entirely different. And the rule is the law of projection which projects the symphony into the language of the musical score. It is the rule of translation of this language into the language of the gramophone record." (4.0141)

"Projection" is a good word, albeit a figurative one, for the process by which we draw purely *logical* analogies. Geometric projection is the best instance of a perfectly faithful representation which, without knowledge of some logical *rule*, appears to be a misrepresentation. A child looking at a map of the world in Mercator projection cannot help believing that Greenland is larger than Australia; he simply *finds* it larger. The projection employed is not the usual principle of copying which we use in all visual comparisons or translations, and his training in the usual rule makes him unable to "see" by the new one. It takes sophistication to "see" the *relative* sizes of Greenland and Australia on a Mercator map. Yet a mind educated to appreciate the *projected* image brings the eye's habit with it. After a while, we genuinely "see" the thing as we apprehend it.

Language, our most faithful and indispensable picture of human experience, of the world and its events, of thought and life and all the march of time, contains a law of projection of which philosophers are sometimes unaware, so that their reading of the presented "facts" is obvious and yet wrong, as a child's visual experience is obvious yet deceptive when his judgment is ensnared by the trick of the flattened map. The transformation which facts undergo when they are rendered as propositions is that the relations in them are turned into something like *objects*. Thus, "A killed B" tells of a *way* in which A and B were unfortunately combined; but our only means of expressing this way is to *name* it, and *presto!*—a new *entity*, "killing," seems to have added itself to the com-

plex of A and B. The event which is "pictured" in the proposition undoubtedly involved a *succession* of acts by A and B, but not the succession which the proposition seems to exhibit—first A, then "killing," then B. Surely A and B were simultaneous with each other and with the killing. But words have a linear, discrete, successive order; they are strung one after another like beads on a rosary; beyond the very limited meanings of inflections, which can indeed be incorporated in the words themselves, we cannot talk in simultaneous bunches of names. We must name one thing and then another, and symbols that are not names must be stuck between or before or after, by convention. But these symbols, holding proud places in the chain of names, are apt to be mistaken for names, to the detriment of many a metaphysical theory. Lord Russell regrets that we cannot construct a language which would express all relations by analogous relations; then we would not be tempted to misconstrue language, as a person who knows the meaning of the Mercator map, but has not used one freely enough to "see" in its terms, misconstrues the relative sizes of its areas.

"Take, say, that lightning precedes thunder," he says. "To express this by a language closely reproducing the structure of the fact, we should have to say simply: 'lightning, thunder,' where the fact that the first word precedes the second means that what the first word means precedes what the second word means. But even if we adopted this method for temporal order, we should still need words for all other relations, because we could not without intolerable ambiguity symbolize them by the order of our words." ¹

It is a mistake, I think, to symbolize things by entities too much like themselves; to let words in temporal order represent things in temporal order. If relations such as temporal order are symbolized at all, let the symbols not be those same relations themselves. A structure cannot include as *part of a symbol* something that should properly be *part of the meaning*. But it is unfortunate that names and syntactical indicators look so much alike in language; that we cannot represent objects by words, and relations by pitch, loudness, or other characteristics of speech.²

As it is, however, all language has a form which requires

¹ *Philosophy*, p. 264.

* In the same chapter from which I have just quoted, Lord Russell attributes the power of language to represent *events* to the fact that, like events, it is a temporal series. I cannot agree with him in this matter. It is by virtue of *names for relations* that we can depict dynamic relations. We do not mention past events earlier in a sentence than present ones, but subject temporal order to the same "projection" as, for instance, attribution or classification; temporal order is usually rendered by the syntactical (non-temporal) device of *tense*.

us to string out our ideas even though their objects rest one within the other; as pieces of clothing that are actually worn one over the other have to be strung side by side on the clothesline. This property of verbal symbolism is known as *discursiveness*; by reason of it, only thoughts which can be arranged in this peculiar order can be spoken at all; any idea which does not lend itself to this "projection" is ineffable, incommunicable by means of words. That is why the laws of reasoning, our clearest formulation of exact expression, are sometimes known as the "laws of discursive thought."

There is no need of going further into the details of verbal symbolism and its poorer substitutes, hieroglyphs, the deaf-and-dumb language, Morse Code, or the highly developed drum-telegraphy of certain jungle tribes. The subject has been exhaustively treated by several able men, as the many quotations in this chapter indicate; I can only assent to their findings. The relation between word-structures and their meanings is, I believe, one of logical analogy, whereby, in Wittgenstein's phrase, "we make ourselves pictures of facts." This philosophy of language lends itself, indeed, to great technical development, such as Wittgenstein envisaged:

"In the language of everyday life it very often happens that the same word signifies in different ways—and therefore belongs to two different symbols—or that two words, which signify in different ways, are apparently applied in the same way in the proposition. (3.323)

"In order to avoid these errors, we must employ a symbolism which excludes them, by not applying the same sign in different symbols and by not applying signs in the same way which signify in different ways. A symbolism, that is to say, which obeys the rules of *logical grammar*—of logical syntax.

"(The logical symbolism of Frege and Russell is such a language, which, however, does still not exclude all errors.)" (3.325) ³

Carnap's admirable book, *The Logical Syntax of Language*, carries out the philosophical program suggested by Wittgenstein. Here an actual, detailed technique is developed for determining the *capacity for expression* of any given linguistic system, a technique which predicts the limit of all combinations to be made in that system, shows the equivalence of certain forms and the differences, and exhibits the conventions to which any thought or experience must submit in order to become conveyable by the symbolism in question. The dis-

³ *Tractatus*.

inctions between scientific language and everyday speech, which most of us can feel rather than define, are clearly illumined by Carnap's analysis; and it is surprising to find how little of our ordinary communication measures up to the standard of "meaning" which a serious philosophy of language, and hence a logic of discursive thought, set before us.

In this truly remarkable work the somewhat diffuse apprehension of our intellectual age, that *symbolism* is the key to epistemology and "natural knowledge," finds precise and practical corroboration. The Kantian challenge: "What can I know?" is shown to be dependent on the prior question: "What can I ask?" And the answer, in Professor Carnap's formulation, is clear and direct. I can ask whatever language will express; I can know whatever experiment will answer. A proposition which could not, under any (perhaps ideal, impracticable) conditions, be verified or refuted, is a pseudo-proposition, it has no literal meaning. It does not belong to the framework of knowledge that we call logical conception; it is not true or false, but *unthinkable*, for it falls outside the order of symbolism.

Since an inordinate amount of our talk, and therefore (we hope) of our cerebration too, defies the canons of literal meaning, our philosophers of language—Russell, Wittgenstein, Carnap, and others of similar persuasions—are faced with the new question: What is the true function of those verbal combinations and other pseudo-symbolic structures that have no real significance, but are freely used as though they meant something?

According to our logicians, those structures are to be treated as "expressions" in a different sense, namely as "expressions" of emotions, feelings, desires. They are not symbols for thought, but symptoms of the inner life, like tears and laughter, crooning, or profanity.

"Many linguistic utterances," says Carnap, "are analogous to laughing in that they have only an expressive function, no representative function. Examples of this are cries like 'Oh, Oh,' or, on a higher level, lyrical verses. The aim of a lyrical poem, in which occur the words 'sunshine' and 'clouds,' is not to inform us of certain meteorological facts, but to express certain feelings of the poet and to excite similar feelings in us. . . . Metaphysical propositions—like lyrical verses—have only an expressive function, but no representative function. Metaphysical propositions are neither true nor false, because they assert nothing. . . . But they are, like laughing, lyrics and mu-

sic, expressive. They express not so much temporary feelings as permanent emotional and volitional dispositions." *

Lord Russell holds a very similar view of other people's metaphysics:

"I do not deny," he says, "the importance or value, within its own sphere, of the kind of philosophy which is inspired by ethical notions. The ethical work of Spinoza, for instance, appears to me of the very highest significance, but what is valuable in such work is not any metaphysical theory as to the nature of the world to which it may give rise, nor indeed anything that can be proved or disproved by argument. What is valuable is the indication of some new way of feeling toward life and the world, some way of feeling by which our own existence can acquire more of the characteristics which we must deeply desire." ⁵

And Wittgenstein:

"Most propositions and questions, that have been written about philosophical matters, are not false, but senseless. We cannot, therefore, answer questions of this kind at all, but only state their senselessness. Most questions and propositions of the philosophers result from the fact that we do not understand the logic of our language. (4.003)

"A proposition presents the existence and non-existence of atomic facts. (4.1)

"The totality of true propositions is the total of natural science (or the totality of the natural sciences). (4.11)

"Everything that can be thought at all can be thought clearly. Everything that can be said can be said clearly." (4.116) ⁶

In their criticism of metaphysical propositions, namely that such propositions are usually pseudo-answers to pseudo-questions, these logicians have my full assent; problems of "First Cause" and "Unity" and "Substance," and all the other time-honored topics, are insoluble, because they arise from the fact that we attribute to the world what really belongs to the "logical projection" in which we conceive it, and by misplacing our questions we jeopardize our answers. This source of bafflement has been uncovered by the philosophers of our day, through their interest in the functions and nature of symbolism. The discovery marks a great intellectual advance. But it does not condemn philosophical inquiry as such; it merely

⁴ Rudolf Carnap, *Philosophy and Logical Syntax*, (London, 1935; German ed., Vienna, 1934), p. 28.

⁵ "Scientific Method in Philosophy," in *Mysticism and Logic* (1918), p. 109.

⁶ *Op. cit.*

requires *every philosophical problem to be recast*, to be conceived in a different form. Many issues that seemed to concern the *sources* of knowledge, for instance, now appear to turn partly or wholly on the *forms* of knowledge, or even the forms of expression, of symbolism. The center of philosophical interest has shifted once more, as it has shifted several times in the past. That does not mean, however, that rational people should now renounce metaphysics. The recognition of the intimate relation between symbolism and experience, on which our whole criticism of traditional problems is based, is itself a metaphysical insight. For metaphysics is, like every philosophical pursuit, a study of *meanings*. From it spring the special sciences, which can develop their techniques and verify their propositions one by one, *as soon as their initial concepts are clear enough to allow systematic handling*, i.e. as soon as the philosophical work behind them is at least tentatively accomplished.⁷ Metaphysics is not itself a science with fixed presuppositions, but progresses from problem to problem rather than from premise to consequence. To suppose that we have outgrown it is to suppose that all "the sciences" are finally established, that human language is complete, or at least soon to be completed, and additional facts are all we lack of the greatest knowledge ever possible to man; and though this knowledge may be small, it is all that we shall ever have.

This is, essentially, the attitude of those logicians who have investigated the limits of language. Nothing that is not "language" in the sense of their technical definition can possess the character of symbolic expressiveness (though it may be "expressive" in the symptomatic way). Consequently nothing that cannot be "projected" in discursive form is accessible to the human mind at all, and any attempt to understand anything but demonstrable fact is bootless ambition. The knowable is a clearly defined field, governed by the requirement of discursive projectability. Outside this domain is the inexpressible realm of feeling, of formless desires and satisfactions, immediate experience, forever incognito and incommunicado. A philosopher who looks in that direction is, or should be, a mystic; from the ineffable sphere nothing but nonsense can be conveyed, since language, our only possible semantic, will not clothe experiences that elude the discursive form.

But intelligence is a slippery customer; if one door is closed to it, it finds, or even breaks, another entrance to the world.

⁷ I have presented a fuller discussion of philosophy as the "mother of sciences" in *The Practice of Philosophy* (1930), ch. ii.

If one symbolism is inadequate, it seizes *another*; there is no eternal decree over its means and methods. So I will go with the logicians and linguists as far as they like, but do not promise to go no further. For there is an unexplored possibility of genuine semantic beyond the limits of discursive language.

This logical "beyond," which Wittgenstein calls the "unspeakable," both Russell and Carnap regard as the sphere of subjective experience, emotion, feeling, and wish, from which only *symptoms* come to us in the form of metaphysical and artistic fancies. The study of such products they relegate to psychology, not semantics. And here is the point of my radical divergence from them. Where Carnap speaks of "cries like 'Oh, Oh,' or, on a higher level, lyrical verses," I can see only a complete failure to apprehend a fundamental distinction. Why should we cry our feelings at such high levels that anyone would think we were *talking*?⁸ Clearly, poetry means more than a cry; it has reason for being articulate; and metaphysics is more than the croon with which we might cuddle up to the world in a comfortable attitude. We are dealing with symbolisms here, and what they express is often highly intellectual. Only, the form and function of such symbolisms are not those investigated by logicians, under the heading of "language." The field of semantics is wider than that of language, as certain philosophers—Schopenhauer, Cassirer, Delacroix, Dewey, Whitehead, and some others—have discovered; but it is blocked for us by the two fundamental tenets of current epistemology, which we have just discussed.

These two basic assumptions go hand in hand: (1) that *language*⁹ is the only means of articulating thought, and (2) that *everything which is not speakable thought, is feeling*. They are linked together because all genuine thinking is symbolic, and the limits of the expressive medium are, therefore, really the limits of our conceptual powers. Beyond these we can have only blind feeling, which records nothing and conveys nothing, but has to be discharged in action or self-expression, in deeds or cries or other impulsive demonstrations.

But if we consider how difficult it is to construct a meaningful language that shall meet neo-positivistic standards, it is quite incredible that people should ever *say* anything at all, or understand each other's propositions. At best, human thought is but a tiny, grammar-bound island, in the midst of

⁸ Cf. Urban, *Language and Reality*, p. 164.

⁹ Including, of course, its refinements in mathematical and scientific symbolisms, and its approximations by gesture, hieroglyphics, or graphs.

a sea of feeling expressed by "Oh-oh" and sheer babble. The island has a periphery, perhaps, of mud—factual and hypothetical concepts broken down by the emotional tides into the "material mode," a mixture of meaning and nonsense. Most of us live the better part of our lives on this mudflat; but in artistic moods we take to the deep, where we flounder about with symptomatic cries that sound like propositions about life and death, good and evil, substance, beauty, and other non-existent topics.

So long as we regard only scientific and "material" (semi-scientific) thought as really cognitive of the world, this peculiar picture of mental life must stand. And *so long as we admit only discursive symbolism as a bearer of ideas, "thought" in this restricted sense must be regarded as our only intellectual activity.* It begins and ends with language; without the elements, at least, of scientific grammar, conception must be impossible.

A theory which implies such peculiar consequences is itself a suspicious character. But the error which it harbors is not in its reasoning. It is in the very premise from which the doctrine proceeds, namely that all articulate symbolism is discursive. As Lord Russell, with his usual precision and directness, has stated the case, "it is clear that anything that can be said in an inflected language can be said in an uninflected language; therefore, anything that can be said in language can be said by means of a temporal series of uninflected words. This places a limitation upon what can be expressed in words. It may well be that there are facts which do not lend themselves to this very simple schema; if so, they cannot be expressed in language. Our confidence in language is due to the fact that it . . . shares the structure of the physical world, and therefore can express that structure. But if there be a world which is not physical, or not in space-time, it may have a structure which we can never hope to express or to know. . . . Perhaps that is why we know so much physics and so little of anything else." ¹⁰

Now, I do not believe that "there is a world which is not physical, or not in space-time," but I do believe that in this physical, space-time world of our experience there are things which do not fit the grammatical scheme of expression. But they are not necessarily blind, inconceivable, mystical affairs; they are simply matters which require to be conceived through some symbolistic schema other than discursive language. And

¹⁰ *Philosophy*, p. 265.

to demonstrate the possibility of such a non-discursive pattern one needs only to review the logical requirements for any symbolic structure whatever. Language is by no mean **our** only articulate product.

Our merest **sense-experience** is a process of *formulation*. The world that actually meets our senses is not a world of "things," about which we are invited to discover facts as soon as we have codified the necessary logical language to do so; the world of pure **sensation** is so complex, so fluid and full, that sheer sensitivity to stimuli would only encounter what William James has called (in characteristic phrase) "a blooming, **buzzing** confusion." Out of this bedlam our sense-organs must select certain predominant forms, if they are to make report of *things* and not of mere dissolving *sensa*. The eye and ear must have their *logic*—*their* "categories of understanding," if you like the Kantian idiom, or their "primary imagination," in Coleridge's version of the same concept.¹¹ An object is not a datum, but a form construed by the sensitive and **intelligent** organ, a form which is at once an experienced individual thing and a symbol for the concept of it, for *this sort of thing*.

A tendency to organize the sensory field into groups and patterns of sense-data, to perceive forms rather than a flux of light-impressions, seems to be inherent in our receptor apparatus just as much as in the higher nervous centers with which we do arithmetic and logic. But this unconscious appreciation of forms is the primitive root of all abstraction, which in turn is the keynote of rationality; so it appears that the conditions for rationality lie deep in our pure animal **experience**—in our power of perceiving, in the elementary functions of our eyes and ears and fingers. Mental life begins with our mere physiological constitution. A little reflection shows us that, since no experience occurs more than once, so-called "repeated" experiences are really *analogous* occurrences, all fitting a form that was abstracted on the first occasion. *Familiarity* is nothing but the quality of fitting very neatly into the form of a previous experience. I believe our ingrained habit of hypostatizing impressions, of seeing *things* and not sense-data, rests on the fact that we promptly and unconsciously abstract a form from each sensory experience, and use this form to *conceive* the experience as a whole, as a "thing."

No matter what heights the human mind may attain, it can work only with the organs it has and the functions peculiar to

¹¹ An excellent discussion of Coleridge's philosophy may be found in D. G. James, *Skepticism and Poetry* (London, 1937), a book well worth reading in connection with this chapter.

them. Eyes that 'did not see forms could never furnish it with *images*; ears that did not hear articulated sounds could never open it to *words*. Sense-data, in brief, would be useless to a mind whose activity is "through and through a symbolic process," were they not *par excellence* receptacles of meaning. But meaning, as previous considerations have shown, accrues essentially to forms. Unless the *Gestalt*-psychologists are right in their belief that *Gestaltung* is of the very nature of perception, I do not know how the hiatus between perception and conception, sense-organ and mind-organ, chaotic stimulus and logical response, is ever to be closed and welded. A mind that works primarily with meanings must have organs that supply it primarily with forms.

The nervous system is the organ of the mind; its center is the brain, its extremities the sense-organs; and any characteristic function it may possess must govern the work of all its parts. In other words, the activity of our senses is "mental" not only when it reaches the brain, but in its very inception, whenever the alien world outside impinges on the furthest and smallest receptor. All sensitivity bears the stamp of mentality. "Seeing," for instance, is not a passive process, by which meaningless impressions are stored up for the use of an organizing mind, which construes forms out of these amorphous data to suit its own purposes. "Seeing" is itself a process of formulation; our understanding of the visible world begins in the eye.¹²

This psychological insight, which we owe to the school of Wertheimer, Kohler, and Koffka, has far-reaching philosophical consequences, if we take it seriously; for it carries rationality into processes that are usually deemed pre-rational, and points to the existence of forms, i.e. of *possible symbolic material*, at a level where symbolic activity has certainly never been looked for by any epistemologist. The eye and the ear make their own abstractions, and consequently dictate their own peculiar forms of conception. But these forms are derived

¹² For a general account of the *Gestalt-theory*, see Wolfgang Kohler, *Gestalt Psychology* (New York: H. Liveright, 1929), from which the following relevant passage is taken:

"It is precisely the original organization and segregation of circumscribed wholes which make it possible for the sensory world to appear so utterly imbued with meaning to the adult because, in its gradual entry into the sensory field, meaning follows the lines drawn by natural organization. It usually enters into segregated wholes. . . ."

"Where 'form' exists originally, it acquires a meaning very easily. But here a whole with its form is given first and then a meaning 'creeps into it.' That meaning automatically produces a form where beforehand there is none, has not been shown experimentally in a single case, as far as I know." (P. 208.)

See also Max Wertheimer, *Drei Abhandlungen zur Gestalttheorie* (Erlangen, 1925), and Kurt Koffka, *Principles of Gestalt Psychology* (London, 1935).

from exactly the same world that furnished the totally different forms known to physics. There is, in fact, no such thing as *the* form of the "real" world; physics is one pattern which may be found in it, and "appearance," or the pattern of *things* with their qualities and characters, is another. One construction may indeed preclude the other; but to maintain that the consistency and universality of the one brands the other as *false* is a mistake. The fact that physical analysis does not rest in a final establishment of irreducible "qualities" does not refute that there are red, blue, and green things, wet or oily or dry substances, fragrant flowers, and shiny surfaces in the real world. These concepts of the "material mode" are not approximations to "physical" notions at all. Physical concepts owe their origin and development to the application of *mathematics* to the world of "things," and mathematics never—even in the beginning—dealt with qualities of objects. It measured their proportions, but never treated its concepts—triangularity, circularity, etc.—as qualities of which *so-and-so much* could become an ingredient of certain objects. Even though an elliptical race-track may approximate a circle, it is not to be improved by the addition of more circularity. On the other hand, wine which is not sweet enough requires more sweetening, paint which is not bright enough is given an ingredient of more white or more color. The world of physics is essentially the real world construed by mathematical abstractions, and the world of sense is the real world construed by the abstractions which the sense-organs immediately furnish. To suppose that the "material mode" is a primitive and groping attempt at physical conception is a fatal error in epistemology, because it cuts off all interest in the developments of which sensuous conception is capable, and the intellectual uses to which it might be put.

These intellectual uses lie in a field which usually harbors a slough of despond for the philosopher, who ventures into it because he is too honest to ignore it, though really he knows no path around its pitfalls. It is the field of "intuition," "deeper meaning," "artistic truth," "insight," and so forth. A dangerous-looking sector, indeed, for the advance of a rational spirit! To date, I think, every serious epistemology that has regarded mental life as greater than discursive reason, and has made concessions to "insight" or "intuition," has just so far capitulated to *unreason*, to mysticism and irrationalism. Every excursion beyond propositional thought has dispensed with thought altogether, and postulated some inmost soul of pure

feeling in direct contact with a Reality unsymbolized, unfocussed, and incommunicable (with the notable exception of the theory set forth by L. A. Reid in the last chapter of his *Knowledge and Truth*, which admits the facts of non-propositional conception in a way that invites rather than precludes logical analysis).

The abstractions made by the ear and the eye—the forms of direct perception—are our most primitive instruments of intelligence. They are genuine symbolic materials, media of understanding, by whose office we apprehend a world of *things*, and of events that are the histories of things. To furnish such conceptions is their prime mission. Our sense-organs make their habitual, unconscious abstractions, in the interest of this "reifying" function that underlies ordinary recognition of objects, knowledge of signals, words, tunes, places, and the possibility of classifying such things in the outer world according to their kind. We recognize the elements of this sensuous analysis in all sorts of combination; we can use them imaginatively, to conceive prospective changes in familiar scenes.

Visual forms—lines, colors, proportions, etc.—are just as capable of *articulation*, i.e. of complex combination, as words. But the laws that govern this sort of articulation are altogether different from the laws of syntax that govern language. The most radical difference is that *visual forms are not discursive*. They do not present their constituents successively, but simultaneously, so the relations determining a visual structure are grasped in one act of vision. Their complexity, consequently, is not limited, as the complexity of discourse is limited, by what the mind can retain from the beginning of an apperceptive act to the end of it. Of course such a restriction on discourse sets bounds to the complexity of speakable ideas. An idea that contains too many minute yet closely related parts, too many relations within relations, cannot be "projected" into discursive form; it is too subtle for speech. A language-bound theory of mind, therefore, rules it out of the domain of understanding and the sphere of knowledge.

But the symbolism furnished by our purely sensory appreciation of forms is a *non-discursive symbolism*, peculiarly well suited to the expression of ideas that defy linguistic "projection." Its primary function, that of conceptualizing the flux of sensations, and giving us concrete *things* in place of kaleidoscopic colors or noises, is itself an office that no language-born thought can replace. The understanding of space which we

standard key for translating sculpture into painting, or drawing into ink-wash, because their equivalence rests on their common *total reference*, not on bit-for-bit equivalences of parts such as underlie a literal translation.

Furthermore, verbal symbolism, unlike the non-discursive kinds, has primarily a *general* reference. Only convention can assign a proper name—and then there is no way of preventing some other convention from assigning the same proper name to a different individual. We may name a child as oddly as we will, yet we cannot guarantee that no one else will ever bear that designation. A description may fit a scene ever so closely, but it takes some known proper name to refer it without possible doubt to one and only one place. Where the names of persons and places are withheld, we can never *prove* that a discourse refers—not merely applies—to a certain historic occasion. In the non-discursive mode that speaks directly to sense, however, there is no intrinsic generality. It is first and foremost a direct *presentation* of an individual object. A picture has to be schematized if it is to be capable of various meanings. In itself it represents just one object—real or imaginary, but still a unique object. The definition of a triangle fits triangles in general, but a drawing always presents a triangle of some specific kind and size. We have to abstract from the conveyed meaning in order to conceive triangularity in general. Without the help of words this generalization, if possible at all, is certainly incommunicable.

It appears, then, that although the different media of non-verbal representation are often referred to as distinct "languages," this is really a loose terminology. Language in the strict sense is essentially discursive; it has permanent units of meaning which are combinable into larger units; it has fixed equivalences that make definition and translation possible; its connotations are general, so that it requires non-verbal acts, like pointing, looking, or emphatic voice-inflections, to assign specific denotations to its terms. In all these salient characters it differs from wordless symbolism, which is non-discursive and untranslatable, does not allow of definitions within its own system, and cannot directly convey generalities. The meanings given through language are successively understood, and gathered into a whole by the process called discourse; the meanings of all other symbolic elements that compose a larger, articulate symbol are understood only through the meaning of the whole, through their relations within the total structure. Their very functioning as symbols depends on the fact that

they are involved in a simultaneous, integral presentation. This kind of semantic may be called "presentational symbolism," to characterize its essential distinction from discursive symbolism, or "language" proper.¹³

The recognition of presentational symbolism as a normal and prevalent vehicle of meaning widens our conception of rationality far beyond the traditional boundaries, yet never breaks faith with logic in the strictest sense. Wherever a symbol operates, there is a meaning; and conversely, different classes of experience—say, reason, intuition, appreciation—correspond to different types of symbolic mediation. No symbol is exempt from the office of logical formulation, of *conceptualizing* what it conveys; however simple its import, or however great, this import is a *meaning*, and therefore an element for understanding. Such reflection invites one to tackle anew, and with entirely different expectations, the whole problem of the limits of reason, the much-disputed life of feeling, and the great controversial topics of fact and truth, knowledge and wisdom, science and art. It brings within the compass of reason much that has been traditionally relegated to "emotion," or to that crepuscular depth of the mind where "intuitions" are supposed to be born, without any midwifery of symbols, without due process of thought, to fill the gaps in the edifice of discursive, or "rational," judgment.

The symbolic materials given to our senses, the *Gestalten* or fundamental perceptual forms which invite us to construe the pandemonium of sheer impression into a world of things and occasions, belong to the "presentational" order. They furnish the elementary abstractions in terms of which ordinary sense-experience is understood.¹⁴ This kind of understanding is directly reflected in the pattern of *physical reaction*, impulse and instinct. May not the order of perceptual forms, then, be a possible principle for symbolization, and hence the conception, expression, and apprehension, of impulsive, instinctive, and

¹³ It is relevant here to note that "picture language," which uses *separate pictures in place of words*, is a discursive symbolism, though each "word" is a presentational symbol; and that all codes, e.g. the conventional gestures of deaf-mutes or the drum communications of African tribes, are discursive systems.

¹⁴ Kant thought that the *principles* of such formulation were supplied by a faculty of the mind, which he called *Verstand*; but his somewhat dogmatic delimitation of the field of knowledge open to *Verstand*, and the fact that he regarded the mind-engendered forms as *constitutive* of experience rather than *interpretive* (as principles must be), prevented logicians from taking serious note of such forms as possible machinery of reason. They abode by the forms of *Vernunft*, which are, roughly speaking, the forms of discourse. Kant himself exalted *Vernunft* as the special gift and glory of man. When an epistemology of medium and meaning began to crowd out the older epistemology of percept and concept, his *Verstandesformen* in their role of *conceptual ingredients* of phenomena, were lumped with his metaphysical doctrines, and eclipsed by "metalogical" interests.

sentient life? May not a non-discursive symbolism of light and color, or of tone, be formulative of that life? And is it not possible that the sort of "intuitive" knowledge which Bergson extols above all rational knowledge because it is supposedly not mediated by any formulating (and hence deforming) symbol¹⁵ is itself perfectly rational, but not to be conceived through language—a product of that presentational symbolism which the mind reads in a flash, and preserves in a disposition or an attitude?

This hypothesis, though unfamiliar and therefore somewhat difficult, seems to me well worth exploring. For, quite apart from all questions of the authenticity of intuitive, inherited, or inspired knowledge, about which I do not wish to cavil, the very idea of a *non-rational source* of any knowledge vitiates the concept of mind as an organ of understanding. "The power of reason is simply the power of the whole mind at its fullest stretch and compass," said Professor Creighton, in an essay that sought to stem the great wave of irrationalism and emotionalism following the first World War.¹⁶ This assumption appears to me to be a basic one in any study of mentality. Rationality is the essence of mind, and symbolic transformation its elementary process. It is a fundamental error, therefore, to recognize it only in the phenomenon of systematic, explicit reasoning. That is a mature and precarious product.

Rationality, however, is embodied in every mental act, not only when the mind is "at its fullest stretch and compass." It permeates the peripheral activities of the human nervous system, just as truly as the cortical functions.

"The facts of perception and memory maintain themselves only in so far as they are mediated, and thus given significance beyond their mere isolated existence. . . . What falls in any way within experience partakes of the rational form of the mind. As mental content, any part of experience is something more than a particular impression having only the attributes of existence. As already baptized into the life of the mind, it partakes of its logical nature and moves on the plane of universality. . . .

"No matter how strongly the unity and integrity of the mind is asserted, this unity is nothing more than verbal if the mind is not in principle the expression of reason. For it can be

¹⁵ See Henri Bergson, *La pensée et le mouvement* (Paris, 1934), esp. essays ii ("De la position des problèmes") and iv ("L'intuition philosophique"); also his *Essai sur les données immédiates de la conscience* (1889), and *Introduction to Metaphysics* (New York: G. P. Putnam's Sons, 1912).

¹⁶ J. F. Creighton, "Reason and Feeling," *Philosophical Review*, XXX (1921), 5: 46S-481. See p. 469.

shown that all attempts to **render** comprehensible the unity of the mental life in terms of an alogical principle fail to attain their **goal.**"¹⁷

The tide of Professor Creighton's trenchant little article is "Reason and Feeling." Its central thesis is that if there is something in our mental life besides "reason," by which he means, of course, discursive thinking, then it cannot be an alogical factor, but must be in essence cognitive, too; and since the only alternative to this reason is feeling (the author does not question that axiom of **epistemology**), feeling itself must somehow participate in knowledge and understanding.

All this may be granted. The position is **well** taken. But the most crucial *problem* is barely broached: this problem is **epitomized** in the word "somehow." *Just how* can feelings be conceived as possible ingredients of rationality? We are not told, but we are given a generous hint, which in the light of a broader theory of symbolism points to explanation.

"In the development of mind," he says, "feeling does not remain a static element, constant in form and content at all levels, but . . . is transformed and disciplined through its interplay with other aspects of experience. . . . Indeed, the character of the feeling in any experience may be taken as an index of the mind's grasp of its object; at the lower levels of experience, where the mind is only partially or superficially involved, feeling appears as something isolated and opaque, as the passive accompaniment of mere bodily sensations. . . . In the higher experiences, the feelings assume an entirely different character, just as do the **sensations** and the other contents of mind"¹⁸

The significant **observation** voiced in this **passage** is that *feelings have definite forms, which become progressively articulated*. Their development is effected through their "interplay with the other aspects of experience"; but the nature of that interplay is not specified. Yet it is here, I think, that cogency for the whole thesis must be sought. *What* character of feeling is "an index of the mind's grasp of its object," and by what tokens is it *so*? If feeling has articulate forms, what are they like? For what these are *like* determines by what symbolism we might understand them. Everybody knows that language is a very poor medium for expressing our emotional nature. It merely names certain vaguely and crudely conceived states, but fails miserably in any attempt to convey the ever-moving patterns, the ambivalences and intricacies of inner ex-

¹⁷ *Ibid.*, pp. 470-472.

¹⁸ *Ibid.*, pp. 478-479.

perience, the interplay of feelings with thoughts and impressions, memories and echoes of memories, *transient* fantasy, or its mere runic traces, all turned into nameless, emotional stuff. If we say that we understand someone else's feeling in a certain matter, we mean that we understand why he should be sad or happy, excited or indifferent, in a general way; that we can see due cause for his attitude. We do not mean that we have insight into the actual flow and balance of his feelings, into that "character" which "may be taken as an index to the mind's grasp of its object." Language is quite inadequate to articulate such a conception. Probably we would not impart our actual, inmost feelings even if they could be spoken. We rarely speak in detail of entirely personal things.

There is, however, a kind of symbolism peculiarly adapted to the explication of "unspeakable" things, though it lacks the cardinal virtue of language, which is denotation. The most highly developed type of such purely connotational semantic is music. We are not talking nonsense when we say that a certain musical progression is significant, or that a given phrase lacks meaning, or a player's rendering fails to convey the import of a passage. Yet such statements make sense only to people with a natural understanding of the medium, whom we describe, therefore, as "musical." Musicality is often regarded as an essentially *unintellectual*, even a biologically sportive trait. Perhaps that is why musicians, who know that it is the prime source of their mental life and the medium of their clearest insight into humanity, so often feel called upon to despise the more obvious forms of understanding, that claim practical virtues under the names of reason, logic, etc. But in fact, musical understanding is not hampered by the possession of an active intellect, nor even by that love of pure reason which is known as rationalism or intellectualism; and *vice versa*, common-sense and scientific acumen need not defend themselves against any "emotionalism" that is supposed to be inherent in a respect for music. Speech and music have essentially different functions, despite their oft-remarked union in song. Their original relationship lies much deeper than any such union (of which more will be said in a subsequent chapter), and can be seen only when their respective natures are understood.

The problem of meaning deepens at every turn. The longer we delve into its difficulties, the more complex it appears. But in a central philosophical concept, this is a sign of health. Each question answered leads to another which previously

could not be even entertained: the logic of symbolism, the possible types of representation, the fields proper to them, the actual functions of symbols according to their nature, their relationships to each other, and finally our main theme, their integration in human mentality.

Of course it is not possible to study every known phenomenon in the realm of symbolism. But neither is this necessary even in an intimate study. The logical structures underlying all semantic functions, which I have discussed in this chapter, suggest a general principle of division. Signs are logically distinct from symbols; discursive and presentational patterns show a formal difference. There are further natural divisions due to various ways of *using* symbols, no less important than the logical distinctions. Altogether, we may group meaningsituations around certain outstanding types, and make these several types the subjects of individual studies. Language, ritual, myth, and music, representing four respective modes, may serve as central topics for the study of actual symbolisms; and I trust that further problems of significance in art, in science or mathematics, in behavior or in fantasy and dream, may receive some light by analogy, and by that most powerful human gift, the adaptation of ideas.

5. *Language*

LANGUAGE is, without a doubt, the most momentous and at the same time the most mysterious product of the human mind. Between the clearest animal call of love or warning or anger, and a man's least, trivial *word*, there lies a whole day of **Creation**—or in modern phrase, a whole chapter of evolution. In language we have the free, accomplished use of symbolism, the record of articulate conceptual thinking; without language there seems to be nothing like explicit thought whatever. All races of men—even the scattered, primitive denizens of the deep jungle, and brutish cannibals who have lived for centuries on world-removed islands—have their complete and articulate language. There seem to be no simple, amorphous, or imperfect languages, such as one would naturally expect to find in conjunction with the lowest cultures. People who have not invented textiles, who live under roofs of pleated branches, need no privacy and mind no filth and roast their enemies for