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20th Century

# THE AGE of ANALYSIS

Selected, with Introduction and Commentary, by Morton White



BASIC WRITINGS OF: Peirce • Whitehead • James • Dewey • Russell  
Wittgenstein • Croce • Bergson • Sartre • Santayana • and others

*The Mentor Philosophers*

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# THE AGE OF ANALYSIS

*20th Century Philosophers*

SELECTED, WITH INTRODUCTION AND INTERPRETIVE COMMENTARY

by

MORTON WHITE



A MENTOR BOOK

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what is the alternative? What is the Bergsonian way of reaching true reality, of getting beneath the artificial concepts and categories constructed by the intellect? In answering this question we shall discover the significance of what Bergson calls experienced, lived, or real time—duration, as he also calls it.

Bergson says that our own awareness of what goes on in ourselves is the most illuminating of all our experiences. While we sometimes think of ourselves as passing from state to state, from a feeling of warmth to a feeling of cold, from a thought of the sun to a thought of the moon, in which each feeling or thought is a separate, unchanging thing that succeeds one and precedes another, a little attention will show us that this is a misleading picture created by a mechanically oriented psychology. It neglects the fact that these states are themselves changing and that each is related to its predecessor and its successor not as externally related things but as interpenetrating, organically linked experiences. Instead of regarding our inner life as a flux of fleeting shades merging into each other, we treat it as an array of solid colors set side by side like the beads of a necklace. In doing so we neglect the most important feature of our lives, the fact that we *endure*. This qualitative process of enduring is what identifies real or lived time and must be carefully distinguished from the artificial, quantitative time of the mathematician and the physicist; indeed real time or duration is the stuff, says Bergson, of which our psychical life is made. What the physicist does is to geometrize real time, to identify it with a line, with the time-axis of physical graphs, and in this way he illustrates the spatial orientation of the intellect. This, Bergson says, is not to be deplored because physics and mathematics are indispensable human activities. But, he says, in a passage that endeared him to a pragmatist like William James, physics and mathematics and all the devices of the intellect are practical devices, constructed in order to facilitate action, and do not, therefore, penetrate to the instinctual stream of consciousness that rushes underneath (or through) them. To reach it is the aim of

philosophy, which proceeds by less practical methods and which is bound to use intuition as the only way to the truth about ultimate, *real* reality.

One of the chief results of Bergson's philosophy was his doctrine of creative evolution and his defense of freedom. He offers the theory of creative evolution as the only defensible alternative to mechanism—the idea that we can characterize and explain evolution by reference to purely physical and chemical transformations—and also to teleology—the view that everything proceeds by prearranged plan. Both of them suffer the same defects that scientific psychology does by comparison to Bergsonian methods, since they concentrate on physical time, neglect duration and therefore they fail to see that real time *bites into* things in a way that allows for real change. Once we recognize the shortcomings of mechanism and teleology as the inherent shortcomings of a scientific, static, mechanical, geometrical, logical approach, we see that there is room for real change and real freedom, unhampered by causality and determinism.

It is easy to see why this point of view proved so exciting and liberating to a generation brought up on the formulae of nineteenth-century positivism and materialism, why it appealed to artists and writers, to religious thinkers and to fashionable ladies who came to Bergson's crowded lectures at the Collège de France to understand the mysteries of evolution, mind, matter, time, and free will, "part of it with the mind and to divine the rest with the heart." For Bergson had gone much further than Hegel in attacking the rationalism and intellectualism of the platonic and cartesian traditions, *so far* that William James greeted the appearance of *Creative Evolution* with ecstasy while the logical Bertrand Russell said that if one were to ask whether there are any reasons for accepting such a restless view of the world, "he will find, if I am not mistaken, that there is no reason whatever for accepting this view, either in the universe or in the writings of M. Bergson."

The following passage is selected from Chapter III of Bergson's *Creative Evolution* (1911), "On the Meaning

than traditional metaphysics; for psychology, cosmology and metaphysics take intelligence, in all that is essential to it, as given, instead of, as we now propose, engendering it in its form and in its matter. The enterprise is in reality much more modest, as we are going to show. But let us first say how it differs from others.

To begin with psychology, we are not to believe that it *engenders* intelligence when it follows the progressive development of it through the animal series. Comparative psychology teaches us that the more an animal is intelligent, the more it tends to reflect on the actions by which it makes use of things, and thus to approximate to man. But its actions have already by themselves adopted the principal lines of human action; they have made out the same general directions in the material world as we have; they depend upon the same objects bound together by the same relations; so that animal intelligence, although it does not form concepts properly so called, already moves in a conceptual atmosphere. Absorbed at every instant by the actions it performs and the attitudes it must adopt, drawn outward by them and so externalized in relation to itself, it no doubt plays rather than thinks its ideas; this play none the less already corresponds, in the main, to the general plan of human intelligence.\* To explain the intelligence of man by that of the animal consists then simply in following the development of an embryo of humanity into complete humanity. We show how a certain direction has been followed further and further by beings more and more intelligent. But the moment we admit the direction, intelligence is given.

In a cosmogony like that of Spencer, intelligence is taken for granted, as matter also at the same time. We are shown matter obeying laws, objects connected with objects and facts with facts by constant relations, consciousness receiving the imprint of these relations and laws, and thus adopting the general configuration of nature and shaping itself into intellect. But how can we fail to see that intelligence is supposed when we admit objects and facts? *A*

\* We have developed this point in *Matière et mémoire*, chaps. ii. and iii., notably pp. 78-80 and 169-86. AUTHOR'S NOTE.

Fichte and Spencer for instance, two names that we happen to have just brought together.

At the root of these speculations, then, there are the two convictions, correlative and complementary, that nature is one and that the function of intellect is to embrace it in its entirety. The faculty of knowing being supposed coextensive with the whole of experience, there can no longer be any question of engendering it. It is already given, and we merely have to use it, as we use our sight to take in the horizon. It is true that opinions differ as to the value of the result. For some, it is reality itself that the intellect embraces; for others, it is only a phantom. But, phantom or reality, what intelligence grasps is thought to be all that can be attained.

Hence the exaggerated confidence of philosophy in the powers of the individual mind. Whether it is dogmatic or critical, whether it admits the relativity of our knowledge or claims to be established within the absolute, a philosophy is generally the work of a philosopher, a single and unitary vision of the whole. It is to be taken or left.

More modest, and also alone capable of being completed and perfected, is the philosophy we advocate. Human intelligence, as we represent it, is not at all what Plato taught in the allegory of the cave. Its function is not to look at passing shadows nor yet to turn itself round and contemplate the glaring sun. It has something else to do. Harnessed, like yoked oxen, to a heavy task, we feel the play of our muscles and joints, the weight of the plow and the resistance of the soil. To act and to know that we are acting, to come into touch with reality and even to live it, but only in the measure in which it concerns the work that is being accomplished and the furrow that is being plowed, such is the function of human intelligence. Yet a beneficent fluid bathes us, whence we draw the very force to labor and to live. From this ocean of life, in which we are immersed, we are continually drawing something, and we feel that our being, or at least the intellect that guides it, has been formed therein by a kind of local concentration. Philosophy can only be an effort to dissolve again into the

Whole. Intelligence, reabsorbed into its principle, may thus live back again its own genesis. But the enterprise cannot be achieved in one stroke; it is necessarily collective and progressive. It consists in an interchange of impressions which, correcting and adding to each other, will end by expanding the humanity in us and making us even transcend it.

But this method has against it the most inveterate habits of the mind. It at once suggests the idea of a vicious circle. In vain, we shall be told, you claim to go beyond intelligence: how can you do that except by intelligence? All that is clear in your consciousness is intelligence. You are inside your own thought; you cannot get out of it. Say, if you like, that the intellect is capable of progress, that it will see more and more clearly into a greater and greater number of things; but do not speak of engendering it, for it is with your intellect itself that you would have to do the work.

The objection presents itself naturally to the mind. But the same reasoning would prove also the impossibility of acquiring any new habit. It is of the essence of reasoning to shut us up in the circle of the given. But action breaks the circle. If we had never seen a man swim, we might say that swimming is an impossible thing, inasmuch as, to learn to swim, we must begin by holding ourselves up in the water and, consequently, already know how to swim. Reasoning, in fact, always nails us down to the solid ground. But if, quite simply, I throw myself into the water without fear, I may keep myself up well enough at first by merely struggling, and gradually adapt myself to the new environment: I shall thus have learnt to swim. So, in theory, there is a kind of absurdity in trying to know otherwise than by intelligence; but if the risk be frankly accepted, action will perhaps cut the knot that reasoning has tied and will not unloose.

Besides, the risk will appear to grow less, the more our point of view is adopted. We have shown that intellect has detached itself from a vastly wider reality, but that there has never been a clean cut between the two; all around conceptual thought there remains an indistinct fringe which

recalls its origin. And further we compared the intellect to a solid nucleus formed by means of condensation. This nucleus does not differ radically from the fluid surrounding it. It can only be reabsorbed in it because it is made of the same substance. He who throws himself into the water, having known only the resistance of the solid earth, will immediately be drowned if he does not struggle against the fluidity of the new environment: he must perforce still cling to that solidity, so to speak, which even water presents. Only on this condition can he get used to the fluid's fluidity. So of our thought, when it has decided to make the leap.

But leap it must, that is, leave its own environment. Reason, reasoning on its powers, will never succeed in extending them, though the extension would not appear at all unreasonable once it were accomplished. Thousands and thousands of variations on the theme of walking will never yield a rule for swimming: come, enter the water, and when you know how to swim, you will understand how the mechanism of swimming is connected with that of walking. Swimming is an extension of walking, but walking would never have pushed you on to swimming. So you may speculate as intelligently as you will on the mechanism of intelligence; you will never, by this method, succeed in going beyond it. You may get something more complex, but not something higher nor even something different. You must take things by storm: you must thrust intelligence outside itself by an act of will.

So the vicious circle is only apparent. It is, on the contrary, real, we think, in every other method of philosophy. This we must try to show in a few words, if only to prove that philosophy cannot and must not accept the relation established by pure intellectualism between the theory of knowledge and the theory of the known, between metaphysics and science.

At first sight, it may seem prudent to leave the consideration of facts to positive science, to let physics and chemistry busy themselves with matter, the biological and psychological sciences with life. The task of the philoso-

Positive science is, in fact, a work of pure intellect. Now, whether our conception of the intellect be accepted or rejected, there is one point on which everybody will agree with us, and that is that the intellect is at home in the presence of unorganized matter. This matter it makes use of more and more by mechanical inventions, and mechanical inventions become the easier to it the more it thinks of matter as mechanism. The intellect bears within itself, in the form of natural logic, a latent geometrism that is set free in the measure and proportion that the intellect penetrates into the inner nature of inert matter. Intelligence is in tune with this matter, and that is why the physics and metaphysics of inert matter are so near each other. Now, when the intellect undertakes the study of life, it necessarily treats the living like the inert, applying the same forms to this new object, carrying over into this new field the same habits that have succeeded so well in the old; and it is right to do so, for only on such terms does the living offer to our action the same hold as inert matter. But the truth we thus arrive at becomes altogether relative to our faculty of action. It is no more than a *symbolic* verity. It cannot have the same value as the physical verity, being only an extension of physics to an object which we are *a priori* agreed to look at only in its external aspect. The duty of philosophy should be to intervene here actively, to examine the living without any reservation as to practical utility, by freeing itself from forms and habits that are strictly intellectual. Its own special object is to speculate, that is to say, to see; its attitude toward the living should not be that of science, which aims only at action, and which, being able to act only by means of inert matter, presents to itself the rest of reality in this single respect. What must the result be, if it leave biological and psychological facts to positive science alone, as it has left, and rightly left, physical facts? It will accept *a priori* a mechanistic conception of all nature, a conception unreflected and even unconscious, the outcome of the material need. It will *a priori* accept the doctrine of the simple unity of knowledge and of the abstract unity of nature.

The moment it does so, its fate is sealed. The philoso-

pher has no longer any choice save between a metaphysical dogmatism and a metaphysical skepticism, both of which rest, at bottom, on the same postulate, and neither of which adds anything to positive science. He may hypothesize the unity of nature, or, what comes to the same thing, the unity of science, in a being who is nothing since he does nothing, an ineffectual God who simply sums up in himself all the given; or in an eternal Matter from whose womb have been poured out the properties of things and the laws of nature; or, again, in a pure Form which endeavors to seize an unseizable multiplicity, and which is, as we will, the form of nature or the form of thought. All these philosophies tell us, in their different languages, that science is right to treat the living as the inert, and that there is no difference of value, no distinction to be made between the results which intellect arrives at in applying its categories, whether it rests on inert matter or attacks life.

In many cases, however, we feel the frame cracking. But as we did not begin by distinguishing between the inert and the living, the one adapted in advance to the frame in which we insert it, the other incapable of being held in the frame otherwise than by a convention which eliminates from it all that is essential, we find ourselves, in the end, reduced to regarding everything the frame contains with equal suspicion. To a metaphysical dogmatism, which has erected into an absolute the factitious unity of science, there succeeds a skepticism or a relativism that universalizes and extends to all the results of science the artificial character of some among them. So philosophy swings to and fro between the doctrine that regards absolute reality as unknowable and that which, in the idea it gives us of this reality, says nothing more than science has said. For having wished to prevent all conflict between science and philosophy, we have sacrificed philosophy without any appreciable gain to science. And for having tried to avoid the seeming vicious circle which consists in using the intellect to transcend the intellect, we find ourselves turning in a real circle, that which consists in laboriously rediscovering by metaphysics a unity that we began by positing a



*priori*, a unity that we admitted blindly and unconsciously by the very act of abandoning the whole of experience to science and the whole of reality to the pure understanding.

Let us begin, on the contrary, by tracing a line of demarcation between the inert and the living. We shall find that the inert enters naturally into the frames of the intellect, but that the living is adapted to these frames only artificially, so that we must adopt a special attitude towards it and examine it with other eyes than those of positive science. Philosophy, then, invades the domain of experience. She busies herself with many things which hitherto have not concerned her. Science, theory of knowledge, and metaphysics find themselves on the same ground. At first there may be a certain confusion. All three may think they have lost something. But all three will profit from the meeting.

Positive science, indeed, may pride itself on the uniform value attributed to its affirmations in the whole field of experience. But, if they are all placed on the same footing, they are all tainted with the same relativity. It is not so if we begin by making the distinction which, in our view, is forced upon us. The understanding is at home in the domain of unorganized matter. On this matter human action is naturally exercised; and action, as we said above, cannot be set in motion in the unreal. Thus, of physics—so long as we are considering only its general form and not the particular cutting out of matter in which it is manifested—we may say that it touches the absolute. On the contrary, it is by accident—chance or convention, as you please—that science obtains a hold on the living analogous to the hold it has on matter. Here the use of conceptual frames is no longer natural. I do not wish to say that it is not legitimate, in the scientific meaning of the term. If science is to extend our action on things, and if we can act only with inert matter for instrument, science can and must continue to treat the living as it has treated the inert. But, in doing so, it must be understood that the further it penetrates the depths of *life*, the more symbolic, the more relative to the contingencies of action, the knowledge it supplies to us

becomes. On this new ground philosophy ought then to follow science, in order to superpose on scientific truth a knowledge of another kind, which may be called metaphysical. Thus combined, all our knowledge, both scientific and metaphysical, is heightened. In the absolute we live and move and have our being. The knowledge we possess of it is incomplete, no doubt, but not external or relative. It is reality itself, in the profoundest meaning of the word, that we reach by the combined and progressive development of science and of philosophy.

Thus, in renouncing the factitious unity which the understanding imposes on nature from outside, we shall perhaps find its true, inward and living unity. For the effort we make to transcend the pure understanding introduces us into that more vast something out of which our understanding is cut, and from which it has detached itself. And, as matter is determined by intelligence, as there is between them an evident agreement, we cannot make the genesis of the one without making the genesis of the other. An identical process must have cut out matter and the intellect, at the same time, from a stuff that contained both. Into this reality we shall get back more and more completely, in proportion as we compel ourselves to transcend pure intelligence. }

## CHAPTER VI

### Nature and Life:

Alfred North Whitehead (1861–1947)

HAD THIS VOLUME BEEN PREPARED THIRTY YEARS AGO THE selection from Whitehead's writings certainly would not have followed those from Croce and Bergson, nor would it have preceded that from Husserl. Whitehead would not

found affinities and contrasts of attitude, style, interest, and doctrine which we cannot blink even though they may be difficult to formulate with exactness.

Because of his peculiar intellectual development Whitehead is the only distinguished philosopher of the twentieth century who crosses these lines. Even Russell, who is notorious for shifting his point of view, commands no such wide audience, for one thing because of a persistent respect for logic, science, clarity, and analysis throughout all his changes. But Whitehead is three things to all men—logician, philosopher of science, and metaphysician—and therefore even the most narrowly conceived libraries contain at least some of his works.

While close students may see unity and continuity in Whitehead's development from a universal algebra to a sort of universal biology, his third period is generally regarded as radically different from the others. His emergence into it has been hailed by some as a major conversion, much as if a logical and scientific sinner had come back to the metaphysical fold. During this third period Whitehead won an audience that resembles Bergson's in its composition (though not in size, I suspect) precisely because of Whitehead's serene dealings with adventure and life, his serious dealings with religion and education, his scoffing at the ideals of clarity and precision. Coming from someone who had been through mathematics and logic and physics, this bucked up a number of people who had no taste or competence for such matters. But because of the difficulty of his later terminology and his radical redefinition of so many terms of ordinary language, many of Whitehead's readers find his more technical and positive systematic work extremely difficult to understand—even when they make concerted efforts to talk his language, to abandon the language of the streets and the schools while living in *Process and Reality* (or in the less charming and darker parts of *Science and the Modern World*). I am sure, therefore, that an excerpt from the *magnum opus*, *Process and Reality*, would be unintelligible out of context. In fact, I suspect that the great numbers of people who read the historical and less technical sections of *Science and the Mod-*

it. The result is a modern muddle, a series of inconsistencies that must be clarified and resolved.

According to Whitehead the first great scientific attack on the common-sense point of view arose when the transmission theories of light and sound showed that color and sound are *secondary* qualities which are not really *in* the objects but are subjective reactions to bodily motions, much as pain is in us and not in the knife with which we cut ourselves. Color and sound were thereby removed from nature, the superficiality of sense perception as a source of insight into the nature of things was demonstrated, and the modern epistemologists' belief that sense perception provides data for the interpretation of nature was shown to be misguided. It was left to Hume, Whitehead says, to see the "hybrid character" of this view of our perceptions, a view which implies that we come to know the redness of the rose in the garden in one way and its position in another, that is to say as a blend of secondary qualities "in here" and primary qualities "out there."

This is Whitehead's first bit of adverse testimony against common sense. It is supplemented by a second expert opinion that comes from Newton. Newton was forced to accept the universal law of gravitation, according to which all bodies attract each other, as an ultimate principle, derivable from nothing more fundamental. He could not say *why* all bodies attract each other, and so he was forced to say (in Latin) "I do not use hypotheses," meaning by that that he refused to go beyond the available evidence in order to provide an explanation for gravitation. In remaining so agnostic, says Whitehead, Newton "illustrated a great philosophic truth, that a dead nature can give no reasons," much as dead men tell no tales, I suppose. Moreover, Whitehead adds homiletically, "All ultimate reasons are in terms of aim at value. A dead nature aims at nothing." With this he concludes his reflections on what might be called the Hume-Newton syndrome, pointing out that in 1933 the President of the United States was inaugurating a new chapter in the history of mankind which we need to understand intuitively, but all the Hume-Newton point of view

can see in it is "a complex transition of sensa, and an entangled motion of molecules."

This familiar testimony is finally buttressed by the statement of a much more powerful and respected figure—the twentieth-century scientist—who not only drives the last nail into the coffin of common sense but also launches Whitehead into his activist philosophy of process. The doctrine of empty space has been eliminated by modern physics, Whitehead says, and replaced by the idea of a field of force, a field of incessant activity. Moreover, "Matter has been identified with energy, and energy is sheer activity." Since any local agitation shakes the whole universe there is no point in treating anything as a local, detached existence. The environment enters into the very nature of each thing. The common-sense and older scientific view of self-contained particles of matter is an abstraction, and a useless one when we are plumbing the depths of the universe. It may suffice for lawyers and ignorant philosophers, Whitehead says, but it prevents us from seeing that the basic fact of modern physics is activity. However, this figure of activity that the modern physicist places at the center of his picture of the universe is what Whitehead calls "bare activity," and it remains for the philosopher to veil it decently with the answers to the very large questions: "Activity for what, producing what, Activity involving what?" To this exacting task Whitehead turns his attention in the selection that follows. It is an abridgment, with omissions indicated, of Lecture Eight, "Nature Alive," of Whitehead's *Modes of Thought* (1938).<sup>1</sup>

[ The status of life in nature . . . is the modern problem of philosophy and of science. Indeed it is the central meeting point of all the strains of systematic thought, humanistic, naturalistic, philosophic. The very meaning of life is in doubt. When we understand it, we shall also understand its status in the world. But its essence and its status are alike baffling. . . .

<sup>1</sup> The present abridgment is printed with the permission of The Macmillan Co., New York, publishers of *Modes of Thought*. The lecture previously appeared in *Nature and Life* (University of Chicago Press, 1934).

The doctrine that I am maintaining is that neither physical nature nor life can be understood unless we fuse them together as essential factors in the composition of "really real" things whose interconnections and individual characters constitute the universe.

The first step in the argument must be to form some concept of what life can mean. Also we require that the deficiencies in our concept of physical nature should be supplied by its fusion with life. And we require that, on the other hand, the notion of life should involve the notion of physical nature.

Now as a first approximation the notion of life implies a certain absoluteness of self-enjoyment. This must mean a certain immediate individuality, which is a complex process of appropriating into a unity of existence the many data presented as relevant by the physical processes of nature. Life implies the absolute, individual self-enjoyment arising out of this process of appropriation. I have, in my recent writings, used the word "prehension" to express this process of appropriation. Also I have termed each individual act of immediate self-enjoyment an "occasion of experience." I hold that these unities of existence, these occasions of experience, are the really real things which in their collective unity compose the evolving universe, ever plunging into the creative advance. . . .

This concept of self-enjoyment does not exhaust that aspect of process here termed "life." Process for its intelligibility involves the notion of a creative activity belonging to the very essence of each occasion. It is the process of eliciting into actual being factors in the universe which antecedently to that process exist only in the mode of unrealized potentialities. The process of self-creation is the transformation of the potential into the actual, and the fact of such transformation includes the immediacy of self-enjoyment.

Thus in conceiving the function of life in an occasion of experience, we must discriminate the actualized data presented by the antecedent world, the non-actualized potentialities which lie ready to promote their fusion into a new

unity of experience, and the immediacy of self-enjoyment which belongs to the creative fusion of those data with those potentialities. This is the doctrine of the creative advance whereby it belongs to the essence of the universe, that it passes into a future. It is nonsense to conceive of nature as a static fact, even for an instant devoid of duration. There is no nature apart from transition, and there is no transition apart from temporal duration. This is the reason why the notion of an instant of time, conceived as a primary simple fact, is nonsense.

But even yet we have not exhausted the notion of creation which is essential to the understanding of nature. We must add yet another character to our description of life. This missing characteristic is "aim." By this term "aim" is meant the exclusion of the boundless wealth of alternative potentiality, and the inclusion of that definite factor of novelty which constitutes the selected way of entertaining those data in that process of unification. The aim is at that complex of feeling which is the enjoyment of those data in that way. "That way of enjoyment" is selected from the boundless wealth of alternatives. It has been aimed at for actualization in that process. . . .

The question at once arises as to whether this factor of life in nature, as thus interpreted, corresponds to anything that we observe in nature. All philosophy is an endeavor to obtain a self-consistent understanding of things observed. Thus its development is guided in two ways, one is the demand for a coherent self-consistency, and the other is the elucidation of things observed. It is therefore our first task to compare the above doctrine of life in nature with our direct observations.

Without doubt the sort of observations most prominent in our conscious experience are the sense-perceptions. Sight, hearing, taste, smell, touch, constitute a rough list of our major modes of perception through the senses. . . . The truth is that our sense-perceptions are extraordinarily vague and confused modes of experience. Also there is every evidence that their prominent side of external reference is very superficial in its disclosure of the universe.

. . . For example, pragmatically a paving-stone is a hard, solid, static, irremovable fact. This is what sense-perception, on its sharp-cut side, discloses. But if physical science be correct, this is a very superficial account of that portion of the universe which we call the paving-stone. Modern physical science is the issue of a co-ordinated effort, sustained for more than three centuries, to understand those activities of Nature by reason of which the transitions of sense-perception occur.

Two conclusions are now abundantly clear. One is that sense-perception omits any discrimination of the fundamental activities within nature. For example, consider the difference between the paving-stone as perceived visually, or by falling upon it, and the molecular activities of the paving-stone as described by the physicist. The second conclusion is the failure of science to endow its formulae for activity with any meaning. The divergence of the formulae about nature from the appearance of nature has robbed the formulae of any explanatory character. It has even robbed us of reason for believing that the past gives any ground for expectation of the future. In fact, science conceived as resting on mere sense-perception, with no other source of observation, is bankrupt, so far as concerns its claim to self-sufficiency. . . .

Yet it is untrue to state that the general observation of mankind, in which sense-perception is only one factor, discloses no aim. The exact contrary is the case. All explanations of the sociological functionings of mankind include "aim" as an essential factor in explanation. For example, in a criminal trial where the evidence is circumstantial the demonstration of motive is one chief reliance of the prosecution. In such a trial would the defence plead the doctrine that purpose could not direct the motions of the body, and that to indict the thief for stealing was analogous to indicting the sun for rising? . . . In fact we are *directly* conscious of our purposes as *directive* of our actions. Apart from such direction no doctrine could in any sense be acted upon. The notions entertained mentally would have no effect upon bodily actions. Thus what happens would happen in complete indifference to the entertainment of such notions.

Scientific reasoning is completely dominated by the presupposition that mental functionings are not properly part of nature. Accordingly it disregards all those mental antecedents which mankind habitually presuppose as effective in guiding cosmological functionings. As a method this procedure is entirely justifiable, provided that we recognize the limitations involved. These limitations are both obvious and undefined. The gradual eliciting of their definition is the hope of philosophy. . . .

A rough division can be made of six types of occurrences in nature. The first type is human existence, body and mind. The second type includes all sorts of animal life, insects, the vertebrates, and other genera. In fact all the various types of animal life other than human. The third type includes all vegetable life. The fourth type consists of the single living cells. The fifth type consists of all large-scale inorganic aggregates, on a scale comparable to the size of animal bodies, or larger. The sixth type is composed of the happenings on an infinitesimal scale, disclosed by the minute analysis of modern physics.

Now all these functionings of Nature influence each other, require each other, and lead on to each other. The list has purposely been made roughly, without any scientific pretension. The sharp-cut scientific classifications are essential for scientific method. But they are dangerous for philosophy. Such classification hides the truth that the different modes of natural existence shade off into each other. There is the animal life with its central direction of a society of cells, there is the vegetable life with its organized republic of cells, there is the cell life with its organized republic of molecules, there is the large-scale inorganic society of molecules with its passive acceptance of necessities derived from spatial relations, there is the infra-molecular activity which has lost all trace of the passivity of inorganic nature on a larger scale. . . .

Again, another consideration arises. How do we observe nature? Also, what is the proper analysis of an observation? The conventional answer to this question is that we perceive nature through our senses. Also in the analysis of sense-perception we are apt to concentrate upon its most clear-cut

instance, namely sight. Now visual perception is the final product of evolution. It belongs to high grade animals—to vertebrates and to the more advanced type of insects. There are numberless living things which afford no evidence of possessing sight. Yet they show every sign of taking account of their environment in the way proper to living things. Also human beings shut off sight with peculiar ease, by closing our eyes or by the calamity of blindness. The information provided by mere sight is peculiarly barren—namely external regions disclosed as coloured. There is no necessary transition of colours, and no necessary selection of regions, and no necessary mutual adaptation of the display of colours. Sight at any instant merely provides the passive fact of regions variously coloured. If we have memories, we observe the transition of colours. But there is nothing intrinsic to the mere coloured regions which provides any hint of internal activity whereby change can be understood. It is from this experience that our conception of a spatial distribution of passive material substances arises. Nature is thus described as made up of vacuous bits of matter with no internal values, and merely hurrying through space.

But there are two accompaniments of this experience which should make us suspicious of accepting it at its face value as any direct disclosure of the metaphysical nature of things. In the first place, even in visual experience we are also aware of the intervention of the body. We know directly that we see *with our eyes*. That is a vague feeling, but extremely important. Secondly, every type of crucial experiment proves that what we see, and where we see it, depend entirely upon the physiological functioning of our body. Any method of making our body function internally in a given way, will provide us with an assigned visual sensation. The body is supremely indifferent to the happenings of nature a short way off, where it places its visual sensa.

Now the same is true of all other modes of sensation, only to a greater extent. All sense-perception is merely one outcome of the dependence of our experience upon bodily functionings. Thus if we wish to understand the relation of our personal experience to the activities of nature, the

proper procedure is to examine the dependence of our personal experiences upon our personal bodies.

Let us ask about our overwhelming persuasions as to our own personal body-mind relation. In the first place, there is the claim to unity. The human individual is one fact, body and mind. This claim to unity is the fundamental fact, always presupposed, rarely explicitly formulated. I am experiencing and my body is mine. In the second place, the functioning of our body has a much wider influence than the mere production of sense-experience. We find ourselves in a healthy enjoyment of life by reason of the healthy functionings of our internal organs—heart, lungs, bowels, kidneys, etc. The emotional state arises just because they are not providing any *sensa* directly associated with themselves. Even in sight, we enjoy our vision because there is no eye-strain. Also we enjoy our general state of life, because we have no stomach-ache. I am insisting that the enjoyment of health, good or bad, is a positive feeling only casually associated with particular *sensa*. For example, you can enjoy the ease with which your eyes are functioning even when you are looking at a bad picture or a vulgar building. This direct feeling of the derivation of emotion from the body is among our fundamental experiences. There are emotions of various types—but every type of emotion is at least modified by derivation from the body. It is for physiologists to analyze in detail the modes of bodily functioning. For philosophy, the one fundamental fact is that the whole complexity of mental experience is either derived or modified by such functioning. Also our basic feeling is this sense of derivation, which leads to our claim for unity, body and mind.

But our immediate experience also claims derivation from another source, and equally claims a unity founded upon this alternative source of derivation. This second source is our own state of mind directly preceding the immediate present of our conscious experience. A quarter of a second ago, we were entertaining such and such ideas, we were enjoying such and such emotions, and we were making such and such observations of external fact. In our present state of mind, we are continuing that previous state.

The word "continuing" states only half the truth. In one sense it is too weak, and in another sense it overstates. It is too weak, because we not only continue, but we claim absolute identity with our previous state. It was our very identical self in that state of mind, which is of course the basis of our present experience a quarter of a second later. In another sense the word "continuing" overstates. For we do not quite continue in our preceding state of experience. New elements have intervened. All of these new elements are provided by our bodily functionings. We fuse these new elements with the basic stuff of experience provided by our state of mind a quarter of a second ago. Also, as we have already agreed, we claim an identification with our body. Thus our experience in the present discloses its own nature as with two sources of derivation, namely, the body and the antecedent experiential functionings. Also there is a claim for identification with each of these sources. The body is mine, and the antecedent experience is mine. Still more, there is only one ego, to claim the body and to claim the stream of experience. I submit that we have here the fundamental basic persuasion on which we found the whole practice of our existence. While we exist, body and soul are inescapable elements in our being, each with the full reality of our own immediate self. But neither body nor soul possesses the sharp observational definition which at first sight we attribute to them. Our knowledge of the body places it as a complex unity of happenings within the larger field of nature. But its demarcation from the rest of nature is vague in the extreme. The body consists of the co-ordinated functionings of billions of molecules. It belongs to the structural essence of the body that, in an indefinite number of ways, it is always losing molecules and gaining molecules. When we consider the question with microscopic accuracy, there is no definite boundary to determine where the body begins and external nature ends. Again the body can lose whole limbs, and yet we claim identity with the same body. Also the vital functions of the cells in the amputated limb ebb slowly. Indeed the limb survives in separation from the body for an immense time compared to the internal vibratory periods of its molecules. Also apart from such

catastrophes, the body requires the environment in order to exist. Thus there is a unity of the body with the environment, as well as a unity of body and soul into one person.

But in conceiving our personal identity we are apt to emphasize rather the soul than the body. The one individual is that co-ordinated stream of personal experiences, which is my thread of life or your thread of life. It is that succession of self-realization, each occasion with its direct memory of its past and with its anticipation of the future. . . .

Yet when we examine this notion of the soul, it discloses itself as even vaguer than our definition of the body. First, the continuity of the soul—so far as concerns consciousness—has to leap gaps in time. We sleep or we are stunned. And yet it is the same person who recovers consciousness. We trust to memory, and we ground our trust on the continuity of the functionings of nature, more especially on the continuity of our body. Thus nature in general and the body in particular provide the stuff for the personal endurance of the soul. Again there is a curious variation in the vividness of the successive occasions of the soul's existence. We are living at full stretch with a keen observation of external occurrence; then external attention dies away and we are lost in meditation; the meditation gradually weakens in vivid presentation: we doze; we dream; we sleep with a total lapse of the stream of consciousness. These functionings of the soul are diverse, variable, and discontinuous. The claim to the unity of the soul is analogous to the claim to the unity of the body, and is analogous to the claim to the unity of body and soul, and is analogous to the claim to the community of the body with an external nature. It is the task of philosophic speculation to conceive the happenings of the universe so as to render understandable the outlook of physical science and to combine this outlook with these direct persuasions representing the basic facts upon which epistemology must build. The weakness of the epistemology of the eighteenth and nineteenth centuries was that it based itself purely upon a narrow formulation of sense-perception. Also among the various modes of sensation, visual experience was picked out as the typical ex-

ample. The result was to exclude all the really fundamental factors constituting our experience.

In such an epistemology we are far from the complex data which philosophic speculation has to account for in a system rendering the whole understandable. Consider the types of community of body and soul, of body and nature, of soul and nature, or successive occasions of bodily existence, or the soul's existence. These fundamental interconnections have one very remarkable characteristic. Let us ask what is the function of the external world for the stream of experience which constitutes the soul. This world, thus experienced, is the basic fact within those experiences. All the emotions, and purposes, and enjoyments, proper to the individual existence of the soul are nothing other than the soul's reactions to this experienced world which lies at the base of the soul's existence.

Thus in a sense, the experienced world is one complex factor in the composition of many factors constituting the essence of the soul. We can phrase this shortly by saying that in one sense the world is in the soul.

But there is an antithetical doctrine balancing this primary truth. Namely, our experience of the world involves the exhibition of the soul itself as one of the components within the world. Thus there is a dual aspect to the relationship of an occasion of experience as one relatum and the experienced world as another relatum. The world is included within the occasion in one sense, and the occasion is included in the world in another sense. For example, I am in the room, and the room is an item in my present experience. But my present experience is what I now am.

But this baffling antithetical relation extends to all the connections which we have been discussing. For example, consider the enduring self-identity of the soul. The soul is nothing else than the succession of my occasions of experience, extending from birth to the present moment. Now, at this instant, I am the complete person embodying all these occasions. They are mine. On the other hand it is equally true that my immediate occasion of experience, at the present moment, is only one among the stream of occasions which constitutes my soul. Again, the world for me



is nothing else than how the functionings of my body present it for my experience. The world is thus wholly to be discerned within those functionings. Knowledge of the world is nothing else than an analysis of the functionings. And yet, on the other hand, the body is merely one society of functionings within the universal society of the world. We have to construe the world in terms of the bodily society, and the bodily society in terms of the general functionings of the world.

Thus, as disclosed in the fundamental essence of our experience, the togetherness of things involves some doctrine of mutual immanence. In some sense or other, this community of the actualities of the world means that each happening is a factor in the nature of every other happening. After all, this is the only way in which we can understand notions habitually employed in daily life. Consider our notion of "causation." How can one event be the cause of another? In the first place, no event can be wholly and solely the cause of another event. The whole antecedent world conspires to produce a new occasion. But some one occasion in an important way conditions the formation of a successor. How can we understand this process of conditioning?

The mere notion of transferring a quality is entirely unintelligible. Suppose that two occurrences may be in fact detached so that one of them is comprehensible without reference to the other. Then all notion of causation between them, or of conditioning, becomes unintelligible. There is— with this supposition—no reason why the possession of any quality by one of them should in any way influence the possession of that quality, or of any other quality, by the other. With such a doctrine the play and interplay of qualitative succession in the world becomes a blank fact from which no conclusions can be drawn as to past, present, or future, beyond the range of direct observation. Such a positivistic belief is quite self-consistent, provided that we do not include in it any hopes for the future or regrets for the past. Science is then without any importance. Also effort is foolish, because it determines nothing. The only intelligible doctrine of causation is founded on the doctrine

of immanence. Each occasion presupposes the antecedent world as active in its own nature. This is the reason why events have a determinate status relatively to each other. Also it is the reason why the qualitative energies of the past are combined into a pattern of qualitative energies in each present occasion. This is the doctrine of causation. It is the reason why it belongs to the essence of each occasion that it is *where* it is. It is the reason for the transference of character from occasion to occasion. It is the reason for the relative stability of laws of nature, some laws for a wider environment, some laws for a narrower environment. It is the reason why—as we have already noted—in our direct apprehension of the world around us we find that curious habit of claiming a two-fold unity with the observed data. We are in the world and the world is in us. Our immediate occasion is in the society of occasions forming the soul, and our soul is in our present occasion. The body is ours, and we are an activity within our body. This fact of observation, vague but imperative, is the foundation of the connexity of the world, and of the transmission of its types of order.

In this survey of the observational data in terms of which our philosophic cosmology must be founded, we have brought together the conclusions of physical science, and those habitual persuasions dominating the sociological functionings of mankind. These persuasions also guide the humanism of literature, of art, and of religion. Mere existence has never entered into the consciousness of man, except as the remote terminus of an abstraction in thought. Descartes' "Cogito, ergo sum" is wrongly translated, "I think, therefore I am." It is never bare thought or bare existence that we are aware of. I find myself as essentially a unity of emotions, enjoyments, hopes, fears, regrets, valuations of alternatives, decisions—all of them subjective reactions to the environment as active in my nature. My unity—which is Descartes' "I am"—is my process of shaping this welter of material into a consistent pattern of feelings. The individual enjoyment is what I am in my role of a natural activity, as I shape the activities of the environment into a new creation, which is myself at this moment; and yet, as

being myself, it is a continuation of the antecedent world. If we stress the role of the environment, this process is causation. If we stress the role of my immediate pattern of active enjoyment, this process is self-creation. If we stress the role of the conceptual anticipation of the future whose existence is a necessity in the nature of the present, this process is the teleological aim at some ideal in the future. This aim, however, is not really beyond the present process. For the aim at the future is an enjoyment in the present. It thus effectively conditions the immediate self-creation of the new creature. . . .

Physical science has reduced nature to activity, and has discovered abstract mathematical formulae which are illustrated in these activities of Nature. But the fundamental question remains, How do we add content to the notion of bare activity? This question can only be answered by fusing life with nature.

In the first place, we must distinguish life from mentality. Mentality involves conceptual experience, and is only one variable ingredient in life. The sort of functioning here termed "conceptual experience" is the entertainment of possibilities for ideal realization in abstraction from any sheer physical realization. The most obvious example of conceptual experience is the entertainment of alternatives. Life lies below this grade of mentality. Life is the enjoyment of emotion, derived from the past and aimed at the future. It is the enjoyment of emotion which was then, which is now, and which will be then. This vector character is of the essence of such entertainment.

The emotion transcends the present in two ways. It issues from, and it issues towards. It is received, it is enjoyed, and it is passed along, from moment to moment. Each occasion is an activity of concern, in the Quaker sense of that term. It is the conjunction of transcendence and immanence. The occasion is concerned, in the way of feeling and aim, with things that in their own essence lie beyond it; although these things in their present functions are factors in the concern of that occasion. Thus each occasion, although engaged in its own immediate self-realization, is concerned with the universe.

metaphysical cosmology. The object of the lectures is to indicate those elements in our experience in terms of which such a cosmology should be constructed. The key notion from which such construction should start is that the energetic activity considered in physics is the emotional intensity entertained in life.

Philosophy begins in wonder. And, at the end, when philosophic thought has done its best, the wonder remains. There have been added, however, some grasp of the immensity of things, some purification of emotion by understanding. Yet there is a danger in such reflections. An immediate good is apt to be thought of in the degenerate form of a passive enjoyment. Existence is activity ever merging into the future. The aim at philosophic understanding is the aim at piercing the blindness of activity in respect to its transcendent functions. ]

## CHAPTER VII

### Phenomenology:

Edmund Husserl (1859-1938)

IN TURNING TO THE PHILOSOPHY OF EDMUND HUSSERL WE take our leave of the philosophers of process but we certainly do not return to anything like the tradition of Moore. Husserl is not easily classified in the loose scheme with which we began because he not only inaugurates a philosophy which is passionately interested in the tiniest details of experience, but he also thinks it provides a clue to art, religion, law, history, and all other aspects of culture and the universe. (Perhaps, like Mr. Berlin's Tolstoi he is the fox who wanted to be a hedgehog!) For this reason Husserl could have been hailed as an early ally of realism, then

we must give up this natural habit in order to concentrate on pure experience, on a pure phenomenon, on the appearance all by itself. It should be repeated here that in the case of the cube we can concentrate not only on the different *experiences* or appearances of the cube, but also on our different *experiencings* or acts of experience. It should be added that we can do something similar in the case of other selves: we can mentally blot out these other selves and then examine our own experiences and experiencings of them. In doing this sort of thing we suspend belief in the existence of the objects blotted out; we perform a "phenomenological reduction," in Greek an *epoché*. Husserl also speaks of this as a process of "bracketing" the external world; it consists in treating cubes and other objects as though they were not there, the better to concentrate on our experiences and experiencings themselves.

Having performed this first reduction we must then perform a second which consists in the description of the remainders of the first. We try to discover their essences or structures. Here Husserl uses the Greek word "eidos" for structure, so that he refers to this step as "eidetic reduction." These essences or forms or structures are said to "constrain psychical existence"; they are the possible structures that any psychical existent might have, and therefore Husserl holds that psychological phenomenology or phenomenological psychology—which is what we have been outlining—must rest on "eidetic phenomenology," the study of these forms and structures that do the constraining.

So far we have not considered the *I* in all of this looking at cubes. *I* see these appearances, *I* understand certain words, and *I* experience other selves, but so far *I* have performed reductions that yield only one kind of subject matter for phenomenological psychology, namely appearances of cubes, and other selves and corresponding acts. But the point is that *I* can also be experienced and treated as the result of a phenomenological reduction just as an appearance of a cube can be. It is just a matter of concentrating on the subject, rather than on the cube. But this *I* upon which one might concentrate is what Husserl calls

"psychical subjectivity" and therefore is still a matter of mere empirical concern, of interest to phenomenological psychology. There is a deeper *I*, he says, "which for want of language we can only call . . . 'I myself.'" This is *transcendental* subjectivity and it is one of the main topics of transcendental phenomenology, i.e. philosophy. It is the hidden *I* to which the psychical *I* is present. It is the end product of the most stringent reduction of all, along with another product which Husserl calls "*transcendental inter-subjectivity*" and which this writer cannot understand well enough to expound—a fault which he shares with philosophers older and wiser and more trained in bracketing. Presumably by examining the structures of these obscure things we arrive at the most profound philosophical truths by "presuppositionless" methods.

Husserl has been extremely influential. Among others, Heidegger and Sartre have been strongly affected by his philosophy. He has had great influence in Germany, France, and Latin America and his followers have tried to bracket and reduce in many different fields. He has been an extremely controversial and productive writer. Like Bergson's, his life was clouded by the rise of the Nazis when he was deserted as an old man by "Aryan" scholars whom he had taught. "And we old people remain here," he wrote. "A singular turn of the times: it gives the philosopher—if it does not take away his breath—much to think of. But now: *Cogito ergo sum*, i.e. I prove *sub specie aeterni* my right to live. And this, the *aeternitas* in general, cannot be reached by any earthly powers."<sup>1</sup>

The following selection is the first chapter of the second section of Husserl's *Ideas: General Introduction to Pure Phenomenology* (1931). The title of the chapter is "The Thesis of the Natural Standpoint and its Suspension."<sup>2</sup>

<sup>1</sup> Quoted in Marvin Farber, *The Foundation of Phenomenology* (Harvard, 1943), p. 23.

<sup>2</sup> Acknowledgment is made to The Macmillan Co., New York, and to George Allen and Unwin, Ltd., London, for permission to reprint the chapter from *Ideas: General Introduction to Pure Phenomenology*, translated by W. R. Boyce Gibson. The original appeared in German in 1913 under the title *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie*.

every man in possession of himself as he is, and places the entire responsibility for his existence squarely upon his own shoulders. And, when we say that man is responsible for himself, we do not mean that he is responsible only for his own individuality, but that he is responsible for all men. The word "subjectivism" is to be understood in two senses, and our adversaries play upon only one of them. Subjectivism means, on the one hand, the freedom of the individual subject and, on the other, that man cannot pass beyond human subjectivity. It is the latter which is the deeper meaning of existentialism. When we say that man chooses himself, we do mean that every one of us must choose himself; but by that we also mean that in choosing for himself he chooses for all men. For in effect, of all the actions a man may take in order to create himself as he wills to be, there is not one which is not creative, at the same time, of an image of man such as he believes he ought to be. To choose between this or that is at the same time to affirm the value of that which is chosen; for we are unable ever to choose the worse. What we choose is always the better; and nothing can be better for us unless it is better for all. If, moreover, existence precedes essence and we will to exist at the same time as we fashion our image, that image is valid for all and for the entire epoch in which we find ourselves. Our responsibility is thus much greater than we had supposed, for it concerns mankind as a whole. If I am a worker, for instance, I may choose to join a Christian rather than a Communist trade union. And if, by that membership, I choose to signify that resignation is, after all, the attitude that best becomes a man, that man's kingdom is not upon this earth, I do not commit myself alone to that view. Resignation is my will for everyone, and my action is, in consequence, a commitment on behalf of all mankind. Or if, to take a more personal case, I decide to marry and to have children, even though this decision proceeds simply from my situation, from my passion or my desire, I am thereby committing not only myself, but humanity as a whole, to the practice of monogamy. I am thus responsible for myself and for all men, and I am creat-

God and subjective idealism. The next part of the history is usually given over to the Enlightenment, with its devotion to science in the case of Benjamin Franklin, to what John Dewey has called the experimentalism of Thomas Jefferson, and to popular expressions of Deism in the case of Tom Paine. Then we come to transcendentalism in the early part of the nineteenth century. It is the spiral nebula of our intellectual history, a spinning literary revolt against British empiricism which was led by Ralph Waldo Emerson. It is anti-lockean, anti-humeian, anti-materialistic, and in all of this it converges with American versions of the Scottish philosophy, however different the Scots and the transcendentalists may be in other respects. The Scottish philosophy tried to meet Hume's skepticism with dogmatism of the driest, dullest kind, as might be expected from a philosophy partly derived from the learned but deadly Sir William Hamilton. Transcendentalist philosophy leaned heavily on Coleridge's garbled versions of post-kantian idealism.

The ideological curve that runs from Edwards to Jefferson to Emerson and the Scottish philosophy, therefore, is tender, tough, and tender again. But then at the height of what John Stuart Mill called "Germano-Coleridgean" and Scottish power, Darwin and Spencer initiated a new period of toughness in English and American philosophy. The *Origin of Species* appeared in 1859 and its impact on American and English thinking was almost instantaneous. It not only stimulated and supported a biologically oriented philosophy like that of the Americans Chauncey Wright and Charles Peirce, but it stiffened the resistance of the tender-minded as well. Those who fought the wave of Spencerian evolutionism and agnosticism at the end of the nineteenth century became much more hardened philosophically than the sweet singers of transcendental airs. The later idealists in Britain, like T. H. Green, John and Edward Caird, and then Bradley and McTaggart whom we have already mentioned, had to defend their concern for the inner life and spiritual values in the face of the great prestige of science; they had to show that the achievements of physics, biology, and technology were not merely grist

for naturalistic, positivistic, materialistic, and agnostic mills. Idealism and the more traditionally religious philosophies were forced to show that their views were consistent with evolutionary doctrine. Some idealists like Royce and the young John Dewey did this with a vengeance. They argued that far from being inconsistent with evolution, idealism was vindicated by it, that evolution was the scientific confirmation of a truth which historically minded idealists had originated and seen, perhaps through a glass darkly.

This backward glance makes it easier to explain William James's important role in American philosophy. He came upon the scene when philosophy was being bullied by a tough and militant scientism, but the only organized alternative seemed to be the absolute idealism of the neo-hegelians which he could not stomach. He was the son of Henry James, Sr., a transcendentalist friend of Emerson and interpreter of Swedenborg the ghost-seer; he was the brother of the great novelist Henry James. He wanted facts but he also wanted a religion. But with Herbert Spencer the custodian of facts and Francis Herbert Bradley the custodian of The Absolute, James felt obliged to apply elsewhere. He thought of himself as an empiricist in the tradition of Locke, Berkeley, Hume, and Mill, but he was upset by the strident materialism and agnosticism into which empiricism had developed at the end of the nineteenth century. And so he looked for some device that would limit the sovereignty of science, something that would silence the bark of "Darwin's bull-dog," T. H. Huxley, and calm that *enfant terrible* of agnosticism, W. K. Clifford.

In 1877 Clifford had said "It is wrong in all cases to believe on insufficient evidence; and where it is presumption to doubt and to investigate, there it is worse than presumption to believe." Partly in response to this James produced what is perhaps his most famous essay on religious matters, "The Will to Believe" (of 1896), which he later said he should have called "The *Right* to Believe" simply because it defended a right that Clifford and other agnostics had denied. One year later James brought out a

volume which featured this piece as title essay and carried a dedication to Charles Sanders Peirce. This publicly dates the beginning of one of the most important chapters in recent philosophy, for another year later in 1898 James delivered a lecture called "Philosophical Conceptions and Practical Results" in which he reminded the philosophical world of Peirce's founding of pragmatism in 1878.

By a number of moves which we shall observe later James transformed Peirce's pragmatism and what may be called his semantical agnosticism into a much more tender and tendentious thing. James, as we shall see, was not up to the austerity and the forbearance that Peirce's doctrine entailed. He was not satisfied with a logical principle that merely helped explicate or analyze the concepts of science; he wanted a device that would resolve his own spiritual turmoil and that of the age. To understand the pattern of his thinking and the development of pragmatism we must turn to Peirce, who is a very important philosopher in his own right and according to some the greatest philosopher America has ever produced.

Peirce was born in Cambridge, Massachusetts, in 1839, the son of the distinguished mathematician Benjamin Peirce. His father encouraged his early interests in mathematics, science, philosophy, and even more esoteric matters. It is reported that the father tried to teach the son the art of concentration "at a tender age" by playing rapid games of double dummy with him that lasted from 10 P.M. to dawn; that when Charles began to read philosophers in his teens his father would get him to repeat their proofs "and in a very few words would usually rip them up and show them empty"; that his father encouraged his "sensory discrimination" to the point where the young man studied to be a semi-professional winetaster. In other respects the relation between them is said to have been "idyllic," but one wonders whether Peirce's later unhappiness and chaotic personal life may have been connected with his life with father; one cannot avoid thinking of John Stuart Mill's life with his.

During his life Peirce never published a book on philosophy and it was left to admiring editors to produce six post-



"then"-clause mention something experienced or observed by the experimenter after the test conditions have been instituted.

Two important consequences of this approach must be mentioned. First of all, if a general term resists, or if the person using it does not supply such a translation upon demand, the term must be regarded as meaningless. Naturally, it may evoke images or stimulate emotion but it is scientifically meaningless. Secondly, if the pragmatic translations or definitions of two general terms are the same, then the two terms are pragmatically or scientifically synonymous no matter how different they are in other respects. In particular, the disregard of the images called up by the term represents Peirce's opposition to the tradition of Descartes and Berkeley on the subject of meaning. These two consequences give rise to what I have called Peirce's "semantical agnosticism" for they require a non-committal attitude toward a good deal of traditional metaphysics and theology. Peirce thought that serious application of the first consequence might show many metaphysical and theological terms meaningless; serious application of the second might show certain disputes to be pseudo disputes, merely arguments about what words to use in reports of the same experiment. Instead of saying as an ordinary agnostic might that one did not have sufficient evidence for a theological statement or its opposite, and therefore that one would have to suspend judgment, the semantic agnostic achieves a similar practical effect by calling the statement meaningless or deciding that the supposedly opposed statements mean the same thing. In physics this pragmatic attitude later converged with the kind of *operationalism* which many philosophical physicists based on Einstein's theory of relativity, chiefly because Einstein urged the need for a definition of simultaneity which would supply an experimental method for testing whether or not two events occurred simultaneously.

In spite of the obscurity in which Peirce wrapped a good deal of his advice about clarity, most students of his philosophy regard the view just formulated as the kernel of his pragmatism. They frequently call it "the pragmatic theory

of meaning" which they identify with Peirce, as opposed to the "pragmatic theory of truth" which is usually associated with James. Some go so far as to say that James's great misunderstanding of Peirce arose from his failure to see that Peirce's pragmatism was merely concerned with meaning, and that James *added* a questionable theory of truth. I shall have something to say about the justice of this when we consider James's pragmatism in the next chapter, but it should be realized already that Peirce's doctrine cannot be used automatically for the kind of reconciliation that James so ardently desired. By itself Peirce's pragmatism could not have bridged the gaps between opposite members of the tender-minded and the tough-minded teams, and used aggressively it might have even led to the un-Jamesian conclusion that they were all saying the same thing or all saying nothing. That would have plagued both their houses rather than have reconciled them; in fact it was one of the things that logical positivists of a later generation admired in Peirce—his attack on "ontological metaphysics." His effect on James was very, very different.

The following selection is an extract from Peirce's essay, "How to Make Our Ideas Clear."<sup>1</sup>

[What . . . is belief? It is the demi-cadence which closes a musical phrase in the symphony of our intellectual life. We have seen that it has just three properties: First, it is something that we are aware of; second, it appeases the irritation of doubt; and, third, it involves the establishment in our nature of a rule of action, or say for short, a *habit*. As it appeases the irritation of doubt, which is the motive for thinking, thought relaxes, and comes to rest for a moment when belief is reached. But, since belief is a rule for action, the application of which involves further doubt and further thought, at the same time that it is a stopping-place, it is also a new starting-place for thought. That is why I have permitted myself to call it thought at rest, although thought is essentially an action. The *final* upshot of thinking is the exercise of volition, and of this thought no longer forms a part; but belief is only a stadium of mental

<sup>1</sup>From *Popular Science Monthly*, Volume 12 (January, 1878), pp. 286-302.

action, an effect upon our nature due to thought, which will influence future thinking.

The essence of belief is the establishment of a habit, and different beliefs are distinguished by the different modes of action to which they give rise. If beliefs do not differ in this respect, if they appease the same doubt by producing the same rule of action, then no mere differences in the manner of consciousness of them can make them different beliefs, any more than playing a tune in different keys is playing different tunes. Imaginary distinctions are often drawn between beliefs which differ only in their mode of expression;—the wrangling which ensues is real enough, however. . . . Such false distinctions do as much harm as the confusion of beliefs really different, and are among the pitfalls of which we ought constantly to beware, especially when we are upon metaphysical ground. One singular deception of this sort, which often occurs, is to mistake the sensation produced by our own unclearness of thought for a character of the object we are thinking. Instead of perceiving that the obscurity is purely subjective, we fancy that we contemplate a quality of the object which is essentially mysterious; and if our conception be afterward presented to us in a clear form we do not recognize it as the same, owing to the absence of the feeling of unintelligibility. So long as this deception lasts, it obviously puts an impassable barrier in the way of perspicuous thinking; so that it equally interests the opponents of rational thought to perpetuate it, and its adherents to guard against it.

Another such deception is to mistake a mere difference in the grammatical construction of two words for a distinction between the ideas they express. In this pedantic age, when the general mob of writers attend so much more to words than to things, this error is common enough. When I just said that thought is an *action*, and that it consists in a *relation*, although a person performs an action but not a relation, which can only be the result of an action, yet there was no inconsistency in what I said, but only a grammatical vagueness.

From all these sophisms we shall be perfectly safe so long as we reflect that the whole function of thought is to

produce habits of action; and that whatever there is connected with a thought, but irrelevant to its purpose, is an accretion to it, but no part of it. If there be a unity among our sensations which has no reference to how we shall act on a given occasion, as when we listen to a piece of music, why we do not call that thinking. To develop its meaning we have, therefore, simply to determine what habits it produces, for what a thing means is simply what habits it involves. Now, the identity of a habit depends on how it might lead us to act, not merely under such circumstances as are likely to arise, but under such as might possibly occur, no matter how improbable they may be. What the habit is depends on *when* and *how* it causes us to act. As for the *when*, every stimulus of action is derived from perception; as for the *how*, every purpose of action is to produce some sensible result. Thus, we come down to what is tangible and practical, as the root of every real distinction of thought, no matter how subtle it may be; and there is no distinction of meaning so fine as to consist in anything but a possible difference of practice.

To see what this principle leads to, consider in the light of it such a doctrine as that of transubstantiation. The Protestant churches generally hold that the elements of the sacrament are flesh and blood only in a tropical sense; they nourish our souls as meat and the juice of it would our bodies. But the Catholics maintain that they are literally just that; although they possess all the sensible qualities of wafer-cakes and diluted wine. But we can have no conception of wine except what may enter into a belief, either—

1. That this, that, or the other, is wine; or,

2. That wine possesses certain properties.

Such beliefs are nothing but self-notifications that we should, upon occasion, act in regard to such things as we believe to be wine according to the qualities which we believe wine to possess. The occasion of such action would be some sensible perception, the motive of it to produce some sensible result. Thus our action has exclusive reference to what affects the senses, our habit has the same bearing as our action, our belief the same as our habit, our

conception the same as our belief; and we can consequently mean nothing by wine but what has certain effects, direct or indirect, upon our senses; and to talk of something as having all the sensible characters of wine, yet being in reality blood, is senseless jargon. Now, it is not my object to pursue the theological question; and having used it as a logical example I drop it, without caring to anticipate the theologian's reply. I only desire to point out how impossible it is that we should have an idea in our minds which relates to anything but conceived sensible effects of things. Our idea of anything is our idea of its sensible effects; and if we fancy that we have any other we deceive ourselves, and mistake a mere sensation accompanying the thought for a part of the thought itself. It is absurd to say that thought has any meaning unrelated to its only function. It is foolish for Catholics and Protestants to fancy themselves in disagreement about the elements of the sacrament, if they agree in regard to all their sensible effects, here or hereafter.

It appears, then, that the rule for attaining the third grade of clearness of apprehension is as follows: Consider what effects, which might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object.

Let us illustrate this rule by some examples; and, to begin with the simplest one possible, let us ask what we mean by calling a thing *hard*. Evidently that it will not be scratched by many other substances. The whole conception of this quality, as of every other, lies in its conceived effects. There is absolutely no difference between a hard thing and a soft thing so long as they are not brought to the test. Suppose, then, that a diamond could be crystallized in the midst of a cushion of soft cotton, and should remain there until it was finally burned up. Would it be false to say that that diamond was soft? This seems a foolish question, and would be so, in fact, except in the realm of logic. There such questions are often of the greatest utility as serving to bring logical principles into sharper relief than

single question was the origin of the whole doubt; that, had it not been for this question, the controversy would never have arisen; and that this question is perfectly solved in the manner which I have indicated.

Let us next seek a clear idea of Weight. This is another very easy case. To say that a body is heavy means simply that, in the absence of opposing force, it will fall. This (neglecting certain specifications of how it will fall, etc., which exist in the mind of the physicist who uses the word) is evidently the whole conception of weight. It is a fair question whether some particular facts may not *account* for gravity; but what we mean by the force itself is completely involved in its effects. . . .

Let us now approach the subject of logic, and consider a conception which particularly concerns it, that of *reality*. Taking clearness in the sense of familiarity, no idea could be clearer than this. Every child uses it with perfect confidence, never dreaming that he does not understand it. As for clearness in its second grade, however, it would probably puzzle most men, even among those of a reflective turn of mind, to give an abstract definition of the real. Yet such a definition may perhaps be reached by considering the points of difference between reality and its opposite, fiction. A figment is a product of somebody's imagination; it has such characters as his thought impresses upon it. That those characters are independent of how you or I think is an external reality. There are, however, phenomena within our own minds, dependent upon our thought, which are at the same time real in the sense that we really think them. But though their characters depend on how we think, they do not depend on what we think those characters to be. Thus, a dream has a real existence as a mental phenomenon, if somebody has really dreamt it; that he dreamt so and so, does not depend on what anybody thinks was dreamt, but is completely independent of all opinion on the subject. On the other hand, considering not the fact of dreaming, but the thing dreamt, it retains its peculiarities by virtue of no other fact than that it was dreamt to possess them. Thus we may define the real as that whose

characters are independent of what anybody may think them to be.

But, however satisfactory such a definition may be found, it would be a great mistake to suppose that it makes the idea of reality perfectly clear. Here, then, let us apply our rules. According to them, reality, like every other quality, consists in the peculiar sensible effects which things partaking of it produce. The only effect which real things have is to cause belief, for all the sensations which they excite emerge into consciousness in the form of beliefs. The question, therefore, is, how is true belief (or belief in the real) distinguished from false belief (or belief in fiction). Now, as we have seen in the former paper, the ideas of truth and falsehood, in their full development, appertain exclusively to the scientific method of settling opinion. A person who arbitrarily chooses the propositions which he will adopt can use the word truth only to emphasize the expression of his determination to hold on to his choice. Of course, the method of tenacity never prevailed exclusively; reason is too natural to men for that. But in the literature of the dark ages we find some fine examples of it. When Scotus Erigena is commenting upon a poetical passage in which hellebore is spoken of as having caused the death of Socrates, he does not hesitate to inform the inquiring reader that Helleborus and Socrates were two eminent Greek philosophers, and that the latter having been overcome in argument by the former took the matter to heart and died of it! What sort of idea of truth could a man have who could adopt and teach, without the qualification of a perhaps, an opinion taken so entirely at random? The real spirit of Socrates, who I hope would have been delighted to have been "overcome in argument," because he would have learned something by it, is in curious contrast with the naïve idea of the glossist, for whom discussion would seem to have been simply a struggle. When philosophy began to awake from its long slumber, and before theology completely dominated it, the practice seems to have been for each professor to seize upon any philosophical position he found unoccupied and which seemed a strong one, to intrench himself in it, and to sally forth from time to time to give battle to

the others. Thus, even the scanty records we possess of those disputes enable us to make out a dozen or more opinions held by different teachers at one time concerning the question of nominalism and realism. Read the opening part of the *Historia Calamitatum* of Abélard, who was certainly as philosophical as any of his contemporaries, and see the spirit of combat which it breathes. For him, the truth is simply his particular stronghold. When the method of authority prevailed, the truth meant little more than the Catholic faith. All the efforts of the scholastic doctors are directed toward harmonizing their faith in Aristotle and their faith in the Church, and one may search their ponderous folios through without finding an argument which goes any further. It is noticeable that where different faiths flourish side by side, renegades are looked upon with contempt even by the party whose belief they adopt; so completely has the idea of loyalty replaced that of truth-seeking. Since the time of Descartes, the defect in the conception of truth has been less apparent. Still, it will sometimes strike a scientific man that the philosophers have been less intent on finding out what the facts are, than on inquiring what belief is most in harmony with their system. It is hard to convince a follower of the *a priori* method by adducing facts; but show him that an opinion he is defending is inconsistent with what he has laid down elsewhere, and he will be very apt to retract it. These minds do not seem to believe that disputation is ever to cease; they seem to think that the opinion which is natural for one man is not so for another, and that belief will, consequently, never be settled. In contenting themselves with fixing their own opinions by a method which would lead another man to a different result, they betray their feeble hold of the conception of what truth is.

On the other hand, all the followers of science are fully persuaded that the processes of investigation, if only pushed far enough, will give one certain solution to every question to which they can be applied. One man may investigate the velocity of light by studying the transits of Venus and the aberration of the stars; another by the oppositions of Mars and the eclipses of Jupiter's satellites; a third by the method

of Fizeau; a fourth by that of Foucault; a fifth by the motions of the curves of Lissajoux; a sixth, a seventh, an eighth, and a ninth, may follow the different methods of comparing the measures of statical and dynamical electricity. They may at first obtain different results, but, as each perfects his method and his processes, the results will move steadily together toward a destined center. So with all scientific research. Different minds may set out with the most antagonistic views, but the progress of investigation carries them by a force outside of themselves to one and the same conclusion. This activity of thought by which we are carried, not where we wish, but to a foreordained goal, is like the operation of destiny. No modification of the point of view taken, no selection of other facts for study, no natural bent of mind even, can enable a man to escape the predestinate opinion. This great law is embodied in the conception of truth and reality. The opinion which is fated\* to be ultimately agreed to by all who investigate, is what we mean by the truth, and the object represented in this opinion is the real. That is the way I would explain reality.

But it may be said that this view is directly opposed to the abstract definition which we have given of reality, inasmuch as it makes the characters of the real depend on what is ultimately thought about them. But the answer to this is that, on the one hand, reality is independent, not necessarily of thought in general, but only of what you or I or any finite number of men may think about it; and that, on the other hand, though the object of the final opinion depends on what that opinion is, yet what that opinion is does not depend on what you or I or any man thinks. Our perversity and that of others may indefinitely postpone the settlement of opinion; it might even conceivably cause an arbitrary proposition to be universally accepted as long as the human race should last. Yet even that would not change the nature of the belief, which alone could be the result of

\* Fate means merely that which is sure to come true, and can now be avoided. It is a superstition to suppose that a certain sort of events are ever fated, and it is another to suppose that the word fate can never be freed from its superstitious taint. We are all fated to die. AUTHOR'S NOTE.

investigation carried sufficiently far; and if, after the extinction of our race, another should arise with faculties and disposition for investigation, that true opinion must be the one which they would ultimately come to. "Truth crushed to earth shall rise again," and the opinion which would finally result from investigation does not depend on how anybody may actually think. But the reality of that which is real does depend on the real fact that investigation is destined to lead, at last, if continued long enough, to a belief in it.

But I may be asked what I have to say to all the minute facts of history, forgotten never to be recovered, to the lost books of the ancients, to the buried secrets.

"Full many a gem of purest ray serene

The dark, unfathomed caves of ocean bear;

Full many a flower is born to blush unseen,

And waste its sweetness on the desert air."

Do these things not really exist because they are hopelessly beyond the reach of our knowledge? And then, after the universe is dead (according to the prediction of some scientists), and all life has ceased forever, will not the shock of atoms continue though there will be no mind to know it? To this I reply that, though in no possible state of knowledge can any number be great enough to express the relation between the amount of what rests unknown to the amount of the known, yet it is unphilosophical to suppose that, with regard to any given question (which has any clear meaning), investigation would not bring forth a solution of it, if it were carried far enough. Who would have said, a few years ago, that we could ever know of what substances stars are made whose light may have been longer in reaching us than the human race has existed? Who can be sure of what we shall not know in a few hundred years? Who can guess what would be the result of continuing the pursuit of science for ten thousand years, with the activity of the last hundred? And if it were to go on for a million, or a billion, or any number of years you please, how is it possible to say that there is any question which might not ultimately be solved?

## Truth and Practice:

## William James (1842-1910)

ENOUGH HAS BEEN SAID ABOUT THE BACKGROUND OF William James's philosophy in the last chapter, including the doctrine of Peirce to which he was so indebted, so that we may now turn to James's peculiar contribution to the pragmatic tradition. Peirce is the pragmatic philosopher of science, James the pragmatic philosopher of religion, and Dewey the pragmatic philosopher of morals, only it must be clear by now that it is not always the same pragmatism that they apply to these different problems. I present their views on these vital subjects not only because they are interesting, influential, and typical, but also to show more concretely that pragmatism is a kind of intellectual halfway house between our first group of philosophers and our last, that it is a philosophy which seeks contact with science, life, and culture while it maintains certain logical and analytical standards.

I should point out, therefore, that the twentieth-century contrast I have identified with the struggle between hedgehogs and foxes is less a matter of doctrine than of method. Unlike James's distinction between the tender and the tough, it is less influenced by the specific religious beliefs, the specific moral beliefs, and the specific emotional attitudes of the contending parties, and more influenced by the difference between those who try to tie all of these together and those who don't. For plainly Sartre is atheistic and pessimistic while being a free-willist (as he should not be on James's diagnosis); Croce is an idealist and yet not dogmatical; Bergson is anti-intellectualistic without being a fatalist or an empiricist. James's contrast, as I have suggested, was the product of the nineteenth century and cannot be mechanically translated to the later philosophy of

powerful cells, will yield a globule of a pinkish silvery metal that will float on gasoline; and the material of *that* is a specimen of lithium. The peculiarity of this definition—or rather this precept that is more serviceable than a definition—is that it tells you what the word lithium denotes by prescribing what you are to *do* in order to gain a perceptual acquaintance with the object of the word.”<sup>2</sup>

The progress in such translation is in the direction of clarity, Peirce says. It's a little like telling an American who knows no French what a French sentence means in English as opposed to telling him its meaning in a language that he doesn't know and can't use. But in this kind of translation as well as in pragmatic translation nothing is said about the *truth* of a statement like “This is a specimen of lithium.” On the other hand, if I should point to a book and say: “If you let it go, you will see it on the floor in a second,” you might agree with me and say “That's true.” If you did, you would be applying the predicate “true” to my statement, and this predicate or general term is somewhat different from the predicates “lithium,” “hard,” and “heavy” just because it is applied to linguistic expressions like statements rather than to blocks or stones. The question arises: Is there some pragmatic way of explaining the meaning of “true” in spite of the fact that it is a predicate which is applied to linguistic expressions? Naturally, one sensible reply is “It all depends on what is meant by ‘pragmatic.’”

It is obvious that you won't find out whether a statement is true by poking *it* or swallowing *it* and then waiting to see what happens, so that if the heart of pragmatism is its operationalism and its experientialism narrowly conceived, it *won't* be applicable to the notion of truth. But if we broaden the notions of operation and experience somewhat, it seems possible at least to deal with the notion of truth in a way that is analogous to Peirce's treatment of “hard,” “heavy,” and “lithium.” Remembering the pattern “If operation *O*, then experience *E*,” we allow *acceptance* or *belief* of a statement as an admissible operation, and a

<sup>2</sup> *Collected Papers* (Harvard University Press, 1931-35), Vol. II, Section 330.



consequent experience of *satisfaction* as admissible, and the formula: "If you believe or accept statement *S*, then certain satisfactory experiences ensue" becomes the pragmatic translation of "*S* is true." In this way we reach the outline of a pragmatic theory of truth which is as much an application of the pragmatic theory of meaning as Peirce's pragmatic definition of truth. It may be argued whether it is an *adequate* definition of truth, just as it may be argued whether Peirce's definition of truth is adequate, but such arguments are far more interesting and fruitful than arguing about whether they are pragmatic.

I cannot enter all of the details of this extremely difficult and historically complex subject, but it is fair to say that James's pragmatic theory of truth proceeds along the lines indicated. It involved him in difficulties over the notion of belief and the notion of satisfaction—his *O* and his *E*—but by construing them loosely enough he was able to invite back into respectability many speculative, metaphysical, and theological statements that seemed to be meaningless by Peirce's criterion of meaning. Moreover, the test of scientific, metaphysical, and theological truth was made uniform by James. If you want to know whether a theory of any kind is true, try believing it and see whether satisfactory results ensue: that is the brief summary that led some to hail James as a savior and others to caricature him brutally. It is the key to his attempted reconciliation of science and religion, and the origin of Peirce's decision to disassociate himself from the doctrine by rebaptizing his own view "pragmatism," a term which he described as "ugly enough to be safe from kidnappers."

Rather than spend the rest of my space on the many other differences and similarities between Peirce and James, it might be more illuminating to say something further about the philosophical reasons for James's approach to truth, lest it be thought that he was merely sentimentally motivated by a desire to tenderize the tough and vice versa. The fact is that James saw more deeply than a number of his glib critics did. A good insight into his motivation may be gotten from his statement that pragmatism agrees with "nominalism . . . in always appealing to particulars; with

utilitarianism in emphasizing practical aspects; with positivism in its disdain for verbal solutions." As a nominalist he was unable to say that a true statement expressed a "proposition" that corresponds to the "facts," because "facts" and "propositions" are abstract entities which consistent nominalists must not postulate. As a sympathizer of nineteenth-century positivism he regarded the correspondence theory of truth—the theory that a statement is true because it expresses a proposition that corresponds to the facts—as no more helpful than saying that sleeping pills put us to sleep because they have the dormitive virtue. These two sympathies led him to become an epistemological utilitarian. *Pragmatism* was warmly dedicated to the memory of John Stuart Mill, whose treatment of right moral conduct James tried to emulate in his theory of truth. James's argument may be put succinctly in three sentences. The true is that which we ought to believe. That which we ought to believe is what is best for us to believe. Therefore, the true is that which is best for us to believe.

By putting it all so baldly he exposed himself to a host of objections that were closely related to those which had been brewing over utilitarianism throughout the nineteenth century. His second premise raised the old question "Good for whom?" and James sometimes answered characteristically "For the individual!" On other occasions he protested that he was not leaving truth to individual taste. His ambiguity reflected an ambiguity in utilitarian ethics, and it was not surprising that Peirce should have concluded a letter to James by writing "What is utility, if it is confined to a single person? Truth is public." This was the theme which John Dewey emphasized more than any other pragmatist. But we cannot leave James without remembering that no matter how ambiguous his statements on truth were, they did stress certain important similarities between the notion of warranted belief or scientific acceptability and those of ethics. They constitute an extremely important contribution to philosophy whose full significance is yet to be widely appreciated.

Because I have concentrated on his pragmatism, it should be said that a fuller study of James's philosophy

would require analysis of his metaphysical pluralism, which linked him to the realists, and his radical empiricism, which brought him so close to Bergson. They are expounded in other works, notably in *A Pluralistic Universe* of 1909 and *Essays in Radical Empiricism*, which appeared posthumously in 1912. The latter was edited by Ralph Barton Perry, who in 1935 produced *The Thought and Character of William James*, one of the greatest philosophical biographies ever written and an inexhaustible source of information about James, his ideas, and his times.

The following is an abridgment of Lecture II of James's *Pragmatism* (1907), "What Pragmatism Means," with indications of omissions.<sup>3</sup>

{ The pragmatic method is primarily a method of settling metaphysical disputes that otherwise might be interminable. Is the world one or many?—fated or free?—material or spiritual?—here are notions either of which may or may not hold good of the world; and disputes over such notions are unending. The pragmatic method in such cases is to try to interpret each notion by tracing its respective practical consequences. What difference would it practically make to anyone if this notion rather than that notion were true? If no practical difference whatever can be traced, then the alternatives mean practically the same thing, and all dispute is idle. Whenever a dispute is serious, we ought to be able to show some practical difference that must follow from one side or the other's being right.

A glance at the history of the idea will show you still better what pragmatism means. The term is derived from the same Greek word *πράγμα* (*prágma*), meaning action, from which our words "practice" and "practical" come. It was first introduced into philosophy by Mr. Charles Peirce in 1878. In an article entitled "How to Make Our Ideas Clear," in the *Popular Science Monthly* for January of that year.\* Mr. Peirce, after pointing out that our beliefs

\* I wish to thank Paul R. Reynolds & Son, New York, for their very generous permission to reprint this section from *Pragmatism* by William James. Copyright, 1907, by William James.

\* Translated in the *Revue Philosophique* for January, 1879 (vol. vii). AUTHOR'S NOTE.

if, theorizing in primitive times about the raising of dough by yeast, one party should have invoked a 'brownie,' while another insisted on an 'elf,' as the true cause of the phenomenon." \*

It is astonishing to see how many philosophical disputes collapse into insignificance the moment you subject them to this simple test of tracing a concrete consequence. There can be no difference anywhere that doesn't make a difference elsewhere—no difference in abstract truth that doesn't express itself in a difference in concrete fact and in conduct consequent upon that fact, imposed on somebody, somehow, somewhere, and somewhen. The whole function of philosophy ought to be to find out what definite difference it will make to you and me, at definite instants of our life, if this world-formula or that world-formula be the true one. . . .

Pragmatism represents a perfectly familiar attitude in philosophy, the empiricist attitude, but it represents it, as it seems to me, both in a more radical and in a less objectionable form than it has ever yet assumed. A pragmatist turns his back resolutely and once for all upon a lot of inveterate habits dear to professional philosophers. He turns away from abstraction and insufficiency, from verbal solutions, from bad *a priori* reasons, from fixed principles, closed systems, and pretended absolutes and origins. He turns towards concreteness and adequacy, towards facts, towards action and towards power. That means the empiricist temper regnant and the rationalist temper sincerely given up. It means the open air and possibilities of nature, as against dogma, artificiality, and the pretence of finality in truth.

At the same time it does not stand for any special results. It is a method only. But the general triumph of

\* "Theorie und Praxis," *Zeitsch. des Oesterreichischen Ingenieur u. Architekten-Vereines*, 1905, Nr. 4 u. 6. I find a still more radical pragmatism than Ostwald's in an address by Professor W. S. Franklin: "I think that the sickliest notion of physics, even if a student gets it, is that it is 'the science of masses, molecules, and the ether.' And I think that the healthiest notion, even if a student does not wholly get it, is that physics is the science of the ways of taking hold of bodies and pushing them!" (*Science*, January 2, 1903.)

that method would mean an enormous change in what I called in my last lecture the "temperament" of philosophy. Teachers of the ultra-rationalistic type would be frozen out, much as the courtier type is frozen out in republics, as the ultramontane type of priest is frozen out in protestant lands. Science and metaphysics would come much nearer together, would in fact work absolutely hand in hand. . . .

*Theories thus become instruments, not answers to enigmas, in which we can rest.* We don't lie back upon them, we move forward, and, on occasion, make nature over again by their aid. Pragmatism unstiffens all our theories, limbers them up and sets each one at work. Being nothing essentially new, it harmonizes with many ancient philosophic tendencies. It agrees with nominalism, for instance, in always appealing to particulars; with utilitarianism in emphasizing practical aspects; with positivism in its disdain for verbal solutions, useless questions and metaphysical abstractions.

All these, you see, are *anti-intellectualist* tendencies. Against rationalism as a pretension and a method pragmatism is fully armed and militant. But, at the outset, at least, it stands for no particular results. . . .

No particular results then, so far, but only an attitude of orientation, is what the pragmatic method means. *The attitude of looking away from first things, principles, "categories," supposed necessities; and of looking towards last things, fruits, consequences, facts.*

So much for the pragmatic method! You may say that I have been praising it rather than explaining it to you, but I shall presently explain it abundantly enough by showing how it works on some familiar problems. Meanwhile the word pragmatism has come to be used in a still wider sense, as meaning also a certain *theory of truth*. I mean to give a whole lecture to the statement of that theory, after first paving the way, so I can be very brief now. . . .

One of the most successfully cultivated branches of philosophy in our time is what is called inductive logic, the study of the conditions under which our sciences have evolved. Writers on this subject have begun to show a

singular unanimity as to what the laws of nature and elements of fact mean, when formulated by mathematicians, physicists and chemists. When the first mathematical, logical, and natural uniformities, the first *laws*, were discovered, men were so carried away by the clearness, beauty and simplification that resulted, that they believed themselves to have deciphered authentically the eternal thoughts of the Almighty. His mind also thundered and reverberated in syllogisms. He also thought in conic sections, squares and roots and ratios, and geometrized like Euclid. He made Kepler's laws for the planets to follow; he made velocity increase proportionally to the time in falling bodies; he made the law of the sines for light to obey when refracted; he established the classes, orders, families and genera of plants and animals, and fixed the distances between them. He thought the archetypes of all things, and devised their variations; and when we rediscover any one of these his wondrous institutions, we seize his mind in its very literal intention.

But as the sciences have developed farther, the notion has gained ground that most, perhaps all, of our laws are only approximations. The laws themselves, moreover, have grown so numerous that there is no counting them; and so many rival formulations are proposed in all the branches of science that investigators have become accustomed to the notion that no theory is absolutely a transcript of reality, but that any one of them may from some point of view be useful. Their great use is to summarize old facts and to lead to new ones. They are only a man-made language, a conceptual shorthand, as some one calls them, in which we write our reports of nature; and languages, as is well known, tolerate much choice of expression and many dialects. . . .

Riding now on the front of this wave of scientific logic Messrs. Schiller and Dewey appear with their pragmatic account of what truth everywhere signifies. Everywhere, these teachers say, "truth" in our ideas and beliefs means the same thing that it means in science. It means, they say, nothing but this, *that ideas (which themselves are but parts of our experience) become true just in so far as they*

*help us to get into satisfactory relation with other parts of our experience, to summarize them and get about among them by conceptual short-cuts instead of following the interminable succession of particular phenomena. Any idea upon which we can ride, so to speak; any idea that will carry us prosperously from any one part of our experience to any other part, linking things satisfactorily, working securely, simplifying, saving labor; is true for just so much, true in so far forth, true instrumentally. This is the "instrumental" view of truth taught so successfully at Chicago, the view that truth in our ideas means their power to "work," promulgated so brilliantly at Oxford. . . .*

The observable process which Schiller and Dewey particularly singled out for generalization is the familiar one by which any individual settles into *new opinions*. The process here is always the same. The individual has a stock of old opinions already, but he meets a new experience that puts them to a strain. Somebody contradicts them; or in a reflective moment he discovers that they contradict each other; or he hears of facts with which they are incompatible; or desires arise in him which they cease to satisfy. The result is an inward trouble to which his mind till then had been a stranger, and from which he seeks to escape by modifying his previous mass of opinions. He saves as much of it as he can, for in the matter of belief we are all extreme conservatives. So he tries to change first this opinion, and then that (for they resist change very variously), until at last some new idea comes up which he can graft upon the ancient stock with a minimum of disturbance of the latter, some idea that mediates between the stock and the new experience and runs them into one another most felicitously and expediently.

This new idea is then adopted as the true one. It preserves the older stock of truths with a minimum of modification, stretching them just enough to make them admit the novelty, but conceiving that in ways as familiar as the case leaves possible. An *outrée* explanation, violating all our preconceptions, would never pass for a true account of a novelty. We should scratch round industriously till we found something less excentric. The

most violent revolutions in an individual's beliefs leave most of his old order standing. Time and space, cause and effect, nature and history, and one's own biography remain untouched. New truth is always a go-between, a smoother-over of transitions. It marries old opinion to new fact so as ever to show a minimum of jolt, a maximum of continuity. We hold a theory true just in proportion to its success in solving this "problem of maxima and minima." But success in solving this problem is eminently a matter of approximation. We say this theory solves it on the whole more satisfactorily than that theory; but that means more satisfactorily to ourselves, and individuals will emphasize their points of satisfaction differently. To a certain degree, therefore, everything here is plastic.

The point I now urge you to observe particularly is the part played by the older truths. Failure to take account of it is the source of much of the unjust criticism levelled against pragmatism. Their influence is absolutely controlling. Loyalty to them is the first principle—in most cases it is the only principle; for by far the most usual way of handling phenomena so novel that they would make for a serious rearrangement of our preconception is to ignore them altogether, or to abuse those who bear witness for them.

You doubtless wish examples of this process of truth's growth, and the only trouble is their superabundance. The simplest case of new truth is of course the mere numerical addition of new kinds of facts, or of new single facts of old kinds, to our experience—an addition that involves no alteration in the old beliefs. Day follows day, and its contents are simply added. The new contents themselves are not true, they simply *come* and *are*. Truth is *what we say about* them, and when we say that they have come, truth is satisfied by the plain additive formula.

But often the day's contents oblige a rearrangement. If I should now utter piercing shrieks and act like a maniac on this platform, it would make many of you revise your ideas as to the probable worth of my philosophy. "Radium" came the other day as part of the day's content, and seemed for a moment to contradict our ideas of the whole order

of nature, that order having come to be identified with what is called the conservation of energy. The mere sight of radium paying heat away indefinitely out of its own pocket seemed to violate that conservation. What to think? If the radiations from it were nothing but an escape of unsuspected "potential" energy, pre-existent inside of the atoms, the principle of conservation would be saved. The discovery of "helium" as the radiation's outcome, opened a way to this belief. So Ramsay's view is generally held to be true, because, although it extends our old ideas of energy, it causes a minimum of alteration in their nature.

I need not multiply instances. A new opinion counts as "true" just in proportion as it gratifies the individual's desire to assimilate the novel in his experience to his beliefs in stock. It must both lean on old truth and grasp new fact; and its success (as I said a moment ago) in doing this, is a matter for the individual's appreciation. When old truth grows, then, by new truth's addition, it is for subjective reasons. We are in the process and obey the reasons. That new idea is truest which performs most felicitously its function of satisfying our double urgency. It makes itself true, gets itself classed as true, by the way it works; grafting itself then upon the ancient body of truth, which thus grows much as a tree grows by the activity of a new layer of cambium.

Now Dewey and Schiller proceed to generalize this observation and to apply it to the most ancient parts of truth. They also once were plastic. They also were called true for human reasons. They also mediated between still earlier truths and what in those days were novel observations. Purely objective truth, truth in whose establishment the function of giving human satisfaction in marrying previous parts of experience with newer parts played no role whatever, is nowhere to be found. The reasons why we call things true is the reason why they *are* true, for "to be true" means only to perform this marriage-function.

The trail of the human serpent is thus over everything. Truth independent; truth that we *find* merely; truth no longer malleable to human need; truth incorrigible, in a word; such truth exists indeed superabundantly—or is sup-

posed to exist by rationalistically minded thinkers; but then it means only the dead heart of the living tree, and its being there means only that truth also has its paleontology, and its "prescription," and may grow stiff with years of veteran service and petrified in men's regard by sheer antiquity. . . .

You will probably be surprised to learn, then, that Messrs. Schiller's and Dewey's theories have suffered a hailstorm of contempt and ridicule. All rationalism has risen against them. In influential quarters Mr. Schiller, in particular, has been treated like an impudent schoolboy who deserves a spanking. I should not mention this, but for the fact that it throws so much sidelight upon that rationalistic temper to which I have opposed the temper of pragmatism. Pragmatism is uncomfortable away from facts. Rationalism is comfortable only in the presence of abstractions. This pragmatist talk about truths in the plural, about their utility and satisfactoriness, about the success with which they "work," etc., suggests to the typical intellectualist mind a sort of coarse lame second-rate makeshift article of truth. Such truths are not real truth. Such tests are merely subjective. As against this, objective truth must be something non-utilitarian, haughty, refined, remote, august, exalted. It must be an absolute correspondence of our thoughts with an equally absolute reality. It must be what we *ought* to think unconditionally. The conditioned ways in which we *do* think are so much irrelevance and matter for psychology. Down with psychology, up with logic, in all this question!

See the exquisite contrast of the types of mind! The pragmatist clings to facts and concreteness, observes truth at its work in particular cases, and generalizes. Truth, for him, becomes a class-name for all sorts of definite working-values in experience. For the rationalist it remains a pure abstraction, to the bare name of which we must defer. When the pragmatist undertakes to show in detail just *why* we must defer, the rationalist is unable to recognize the concretes from which his own abstraction is taken. He accuses us of *denying* truth; whereas we have only sought to trace exactly why people follow it and always ought to follow it. Your typical ultra-abstractionist fairly shudders at

concreteness: other things equal, he positively prefers the pale and spectral. If the two universes were offered, he would always choose the skinny outline rather than the rich thicket of reality. It is so much purer, clearer, nobler.

I hope that as these lectures go on, the concreteness and closeness to facts of the pragmatism which they advocate may be what approves itself to you as its most satisfactory peculiarity. It only follows here the example of the sister-sciences, interpreting the unobserved by the observed. It brings old and new harmoniously together. It converts the absolutely empty notion of a static relation of "correspondence" (what that may mean we must ask later) between our minds and reality, into that of a rich and active commerce (that anyone may follow in detail and understand) between particular thoughts of ours, and the great universe of other experiences in which they play their parts and have their uses. . . .

Men who are strongly of the fact-loving temperament, you may remember me to have said, are liable to be kept at a distance by the small sympathy with facts which that philosophy from the present-day fashion of idealism offers them. It is far too intellectualistic. Old-fashioned theism was bad enough, with its notion of God as an exalted monarch, made up of a lot of unintelligible or preposterous "attributes"; but, so long as it held strongly by the argument from design, it kept some touch with concrete realities. Since, however, darwinism has once for all displaced design from the minds of the "scientific," theism has lost that foothold; and some kind of an immanent or pantheistic deity working *in* things rather than above them is, if any, the kind recommended to our contemporary imagination. Aspirants to a philosophic religion turn, as a rule, more hopefully nowadays towards idealistic pantheism than towards the older dualistic theism, in spite of the fact that the latter still counts able defenders.

But, as I said in my first lecture, the brand of pantheism offered is hard for them to assimilate if they are lovers of facts, or empirically minded. It is the absolutistic brand, spurning the dust and reared upon pure logic. It keeps no connexion whatever with concreteness. Affirming the Ab-

solute Mind, which is its substitute for God, to be the rational presupposition of all particulars of fact, whatever they may be, it remains supremely indifferent to what the particular facts in our world actually are. . . .

Far be it from me to deny the majesty of this conception, or its capacity to yield religious comfort to a most respectable class of minds. But from the human point of view, no one can pretend that it doesn't suffer from the faults of remoteness and abstractness. It is eminently a product of what I have ventured to call the rationalistic temper. It disdains empiricism's needs. It substitutes a pallid outline for the real world's richness. It is dapper, it is noble in the bad sense, in the sense in which to be noble is to be inapt for humble service. In this real world of sweat and dirt, it seems to me that when a view of things is "noble," that ought to count as a presumption against its truth, and as a philosophic disqualification. The prince of darkness may be a gentleman, as we are told he is, but whatever the God of earth and heaven is, he can surely be no gentleman. His menial services are needed in the dust of our human trials, even more than his dignity is needed in the empyrean.

Now pragmatism, devoted though she be to facts, has no such materialistic bias as ordinary empiricism labors under. Moreover, she has no objection whatever to the realizing of abstractions, so long as you get about among particulars with their aid and they actually carry you somewhere. Interested in no conclusions but those which our minds and our experiences work out together, she has no *a priori* prejudice against theology. *If theological ideas prove to have a value for concrete life, they will be true, for pragmatism, in the sense of being good for so much. For how much more they are true, will depend entirely on their relations to the other truths that also have to be acknowledged. . . .*

I am well aware how odd it must seem to some of you to hear me say that an idea is "true" so long as to believe it is profitable to our lives. That it is *good*, for as much as it profits, you will gladly admit. If what we do by its aid is good, you will allow the idea itself to be good in so far forth, for we are the better for possessing it. But is it not a

strange misuse of the word "truth," you will say, to call ideas also "true" for this reason?

To answer this difficulty fully is impossible at this stage of my account. . . . Let me now say only this, that truth is *one species of good*, and not, as is usually supposed, a category distinct from good, and co-ordinate with it. *The true is the name of whatever proves itself to be good in the way of belief, and good, too, for definite, assignable reasons.* Surely you must admit this, that if there were no good for life in true ideas, or if the knowledge of them were positively disadvantageous and false ideas the only useful ones, then the current notion that truth is divine and precious, and its pursuit a duty, could never have grown up or become a dogma. In a world like that, our duty would be to *shun* truth, rather. But in this world, just as certain foods are not only agreeable to our taste, but good for our teeth, our stomach, and our tissues; so certain ideas are not only agreeable to think about, or agreeable as supporting other ideas that we are fond of, but they are also helpful in life's practical struggles. If there be any life that it is really better we should lead, and if there be any idea which, if believed in, would help us to lead that life, then it would be really *better for us* to believe in that idea, *unless, indeed, belief in it incidentally clashed with other greater vital benefits.*

"What would be better for us to believe"! This sounds very like a definition of truth. It comes very near to saying "what we *ought* to believe": and in *that* definition none of you would find any oddity. Ought we ever not to believe what it is *better for us* to believe? And can we then keep the notion of what is better for us, and what is true for us, permanently apart?

Pragmatism says no, and I fully agree with her. Probably you also agree, so far as the abstract statement goes, but with a suspicion that if we practically did believe everything that made for good in our own personal lives, we should be found indulging all kinds of fancies about this world's affairs, and all kinds of sentimental superstitions about a world hereafter. Your suspicion here is undoubtedly well founded, and it is evident that something happens

when you pass from the abstract to the concrete that complicates the situation.

I said just now that what is better for us to believe is true *unless the belief incidentally clashes with some other vital benefit*. Now in real life what vital benefits is any particular belief of ours most liable to clash with? What indeed except the vital benefits yielded by *other beliefs* when these prove incompatible with the first ones? In other words, the greatest enemy of any one of our truths may be the rest of our truths. Truths have once for all this desperate instinct of self-preservation and of desire to extinguish whatever contradicts them. My belief in the Absolute, based on the good it does me, must run the gauntlet of all my other beliefs. Grant that it may be true in giving me a moral holiday. Nevertheless, as I conceive it—and let me speak now confidentially, as it were, and merely in my own private person—it clashes with other truths of mine whose benefits I hate to give up on its account. It happens to be associated with a kind of logic of which I am the enemy, I find that it entangles me in metaphysical paradoxes that are unacceptable, etc., etc. But as I have enough trouble in life already without adding the trouble of carrying these intellectual inconsistencies, I personally just give up the Absolute. I just *take* my moral holidays; or else, as a professional philosopher, I try to justify them by some other principle. . . .

You see by this what I meant when I called pragmatism a mediator and reconciler and said, borrowing the word from Papini, that she “unstiffens” our theories. She has in fact no prejudices whatever, no obstructive dogmas, no rigid canons of what shall count as proof. She is completely genial. She will entertain any hypothesis, she will consider any evidence. It follows that in the religious field she is at a great advantage both over positivistic empiricism, with its anti-theological bias, and over religious rationalism, with its exclusive interest in the remote, the noble, the simple, and the abstract in the way of conception. . . .

Her only test of probable truth is what works best in the way of leading us, what fits every part of life best and combines with the collectivity of experience's demands,



tion with personal and emotional problems. It also contrasts with the Kantian background of Peirce's thinking, a fact whose general significance Peirce saw when he said that his own outlook, like Kant's, was that of a physicist who had entered philosophy. What links all of the pragmatists, nevertheless, is the fact that they are critical thinkers who also think of philosophy as an active force in civilization.

Quite apart from the way in which they reflect a typically American interest in relating the abstract to the concrete, they also reflect America's effort to absorb the best in European philosophy. A distinguished French philosopher has said that he understands American philosophers far better than he does the English, and Englishmen look across the channel with similar feelings. But American philosophers who learned from Peirce, James, Dewey, Royce, and Santayana became part of a more international, cosmopolitan tradition in philosophy which was less motivated by national concern and less burdened by xenophobia than any other group of philosophers in the world. This is not to say that they were detached from American life; on the contrary, many of them were dedicated to it and its problems in a way that prompted them to learn from and communicate with philosophers all over the Western world. For this reason American philosophy in the twentieth century has not been parochial, and while this does not necessarily indicate greatness it certainly refutes cliché generalizations about the spiritual uniformities produced by our pioneers, our engineers, and our capitalists. Hardly any great American university is dominated by pragmatism, "the national philosophy." Some have established reservations for dying philosophical races like idealism; some get to sound more and more like contemporary Oxford and others like Cambridge in the thirties. All over the land there are echoes of Vienna in the twenties, Paris in the thirteenth century, and even of existentialist cafés. It is true that America has produced no world figures in the twentieth century who have not been pragmatists, but this needs no more apologies than Englishmen were required to give in the early nineteenth century when their long

philosophical history could boast only of great empiricists.

From this digression I return to John Dewey, the subject of this chapter. It should be said quickly that he did not remain a hegelian forever. Under the influence of Darwin and James he transformed the antitheses of the hegelian dialectic into the tensions of a biologically rooted and socially enveloped "problematic situation." He held that all thought is dedicated to resolving these tensions and therefore that scientific theories are to be measured by their contributions to this resolution. In this he reverts to the more social and public pragmatism of Peirce and criticizes the capriciousness of the Jamesian test of truth. He calls his philosophy instrumentalism or experimentalism.

In logical theory Dewey held that laws of deduction arise in the context of scientific inquiry and that they too are to be tested by their contribution to the over-all efficiency of science. In politics his view was that intelligence is man's chief weapon in his fight for a free society, and that all forms of totalitarianism, Communist or Fascist, are man's enemies. Dewey joined actively in the fight against Communist ideology and politics when active disapproval of it was less fashionable among American intellectuals than it is today. He was never a totalitarian liberal and he was one of the most respected intellectuals of his time. He earned scurrilous attacks from the Communists and bigoted enemies of his theory of progressive education. Even as an old man he was active in the fight for freedom throughout the world; from his defense of Sacco and Vanzetti to his attack on the Moscow Trials he was the conscience of American philosophy. It is hard to think of the American scene without him. Like Justice Holmes, who admired his work and with whom he shared so much, he lived into his nineties. And even though he was the youngest of the three pragmatists, one thinks of him as the father in the holy family of pragmatism—not so clever as Peirce in matters of logic and science, not as witty or as brilliant as James, but in many ways a more rugged and compelling figure than either of the others.

In the selection to follow Dewey presents his ethical views at length, but a discussion of their background and

some of their implications may be illuminating. In a sense Dewey continues James's effort at mediation between the tough and the tender, except that he transfers it from theology to morals. The last lines of James's *Pragmatism* read: "Between the two extremes of crude naturalism on the one hand and transcendental absolutism on the other, you may find that what I take the liberty of calling the pragmatistic or melioristic type of theism is exactly what you require." In a similar spirit Dewey offered an ethical theory which, he hoped, would mediate between the remote ethics of "transcendental eternal values" and the view that value is constituted by mere liking, desire, or enjoyment. In the major ethical controversy of the first quarter of the twentieth century, that is to say, before the emergence of logical positivism, Dewey defended a position somewhere between the view of G. E. Moore that "good" is an indefinable predicate which is radically different from the descriptive, naturalistic terms of science, and the view of Ralph Barton Perry, that to have value is to be an object of interest.

Moore's view was closely associated with his own epistemological realism but it was not a logical consequence of it. Since I have stressed the fact that Moore led the rebellion against idealism, and since I have also stressed idealism's rejection of nineteenth-century naturalism, the reader should be warned that Moore's attack on idealism did not involve a reversion to the ethical naturalism the idealists attacked. On the contrary, his *Principia Ethica* (1903) contained a more devastating criticism of the ethics of Herbert Spencer and John Stuart Mill than did any idealist work of the nineteenth or twentieth century. Moore held that while ethical qualities like goodness are objective and real, independent of the mind, they cannot be defined by reference to descriptive predicates, on pain of committing what he called "the naturalistic fallacy." For this reason, Moore's realistic comrade in America, Perry, said in his *Present Philosophical Tendencies* (1912): "In discussing the nature of goodness or value, I find myself in disagreement with certain eminent realists with whom I should much prefer to agree. Mr. G. E. Moore and Mr. Bertrand Russell both contend that goodness is an inde-

habit of regarding enjoyments as they are actually experienced as values in and of themselves. It completely sidesteps the question of regulation of these enjoyments. This issue involves nothing less than the problem of the directed reconstruction of economic, political and religious institutions.

There was seemingly a paradox involved in the notion that if we turned our backs upon the immediately perceived qualities of things, we should be enabled to form valid conceptions of objects, and that these conceptions could be used to bring about a more secure and more significant experience of them. But the method terminated in disclosing the connections or interactions upon which perceived objects, viewed as events, depend. Formal analogy suggests that we regard our direct and original experience of things liked and enjoyed as only *possibilities* of values to be achieved; that enjoyment becomes a value when we discover the relations upon which its presence depends. Such a causal and operational definition gives only a conception of a value, not a value itself. But the utilization of the conception in action results in an object having secure and significant value.

The formal statement may be given concrete content by pointing to the difference between the enjoyed and the enjoyable, the desired and the desirable, the *satisfying* and the *satisfactory*. To say that something is enjoyed is to make a statement about a fact, something already in existence; it is not to judge the value of that fact. There is no difference between such a proposition and one which says that something is sweet or sour, red or black. It is just correct or incorrect and that is the end of the matter. But to call an object a value is to assert that it satisfies or fulfills certain conditions. Function and status in meeting conditions is a different matter from bare existence. The fact that something is desired only raises the *question* of its desirability; it does not settle it. Only a child in the degree of his immaturity thinks to settle the question of desirability by reiterated proclamation: "I want it, I want it, I want it." What is objected to in the current empirical theory of values is not connection of them with desire and enjoy-

ment but failure to distinguish between enjoyments of radically different sorts. There are many common expressions in which the difference of the two kinds is clearly recognized. Take for example the difference between the ideas of "satisfying" and "satisfactory." To say that something satisfies is to report something as an isolated finality. To assert that it is *satisfactory* is to define it in its connections and interactions. The fact that it pleases or is immediately congenial poses a problem to judgment. How shall the satisfaction be rated? Is it a value or is it not? Is it something to be prized and cherished, *to be enjoyed*? Not stern moralists alone but everyday experience informs us that finding satisfaction in a thing may be a warning, a summons to be on the lookout for consequences. To declare something *satisfactory* is to assert that it meets specifiable conditions. It is, in effect, a judgment that the thing "will do." It involves a prediction; it contemplates a future in which the thing will continue to serve; it *will* do. It asserts a consequence the thing will actively institute; it *will do*. That it is satisfying is the content of a proposition of fact; that it is satisfactory is a judgment, an estimate, an appraisal. It denotes an attitude *to be* taken, that of striving to perpetuate and to make secure.

It is worth notice that besides the instances given, there are many other recognitions in ordinary speech of the distinction. The endings "able," "worthy" and "ful" are cases in point. Noted and notable, noteworthy; remarked and remarkable; advised and advisable; wondered at and wonderful; pleasing and beautiful; loved and lovable; blamed and blameable, blameworthy; objected to and objectionable; esteemed and estimable; admired and admirable; shamed and shameful; honored and honorable; approved and approvable, worthy of approbation, etc. The multiplication of words adds nothing to the force of the distinction. But it aids in conveying a sense of the fundamental character of the distinction; of the difference between mere report of an already existent fact and judgment as to the importance and need of bringing a fact into existence; or, if it is already there, of sustaining it in existence. The latter is a genuine practical judgment, and marks the only

type of judgment that has to do with the direction of action. Whether or no we reserve the term "value" for the latter (as seems to me proper) is a minor matter; that the distinction be acknowledged as the key to understanding the relation of values to the direction of conduct is the important thing.

This element of direction by an idea of value applies to science as well as anywhere else. For in every scientific undertaking, there is passed a constant succession of estimates; such as "it is worth treating these facts as data or evidence; it is advisable to try this experiment; to make that observation; to entertain such and such a hypothesis; to perform this calculation," etc.

The word "taste" has perhaps got too completely associated with arbitrary liking to express the nature of judgments of value. But if the word be used in the sense of an appreciation at once cultivated and active, one may say that the formation of taste is the chief matter wherever values enter in, whether intellectual, esthetic or moral. Relatively immediate judgments, which we call tact or to which we give the name of intuition, do not precede reflective inquiry, but are the funded products of much thoughtful experience. Expertness of taste is at once the result and the reward of constant exercise of thinking. Instead of there being no disputing about tastes, they are the one thing worth disputing about, if by "dispute" is signified discussion involving reflective inquiry. Taste, if we use the word in its best sense, is the outcome of experience brought cumulatively to bear on the intelligent appreciation of the real worth of likings and enjoyments. There is nothing in which a person so completely reveals himself as in the things which he judges enjoyable and desirable. Such judgments are the sole alternative to the domination of belief by impulse, chance, blind habit and self-interest. The formation of a cultivated and effectively operative good judgment or taste with respect to what is esthetically admirable, intellectually acceptable and morally approvable is the supreme task set to human beings by the incidents of experience.

Propositions about what is or has been liked are of in-

strumental value in reaching judgments of value, in as far as the conditions and consequences of the thing liked are thought about. In themselves they make no claims; they put forth no demand upon subsequent attitudes and acts; they profess no authority to direct. If one likes a thing he likes it; that is a point about which there can be no dispute:—although it is not so easy to state just *what* is liked as is frequently assumed. A judgment about what is *to be* desired and enjoyed is, on the other hand, a claim on future action; it possesses *de jure* and not merely *de facto* quality. It is a matter of frequent experience that likings and enjoyments are of all kinds, and that many are such as reflective judgments condemn. By way of self-justification and "rationalization," an enjoyment creates a tendency to assert that the thing enjoyed is a value. This assertion of validity adds authority to the fact. It is a decision that the object has a right to exist and hence a claim upon action to further its existence.

The analogy between the status of the theory of values and the theory of ideas about natural objects before the rise of experimental inquiry may be carried further. The sensationalistic theory of the origin and test of thought evoked, by way of reaction, the transcendental theory of *a priori* ideas. For it failed utterly to account for objective connection, order and regularity in objects observed. Similarly, any doctrine that identifies the mere fact of being liked with the value of the object liked so fails to give direction to conduct when direction is needed that it automatically calls forth the assertion that there are values eternally in Being that are the standards of all judgments and the obligatory ends of all action. Without the introduction of operational thinking, we oscillate between a theory that, in order to save the objectivity of judgments of values, isolates them from experience and nature, and a theory that, in order to save their concrete and human significance, reduces them to mere statements about our own feelings.

Not even the most devoted adherents of the notion that enjoyment and value are equivalent facts would venture to assert that because we have once liked a thing we should go on liking it; they are compelled to introduce the idea!

that *some* tastes are to be cultivated. Logically, there is no ground for introducing the idea of cultivation; liking is liking, and one is as good as another. If enjoyments *are* values, the judgment of value cannot regulate the form which liking takes; it cannot regulate its own conditions. Desire and purpose, and hence action, are left without guidance, although the question of regulation of their formation is the supreme problem of practical life. Values (to sum up) may be connected inherently with liking, and yet not with *every* liking but only with those that judgment has approved, after examination of the relation upon which the object liked depends. A casual liking is one that happens without knowledge of how it occurs nor to what effect. The difference between it and one which is sought because of a judgment that it is worth having and is to be striven for, makes just the difference between enjoyments which are accidental and enjoyments that have value and hence a claim upon our attitude and conduct. . . .

When theories of values do not afford intellectual assistance in framing ideas and beliefs about values that are adequate to direct action, the gap must be filled by other means. If intelligent method is lacking, prejudice, the pressure of immediate circumstance, self-interest and class-interest, traditional customs, institutions of accidental historic origin, are *not* lacking, and they tend to take the place of intelligence. Thus we are led to our main proposition: *Judgments about values are judgments about the conditions and the results of experienced objects; judgments about that which should regulate the formation of our desires, affections and enjoyments.* For whatever decides their formation will determine the main course of our conduct, personal and social.

If it sounds strange to hear that we should frame our judgments as to what has value by considering the connections in existence of what we like and enjoy, the reply is not far to seek. As long as we do not engage in this inquiry enjoyments (values if we choose to apply that term) are casual; they are given by "nature," not constructed by art. Like natural objects in their qualitative existence, they at most only supply material for elaboration in rational dis-

defined as meaning: "The author of *Waverley* exists (or existed or will exist)." Thus "The golden mountain does not exist" means:

"There is no entity *c* such that 'x is golden and mountainous' is true when *x* is *c*, but not otherwise."

With this definition the puzzle as to what is meant when we say "The golden mountain does not exist" disappears.

"Existence," according to this theory, can only be asserted of descriptions. We can say "The author of *Waverley* exists," but to say "Scott exists" is bad grammar, or rather bad syntax. This clears up two millennia of muddle-headedness about "existence," beginning with Plato's *Theaetetus*.

One result of the work we have been considering is to dethrone mathematics from the lofty place that it has occupied since Pythagoras and Plato, and to destroy the presumption against empiricism which has been derived from it. Mathematical knowledge, it is true, is not obtained by induction from experience; our reason for believing that 2 and 2 are 4 is not that we have so often found, by observation, that one couple and another couple together make a quartet. In this sense, mathematical knowledge is still not empirical. But it is also not *a priori* knowledge about the world. It is, in fact, merely verbal knowledge. "3" means "2 + 1," and "4" means "3 + 1." Hence it follows (though the proof is long) that "4" means the same as "2 + 2." Thus mathematical knowledge ceases to be mysterious. It is all of the same nature as the "great truth" that there are three feet in a yard.

Physics, as well as pure mathematics, has supplied material for the philosophy of logical analysis. This has occurred especially through the theory of relativity and quantum mechanics.

What is important to the philosopher in the theory of relativity is the substitution of space-time for space and time. Common sense thinks of the physical world as composed of "things" which persist through a certain period of time and move in space. Philosophy and physics developed the notion of "thing" into that of "material substance," and thought of material substance as consisting of

particles, each very small, and each persisting throughout all time. Einstein substituted events for particles; each event had to each other a relation called "interval," which could be analysed in various ways into a time-element and a space-element. The choice between these various ways was arbitrary, and no one of them was theoretically preferable to any other. Given two events A and B, in different regions, it might happen that according to one convention they were simultaneous, according to another A was earlier than B, and according to yet another B was earlier than A. No physical facts correspond to these different conventions.

From all this it seems to follow that events, not particles, must be the "stuff" of physics. What has been thought of as a particle will have to be thought of as a series of events. The series of events that replaces a particle has certain important physical properties, and therefore demands our attention; but it has no more substantiality than any other series of events that we might arbitrarily single out. Thus "matter" is not part of the ultimate material of the world, but merely a convenient way of collecting events into bundles.

Quantum theory reinforces this conclusion, but its chief philosophical importance is that it regards physical phenomena as possibly discontinuous. It suggests that, in an atom (interpreted as above), a certain state of affairs persists for a certain time, and then suddenly is replaced by a finitely different state of affairs. Continuity of motion, which had always been assumed, appears to have been a mere prejudice. The philosophy appropriate to quantum theory, however, has not yet been adequately developed. I suspect that it will demand even more radical departures from the traditional doctrine of space and time than those demanded by the theory of relativity.

While physics has been making matter less material, psychology has been making mind less mental. We had occasion in a former chapter to compare the association of ideas with the conditioned reflex. The latter, which has replaced the former, is obviously much more physiological. (This is only one illustration; I do not wish to exaggerate the scope of the conditioned reflex.) Thus from both ends

physics and psychology have been approaching each other, and making more possible the doctrine of "neutral monism" suggested by William James's criticism of "consciousness." The distinction of mind and matter came into philosophy from religion, although, for a long time, it seemed to have valid grounds. I think that both mind and matter are merely convenient ways of grouping events. Some single events, I should admit, belong only to material groups, but others belong to both kinds of groups, and are therefore at once mental and material. This doctrine effects a great simplification in our picture of the structure of the world.

Modern physics and physiology throw a new light upon the ancient problem of perception. If there is to be anything that can be called "perception," it must be in some degree an effect of the object perceived, and it must more or less resemble the object if it is to be a source of knowledge of the object. The first requisite can only be fulfilled if there are causal chains which are, to a greater or less extent, independent of the rest of the world. According to physics, this is the case. Light-waves travel from the sun to the earth, and in doing so obey their own laws. This is only roughly true. Einstein has shown that light-rays are affected by gravitation. When they reach our atmosphere, they suffer refraction, and some are more scattered than others. When they reach a human eye, all sorts of things happen which would not happen elsewhere, ending up with what we call "seeing the sun." But although the sun of our visual experience is very different from the sun of the astronomer, it is still a source of knowledge as to the latter, because "seeing the sun" differs from "seeing the moon" in ways that are causally connected with the difference between the astronomer's sun and the astronomer's moon. What we can know of physical objects in this way, however, is only certain abstract properties of structure. We can know that the sun is round in a sense, though not quite the sense in which what we see is round; but we have no reason to suppose that it is bright or warm, because physics can account for its seeming so without supposing that it is so. Our knowledge of the physical world, therefore, is only abstract and mathematical.

Modern analytical empiricism, of which I have been giving an outline, differs from that of Locke, Berkeley, and Hume by its incorporation of mathematics and its development of a powerful logical technique. It is thus able, in regard to certain problems, to achieve definite answers, which have the quality of science rather than of philosophy. It has the advantage, as compared with the philosophies of the system-builders, of being able to tackle its problems one at a time, instead of having to invent at one stroke a block theory of the whole universe. Its methods, in this respect, resemble those of science. I have no doubt that, in so far as philosophical knowledge is possible, it is by such methods that it must be sought; I have also no doubt that, by these methods, many ancient problems are completely soluble.

There remains, however, a vast field, traditionally included in philosophy, where scientific methods are inadequate. This field includes ultimate questions of value; science alone, for example, cannot prove that it is bad to enjoy the infliction of cruelty. Whatever can be known, can be known by means of science; but things which are legitimately matters of feeling lie outside its province.

Philosophy, throughout its history, has consisted of two parts inharmoniously blended: on the one hand a theory as to the nature of the world, on the other an ethical or political doctrine as to the best way of living. The failure to separate these two with sufficient clarity has been a source of much confused thinking. Philosophers, from Plato to William James, have allowed their opinions as to the constitution of the universe to be influenced by the desire for edification: knowing, as they supposed, what beliefs would make men virtuous, they have invented arguments, often very sophistical, to prove that these beliefs are true. For my part I reprobate this kind of bias, both on moral and on intellectual grounds. Morally, a philosopher who uses his professional competence for anything except a disinterested search for truth is guilty of a kind of treachery. And when he assumes, in advance of inquiry, that certain beliefs, whether true or false, are such as to promote good behaviour, he is so limiting the scope of philo-