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PREFACE

It has been thought worth including in the present series a sketch of the philosophy of a contemporary thinker, M. Bergson. The curiosity and admiration he has aroused in wide circles in this and other countries of Europe, and also in America, his reassertion—in a far more explicit form, it is true—of one of the imperishable ideas of antiquity, his bold arraignment which is at the same time in a way a justification of the whole course of philosophy from Socrates downwards, his conception, for the first time definite and duly limited, of evolution, and his great learning—all seem to justify his inclusion. Doubtless he has still much to give us in illustration and continuation of his views ; but his work has now stood for twenty years the examination of its author ; and the breadth, profundity and unity of his doctrine is such that an

exposition of it at once elementary and interesting may even now be given—of course, with omission of all but the most essential parts.

It is true we cannot observe and estimate these views as our posterity will. It is given to no philosopher—and on Bergson's principles we should not expect it to be given—to see the ultimate upshot of his work. A philosopher seems to himself and his contemporaries to have swept away all that his predecessors had constructed, and in the end he is found merely to have added an idea, needed indeed and valuable, but far short of the comprehensive system which he thought he had created. Nevertheless even in this obscurity he must work as we must all work. If he has effected something, however little, he is among the world's leaders; and even contemporaries can know for certain that he has lifted them to a higher plane. Such a leader none who have studied him can doubt Bergson to be.

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CHAPTER I

CHANGE

THE world, whether as a whole or in its parts, is in constant change. Conscious beings feel the contents of their consciousness to be ever changing; living things are ever growing or decaying or both at once; even the inanimate world is constantly undergoing alteration or at least movement.

True, much of the inanimate world, to the civilized man the most of it, seems stable—the instruments, namely, that man has constructed to be the supporters or regulators of his activity. Made in order to serve as permanent tools for the satisfaction of permanent wants, their whole value consists in their permanence; and by the town-dweller in particular it is much more the monotonous invariability of his

surroundings—his buildings, streets, furniture, railways, omnibuses, etc.—that is felt than their change. Yet it is obvious that these too perish and decay. A time comes when the most expensive watch will no longer perform its function ; the house must be pulled down ; the costly and elaborate machine or warship must be broken up and thrown on the scrap-heap. The rocks and mineral foundations of the earth, on the surface of which we exercise our ceaseless activity, are far more permanent than any product of human skill ; yet we pay little attention to their permanence ; we assiduously study their changes, and whole sciences now exist merely to be the record of these.

Change, we repeat, is constant and universal ; it " completely dominates," as Lotze says, " the whole range of reality." Change gives all its interest to our existence ; our practical activity, our theoretical activity, is wholly directed by the implicit or explicit thought of it. We will not

assert that unchanging sameness of feeling is impossible, a mere name for absence of feeling (" idem semper sentire et nil sentire in idem recidunt "); we will grant that a feeling—say of toothache—may remain real, however long it remain unchanged. But at least when we seek to remove the unpleasant feeling, it is because we conceive of some change and believe or, it may be, know how that change may be brought about. And as in our practice, so in our theorizing. We are dissatisfied till we *explain* the present reality or event by discovering something different out of which it arose. So far as our experience consists merely in feeling what we feel, all activity is dammed at its source; the man absorbed in his pain neither tries to relieve it, nor hopes to relieve it. Doctors well know this attitude in patients—" I am a cripple and shall never be anything else." But when theorizing, we seek to apprehend a change; when acting we seek to make a change.

And yet we have to notice here a strange paradox. This change that we are always trying to make or apprehend we insist shall be no change. Reason and logic seem to drive us to insist with Bishop Butler that "things are what they are," and that the seeming new must be at bottom identical with the old. This curious bent we shall study later (Chapter IV); we shall ask what reason and logic really are, and whence they get their authority. They take concrete form in the operations and results of science, and to question science is to modern ideas the deadliest of heresies. But science will be found to state not only incontestable facts, but also a dogmatic principle extending far beyond what it can verify. Its facts we receive with all respect; its claims on the ground of its principle to denounce as error facts that we find as incontestable as its own we shall put aside. When later we examine its dogmatic principle, we shall see that we are justified in slighting its anathemas.

And change is surely a fact as incontestable as we can find anywhere. More, some change—that, in general, of living beings—is obviously personal. Their growth—for their decay is of a different order—is not of the impersonal, general, mechanical kind which alone science accepts, and accepts only because it seems capable of being explained away as no change at all. The growth of living beings—as Chapter II will more fully show—is in some sense teleological or purposive; *in some sense*, because though made with an intention, a purpose, or object, its result—its literal end—need not even in conscious beings be actually present to the agent's apprehension till it has been actually attained; in its essence the beginning of the action is merely an impulse, a tendency, a direction. But at least the change is personal; it depends on the being and its wants, such as both are at the moment of action. It is not dictated by, it is not even in accordance with, some general law. The creature's

behind the change, to show that there is no change.[1] Reason and logic forbid, as we said above, that a thing should be other than itself, that A should ever, no matter what time elapses, be anything but A, or that A and B and C together should ever be anything but A and B and C; change, it says, must be merely apparent.[2] Evidently if we insist on this we shall arrive at a deadlock. Science endeavours to justify itself by a compromise. It concedes that in a sense A may become B, or A, B and C together may become D, but it insists that in the end there shall be the same "ultimate elements" as in the beginning, though the ultimate elements seen in the cause may be in the effect "transposed." Thus in the celebrated experiment which founded chemistry, that of

[1] P. 12 *supra.*

[2] The demand is, as Münsterberg (*Eternal Values*, p. 28) puts it, "that the imagined thought-form of causality shall be exchanged for the real thought-form of identity."

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burning the candle and collecting the products, the ultimate elements of the unburnt candle were found to exist unchanged in quantity and quality in the soot, water, etc., which resulted from the combustion, and were in appearance so different from the candle when still unlighted; they were the same elements, transposed merely. But transposition is itself a change. Bacon in a celebrated aphorism has said that all that human power can do is limited to bringing things together, to transposition, in fact. Yet what mighty changes human power can effect! At a later stage (Chapter IV) we shall see the inner significance of this theory which assimilates natural to human agency.

Let us look at the same facts from another point of view. The formula connecting causes and effects, the antecedent with the subsequent, in the inanimate world is unaffected by time. Oxygen supports and promotes combustion, not at one particular time, but at any time. But in the living

world [1] time is of the essence of the change. The effect of food on the organism, of a stimulus on the consciousness, varies indefinitely with the past history of that organism or consciousness, i.e., with the time *for* which and the time *at* which they are applied. We are led to say—and even Bergson does not shun saying—that time affects (mord sur) the animate but not the inanimate. But this means, in fact, that we must revise our idea of time. Time [2] is an abstraction, that can affect nothing. But though time is an abstraction, duration is a felt reality. It is most plainly felt when our purpose is not to do or observe anything, but simply to wait for something, and when—just because we are awake and doing nothing—we attend to our waiting. Our consciousness is then continuously varying, generally in the direction of greater unpleasantness. An hour is a mere ab-

[1] And, in fact, in the inanimate world as well: see *infra* in this paragraph.

[2] Cf. 21 *infra*.

straction ; waiting an hour—say for a train —is a very distinct and usually painful reality, different from any longer or shorter waiting. Now duration is a characteristic of anything that we can call a process, whether in the animate or in the inanimate world ; but the point to be noticed is that in animate, and most plainly in conscious, process the very continuance of the process is perceptibly an accumulation ; in the inanimate we have no knowledge of such accumulation and no need to know it. In most general words, of the process itself in the inanimate we know nothing ; it has, so far as we are aware, no duration *in itself*. When, says Bergson,[1] to get a glass of sugar-water I melt sugar in water, the process undoubtedly has duration ; I have to wait for its completion, and that waiting I more or less acutely feel. But observation—in which word we include the profoundest science—knows of nothing but the beginning and end of the process, or, if it can

[1] *Évolution Créatrice*, 10.

subdivide it into different processes, still of nothing but the beginnings and ends of these ; [1] for apprehending the process and the duration which is an inseparable feature of the process it has no organ. Suppose we say that science finds nothing mysterious in the solution of the sugar—though of late science has found it much more curious than it once suspected—that it accepts the sugar now scattered throughout the water as the exact logical equivalent of the lump once in a certain portion of the water : yet the duration, the process itself, still remains opaque and mysterious to science. It remains mysterious that there should be a process at all, that two states " logically equivalent " should not be found together and simultaneous, as one property of the circle is simultaneous with any other. The truth seems to be that our " logical equivalents " are merely useful abstractions, and that the concrete whole creates

[1] *Ev. Cré.*, 363–4.

new results and can no more be hurried than consciousness.[1]

When we say, then, that time affects the animate, but not the inanimate, what we mean is true for practical purposes, though not strictly true; but what we say is not what we mean. For what we say relates to abstract time, and abstract time has no reality and can affect nothing. But what we mean is that changes in the animate are wholly misrepresented if we regard them otherwise than as continuous processes having duration; while changes in the inanimate, though doubtless in themselves also processes having duration, cannot be observed as such by us, and are for practical and scientific purposes—science being, as we shall see in Chapter IV, above all practical—sufficiently described by their beginning and their end. Of their duration we take note only in order to compare it with the duration of some other change, that we may know what results of change

[1] *Év. Créa.*, 367.

are *simultaneous* with each other. Thus we say, "I shall have dressed by the time that dinner is ready," meaning that the sum of the changes expressed by "dressing" will be completed at the same moment as the sum of changes expressed by "the laying of the table," "the bringing up of the meat," etc. Abstract time is just the common measure of all durations. But to serve practically as a common measure it must appear in the form of some standard uniform process—say the movement of the hands of a clock, or the rotation of the earth on its axis, or the revolution of the earth round the sun—these processes being chosen because they are uniform, i.e., separable into elementary processes each of which has the same duration. But have we not here involved ourselves in a vicious circle? Duration, we say, is measured by time; yet we choose our representative of time (the moving clock, earth, etc.), by reference to the duration of its processes. In fact there is no escape from such a circle,

nor from the possibility of error which recourse to it involves. We find it convenient to speak of time as an independent something which moves uniformly, the "independent variable" of the mathematical physicist; but evidently no meaning can be attached to such a phrase. Or we speak of time as an endless line, and mark off greater or lesser parts on it as measuring the duration of a process. But this line and its parts are evidently unsatisfactory symbols of time, since the idea of progress or forward motion is entirely unrepresented in them. A more elaborate and appropriate symbol would be that of a point moving uniformly along a straight line; we may then represent greater duration by a longer journey of the point, less duration by a shorter. But then we must ask once more what ensures the uniformity? It is useless to answer "when the point makes equal journeys in equal times," because that sends us to some other standard to measure the equality of the times; in other

words, our moving point ceases to be the standard it professed to be. In the end we must come back to duration, felt as such; no lines or points will serve us. The clock will serve as a measure of duration simply because each of its units of movement—each oscillation of the pendulum—is *felt* by us to be equal in duration. The so-called "uniformity of time's movement" is an unmeaning fiction; an hour of joy is infinitely shorter[1] than an hour of expectation. But duration is real, and all change has duration.

It may be asked—if all change is a process, if it has real duration, does not the distinction we have drawn between living and inanimate change become once more faint and evanescent? Are not both kinds of change continuous and cumulative? Can we say that change in the inanimate is less personal than in the living? When the irregular stone is gradually rounded by the action of the sea into a pebble, is there

[1] Cf. *As You Like It*, Act III, sc. 2.

not a continuous change of form, in which the millionth wave has a different effect on the stone from the first, because it finds the stone different? We may allow this and yet not give up our distinction between animate and inanimate change. For the continuous change in the stone may be truly subdivided into a number of changes all of the same kind, such that they may be added together and the total result calculated. The process, being throughout practically homogeneous, may be neglected, and the net result obtained by addition of partial results. Each moment may without error be viewed as independent. But the living exhibits a constant process of *self*-creation, of development from itself; its moments are not independent. Its duration is not a mere abstract relation between its processes and some external process; it is the very concrete reality of its being; it is not a relative but an absolute. We shall show this more clearly in the following chapter.

We shall end the description of inanimate change by pointing out that it possesses the special character of *reversibility*. Its type is that of the hour-glass.[1] In the hour-glass the sand falls by a continuous process from the upper to the lower half; but we have only to reverse the glass for the operation to be executed in reversed order and the effect of the previous operation to be undone. It is true that physical science is familiar with irreversible operations—the transmission of heat by conduction is one. But this result science regards as merely empirical and accidental.[2] It argues that if heat is really equivalent to other forms of energy, then in principle what it has effected may be reversed, just as the energy which has raised the stone appears as reversing its operation when that stone is released and allowed to move

[1] *Ev. Cré.*, 18.

[2] It might be upset by what have been called Maxwell's "demons" (Maxwell, *Theory of Heat*, p. 308).

downwards again. The operations of the living being are irreversible. True it seems at first as if decay repeats in the reverse order the operations of growth. But on closer consideration we see that nothing of the sort occurs. Is it true in any but the roughest metaphorical sense that old age is a second childhood, that as the child becomes the man, so the man becomes the child again? Or, to take a more definite and limited instance, is forgetting the reverse of learning? True, we may roughly represent the stages of learning by their termini; we may say that we learn A, then B, then C; and we may say with rough correctness that we forget first C, then B, then A. But learning is a special process; self-conscious beings like ourselves are to some extent aware of the nature of that process. To affirm that forgetting is that process reversed is not merely incorrect; it is unmeaning. The idea of a forward movement followed by a reverse movement which exactly negatives

its effect is obviously and totally inapplicable.

If the reader refers to Mr. Benn's volume [1] in this series on *Early Greek Philosophy*, he will see that five hundred years before Christ, before formal prose-writing and continuous discussion had arisen, Heraclitus expressed in vivid metaphors and dark riddling language that at once stimulated and mystified his successors the central idea of the present chapter—that the world was a universal flux, that existence was a perpetual change, to which our language with its words of definite meaning could never do justice. We name a thing, and straightway the name becomes inapplicable, for the thing has become different; "we cannot step twice into the same river." An enduring perception of this would render men speechless, as in fact certain Heraclitean contemporaries of Plato actually affected to be. A reaction followed. Words, or the ideas they ex-

[1] P. 38.

press, or the intellect which constructed the ideas, became restored, as human life made it necessary they should be, to their old dignity, and more. They claimed to describe the world as it is, to define it as a whole and in its parts, nay, even to give it laws—such as Kant called *à priori*—independent of all experience. Bergson is the modern Heraclitus, insisting that existence is a perpetual change, but vindicating by exhibiting their origin the necessity and relative value of words, ideas, and intelligence. Of the fundamentally identical doctrines that "man is the measure of all things," that "the intelligence creates the system of nature" (as Kant put it), that "nature is but the internal, spontaneous, necessary development of intelligence or thought—the Absolute Idea" (as Hegel put it)—of such doctrines Bergson is the steady opponent. This gives him his peculiar and eminent position. He is not primarily a thinker with a special set of ideas about the world. His function is

to breathe on till he reduces to thin mist the sophistications of generations that have hid nature from man. Like Heraclitus, he produces in those who apprehend his views a veritable change of soul.

But Heraclitus did not distinguish, as we have seen Bergson do, living change in which process and duration *must* be regarded, from inanimate, impersonal change in which it need not. Still later (Chapter IV) we shall return again to inanimate change. According to the view that may at present satisfy us, it is a transition from a cause to an effect, and a transition so absolutely constant and invariable that we cannot help regarding the effect as inevitably produced by, following from, involved in, ideally identical with the cause, as the "properties" of a circle merely repeat its definition. That duration is necessary to the transition, that the effect refuses to be simultaneous with the cause, is no doubt a mystery, but a mystery which we have no need to elucidate. The key to the mystery

will be that these absolute quasi-geometrical connexions really exist not as a part of the universe, but between abstract elements which our thinking—or, ultimately, our action—cuts out of the universe.

At present, then, let us proceed with our account of the living.

CHAPTER II

LIFE

A somewhat detailed description of the character of life as seen in human beings is the subject of Bergson's first two works—*The Immediate Data of Consciousness* (1889) and *Matter and Memory* (1896). The essence of these is again gathered up, extended with due modification to other living beings, and shown to be the key to what alone is properly called evolution, in his *Creative Evolution* (1907). That work, too, finally resolves—what is occasionally touched on in *Matter and Memory*, the problem of human knowledge, the nature of human reason, the conventional character of that view of the universe which is the goal ultimately reached, or to be

reached, by human science. These last questions we reserve for Chapter IV. There we shall offer our justification for adding the attribute " human " to such words as " knowledge " and " reason," which to common sense seem absolute functions in which not even an omniscient and omnipotent being could differ from ourselves. There, too, we shall meet the objection that any attempt to get behind, to analyse or criticize, knowledge and reason is a task involving self-contradiction and therefore doomed to failure.

The title *Immediate Data of Consciousness* explains itself. That we at least among living beings are conscious and self-conscious is unquestionable. We are indeed doubtful how far down in the scale of living beings these attributes are to be found, and what may be the connexion between them and our bodies. But our consciousness itself is something that it would be unmeaning to doubt. Here, then, we find in the clearest, most indubit-

able form the characters of life. What are they ?

In the first place change, incessant continuous change. But does this change consist in a mere " transposition " [1] of constant elements, of mental atoms ? A rough analysis leaves us ready to admit that it may be so : science—basing itself on that dogmatic principle which we have already referred to in Chapter I but postponed for further examination—starts with the conviction that it must be so. But if we disregard this *à priori* conviction, we shall find, as most modern psychologists have found, that this atomistic [2] view of consciousness is false. Their observations have been restated, revised, and greatly deepened by Bergson in the first two chapters of his *Data*. The substance of the new statement is as follows.

The " mental atoms " are supposed to present themselves sometimes alone, some-

[1] P. 16, *supra*.

[2] Cf. James *Principles of Psychology*, I, 158 *seq*.

times together in larger or smaller groups, in successive moments. But if the consciousness were simply made up of these successive atoms, simple or compounded, there would be no consciousness that they did succeed one another; for—to use a formula now familiar to English philosophy —"a succession of perceptions is not a perception of succession." Further, we delude ourselves by the phrase "successive moments" of time. For, as was shown in Chapter I, time is no reality. Duration, no doubt, is a concrete reality that can be felt as such by conscious beings; but the analysis of it into a number of homogeneous "moments," though often convenient, is illusory. Similarly what may be called the other aspect of time—succession—is a concrete reality to a consciousness which can grasp change; but if it is explained as a number of heterogeneous moments, minute divisions of time but divisions, so to speak, differently tinted—as the naturalists contrive to tint differently

the parts of the objects they put under the microscope—we again deceive ourselves, because, once more, there is no time to divide. "Time" is, as we have seen, a mere self-destroying phantom, a "bastard space"—as Bergson points out; for it is spatial, viz.: an infinite line, with just the property that space cannot have, namely, motion. Duration, then, and succession are realities, not as segments of a fabulous time, but for a consciousness which is not split up into unconnected atoms, but is a whole in continuous change or movement, a whole that has duration. Roughly we may describe that movement as a continual learning—the accidental forgetting we neglect for the moment. Figuratively we may describe it as a continual ripening or growth. Most truly (as we hope to show further on) we shall describe it as a perpetual adaptation to environment, but an active adaptation for its own ends, a true creation, like that employed by the orator or preacher, who begins by working *with*,

but ultimately works *on*, the ideas and passions of his hearers till he can elevate them to his own point of view and inspire them with his own desires.[1]

This continuously changing whole is what common sense calls the Soul, Spirit, or Mind, and philosophers the "Ego." But common sense is only too apt to suppose that it is some sort of permanent substantial reality on which the various states of consciousness are beaded, as on a string. Such a notion, as a little reflection will show, is unmeaning and not really held. The states of consciousness are each of them the entire mind in one of the phases of its continuous movement. And common sense understands this, though it expresses it so ill. It is aware that the states of consciousness are not parts or fragments of the mind, members in an endless series which, for no reason, we choose to regard as a unity and call by a single name. The consciousness at any moment is the whole

[1] *Év. Créa.*, 77.

mind, but with now this now that aspect salient, now this now that in the background. The more we take note of ourselves, the more we shall find that, though it is quite impossible to avoid speaking of "parts" in our momentary frame of mind, we do not in the least take them to be really parts having a certain independence, but feel them to be colouring one another throughout. No better proof can be given of this than Bergson's admirable examination[1] of the common idea that psychical states are capable of some sort of measurement, that effort or emotion or sensation, remaining the same in *quality*, may be more or less intense. The fact, is that—to take one of the instances he has so luminously studied—joy becomes more intense by spreading to and colouring more and more elements of our consciousness. The modern psychologist says that, as it grows intenser, it "irradiates" to other elements; but in fact the intensity *is* the irradiation, and is

[1] *Données*, Ch. I.

felt in that way, and can be felt in no other; a greater joy cannot be analysed into a sum of smaller joys; it is one indivisible state of our whole being. The modern "science" of Psycho-physics, which undertakes experimentally to measure each element of consciousness, is thus based on a false notion of the nature of our conscious life, and cannot advance a step without a legion[1] of false assumptions.

In short, the mind is ever changing by a sort of self-creation, or, more precisely, by active adaptation. It is this that constitutes its freedom. It is making; it is never made. All its past experience[2]—we have reason to think—remains to it. Though much of this seldom or never comes to "the level of consciousness" or "appears as representation," yet it all helps to constitute the mind as it is at any moment, to determine the course of its innate tendency towards adaptation. If we doubt

[1] *Données*, Ch. I.: *Mind*, Jan., 1911, pp. 18, 19,
[2] *Infra*, 51.

the freedom of the mind or, as we usually say, of the will, it is just because—after the fashion of science—we think it to consist at each moment essentially of elements fixed in nature and magnitude, which determine by their mutual reactions its next and all future states. But if ever, while trying to arrive at some practical decision, we can, without checking the process, spare enough attention from it to observe its nature, we see that the mental elements (here called "motives") are all the time changing both their nature and their force. Man is not a bundle of wants, some stronger some weaker, which fight for themselves or for their allies till one shows itself the stronger and carries off the man in its train. In fact, mental or spiritual process, each new act, each new step in our work, is not determined, not predictable, but ever self-determining. It cannot be

[1] *Données*, Ch. 3. Cf. Art. in *Mind*, Jan., 1911, p. 21, and Stout's *Primer of Psychology*, p. 237.

anticipated, it cannot be grasped in a single intuition, it cannot be hurried. The astronomer can foretell the eclipse years before its arrival; the whole series of events that terminate in it might pass before his consciousness in a moment of time. But we cannot know to-morrow's acts till we have *lived* through to-day and into to-morrow. It is even more obvious that if we engage in some literary or artistic work, we cannot know what that work will be before it is done; it is actual living, an irreducible process, that effects that work. That admirable romancer, R. L. Stevenson, has said in one of his letters [II. 356–7] that in story-telling collaboration between two writers is impossible except on the terms that each is left to execute alone his own part; one cannot direct the other. "I as a personal artist," he says, "can begin a character with only a haze in my head; but how if I have to translate the haze into words *before I begin*? I can find language for my every mood; but how

could I *tell any one beforehand what this effect was to be*, which it would take every art I possessed and hours and hours of deliberate selection and rejection to produce ? "

If life, then, were merely consciousness, its general character as process, as duration, as creative, would be fully and indisputably established for us by introspection. It would be seen to resist " scientific " analysis, and to contradict the " scientific " principle that the same constant elements are everywhere present, that the future is substantially identical with the past. It would be seen to have in itself duration and succession. But the living includes not merely mind but body ; and living body is in many respects the same as inanimate body ; chemical laws, physical laws undoubtedly, in part control it ; it can become the object of exact experiment. That it has the closest connexion with consciousness is certain ; but how there can be a connexion seems an insoluble mystery. But

since the body can be examined by others than its owner, since no assertion about a particular body—unlike the assertions of introspection—need be accepted by any one without testing it for himself, ought we not to begin from body rather than from mind? We reply in the negative; for our knowledge of a living body, extensive as it is or may become, must remain superficial. The brain, for instance, is the most important organ of the body; but all our statements about its action can be nothing but the suggestions of our fancy.

It is the relation of consciousness and body that Bergson's *Matter and Memory* seeks to elucidate. The title of the book demands explanation. It deals with memory; it deals also with perception of the present; and both of these clearly depend on matter, on our body, and on what is outside our body. Our natural first thought is that one is the immediate effect, the other the later effect, of the physical influence of external matter on the matter of our

bodies. Hence it has always been usual to call perceptions *impressions*, while memories are explained either as a new sort of impressions—called "images"—made by the first impressions, or as the very impressions themselves in a state of latency. But innumerable familiar difficulties attend such views. What identity or even similarity is there between a physical impression and a consciousness? Granting even that the two accompany one another either as cause and effect, or as "two aspects" of the same reality, why should the consciousness be a picture of the external object? how can it even resemble it? Why should it imply or point to an external object at all, or be anything but a mental or subjective phenomenon? These difficulties have long been urged against an "impressionist" theory of perception and memory. A new one has been most convincingly urged by Bergson. The theory supposed that our body or, more specifically, our brain, having been affected by

external things, gives us a picture of them. But it is itself of the same nature as they, a part of the material world. What a self-contradiction [1] it is, then, to assume that it can somehow contain an equivalent or picture of the rest of the system of which it is but a part!

Bergson's own theory is striking and original. Our body is essentially a nervous system—as Cuvier [2] long ago saw—all its other parts existing for the nutrition and service of this system. The nervous system in man in part consists of afferent (ingoing) nerves and "centres" in the brain to which the afferent nerves convey physical agitations caused by external bodies on the surface of our bodies; in part it consists of efferent (outgoing) nerves conveying agitations from the brain-"centres" towards the surface of the body, whereby limbs are set in motion and effect changes

[1] *Matière*, pp, 3, 4, 8, 10. Binet agrees: cf. *The Mind and the Brain*, p. 224.

[2] *Év. Cré.*, 134.

in the external world. The vital point is that agitation in brain-centres due to afferent nerves is passed on to efferent nerves and results in what we may call the *return* of the original agitation or movement to the external world. If certain afferent nerves were definitely connected with certain efferent nerves, then when a living body was impressed it would at once reply by the corresponding action. Indeed in the actions of the lowest animals,[1] to speak broadly, and in man's "reflex actions"—such as blinking with our eyes when light suddenly strikes on them—we have such determinate, instantaneous, uncontrollable and, we must add, unconscious replies. But in human action there is not everywhere such definite connexion of afferent with efferent nerves; the brain is rather "a great telephone-exchange"[2] in which there are endless possible ways of combining the two sorts of nerves and of retransmitting the motion brought in by the

[1] *Matière*, 14–18. [2] *Ib.* 16.

afferent as motion carried outward by the efferent. Here we see an opening for the deliberate action characteristic of man, for action which is purposed before it is executed. Physical causes will limit in various ways the action possible to him; but they will not determine it. It is a life-force (*élan de vie*) in him, a spiritual or psychological principle of active adaptation, that determines it. And if so, this life-force, being the very living man himself, would not be expected to act solely in view of the present physical impression; it has been moulded, or rather it has moulded itself, through a long series of past impressions. A question—to use Bergson's phrase—has been put to it; it answers it out of its whole store of experience. Such a view, Bergson thinks, will account both for perception and memory.

But, one objects, we have not yet really heard of either of these, but only of action. Bergson's answer is that perception and memory can be understood as forms of

action or "annexes to action," and in that way only. The view is startling; but at least it must be admitted that all other views of perception and memory have broken down. We obstinately say that perception is a picture of the present, memory an image of the past; but we have to admit that we can find no meaning in such "mental picture" of the present; and as to memory, the popular view has even less plausibility. How can the past, which is no longer here, make a picture? how can its picture, if we allege it to *have* been made once and to have remained, be supposed to remain, when our very idea of the present is of a picture which is presently erased to make room for a new picture of a new present? How, too, can we explain the general invisibility of the memory-picture and its occasional returns to visibility? its completeness at some times, its faintness and incompleteness at others? Where is it lodged? Some fifty years ago it was discovered that

different kinds of memory-failure—" aphasias " as they are called from the name of one particular species—were accompanied by or correlated with different injuries to the brain-substance ; the conclusion seemed obvious that one kind of memory was lodged in one part, another in another part of the brain. But now that the facts of correlation are more fully known, it has been found impossible to work the theory into a form that will agree with them. We must search for the explanation of the facts elsewhere than in a theory of the lodgment of different memories in different places. Perhaps, then, a conviction of our present ignorance will induce us to give a more patient ear to Bergson's theory.

Perception, Bergson holds, is not indeed our action on the external ; but it is our active attitude towards it, our *nascent* action. To borrow a sentence from Professor Royce's brilliant *Gifford Lectures* [1] —" our intelligent ideas of things never

[1] I, 22.

consist of mere images of the things, but always involve a consciousness of how we propose to act towards the things of which we have ideas." We come into the neighbourhood of a hot fire; we may not perceive it at all, but we shall certainly shrink from it; on the other hand, we may perceive it but not shrink from it, being aware of our impulse to shrink from it, but for some reason deliberately suspending that impulse. It is just our consciousness of the action of the fire on us and of our reaction to it that constitutes our knowledge of the fire—or rather a part of it; for our reaction will depend to a large degree on previous experiences; if we are wet, we shall be aware of the inclination to approach the fire to dry our clothes; or we may think of throwing coal-dust on it to damp it down. But the very memory takes a practical form; it is a consciousness of something to be now done. It is true that memory often seems to bring back the past merely as past, and not to further any action

on what is at present before us. But even then there is action on our part. The past returns because we recall it, because we now want to re-live the past, either for the sake of throwing light on the present or to satisfy some present mood, e.g., the desire to dwell on something pleasant as a distraction from our present dreariness. And what we call our "images" of the past depend for their fullness and scantiness, their distinctness or vagueness, on our purpose in recalling them. There are, as Bergson[1] puts it, various "planes of memory." In a mood of reverie the images return full and distinct. They also return as past; they are felt to be not merely images *from* the past, but images *of* the past; for we deliberately put ourselves in the past; otherwise the images would not be felt as images of the past at all. When we do not so put ourselves in the past —a vital action which would alone be called "*pure* memory" by Bergson—images from

[1] *Matière*, Pref.

it recur, but they recur so as to affect our present perception and to colour its object, not as images of the past. Or rather we should not say that they "recur"; they are an ever-present part of ourselves, brought into consciousness by the adaptive reaction we assume to all that affects us. Thus even in perception and memory the act is that of the *man*, the mind as a whole. The body, of course, takes part [1] in any actual or nascent action—less in proportion as we are further from present action; but its condition or change of condition only limits the act; it does not constitute it; it only "canalizes" the living water. So the canal—to use Bergson's [2] simile—which floats our barges from one end of England to the other is the water that is under them, not the banks that confine its course or connect it with the natural streams that feed it. And so injuries [3] to the body,

[1] *Matière*, Pref. [2] *Ev. Cré.*. 102,

[3] A fuller explanation will be found in *Mind*, Jan., 1911, p. 30.

nerves, brain, affect perception and memory not because body, nerves or brain perceive and remember; but either because the external thing no longer acts on the brain and excites it to reaction—and then perception goes; or because the attempt to put ourselves in the past fails, since the physical concomitants needed, as all of us are aware, to fix the attention, remain, owing to some injury to the nervous system, unrealized.

But when all is granted that is said above, is not the net effect to show that our body is simply the tool (the "organ" in the old Greek sense) of the mind, so that there is life in the mind, but no true life in the body at all? Must not the body even of animals be just brute matter? We answer, No: for our body is even now being ever recognizably altered by the mind. Whenever we acquire a new bodily faculty —of swimming, of cycling, of repeating a book of the Æneid—we have modified our nervous system, we have created a new

nervous mechanism. We say that we swim because we remember how to swim; but there is no memory here; neither explicitly nor subconsciously do we recall either our past attempts or any rule that we have framed from them or learnt from others. The immersion in the water, when once we are able to swim, sets going the motions needed to support and advance us in it. So the speaking or hearing the first line of the Æneid sets going the motions that we call uttering the second line, as it is enough to say "Sing a song of sixpence" for a baby to continue[1] with "a pocketful of rye." This organic tendency is quite other than memory, though there is a certain convenience in calling it motor or organic memory. Mind or life has in fact here effected a bodily creation. Possibly the entire living body as living is its creation. That this is so, it will be the task of our next chapter, that on Evolution, to render plausible and probable.

[1] Stout's *Primer of Psychology*, p. 60.

So much for perception and memory. Of thinking we shall speak in Chapter IV: there, too, we shall speak of knowledge, so far as it may be justly contended that not even perception with memory, as described above, amounts to knowledge, and that knowledge (as Kant contended) cannot be understood apart from thought.

CHAPTER III

EVOLUTION

EVOLUTION is a highly ambiguous word. It is used wherever a series of changes conducts and seems to tend to a definable terminus, whether in brute matter or living beings, whether in a single consciousness or in the ideas and institutions of a race, nation, or mankind; nay, it is commonly assumed that living beings themselves are evolved from brute matter. Further, a formula, often attacked it is true, has been devised by Spencer that is supposed to cover all cases of such evolutionary change —the formula that the homogeneous passes into the heterogeneous, the unstable into the coherent and definite. Let us see what evolution means to Bergson.

It means that change which we have seen to be characteristic of mental life and, at least to some extent, of material life also—a change which is an active adaptation, a utilization of what promotes life, an escape from what antagonizes it. It means a continuous and irreversible process of self-creation. The mental life was clearly such. Consciousness is clearly engaged in grappling with the external world, in enriching its ideas, in developing new modes of will—new both as to their ends and as to the means they adopt. By the formation of habits—which (as we saw at the end of Chapter II) was the creation of a new nervous mechanism—it gradually moulds the body in the same direction. Thus there is evolution in the individual life. But here we usually call it development; we reserve the name of evolution for the development shown in a series of successive lives, of which the latter, though differing in form from the earlier, are derived from them.

Now this derivation—a particular case

of reproduction—introduces, like reproduction generally, a problem of its own. While in other respects the living being, as mind and, partially at least, as body also, exhibited a continual self-creation, an enduring, growing individuality, reproduction is the creation of a new individual form out of the old. To that extent it is an infringement, a violation of individuality; for it takes a part of a living being and constitutes this a new living individual, whereas a part of a true individual is such as cannot exist when severed from it—the hand, as Aristotle observed, when severed from the body, being no more a real hand than one modelled in marble. But this problem, this contradiction, is only of the sort that we must ever be prepared for in the study of Reality; it is but one illustration of Bergson's first principle. In Reality there are no contradictions. If we in our speech or thought, intending our speech or thought to remain identical, say or think the negative of what we have

thought or said, then we contradict ourselves, we undo our own act, and have spent our labour in vain. But who is to say that Reality means or intends any such identity? The principle of Reality, at least of living Reality, is constant change, not the maintenance of identity. And just because the meaning and purpose of our ideas—and of the words that express them—is the maintenance of identity, therefore all ideas must be inadequate to Reality and must be treated as what they are, mere instruments for the convenient adaptation of Reality to our needs, to be thrown away when they cease to be convenient. One thinker, Hegel, alone has gone to the length of regarding change itself as identity. It certainly is so, if we accept his principle of the "identity of contraries." But to accept it is simply to deprive language and thought of such temporary usefulness as they possess; if "hot" and "cold" mean the same, then there is no use to be made, even tempor-

arily, of either word. We shall return to this topic in Chapter IV.

To resume—let us admit without fear of having to pay a penalty for self-contradiction that life constitutes individuals, and again does violence to their individuality, at least to the extent of making out of parts of them new individuals. A continuous process is going on, the creation of individuality at the expense of individuality. It is just this that Bergson would call Evolution, while the ripening of individuality in a single organism is best named Development.

Both are facts of life, notwithstanding their opposition to one another. At bottom they may be the same fact, if individualization is the work of life, but not the life-principle itself. We must accept the fact that the life-principle asserts itself in individuality, that the individual alone is truly living—since self-creation, adaptation to self, requires an individual self—and yet that it transcends any single individual

or succession of individuals. It is just because we must accept at once the immanence of life in the individual, and its transcendence of the individual, that the scientific physiologist, already impelled to explain vital phenomena by general, mechanical, and impersonal laws, seems to himself to triumph easily over Vitalism, the doctrine to which life is a primary or elemental fact; "your primary fact," he says, "is a mere idle imagination, a centaur of self-contradicting parts, at once individual and super-individual." There is no answer to this criticism, if life is merely an abstract idea; for an abstract idea that contradicts itself is no idea. But Bergson has never said, nay he strenuously denies, that life is an idea; it is the ultimate reality. And if it chooses so to work that, after constituting an individual and enriching it, it abandons it to old age and decay, and taking a fragment of it makes a fresh individual from it, we show foolishness when we deny this, when we cling to ideas

that cannot possibly express it. At bottom, so Bergson would say, there are no ideas to express it; the intelligence which creates and uses ideas is here inadequate; but we can in a moment of insight apprehend life as it is, though we quickly again lose the intuition. We shall later see why we have the power momentarily to grasp it, and why we cannot permanently and intelligently conceive it.

If the almost universally accepted modern doctrine that the evolution of living species is due to generation be true, then development and evolution are one and the same process. And modern embryology, which has traced with great fullness the surprising changes of form which the living being undergoes before it attains a separate existence, and palæontology, which shows that different systems of species have actually succeeded one another on our earth, make it almost impossible to doubt that generation is fully able to explain the arising of a large number of species out of few or

even out of one. Indeed the "natural classifications" of the older zoologists had already given more than a hint that between species there existed relationships closely analogous to what we call literally relationships, those due to blood and descent. The old doctrine of fixed species which adequately represents our daily experience and was first stated in rigid form by Aristotle, has really no necessity about it except the subjective necessity we experience that nature shall be constant and definite even as our words and ideas are constant and definite. But if development and evolution—"transformism," as the French call it—are in essence the same, a great light is thrown on living process in general.

For, as Bergson points out with great force in the first chapter of his *Creative Evolution*, we must then admit that it becomes more than ever difficult to treat "life" as a mere abstract idea, a mere common name for resembling groups of

phenomena, which still leaves us in need of an explanation of the existence and nature of those phenomena themselves. A general name, as has often been pointed out, explains nothing. Call the relation of the planets to the sun, of the stone in the air to the earth, by the common name of "attraction," and you have brought together in an interesting and practically valuable way phenomena that seemed absolutely different and incapable of throwing light on one another; but you have in no wise shown what is happening—as distinguished from the result—in the two cases; still less that it was the same happening, that there was more than a mere likeness between the two. So with the various widely different beings that from their general similarity one describes as "living." We want more than a common term for their natures and changes: we want an explanation. Perhaps they are to be explained on mechanical principles; perhaps they are to be explained teleologi-

cally, as determined by a certain end and the striving for it. In fact it is extremely common, it is with the great majority of scientific biologists a method, or at least a principle—if it cannot be made into a working method—to explain the individual's life by mechanical causes. With another, much smaller, but still important body of biologists—the so-called Vitalists—the accepted principle of explanation is teleological; the action and reaction within the living individual is supposed to be due to the attraction of a certain end and to be explained as the continuous furtherance of it. But if it is one and the same process that occurs not merely in the individual life and in its propagation of new lives—what is called Ontogeny—but also in the propagation of new and enormously different species—the so-called Phylogeny—species that form not one continuous series, but several, and those divergent, mechanical and teleological explanations become alike impossible. The variety of opinion among

the different schools of evolutionary biologists hints at this; a comparison of their opinions with the facts they have to explain proves it.

Those opinions may be classed as negative or positive. Darwinism proper, in all its varieties, merely says that definite new species having persistence from generation to generation win their existence by the elimination of intermediate varieties that were unsuited to their environment —an idea as old as Empedocles, though rejected by the intellectual conceit of Aristotle. This opinion may be called negative: it gives grounds for the absence of certain forms of existence, but not for the presence of others. For the permanent existence of these, as for the temporary existence of the eliminated species, Darwinism does not attempt to give a reason; it refers them to mechanical accident, or rather to an enormous accumulation of accidents, which in lucky cases produces beings that can maintain themselves. It

has often been pointed out that such an accumulation of accidents constructing a coherent and self-supporting whole is wildly improbable, whether the single accidents be small or—as there now seems reason to hold—great changes. But Bergson adds a stronger argument. For we find, he points out, in living beings belonging to widely divergent series identical organs with identical functions, e.g., the eye in the vertebrates and in a certain kind of mollusc (Pecten)—the molluscs and the vertebrates having descended indeed from the same original protoplasm, but having long gone different ways. But different ways, one objects, may lead to the same terminus. Not where, as here, "terminus" in its local sense is a mere metaphor, and the actual result is not a point attained but a complex machine built up by, and showing in its structure, a vast accumulation of additions and changes. It is not a case of two independent travellers arriving by accident at the same point; it is a case

of two such travellers traversing the same route, and that [1] a route consisting of an infinity of zig-zags.—The famous theory of Eimer—the so-called Orthogenesis—in which not accident but an external agent (e.g., light) is supposed to create a long succession of minute changes "all in one direction" so as to create an organism ever more adapted to itself (e.g., the vertebrate's eye), is liable to similar objections. It is also liable to the further one that the only "adaptation" it could account for would be that of a liquid, no matter of what kind, to the vessel that holds it, not that active adaptation whereby the organism comes to utilize ever better the external agent itself. What the eye by its evolution effects is not to fit or adjust itself better to light, but to draw ever more and more profit from it, and also to create more and more subsidiary organs and connexions with the rest of the body whereby the greater profit it has drawn may be realized

[1] *Ev. Cré.*, p. 62.

in more complex and more useful movements.[1]

So much for mechanical explanations. Can a teleological explanation help us? If the whole realm of the living is one and the result of an impulsion from a single [2] Life-Force—and the facts on which "transformism" is based drive us, as we have seen, to this view—it is yet obvious that it does not work, according to the principle of a final cause, an end that acts by attraction. For the parts of the animal kingdom are visibly opposed to one another; a world in which lambs exist to be eaten by wolves or mankind is plainly not a world in which all evolution works to a single self-harmonious end, in which each part is necessary to the others. But many learned and original biologists [3] still urge—as Aristotle had done—that each separate living

[1] For Orthogenesis, see Baldwin, *Development and Evolution*; for the objections to it, *Év. Créa.*, 78-81.

[2] *Supra*, 60.

[3] E.g., Driesch, in his *Gifford Lectures.*

being exhibits the operation of the final cause, that its parts conspire with admirable harmony to forward a common end, and similarly the parts of those parts, such as the intricate fabric of elements in the eye—which has long been a favourite instance of design in nature. Or to take a more modern line of argument—the facts of restitution and regeneration, in which, after damage done by accident or designed experiment,[1] the living body still contrives to build up the destined order, or to restore it when impaired, or to re-create the extirpated organ or abolished function, show, it is said, that the living body is struggling with a view to an end. The facts are not to be denied. But neither can it be denied that the individual being may harbour parasites that simply feed on and weaken it; that its very "parts," too (in the most limited sense of the word) show an individual life and self-assertion quite inde-

[1] Cf. Driesch's experiments with the embryo of the sea-urchin, l.c.

pendent of the individual as a whole: regeneration itself is an instance of such independent vitality. And when these parts do not weaken the whole but work together for its welfare, still this very action contradicts the principle of the theory. For the theory, giving up the harmony of things with other things, pleaded for a principle of *internal* Finality, according to which each single thing in harmony with itself sought its own end. But we have to admit even in the individual animal independent action of independent parts, seemingly conducted in each other's interest; and this is just that *external* Finality which we had to throw over as a general principle, because we observed in the living world as a whole at least as much conflict as harmony.

No. The living world compels us to the admission of a Life-Force (*élan de vie*) wholly unmechanical, for that very reason purposive or teleological, only with a purpose turned in a certain *direction*, not

towards a certain *end*; immanent [1] in the individual, and yet transcending it so that we must not look for it in some "entelechy" or "psychoid" attached to each individual, (as Driesch does), nor yet must we narrow it to "effort" such as we are conscious of. It must be wider and deeper than any conscious, personal effort, though such personal effort is a form of it, and though Lamarck and the Neo-Lamarckians were, Bergson thinks, undoubtedly on the right track in making effort,[2] and not accident, the agent of evolution. But this Life-Force of Bergson is rather of the same order as the Will of Schopenhauer or the Unconscious of Von Hartmann—only that it is more definite, more verifiable by direct experience. It insinuates itself at first into matter; then, more definitely shaping it, it ever tends to *organize* the matter to a freer and fuller

[1] *Supra*, 60.

[2] Cunning, not Luck—to use S. Butler's pithy antithesis: see his book, *Luck or Cunning?*

adaptation to its environment. Adaptation, it is true, is made in many ways. All species that maintain their existence have a claim to be called genuine adaptations. But if they stop there, the breath of life (*le souffle de la vie*) has been, as it were, converted into a circular current that ever revolves in the same spot.[1] Such stoppages, nay even retrogressions, are familiar to the biologist—nay, they are even more familiar to our own daily experience of mankind. But in the vertebrate series at least, while we find lower species permanently deposited, so to speak, by evolution, there has been an immense and steady rise from the original mass of protoplasm to Man ; and Man, unlike other species, himself seems to show a possibility of indefinite progress along his special line of evolution.

And now we can return upon and complete the account of Life that we offered in Chapter II. We could only say there

[1] *Év. Cré.* 139

that consciousness entirely, and the body in certain changes of the nervous system, exhibited life as an incessant growth, ripening, self-creation, self-adaptation. We now find ourselves driven to maintain the same of living bodies generally. And it is just the transformation or evolution of species that has forced us to do so. For we have been forced to recognize that mechanical principles and teleological principles cannot possibly explain these transformations, that nothing but a Life-Force ever asserting itself, ever moulding new species to be its channels, its ever more supple, elastic, and controllable channels,[1] can explain them. What, then, can be more natural than to explain the life of the individual body, too, not by mechanical principles, not even, as in Driesch's Vitalism, as a tendency to an end-form in which all the parts harmoniously co-operate, but by this forward push of the Life-Force? The individual body, too, is in constant self-

[1] *Supra*, 51.

creation. True, when we look to its *acts*, we seem to see just that regular repetition which is the very field in which science is fitted to expatiate—digestion, secretion, circulation, seem ever exactly repeating themselves under exactly repeated conditions; here we can find formulas or laws to our hearts' content. We find accordingly that it is just the physiologists [1] who are most prone to assume a mechanics of the body, most ready to jeer at what they call the "mystical" Life-Force. And in a measure they are right. They do not, indeed, see the whole as it is; they have not apprehended the real, throbbing life but only a partial view—one of many [2] partial views—of it. The sciences generally are such partial views, mechanics of one aspect of things, chemistry of another aspect of those same things. But no number of such partial views will reconstitute the reality any more than—to

[1] *Év. Cré.*, p. 39. [2] *Infra*, Chap. IV.

use Bergson's [1] image—any number of photographs will reconstitute a material object. And when we look at the living body not as physiologists, when we do not examine its *acts* but seek to understand its parts and the growth and transformations of these parts, it is not repetition that we see, it is not the field of formula. To the closest of such observers the organic seems less than ever to resemble the inorganic.[2] The changes in the embryo are not less astounding to a pure mechanician, not less defiant [3] of the mechanical rule that "change of the conditions involves change in the effect," than the succession of forms in a series of evolving species. Nay, it has become a commonplace that in a condensed form they repeat the latter—Ontogeny follows the lines of Phylogeny. What again shall we say of the phenomena of regeneration already alluded to,[4] in which

[1] *Ev. Cré.* [2] *Ev. Cré.*, p. 38.
[3] See Driesch's beautiful experiments and arguments.
[4] *Supra*, 69.

the mutilation of a part does not permanently cripple the general life of the whole, since the part in some marvellous way renews itself or finds a substitute for itself till the perfect working of the whole organism is restored? Is a hand or a spring of a watch uneasy when a particle of grit stops it? can it struggle, can it succeed in restarting itself? It is the Life-Force that makes brute matter organic, that is the spring of its growth, whether of the unconscious and merely material, or of the conscious and what we call the mental. This gives us forms that function, that have a specific personal activity from the lowly amœba to man with his highly developed and still-developing nervous system. Such forms have never been produced by mechanical means; we may presume—though of course we cannot demonstrate—that they never will be. The nearest approach to such production of the organic is the manufacture of what in the organism's life are waste products;

towards the production of what can live we have not advanced a step.

In fact the task of "organizing," if we watch it as we find it proceeding in nature, seems not to resemble, but to be the very opposite of that of manufacture.[1] Manufacture is effected by the putting together of materials, organization by continual separations, by the repeated breaking up of cells. The former works from the circumference to the centre, the latter from a centre to a circumference. The material in the former is what gives the result its character; the material in the latter is something to be diverted, it is an obstacle to be turned.

This difference between manufacture and organization by an indwelling life-force is the very central idea of Bergson's new Heracliteanism; and he expends all the richness of his vocabulary and vigour of his imagination to make us apprehend it. That our present consciousness is no result

[1] *Év. Cré.*, 97-101.

of manufacture is admitted at once by all who have once given up the atomistic [1] doctrine of consciousness; it is certainly not constituted by the addition to one another of more rudimentary forms of consciousness. No "analysis of the human mind" will ever again persuade us to admit that our idea or knowledge of gold is, as Locke thought, a mere aggregation of ideas of weight, colour, etc.; that our conscience is a mere aggregate of feelings of pity at suffering, of alarm at the possibility of its happening to one's self, of terror at another's censure, of elation at another's praise.

But why is there not one series of living things but many and divergent? And in what precisely does the divergence consist? It consists, Bergson holds, in this, that the Life-Force is not one tendency but a sheaf [2] of tendencies, that have to separate as they

[1] *Supra*, 33.

[2] Cf. Butler, *Luck or Cunning?* last chap., on the differentiation of animals and plants.

define themselves more strongly in matter, as they take more effective shape. So, he points out, childhood shows vaguely combined a number of capacities; the adult has developed one to the exclusion of all others; he has become the man of business, the poet-dreamer, the thinker, while the child charms us by exhibiting each capacity in turn. These tendencies in the Life-Force seem to be broadly three —Vegetism, Instinct, Intelligence.

The first is shown in the motionless existence of the plant, ever engaged in one and the same continuous operation, that of absorbing from the sun, by the action its leaves exercise in sunlight on carbonic acid, the energy needed to sustain its own existence and the stored or potential energy which makes it a suitable aliment for animals. Then comes the kingdom of animals, which by feeding on plants or perhaps on one another secure at a stroke the store of energy they need and, discharged from the work of continuously

providing it, devote themselves to expending it by what we properly call "acts," sharply divided from one another and discontinuous. Instinct is seen at work when such acts take the form directly prescribed, with no room left for choice, by the special organization. Intelligence is shown where that organization leaves so much room for choice that the animal can make its very organization in some sort an instrument for purposes not immediately effected by it; it is shown in a still higher measure where the animal adapts to its purpose the inorganic, that lies outside its own organism altogether. Its proper object, we shall see, is inert matter; that of instinct is the living being.[1]

The consideration of intelligence we reserve for Chapter IV. We shall there show that the short account here given is the proper description not only of what we call intelligent action, but also of the root of what we call "intelligence," of percep-

[1] *Év. Créa.* 191, and *Infra.*

tion, thinking, and knowledge. Our immediate purpose is to discriminate between Instinct and Intelligence, Instinct and Vegetism.

Let us repeat once more that we seek to describe not abstractions but realities, not formulae but operations, not heads of a classification but working functions. If any one admits vegetism according to the above view of it to be approximately a true formula for the life of plants, instinct and intelligence to be the same for the life of animals, he is still far from understanding Bergson's view. He will naturally qualify his admission by pointing out that on the one hand plants need not wholly vegetate, but in some cases move and devour like animals—as we see in the climbing and fly-catching plants; that on the other hand the animals, even man, as ordinary language has seen and expressed it, may vegetate. But Bergson's purpose is not to discover a formula with or without exceptions, but to point out real active tendencies. And

the reality of these tendencies and their relation to the universal Life-Force is not made more doubtful, it is rendered more certain and definite, by the very exceptions above pointed out. For once "the exceptions" really "prove the rule"—but just because it is not a mere rule but something more. The tendencies to vegetism, to instinctive, to intelligent life are so many tendencies which are parts of the original tendency or Life-Force; they are different but complementary, complementary because they are different. To identify instinct with intelligence, as is still so often done, as when instinct is spoken of as "lapsed" [1] intelligence, is a radical error. There is, then, nothing but what one should expect if the plant show traces of other tendencies than that to vegetism. But that we have here different tendencies is just what the whole evolved series of plant-forms show, the exceptions only confirming it. For the general direction of

[1] *Év. Créa.*, 191.

plant-evolution as it moves on to greater complexity, as the plant becomes more specifically a plant, is obviously along the line of vege sm; it is the starved, degenerate, least plant-like[1] of plants that exhibit a quasi-animal life of movement and discontinuous nutrition. And similarly it is the least man-like of men that vegetate like the plant or live by instinct like the brute.

Of all the three lines of evolution that of instinct (*Év. Cré.*, 179–191) is the most difficult to grasp; some of Bergson's best work is done in elucidating it. It is above all the function of organization, of the organized being as such, when it has reached the state—not known to plant-life—of possessing a nervous system or, we should better say, a sensori-motor system, a nerve-system connected with external organs that, being in contact with the outer world, at once stimulate it to action and execute

[1] *Év. Cré.*, 117.

its will. But what, one may ask, has this to do with evolution? It is the evolved product, the definite species, that has instincts; instincts can never be said to evolve. But just this very view is contradicted by facts. Follow the development of the single individual. Do not its instincts develop with its organization? Does the sucking instinct last after infancy, or the sexual instinct appear before puberty? Another difficulty may seem more formidable. Is not every living being, it may be asked, a bundle of instincts? If the brute has its instinct to mate, has not the plant its instinct to extract carbon from carbonic acid, has not man his instinct to know, to understand, to fit facts into a coherent system? But this only amounts to saying that each species has its definite mode of being, that which constitutes it a species. It does not prove that the instinct to mate, to suck the breast, or to deal with certain things in the complex way shown by the wasp that provides living

food for its progeny, is not something altogether different from the extractive action of the plant, from the intellectual apprehension of the man. Instinct is different from vegetative function by its discrimination, a discrimination so delicate that we are apt to mistake it for the subtlest knowledge that intelligence can supply us with. The wasp selects its victims, adjusts its action to the differences it finds amongst them, behaves—as has been said—like a man who was at once a profound entomologist and the most dexterous of surgeons. And yet it is neither the one nor the other. Knowledge it has none. It discriminates most delicately, and yet blindly. It exhibits action without ideas, unlearnable and unimprovable. Man, too, occasionally shows this same sort of adaptation. Untaught, aye, even when apt to be misled by what he has been taught, he sometimes hits on the exact adjustment of his conduct to the person he is dealing with. Such conduct, we say, shows the divination of

sympathy. And some such sympathy [1] is the instinct with which we must credit the wasp in our example. It directly apprehends the living life itself—as, indeed, our term " sympathy " implies. In radical opposition to intelligent knowledge, it apprehends the singular not the general, *things* not *relations*. And, therefore, the animal may be taught the " name " of a thing in the sense that it may attend to that thing when it hears its name; it cannot know that it is its name, for the operation of naming, the *relation* of a sound to a thing, it is quite unable to grasp. The child, on the other hand, is aware at a very early age what naming means; he understands that an object is being named to him and himself asks the name of other things.

Instinct, because it is in sympathy with but few manifestations of life, because it cannot reflect on itself, cannot generalize, can never give its possessor the master-key to the operations of life. If it added

[1] *Ev. Créa.*, 191.

to itself the capability of such reflection [1] —and intelligence may stimulate it to such reflection—then, indeed, it would not merely use, it would apprehend, the living. For such an apprehension we have at hand a suitable name—intuition. In fact we see such intuition, though still confined to the singular and therefore not to be called "knowledge," in the æsthetic faculty by which the artist enters into and presents the very life of his object, and makes us to enter into it. It is an invaluable gift. If it can never give us the sharpness and steadiness of intelligent knowledge, it gives us something that supplements it, a vague fringe surrounding the illuminated kernel. It makes us feel the insufficiency of all the categories in which our "intelligent knowledge" is framed, of Unity and Multiplicity, of Mechanical Causation and Intentional Causation. It makes us aware of the reciprocal penetration of all by all, of the incessant creation.

[1] *Ev. Cré.*, 192 seq.

But it is time to turn to Intelligence, the characteristic tendency of human life, the principle of its action, the root of its knowledge; the source also of its errors when it tries to rise beyond itself, to grasp that which has *created* intelligence.

CHAPTER IV

THOUGHT, INTELLIGENCE, KNOWLEDGE: REASONING AND LOGIC

THE famous old definition tells us that "Man is a rational animal"; and we are proud to belong to such a species, because Reason with its function, Thinking, seems the one legitimate authority to direct our action, the one guide that can conduct us open-eyed into the presence of the Real. Meanwhile we are not very certain what reason and thinking are, and how they act. We are capable even of some distrust of them, for we often divine truth or act successfully without their aid; we are sometimes plainly misled when we follow them; at times we actually find them, so far from leading us into the presence of the Real, barring its door in our face and assuring

us that we can never apprehend it. We then denounce and deride what before we blindly adored. Bergson attempts to declare to us the god whom we ignorantly worship. The nature and limits of intelligence—undoubtedly man's characteristic faculty—the function of science, these form, broadly speaking, the subject of "Creative Evolution" and especially of its third and fourth chapters.

Thought shows itself in ideas, reason works with ideas; and ideas must above all be self-consistent [1] and ever identical with themselves. But if the world is in fact ever changing and re-creating itself, how can ideas be adequate to it? How can they ever in any degree apply to it? In fact they are perfectly adequate to one sort of reality only, that which we have intentionally created. The watch that we have put together with our own hands, the suspension bridge that we have hung over the river to sustain the weight of the traffic

[1] *Supra*, 57.

passing from bank to bank—these we understand; of these we have ideas which, so long as the process[1] of nature has not weakened the spring of the one or rusted the chains of the other, fully inform us as to the nature of each. A discussion familiar of late to readers of Plato illustrates this point. The great thinker who first introduced "ideas" as such and gave them an eternal consecration, surprises us by choosing his illustrations equally from natural things and from fabricated ones—e.g., the bed in the tenth book of the *Republic*. His scandalized interpreters declare, partly from consideration of his own statements, partly on the authority of Aristotle, that in fact he meant the Ideas to relate to natural things only (τὰ φύσει), not to artificial. We do not enter into this controversy. But we may say that, if Plato was really of the opinion here ascribed to him, then, on Bergson's view, he was precisely wrong. Ideas give a true description of artificial

[1] *Supra*, 10.

things; there—to refer to the famous dispute between Plato and his greatest pupil—the ideas are really "prior to" and "separable from" the only concrete things that they truly describe; Plato [1] was right and Aristotle was wrong. But these concrete things are the artificial only; of natural things ideas can only give temporary, approximate and superficial descriptions.

It is true that Plato and, in modern times, Hegel and his followers, believe in an "Absolute Idea" [2] which is in God—if, indeed, it be not itself God—that somehow embraces all reality at once and includes all finite ideas, these either growing out of it by some sort of logical germination, or themselves—as Professor Royce seems to hold—expanding into it. But such an Absolute Idea is inaccessible, perhaps even unintelligible, to us. To us ideas are finite ideas. And of these we repeat what we have said above; they give a true descrip-

[1] *Ev. Cré.*, 340. [2] *Supra*, 28.

tion of our own fabrications, having in fact directed and determined their fabrication; but of natural things they give descriptions which are only superficial and approximate.

But if this be true, then we begin to see how ideas with their essential permanent stability [1] arose. We see that man is an animal with ideas, a thinking animal, because he is a fabricating animal. The life-tendency [2] which has pre-eminently developed itself in him, does not, like that in the plant or the brute, take the direction of building up an organism in which it may abide. It is not a more perfect organism that is the main result of human activity, though we have seen that in acquiring such capacities as those for swimming, cycling, etc., man does modify [3] his own organism. But the main result that he achieves is something separable from the man himself, neither in his own nor in any other organism; it is the inorganic tool. That this

[1] *Supra*, 90. [2] *Supra*, 78. [3] *Supra*, 152.

permanent because it is an idea; which enjoys, within the limits [1] allowed by the eternal flux, the permanence which is the proper characteristic of ideas as such. If it be objected that a tool, though undoubtedly an idea to its maker, may be used by one who is not aware of the idea embodied in it, the answer is that the more perfect one becomes in the use of the tool, the more perfectly its idea is revealed to him; the way in which a thing may be used *is* the idea of it. We have seen [2] this in speaking of Perception. But the defect of perception in regard to natural things is that, while it gives their relation to our activity or the way in which we may use them, we are aware that we are not justified in assuming that they exist solely to be so used by us. The rigid, constant, idea, then, will not apply to them. But the tool, e.g., a sewing machine, does exist simply to be used. The machine and its idea are adequate or equivalent to one

[1] *Supra*, 10. [2] *Supra*, 48.

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[1] *Supra*, 10. [2] *Supra*, 48.

another. It has a permanent function, dependent on and, in fact, the aggregate of the permanent functions of its permanent parts

In the entire natural thing, on the other hand, we can discover no permanent function except in living organisms; and just there we can discover no permanent parts and therefore, still less permanent functions, the aggregate of which makes up the permanent function of the whole. It is true that the physiologist would claim, not without reason, to have discovered all these permanent parts, functions, and relations. But we still deny that the movement of life has been discovered, the constant and ever new re-creation of the whole out of itself; for analysis, which is what reveals the secret of the whole when that whole is a machine, is just what blinds us to the secret of the whole, when it is a living thing. Thus, as we have seen,[1] our true conscious life is not revealed by the

[1] *Supra*, Chap. II.

psychologist's analysis—"psychologism," as Münsterberg, himself an able and experienced psychologist, calls it, in order to put more effectively a view identical with ours—but is disguised and distorted by it. Science gets a hold only on phenomena that are *repeated*[1]; and in the states of the organism there is much that, taken in isolation, is repeated. But if life is essentially a continuous creative process in which there is at bottom no repetition, then science cannot grasp it, though it grasps much that is of no slight interest and of no slight practical value, because superficially there *is* much repetition, which can be apprehended by a permanent idea and named by a permanent name.

The scientist's "ideas" of natural things are vitiated—though not always to the same extent—by the same vice as the ordinary man's "perceptions" of them. Both spring from analysis. But "analysis" is a learned and profound-looking

[1] Cf. Venn's *Empirical Logic*, pp. 96–100.

word, and no scientist would be inclined to blush at the imputation to him of such a method. Let us, then, say in homely vernacular not that we "analyse," but that we break up into practicable, manageable parts the vast congeries before us. That is the common, the inevitable method of both scientist and ordinary man. The scientist, it is true, is inclined to smile at the "perceptions" of the ordinary man, the ordinary man to be bewildered or even indignant at the "ideas" of the scientist. "What!" asks the latter, "do you deny that I see a real fire-emitting mountain, a real worm, a real river? and am I to accept instead your undulating ether or your electrons, which you do not even profess to see, and which you are not even sure you can clearly think?" He cannot be expected to apprehend—what in fact no one before Bergson has apprehended—that perception, though *of* the real, is yet relative, relative to our activities. And the scientist's "idea" is relative no less. Take

some definite fragment of the world. The child does not perceive it in the same way as the man; the child Macaulay and his fellow children on Clapham Common found a range of mountains in "a slight ridge, the very existence of which no one above eight years old would notice." The worm would doubtless perceive it in a still different way. The scientist apprehends the world in a different way still. For the explicit principle of his apprehension is what, though implicit in the perception of the ordinary man, the child, even the worm, is never recognized by them—we mean, that only that is a "thing," a reality, which is permanent in its existence and properties, as the parts of a machine truly are. Guided by this principle, the scientist explicitly rejects as "non-things" or, at least, as non-objective, whatever exhibits change. But so, when he is in earnest in his thinking, does the ordinary man. Much of what he "perceives" he dismisses, not, indeed, as "non-objective" or subjective,

but as " accidental," " non-essential." He only differs from the scientist in being less constantly in earnest in his thinking, more apt to disregard the minute, more ready to abandon himself to a purely aesthetic delight or displeasure over what is presented to him. The scientist, on the other hand, " thinks " everything, " explains " everything, not because he is less practical, but because he is more practical than the ordinary man. His ideal is that so perfectly expressed by Lord Kelvin—" I cannot be satisfied that I have explained any natural process, unless I can construct a working model of it." That is, in fact, just what we have stated to be the scientist's principle. He assumes that part of the world that he is investigating to be a machine, he assumes the world as a whole to be a machine and all its parts to be machines. Thus and thus only can he *use* it, and thus he could not merely use it, he could even reconstruct it. And even though the world as a whole or in any of

its parts says in the clearest tones that it is no machine, he turns a deaf ear. This is that "dogma" of science, of the characteristically human intelligence of which we spoke in Chapter I. It is mere dogma, and if it dissatisfies us we have the right to disregard it.

Strong in the authorization he imagines himself to have received from this dogma, the scientist goes further than the ordinary man ever dreamed of going. Man ever wants to use his environment, to make it into his tool; but it is in general the inanimate universe that he is content so to use. The child, we plainly see, regards "things" as to be used, but "persons" as users like himself, as helping or thwarting him in his use of things. And a philosopher like Münsterberg,[1] who understands and respects science, but understands also what is beyond science, sees that this is the true and normal attitude of men towards one another. Man is not—at least mainly

[1] See his remarkable book, *The Eternal Values*.

not—" object " or " thing " to another man, and still less to himself: Berkeley was trying to express this when in a passage often vainly derided he declared that we had not an " idea," though we had a " notion," of ourselves. The physiologist with much excuse, the analytical psychologist with much less, would analyse human bodies and human minds as the child analyses his toys, as the ordinary adult analyses his inanimate surroundings.

What the man of science gets in this way he takes to be " parts " of the universe, these parts by the aggregation of their functions constituting the function of the whole, as in a machine they would. What he really gets is a permanent photograph of a phase or aspect of the whole; the real working, the real interlocking of the phases escapes him. Here Bergson[1] introduces his happy parallel of the kinematograph. There we seem to see the real movement of life. In fact we get a large number of

[1] *Év. Cré.*, 330.

stationary pictures taken so shortly after one another that each can replace the last without shock to our senses, but each of which after all is merely a substitute for, not a continuation of, the last, being only presented to us in its turn because of the motion of the film on which all are shown. So it is with our ideas or thoughts about nature. Like the perceptions that common language denotes, they are static, stable; and as we keep those because they are adequate to the primary needs of life, so we keep the scientist's ideas for their wider usefulness. But their static character is clearly seen if we ask how we get fresh ideas. For this occurs plainly not through a development of the old ones, but by fresh experience, by tentative activity. Men never learnt how to swim from their ideas; the ideas of an intelligent race that had never swum would only prove to them that they could never swim.[1] It was not

[1] *Év. Créa.*, 210. Cf. B.'s "Introduction à la Metaphysique" (a magazine article): "modern

till they had succeeded in swimming that they succeeded in devising a set of ideas which showed that swimming had all along been possible. The text-books of logic tell us that the purpose of experiment is to verify ideas or hypotheses that we have already conceived. But its wider and more primary purpose is to see, not whether that happens which we had expected, but what will happen under certain circumstances.

Such is our criticism of human intelligence. But how is it that we are able to see its limitations? If intelligence is expected to point out its own limits—as the empirical philosophers from Locke downwards have expected—we may justly call such an expectation absurd. As the transcendentalists are fond of saying, "to perceive a limit is to transcend it"; and

science rests on ideas that one ends by finding clear, but they become cleared by the use made of them. . . . They round off one another's angles. . . . True and fruitful ideas are so many contacts with currents of reality, not necessarily converging on one point."

when Kant or Spencer tells us that there are "things in themselves" or an "unknowable," of which we can know nothing, they are plainly contradicting themselves; they say we know what in the same breath they deny us the knowledge of. But we can see the limitations of intelligence because we are something more than intelligence. Our earlier chapters have shown that in our conscious life something more occurs than the mere putting together of part and part, each part being previously known and the combination known too, because its properties simply repeat, perhaps in some new order, the properties of the parts. Our thoughts, our emotions, our purposes, our actions, are, we saw, an incessant creation of absolute novelties, not designed, not known till they have arisen, and yet *ours*, or rather *us*, not something forced on us from without; their origination is outside the pale of the understanding intelligence altogether; it is something that we "feel and live," in

Bergson's characteristic and emphatic phrase. And in all life, not only in consciousness but in all vitalized masses, in all organisms, we have had to recognize the same thing. We have seen analysing and combining intelligence fail as a fact to understand that which refuses to break up into final and definite parts and to show in its totality any trace of the nature of such parts. Life, whether as organism or as consciousness, is outside the limits of intelligence; and we see this, because our soul, our consciousness, is not limited to intelligence.

Rather intelligence is a special function of the soul which in the course of evolution has come in man to the front. Shall we congratulate ourselves on the possession or acquisition of such a function, because it is so useful, because—if it cannot represent one hemisphere of the world, the living—it is perfectly suited to represent another, the non-living? Have we in intelligence simply a wonderful windfall giving us just

the right instrument for dealing with a special material, the non-living? have we here a mere conjunction miraculous and inexplicable? a mere uncovenanted grace? The answer is both Yes and No. No, if what is meant is that there is on the one hand a world of things reciprocally connected by natural laws, on the other a mental capacity inexplicably adopted to conceive such laws and to grasp the fundamental principles of them—the Law of Contradiction or the Law of Causality. Neither is the mental capacity a miraculous gift, nor is the world which is its object in a miraculous correspondence with it. The mental capacity is evolved by the Life-Force as it develops a special mode of action, that of producing effects by the construction of tools and instruments independent of our organism and themselves inorganic. The object is evolved by the views such a capacity must take of the continuous flux when it breaks it up into parts, each non-fluent. The intelligence is not some

mysterious gift to us, and the material world another mysterious gift providentially adapted to it. The intelligence comes by evolution, and the same evolution gives us the matter which it is suited to deal with. The phenomenal world is in a sense what Kant called it, a creation of the intellect; and Spencer [1] made a profound mistake when he tried to explain our intelligence as an imprint made on us by the phenomenal world, when that world in fact involves intelligence and would be non-existent except for it. And yet that world is in a measure real, and our knowledge of it is not merely "relative to our cognitive faculty," that is, in plain words, no knowledge at all. There *is* in some degree a world of separable elements having constant qualities and relations; there must be, unless our perception and our science is mere illusion; but that which guides our action successfully cannot be mere illusion, mere unrealities such as the figures

[1] *Év. Cré.*, 396 *seq.*

we seem to see in clouds or in our dreams. And so where before we answered No, we must now answer Yes. The world is flux, is eternal creation, yet not altogether so. Beside life with its incessant creation there is that which is the material on which it exercises its creative power. Thus, for example, life—in the form we call poetical genius—creates new poems, but out of words or at least letters which are not new. And this material for the Life-Force has its own laws, which are just the opposite of the principle of life—inertia, lack of mutual influence, dissipation of energy, decay; it is just the absence[1] of life, or rather a minor intensity of it. In this we can have laws, laws of nature, provided that we concede them only an abstract and hypothetical truth. Thus we have laws of geometry and arithmetic, seemingly absolute if anything can be, and yet in the end merely hypothetical, being true only *if* and *so far as* the creative vital force has

[1] *Ev. Cré.*, 219, 220.

ceased to act. Where that acts, they may be falsified; even one and one may cease to make two; they may make no more than one, e.g., in a chemical combination. But since the domain of inertia is so wide, the domain of intelligence is wide also. Matter has its ascent and its descent; when the ascent ceases, the descent begins; the image of the ball rising till the impulse which threw it is exhausted, then descending, is, in a measure, a true picture of the material universe. Science is at home with the descending movement,[1] it can never predict or calculate the ascending. But the descending movement being a constant property of matter, matter lends itself to our mathematics. Geometry holds true of it because, in Bergson's phrase, it "is ballasted with geometry."[2] We break it up into elements, find mathematical relations between them, our calculus leads us to successful prediction; we then pride ourselves on the wonderful divining power

[1] *Supra*, 76 *s.f.* [2] *Év. Cré.*, 239.

of our intelligence. But possibly, says Bergson, we might have constructed the world out of other elements, and a calculus based on them would have been no less successful. For the world's inertia guarantees the success of a mathematical treatment of it; it is like a figure weighted at the bottom with lead, which, put in any position, at once recovers the standing attitude.[1]

It is not God who "eternally geometrizes," to use the phrase attributed to Plato; it is man with his human intelligence, to which all action is but movement, all movement nothing more than the line traced by it; to which the only reality is atoms, which are in fact mere points now moved into one order, now into another, and again capable of reverting to the first; to which Space is the great reality and Time merely an inexplicable accident or, rather, an unreality—as in abstract geometry it is; for there each property

[1] *Év. Créa.*, 239.

"follows from" another property, but never "follows" it. The ideal of science is an intuition in which all that we call "future" is seen in the present, and its futurity [1] is a mere illusion. All our logic is based on this idea—our deduction evidently, for there we only claim to infer the present from the present; "this is a man, therefore this is mortal." But, as Bergson [2] points out, our induction rests on the same basis. If we infer that the kettle now before us will boil when placed on the fire, because yesterday's kettle boiled, it is because we identify to-day's kettle and fire with yesterday's, or conceive them as superposable; then we argue that the group, kettle and fire must in both cases be completed in the same way, namely by the boiling. The argument is not different from that by which Euclid proves

[1] The impossibility, even absurdity, of such a view is well shown by Jacks' "The Message of William James," *Contemporary Review*, June, 1911.
[2] *Év. Cré.*, 233.

the complete equality of two triangles that have two sides of the one equal respectively to two sides of the other and their included angles equal.

But futurity, you say, is no illusion. I grant it. We feel time to be a reality, but we only do so by feeling change to be real. The new continues the old but in a new form; it is not contained in it and eternally present; it *grows* out of it. This real time Bergson calls Duration, the duration of a continuously changing reality. The universe has such duration; but so also has each separate living thing. The guesses made at the future forms of the universe or a living thing may have a rough practical correctness, but can have no more. If the scientific spirit, the intelligence, will not be satisfied with such rough correctness, it must confine itself to *fragments* of the universe, to *aspects* of the life of a living being. It subsists on the repeatable[1]; and in the universe as a whole or in the life

[1] *Supra*, 97.

of a living being we can never find more than an approximation to repetition, an approximation probably far less close than we think.

Science has two quarrels, with views such as those of Bergson or the Vitalists in general. It complains that the views are misty, incapable of leading to definite conclusions; and again that they throw a slur on its own practical and progressive method, as if they would suppress it as radically erroneous, whereas it is ever advancing to new conclusions which experience verifies. But Bergson would throw no slur on biological science; he considers it superficial, but he admits its progressiveness, its verifiability. Only it throws, he contends, not light but darkness on the living being; it forces us, if regarded as the whole truth, to deny that we are what we know we are. It gives, like the kinematograph,[1] accurate pictures of us

[1] *Supra*, 102.

at a number of moments indefinitely near to one another; but while the kinematograph presents at least the appearance of movement from stage to stage, science does not give us even an illusory representation of the movement—it flatly and starkly refuses to explain it at all. But in so doing it leaves out the essential fact; the figures in the kinematograph only seem to move; those of science do not move at all. Yet movement is everything, as Heraclitus said, πάντα ῥεῖ, nothing persists.

But we must seek *order* in the universe, one objects; and it is this order that science discovers. Is there, then, no order in the universe for us till science has revealed one? Or, rather, is not science merely substituting a quasi-geometrical order for an order of a different kind, the order of which our conscious life presents us the clearest illustration? In fact, absolute disorder is a mere negation; and mere negation has importance merely because it denies something positive; it tells us

nothing; it merely rejects a blunder.[1] We go into an unfurnished room and say that there is nothing in it; is there really nothing in it—no air, no dust, no cobwebs? No; we merely mean that there is nothing in it that we expect from a room, the purpose of whose creation was obviously to be lived in or slept in. Or we say of a room that it is in total[2] disorder. But really its contents and their position are perfectly explicable; each has its cause; it has what we may call "mechanical order"; it would surprise no one who knew preceding events. What it has not got is "purposive order," the order we expect to find in a room, a thing made to be lived in or slept in. We insist on having a theory of the universe as it was, is, and will be—what we call a metaphysic. But it would now seem that the universe is substantially a constant process of self-creation, of whose past there is no doubt a determinate history which we may to some

[1] *Év. Cré.*, 301–322. [2] *Év. Cré.*, 240–242.

extent ascertain, but of whose future and tendency, beyond some empirical rules of limited and uncertain application, we know nothing. How should we? Our ideas register past experience; but they have no power, they cannot anticipate future experience.[1] The present does not contain the future, except in geometry, where there is no real future at all—or except in that inert matter to which our geometrizing intelligence is ever seeking to reduce the universe, till we find a Descartes or a Spinoza absolutely identifying Matter with Space. It is true, we claim to have added movement as well. But this movement is merely quantity—"directed quantity," if you please, but still quantity, without quality. But real movement is essentially qualitative, *sui generis*; and its species are qualitative. Our science, on the other hand, is essentially quantitative, graphical; curves, traced by the extremities of ordinates varying in length according

[1] *Supra*, 103.

to some law as their abscissae vary, can express the whole of it.

The contrast between modern science and Aristotle's pseudo-science has been pointed out before Bergson, though by no one more tersely and effectively. But he has exhibited great and striking originality in showing how a metaphysic radically similar to Aristotle's and based like his on the implicit acceptance, the deification, of the understanding, has grown up around our science and is taken to be not less incontestable. To Aristotle each natural thing had its Idea or Essence or Form, all deviations from which were accidental and temporary variations due to its ὕλη (Matter, which is the literal equivalent of ὕλη). The great modern science of movement, of which Dynamics is the abstract form and Astronomy the most impressive concrete application, is replaced in Aristotle by the vague and useless "ideas" of gravity and levity; some things, e.g. stones, naturally fall, others, such as fire,

naturally rise, and they are only *their true selves* and *truly real* when they are in their natural place. ("To be brought to its own place is for each thing to be brought to its own nature or essence"—as he says in the *De Caelo*, quoted *Ev. Cré.*, p. 248). The kernel of this strange and useless physics is the old Greek metaphysics, according to which the "idea" of a thing is its genuine reality—the "idea" being, as in Spinoza's phrase, "what the intellect perceives about substance as constituting its essence." The modern physicist from Galileo onwards laughs at Aristotle's physics. The movement of the stone, he says, not the stone itself, is what we must fix our attention on. By so fixing it Galileo and his successors have taught us what is of extreme practical value, what we could never have deduced from Aristotle's speculations—namely, how to calculate the position of the stone at any moment. But the modern physicist is no less enamoured of the immobile idea than the ancient—

only his immobile idea is not of a *thing* but of a *law*; the universe is to him a congeries not of fixed things but of fixed laws. He speaks of a thing's "movement"; but he really tells us merely of a series of points determined by a law, at one or other of which the thing at any given moment is. But in fact the thing *passes through* each of these points, it *is* not at any one of them; if it were, then we could easily prove movement was impossible by the argument of Zeno.[1] In fact the movement is the reality, but a reality that eludes the physicist's "laws" altogether; and Zeno's argument only proves the falsity of his own premises. And—apart from this enormous gap in the metaphysical foundation of modern physics—is not "a system of laws" an even more impossible conception of the universe than "a system of things?" For law—natural

[1] *M. and M.*, Chap. IV: the argument is that at any moment the thing *is* at some place; therefore, that it is never moving.

law, that is—means detected similarities, and for the detection of similarities we need a comparing intellect that grasps many in one, Kant's "synthetic unity of apperception." In the end there will be nothing else; for if all the unity is in the intellect, that which is left to be presented to it can be nothing but a "chaotic manifold," which, as even Kant says, "is as good as nothing at all for us." The "synthetic unity" becomes the universe itself —for Kant's ineffectual proviso that there are (he should have said "there may be") things in themselves is soon swept away by his successors. And in the full-blown system of T. H. Green the English reader may see the "unity of consciousness" expressly identified with God, who of course includes within Himself the universe which has emanated from Him—a "formal" universe emanating from a "formal" God.[1] But if only, as we recognized the consequences of movement to be the centre of

[1] *Ev. Cré.*, 386.

interest for science, so we recognized movement itself as the centre of interest for philosophy, we should once for all have overthrown the domination of the immobile idea—the "visibly inactive idea," as Berkeley described it—and grasped, if only by "a momentary and evanescent intuition," [1] that life and creation, not the fixities of either laws or things, is the essence of the world

An English writer—the author of a great novel,[2] if it is not rather to be regarded as a great autobiography—Samuel Butler, whose writing for flexibility, suggestiveness and vividness of imagery may compare with Bergson's own, had already seen this in 1886. "It comes, therefore, to this" (he says in *Luck or Cunning?* p. 80), "that if we are to think fluently and harmoniously upon any subject into which change enters (and there is no conceivable subject into which it does not), we must begin by flying

[1] *Ev. Cré.*, v.
[2] *The Way of All Flesh.*

in the face of every rule that professors of the art of thinking have drawn up for our instruction. . . . Logic has been the true Tower of Babel, which we have thought to build so that we might climb up into the heavens and have no more miracle, but see God and live . . . nor has confusion of tongues failed to follow on our presumption."

CHAPTER V

CONCLUSION

LET us try to put shortly the substance of the preceding chapters.

They assert that the world is essentially an active process, not a special machine grinding out some pre-determined result, whether happiness, misery, civilization, or anything else; not indeed a machine at all; for a machine works by fixed laws so that at least its next immediate action or product can be predicted, if not its final product. But of the world we cannot know even the next, and far less the final, product. Because we can, not without frequent failures, harness here a bit and there a bit of it and make of them instruments to satisfy our wants, we fancy that to that extent we have grasped the idea or meaning of the world, and that we may legitimately hope to grasp some day the meaning of all its parts and of the whole formed by those

parts. Many of us even believe that we have, prior to all experience, ideas that experience will be compelled to confirm. But all ideas are mere shadows, shadows of the action that we perform. When action becomes conscious of itself, that is when we are in the state of what Bergson calls "nascent action," and all is on the point of performance but actual [1] performance is suspended, then ideas are generated; but their generation is not like a creation of fruit, it is merely the dropping from the tree of the already ripe fruit. Ideas can inspire action, it is said; they have—in Hegel's fine language—"hands and feet." True. But that is because, and so long as, they are themselves essentially action. The fruit that has dropped is often far from being fully ripe; but once it has dropped, it will never ripen more. Think of our attempts to form a child's character. Its parents are always dictating ideas to it, "moral" ideas—with how much effect? We shall probably soon see the establish-

[1] *Supra*, 48.

ment here, as in France, of moral classes in our schools, and the issuing of moral catechisms sanctioned by the Board of Education, of which a page will have to be learnt by heart in each half-hour assigned to this study by the Board's time-table. Does a person who has really had much to do with children expect any greater effect from this ? If a child is to feel the urgency of truthfulness, it must be from experiencing the consequences of lying—its paralysis, when having itself lied it finds itself distrusted, or when, being in the company of others that have lied to it, it knows not where to turn or how to act. The idea as dictated by parent or teacher is but so much dropped fruit that will ripen no more.

The world is not created ; it is a creator, creator of itself. In theological language —and language increasingly adopted even in the world of professional theologians— God is immanent in the world, not transcendent of it. Are we clay moulded by the potter, some to vessels of honour, some to vessels of dishonour ? We often say

so; in moments of mournful retrospection we often think we believe so. But[1] did any human being in the moment of action ever so believe? Such a belief would mean paralysis; under its influence we could not act at all. But if we could do nothing, would it not be left to us to understand? might not our true life be Aristotle's contemplative life, Spinoza's freedom, the *libertas* to which we rise when the fetters of human passions and desires fall from us (*Ethics*, Bk. V)?—No, we could not even understand. To understand a machine is to be able at least to use it, at best to create it. Impotence to act is also impotence to think.

But so far as we live we are not impotent. The "divinae particula aurae," that fraction of the general Life-Force that animates our members acts and creates: and in the wake of its creation there may follow understanding.

[1] Cf. the fine passage in chap. 31 of Butler's *The Way of All Flesh*, ending with the emphatic words: "for I, Ernest, am the God who made you."

BOOKS USEFUL TO THE ENGLISH STUDENT OF BERGSON

THE three great works of Bergson have all been translated into English: the *Données*, by Pogson (Sonnenschein); the *Matière et Memoire*, by Miss Paul (Sonnenschein); the *Évolution Créatrice*, by Mitchell (Macmillan).

Mr. Pogson has added a long list of articles from English and foreign magazines dealing with Bergson: the present author's article *Mind* for January, 1911, goes into some detail on the difficult but highly interesting theory of Memory and Recognition.

W. James' lecture on Bergson in his *Pluralistic Universe.*

J. M. Baldwin's *Development and Evolution.*

Driesch's *Gifford Lectures*, delivered at Aberdeen (especially vol. 1).

Jacks' "The Alchemy of Thought" (Williams & Norgate), and his "Message of William James" in *Contemporary Review*, January, 1911, though they hardly mention Bergson, are written under an inspiration essentially the same as his, and greatly help to the comprehension of Bergson's ideas.

Binet's *The Mind and the Brain*, in the International Scientific Series.

Butler & Tanner The Selwood Printing Works Frome and London