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By
GEORGE WILLIAMS PECKHAM, Jr., Ph.D.

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INTRODUCTION

Like a number of other philosophical writers M. Bergson presupposes a world in which there are objects of knowledge and knowledges of these objects, the latter being true in the measure of their resemblance to what they are knowledges of; but more elaborately than any other philosopher, perhaps, he develops a consequence of this fundamental assumption, according to which a knowledge, to be absolutely true, must coincide with what it is knowledge of. He applies this supposition, along with its consequence, first to psychology, then to physics and biology, and, finally, to natural science as a whole. In *Time and Free-Will* he tries to effect a reform of psychology by making the mind it describes coincide with the object of psychological science, or immediate experience; in the sequel he repeats the attempt with regard to physics and biology. In other words, M. Bergson condemns whatever discrepancy he succeeds in discovering between science and concrete experience; he finds fault with science for being abstract and analytical, and his philosophy argues in favor of the validity of immediate intuition. It is not an unequivocal argument in favor of the doctrine of immediate intuition, however, for besides the difficulty of accounting for error in a doctrine that defines any object presented in consciousness as the truth of itself, an attack on the truth of the natural sciences, to carry weight, requires the provision of a substitute science. But—since formulations are abstract irremediably and experience concrete—in formulating a substitute science M. Bergson transgresses the fundamental assumption of his argument, which declares that as long as a discrepancy exists between knowledge and the object of knowledge, the latter must fall short of the absolute truth. Hence the most general characteristic of M. Bergson's logic: He discovers what he takes to be flaws of an epistemological order in natural science, and proposes a novel science in its place, in which the same flaws, or flaws of a similar sort, reappear.

The capital significance of M. Bergson's writings, for technical philosophy, then, is to be found in the fact that he originally defines a psychology radically distinct from ordinary psychology; a metaphysics of matter radically distinct from ordinary physics; and a general metaphysics radically distinct from natural science, and relinquishes these distinctions one by one, identifying in principle the sciences he proposes as true, philosophically, with the sciences of nature he impugns

as invalid. This relinquishment is the chief source of the ambiguities that have frequently been noted in M. Bergson's writings, and which appear sometimes in sharp contradictions, but more often in the double or multiple meanings of the terms and definitions he employs; for in one form or another the ambiguity springing from this relinquishment pervades M. Bergson's philosophy, and is the only element of logic common to his successive books and informing them with a significant systematic unity. As to the purport of the relinquishment we describe, it may mean that so far as M. Bergson formulates a succeedaneous science he is false to the truth of his own inspiration—that, strictly speaking, philosophical truths are inexpressible in abstractions; or it may mean that M. Bergson's initial assumption should be renounced—that his need to fall back on the characteristics of natural science, with which he found fault, is evidence in favor of their philosophical validity. We prefer the latter of these alternatives, but the reader may make his choice without prejudice to the following exposition of the difficulties of M. Bergson's logic.

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I

TIME AND FREE-WILL

We are concerned with *Time and Free-Will*, in this dissertation, in order to show that the book embodies a doctrine of mind no sooner formulated than renounced; this demonstration in turn will contribute to prove that M. Bergson's philosophical work is a succession of attempts to set up a kind of cognition prescribed by a theory of knowledge; attempts which terminate in each case in an abdication of the theoretically necessitated results. But seeing that the doctrine of *Time and Free-Will* is difficult of comprehension in terms of itself, we propose to commence our introductory chapter with a general analysis of the book's contents, hoping that the evidence in favor of our preliminary proposition may be made unmistakably manifest by this means.

We shall seek to derive the parts and details of *Time and Free-Will* from a small number of considerations, proceeding as though we were exhibiting the reasoning that guided M. Bergson in writing his book; if the reader should be disinclined to acquiesce in our analysis as an exposition of the influences that cooperated to produce M. Bergson's book, however, its acceptance as a classification of the logical elements of *Time and Free-Will* will be a sufficient concession for the purposes of our inquiry.

In *Time and Free-Will* we discern the interaction of an hypothesis and a fact; the hypothesis of dualism and the fact that associationistic psychology is incompetent to describe the immediate accurately in terms of its analytical elements—ideas, mental states, and atoms of mind—since the immediate is a combination of elements that interpenetrate. For brevity's sake the fact that associationistic descriptions of the immediate are imperfect will be denominated the fact of uniqueness; for the confluence of psychological elements in the immediate is, in another view, simply the fact that each phase of our immediate experience is unique. What, now, results from the interaction of the fact of uniqueness with the dualistic hypothesis?

Traditional dualism—in the philosophy of Herbert Spencer, for instance,—neglects to provide for the fact of uniqueness, and to make a provision for this fact in the dualistic hypothesis M. Bergson is forced to modify radically the correspondence aspect of the supposition in

which he starts; he is forced to infer that the mind of dualism, which he classifies with the fact of uniqueness, can have nothing in common with the matter of dualism, since if mind correspond to determined and possibly recurrent patterns of matter—a correspondence feasible if matter and mind have attributes in common—uniqueness will be reducible to some kind of a secondary phenomenon or mere appearance. The result of the combination, therefore, for dualism, is the isolation of mind from quantity in all its forms; mind becomes pure quality.

Not only are the matter and mind of dualism absolutely separated by the logic that underlies *Time and Free-Will*, but the truth that the phases of the immediate come to us unanalyzed into psychological elements is modified thereby into a conviction, on M. Bergson's part, that the immediate has no magnitude of any sort; a modification encouraged by the dualistic dogma that the immediate is unextended. Thus the interaction of his premises makes M. Bergson believe that neither intensity nor multiplicity can rightly be predicated of immediate experience. Consistently with this belief, how does he deal with the phenomena ordinarily described as mental intensity and multiplicity?

His treatment of these quantitative aspects of experience follows from the interaction of his premises as indicated already. If psychic magnitude, so-called, is not psychic, dualism presents no alternative to the view that it must be material quâ magnitude; and since the material division of the dualistic world is defined as characteristically spatial, M. Bergson is led to conclude that magnitude of the intensive and numerical sorts must be spatial—somehow. His treatment of immediate experience is thus an attempt to reduce its intensity and multiplicity to space, and issues in the claim that immediate experience, minus intensity, multiplicity, and extension, is real, pure, perfect, or veritable mind.

Having, that is, observed that experience is no accumulation of particles of a constitutive material, M. Bergson transfers his faith in this fact to conclusions that flow from the fact interpreted in the assumption of the truth of the dualistic hypothesis. He believes that the phenomena of psychic magnitude are illegitimate and illusory, and the problem devolves upon him quite naturally: Whence comes the notion, entertained in both science and common sense, that the psychic has magnitude? This notion, he pronounces, originates in a "confusion" of the psychic with space.

M. Bergson consequently commences his discussion of intensity in *Time and Free-Will* with the question: By what means are intensities

transformed into magnitudes? Inasmuch as the origin and bearing of this question are not clearly explained by the author of *Time and Free-Will*, its readers may find themselves in a quandary concerning the drift of the opening discussion of the book; a quandary, moreover, not entirely likely to be dispelled by a further reading in *Time and Free-Will*, for reasons to which we must next proceed to devote a few moments of attention.

The interaction of the premises of M. Bergson's argument, we repeat, brings him to believe that the immediate is non-intensive and non-multiple, as well as being unextended. Nevertheless a difficulty confronts him when he attempts an exposition of the consequences of this belief; for, as a matter of fact, the immediate *is* intensive and numerical and extended; or, in other words, qualitative mind and quantitative matter *are* mingled together in the world that crowds itself on our senses. How then does M. Bergson harmonize with his belief that the immediate is nothing but quality the fact that it is a mixture of quality and quantity? He achieves this by varying the sense in which he affirms the conversion of space into psychic intensity and multiplicity; by varying, that is, the sense of the "confusion" by which the idea of mental growth (or intensity), and mental parts (or multiplicity), gains currency—according to himself—in science and common sense. This ambiguous employment of the concept of "confusion" gives rise to a sense of intangible issues that is likely to beset the reader of *Time and Free-Will* from the opening of the book to its close; for the cause that requires M. Bergson to temper his general assertion that quality and quantity are not mingled at all acts to modify each one of his specific assertions that mind is non-quantitative.

Thus in Chapter I of *Time and Free-Will* M. Bergson affirms that the mind can not manifest intensity, but tempers his affirmation to the statement that if mind is intensive it ought not to be so; and this to the assertion that mind is intensive;—modulating these propositions into each other by a number of means we shall scrutinize presently. In Chapter II of his book he affirms that mind: is not —is illegitimately—and positively is—multiple. Believing that mental magnitudes, so-called, are spatialities, he affirms concomitantly that mind: is not—is in a way—and quite is—extended. Since quantitative mind is analyzable, subject to associationism's laws, repetitious, and capable of manifesting causal sequences, we discover M. Bergson asserting, in the latter portion of his book, that analytical formulations of mind are: false—semi-false—true; that the laws of associationism are: valid and invalid; that psychic change proceeds into pure novelty:

always—usually—hardly ever; and that freedom of the will is: certain—probable—possible. But before adducing evidence in support of the analysis we are introducing, we must point out one or two further peculiarities of the doctrine of *Time and Free-Will*, coordinate with those we have mentioned, or consecutive upon them.

As M. Bergson's initial observation that the immediate is not a congeries of particles of mind-stuff refutes associationistic psychology, it likewise refutes the idea that we immediately experience moments of time; the idea that the phases of our lives are distinct as a multitude of beads on a wire are distinct; for actually the instants of immediate experience fuse at their edges and intermingle and overlap. M. Bergson, therefore, was convinced directly that the temporal dimension is incommensurable with immediate experience, and this conviction united in his mind with the belief that the immediate can not be multiple (indirectly derived from the attempt to legitimatize uniqueness in the dualistic hypothesis), to bring out the inference that the homogeneous time of physics is not time, really (time being by tradition the form of inner sensibility and therefore experienced immediately), but—as a spurious magnitude of the immediate—space; and the further inference that the material world is remote from veritable duration and change. M. Bergson supported his consequent attempt to reduce homogeneous time to space on the fact that in mathematical physics time is relational; and the importance, in his eyes, of the relativity of time doubtless encouraged his identification of duration with mind; an identification with advantages of an expositional order as well.

But against the thesis that duration is heterogeneous purely stands the general impediment to M. Bergson's belief that mind is pure quality, the specific difficulty, in this case, that immediate experience constitutes the multiple hours and years of our lives. Hence arises an ambiguity in *Time and Free-Will* as to the measure in which heterogeneous time is spatial, leading to ambiguities as to whether the material world is changeless; whether motion is spatial; whether the conservation of energy is valid universally; and so forth.

M. Bergson, to recapitulate, starts from the fact that the immediate is unique. Interpreting this fact on the basis of dualism he infers that mind is non-quantitative; that intensity and multiplicity are spatial; and that mental intensity and multiplicity arise by an illegitimate "confusion" of the psychic with space; he supposes that the undoing of this "confusion" of quantity with quality will establish a psychological science and effect a reform in philosophy. But to

demonstrate the confusion of the psychic with space is to prove the hypothesis of dualism erroneous—is to refute one premise of the argument of *Time and Free-Will*. The essential meaning of this contradiction must be investigated in a more ample context as soon as the preceding analysis has been substantiated.

We begin by directing the attention of the reader to two or three curious facts about *Time and Free-Will*, which can easily be explained in our analysis.

We remark first that, supposing that M. Bergson's convictions in the subject of intensity and multiplicity originated in his pre-occupation with the uniqueness of the immediate, or, in other words, with the novelty of mind or the freedom of the will; and supposing that these convictions were deductions as to what would have to be true to make the freedom of the will, in the sense of the uniqueness of the immediate, legitimate in the dualistic hypothesis;—it is then comprehensible that Chapter III of *Time and Free-Will* should be logically independent of the earlier chapters. For Chapter III is M. Bergson's fundamental argument on the uniqueness of the immediate, in relation to which Chapters I and II, on intensity and multiplicity, are, in a logical view, little more than elaborations of detail. On this supposition, for example, it is comprehensible in particular why M. Bergson should repeat his reduction of time to space, giving it in Chapter III (pp. 190–199), and in Chapter II (pp. 85–128), since, inasmuch as the premises of Chapters I and II are really presented in Chapter III, it is necessary to repeat these premises, to a certain extent, in the earlier chapters, in order to give coherence to the argument on magnitude; the alternative being to leave that argument in the air; a procedure preferred by M. Bergson in the division of that argument relating to intensity. Analogously, our analysis explains why one is likely to have the unwonted impression, in reading the book, of proceeding through a series of unsound arguments to a sound conclusion; because the conclusion is a fact by itself, apart from the modification of dualism undertaken to insure its theoretical legitimacy; and because dualism, in the event, turns out gravely to compromise the fact of uniqueness by the curious results of their combination.

A more interesting peculiarity in the doctrine of *Time and Free-Will*, which would be difficult to explain without the aid of a supposition such as the one we propose, is that the arguments by which M. Bergson attempts to prove that the immediate manifests, genuinely, neither growth nor diminution, nor number, are arguments of an

arbitrary nature, evidently suggested to M. Bergson by his great ingenuity, in support of conclusions reached independently of them; as is clear from this, that they are slight in proportion to the importance of the propositions he means them to demonstrate, and contradict, markedly, the general contentions of his book. We will take up the case of number to begin with.

We said that M. Bergson concluded from the fact of uniqueness that mind has no magnitude, and therefore no multiplicity, and that number must be material and consequently spatial. This explains why, on assigned grounds of no philosophical value, and against the consensus of opinion among mathematicians he tries to demonstrate that space is implied in number. His argument (p. 76) is this: that number implies space since counting means thinking together, and that things can only be assembled in space. He forestalls the objection that the units of a sum might be added in time by saying (p. 79) that it is necessary that each term of the series " . . . should wait . . . to be added to the others; but how could it wait if it were nothing but an instant of duration? And where could it wait if we did not localize it in space? . . . when we add to the present moment those which have preceded . . . as . . . when we are adding up units, we are not dealing with these moments themselves, since they have vanished forever, but with the lasting traces which they seem to have left in space . . . ." (*cf.* p. 87). In other words, M. Bergson argues that the past has got to be saved up somewhere—not in time, which *is* past, but in space, which resembles, in his argument, a pane of glass which each bit of passing duration is imagined to scratch. We judge this argument an expedient not alone on account of its slightness, nor because M. Bergson maintains in general that the past is stored up by time, but because, besides, he denies explicitly a few pages further along (p. 108. *cf.* pp. 116, 120) that space has the faculty of saving up what is past.

Next intensity. M. Bergson is persuaded that mind has no quantity and is therefore incapable of growth or diminution; that when it changes, its alteration is not intensive, but ever into new quality, as though its change went in no direction or dimension, but invariably, so to say, round a corner. Whatever intensity may wrongfully be discovered in such a process, M. Bergson is convinced from beforehand, must come from space. Arbitrary, in consequence, are the analyses of Chapter I of *Time and Free-Will*, which simply point out, in the case of one sort of psychic change after another, that where common sense and science take for granted a single kind of mental quality increasing or diminishing, there is really a series of

distinct qualities with nothing in common, joined through "confusion" by pseudo-intervals that can be traced back to space. As both qualities and intervals, mind and space, are present in the immediate, M. Bergson can arbitrarily stress the former and disparage the latter in a multitude of ways without any difficulty. For instance, he describes an increasing intensity of pity as really (p. 19): " . . . a transition from repugnance to fear, from fear to sympathy, and from sympathy itself to humility." Or again, he writes (p. 47): "When you say that a pressure on your hand becomes stronger and stronger, see whether you do not mean that there was first a contact, then a pressure, afterwards a pain, and that this pain itself, after having gone through a series of qualitative changes, has spread further and further over the surrounding region. Look again and see whether you do not bring in the more and more intense, *i. e.*, more and more extended, effort of resistance . . . ." The final portion of this discussion of intensity (pp. 52–72) is an attempt to show that psychophysics is theoretically absurd since it assumes that the qualities in a series of sensations, produced by a continuous increase in the external cause, are connected by quantitative intervals, whereas (p. 66): " . . . not only are you unable to explain in what sense this transition is a quantity, but reflection will show you that it is not even a reality; the only realities are the states S and S′ through which I pass." "The mistake which Fechner made . . . was that he believed in an interval between two successive sensations S and S′ . . . " (p. 67). But this runs counter to M. Bergson's general logic, for he usually insists that change in mind is continuous, and states of mind not philosophically real. Let us now go on to the substantiation of our analysis by the citation of the contradictions into which we said that M. Bergson must fall.

We said that M. Bergson's premises produce the conclusion that quality and quantity, or mind and matter, are separate; but that since quality and quantity are mingled in the immediate as a matter of fact, he is led to modify this theoretical contention; and that inasmuch as his original premises force him to conclude that intensity and number are spatial, and as intensity and number are predicable of what passes for mind, M. Bergson's logic develops into a proof that the immediate, or mind, is partly spatial, that quality and quantity are mingled in a sense; although the mingling is disparaged as a "confusion" to be done away with for the purposes of philosophy. The ambiguity inherent in the employment of the concept "confusion," we said, is apparent in every topic, very nearly, treated in *Time and Free-Will.*

Quality and Quantity in General. " . . . there is no point of contact between . . . quality and quantity" (p. 70). But we "conventionally assimilate" them; " . . . the more our knowledge increases, the more we perceive . . . quantity behind quality, the more also we tend to thrust the former into the latter . . ." (p. 70). In fact: " . . . the confusion of quality with quantity" if confined to the phenomena of consciousness taken separately "would give rise to obscurities . . . rather than problems. But by . . . introducing space into our perception of duration, it corrupts our feeling of . . . change, of movement, and of freedom" (p. 74). Indeed, "the problem of freedom . . . has its origin in the illusion through which we confuse . . . quality and quantity" (p. 240). Yet elsewhere: " . . . every phenomenon" in the physical world "is there presented under two aspects, the one qualitative and the other extensive . . ." (p. 63). " . . . physical phenomena . . . are distinguished by quality not less than by quantity . . ." (p. 204).[1]

Psychic Intensity in General. "The intensity of a simple state . . . is not quantity, but its qualitative sign. You will find that it arises from a compromise between pure quality, which is the state of consciousness, and pure quantity, which is necessarily space. Now you give up this compromise . . . when you study external things . . . Why, then, do you keep this hybrid concept when you analyze . . . the state of consciousness? If magnitude, outside you, is never intensive, intensity, within you, is never magnitude" (p. 224). But, at another point of the argument, "Shall we call the intensity of light a quantity, or shall we treat it as a quality" (p. 50)? "The sensations of sound display well-marked degrees of intensity" (p. 43). "The intensity of sensations varies with the external cause . . . how shall we explain the presence of quantity in an effect which is inextensive . . . " (p. 32)?[2]

Psychic Multiplicity. " . . . the multiplicity of conscious states, regarded in its original purity, is not at all like the discrete multiplicity which goes to form a number (p. 121) . . . there is . . . multiplicity without quantity. . . . I said that several conscious states are organized into a whole . . . but the very use of the word 'several' shows that I had already isolated these states . . . by the very language which I was compelled to use I betrayed the deeply ingrained habit of setting out time in space. From this spatial

[1] *Cf.* especially pp. 34, 35, 64, 109, 110, 112, 121, 124, 125, 213, 217, 225, 230, 231, 239; and pp. 72, 73, 74, 120, 126, 130, 181, 209, 210, 218, 222, 224, 227, 228, 229.

[2] *Cf.* Chapter I, *passim*

setting out . . . we are compelled to borrow terms which we use to describe the state of mind . . . these terms are . . . misleading . . . the idea of a multiplicity without relation to number or space, although clear for pure reflective thought, can not be translated into the language of common sense" (p. 122). " . . . conscious life displays two aspects according as we perceive it directly or by refraction through space. Considered in themselves, the deep-seated states have no relation to quantity, they are pure quality" (p. 137). "We should . . . distinguish two . . . aspects of conscious life . . . below the self with well-defined states a self in which succeeding each other means melting into one another . . . But we are generally content with the first, *i. e.*, with the shadow of the self . . . Consciousness . . . substitutes the symbol for the reality, or perceives the reality only through the symbol. As the self thus refracted, and thereby broken to pieces, is much better adapted to the requirements of social life . . . consciousness prefers it, and gradually loses sight of the fundamental self" (p. 128). " . . . our ego comes in contact with the external world at its surface (p. 125) . . . the mutual externality which material objects gain from their juxtaposition in homogeneous space . . . spreads into the depths of consciousness: little by little our sensations are distinguished from one another . . . and our feelings or ideas come to be separated like the sensations with which they are contemporaneous" (p. 126). "How could this self, which distinguishes external objects so sharply . . . withstand the temptation to introduce the same distinctions into its own life and to replace the interpenetration of its psychic states, their wholly qualitative multiplicity, by a numerical plurality of terms . . . ? . . . In place of an inner life whose successive phases, each unique of its kind, can not be expressed in the fixed terms of language, we get a self which can be artificially reconstructed, and simple psychic states which can be added . . . Now, this must not be thought to be a mode of symbolical representation only, for immediate intuition and discursive thought are one in concrete reality, and the very mechanism by which we only meant at first to explain our conduct will end by also controlling it. Our psychic states, separating then from each other, will get solidified . . ." (p. 236). In chapter one the distinct plurality of psychic elements is an explicit part of the argument on intensity.[3]

Analysis. "The feeling . . . is a being which lives . . . because the duration in which it develops is a duration whose moments

[3] See especially pp. 8, 10, 26, 31, 57. *Cf.* pp. 84, 99, 100, 104, 105, 120, 131, 132, 136, 162, 163, 164, 176, 196, 211, 216, 218, 226, 229, 235.

permeate one another. By separating these moments from each other, by spreading out time in space, we have caused this feeling to lose its life . . . we believe that we have analyzed our feeling, while we have really replaced it by a juxtaposition of lifeless states . . . if some bold novelist . . . shows us under . . . this juxtaposition of simple states an infinite permeation . . . we commend him . . . however . . . the very fact that he spreads out our feeling in a homogeneous time, and expresses its elements by words, shows that he in his turn is only offering us its shadow" (p. 132). " . . . a feeling . . . contains an indefinite plurality of conscious states: but the plurality will not be observed unless it is, as it were, spread out in . . . space. We shall then perceive terms external to one another, and these terms will no longer be the states of consciousness themselves, but their symbols, or, speaking more exactly, the words which express them.. . . As soon as we try to analyze" a conscious state, it "will be resolved into impersonal elements . . . But because our reason . . . draws these multiple elements out of the whole, it does not follow that they were contained in it. For within the whole they did not occupy space and did not care to express themselves by means of symbols" (p. 162). " . . . we can analyze a thing, but not a process; we can break up extensity, but not duration. Or, if we persist in analyzing it, we unconsciously transform the process into a thing, duration into extensity . . ." (p. 219). " . . . even in the cases where the action is freely performed, we can not reason about it without setting out its conditions externally to one another, therefore in space and no longer in duration" (p. 240). The "breaking up of the constituent elements of an idea, which issues in abstraction, is too convenient for us to do without it in ordinary life and even in philosophical discussion. But when . . . substituting for the interpenetration of the real terms the juxtaposition of their symbols, we claim to make duration out of space, we invariably fall into the mistakes of associationism" (p. 134).[4]

Associationism. "Associationism . . . makes the mistake of constantly replacing the concrete phenomenon which takes place in the mind by the artificial reconstruction of it given by philosophy . . ." (p. 163). "The associationist reduces the self to an aggregate of conscious states . . . But if he sees in these . . . states . . . only their impersonal aspect, he may set them side by side forever without getting anything but . . . the shadow of the ego projecting itself into space" (p. 165). " . . . in proportion as the conditions of social life are . . . realized . . . our conscious states . . .

[4] *Cf.* pp. 128, 129, 130, 176, 177, 200.

are made into objects or things. . . . Henceforth we no longer perceive them except in the homogeneous medium in which we have set their image. . . . Thus a second self is formed which obscures the first, a self whose existence is made up of distinct moments, whose states are separated from one another and easily expressed in words. I do not mean, here, to split up the personality, nor to bring back in another form the numerical multiplicity which I shut out at the beginning. It is the same self which perceives distinct states at first, and which by afterwards concentrating its attention, will see these states melt into one another like the crystals of a snowflake when touched for some time with the finger. And in truth, for the sake of language, the self has everything to gain by not bringing back confusion where order reigns, and in not upsetting this ingenious arrangement of almost impersonal states. . . . An inner life with well-distinguished moments and with clearly characterized states will answer better the requirements of social life. Indeed, a superficial psychology may be content with describing it without thereby falling into error, on condition, however, that it restricts itself to the study of what has taken place and leaves out what is going on" (p. 138).[5]

Mind in Relation to Repetition. "As we are not accustomed to observe ourselves directly . . . we . . . believe that real duration . . . is the same as the duration which glides over the inert atoms without penetrating . . . them. Hence it is that we do not see any absurdity in putting things back in their place after a lapse of time, in supposing the same motives acting afresh on the same persons. . . . That such an hypothesis has no real meaning is what we shall show later on" (p. 154). "To say that the same inner causes will reproduce the same effects is to assume that the same cause can appear a second time on the stage of consciousness. Now, if duration is what we say, deep-seated psychic states are radically heterogeneous to each other. . . . It is no use arguing that, even if there are no two deep-seated psychic states which are altogether alike, yet analysis would resolve these different states into more general and homogeneous elements. . . . This would be to forget that even the simplest psychic elements possess a personality and life of their own, however superficial they may be . . ." (p. 199). The "intuition of a homogeneous medium . . . enables us to externalize our concepts in relation to one another . . . and thus . . . by getting everything ready for language . . . prepares the way for social life (p. 236). . . . In place of a heterogeneous duration whose moments permeate one another, we . . . get a homogeneous time, whose moments

[5] *Cf.* pp. 135, 158, 161, 162, 164, 168, 226, 237.

are strung on a spatial line. In place of an inner life whose successive phases, each unique of its kind, can not be expressed in the fixed terms of language, we get a self which can be artificially reconstructed, and simple psychic states which can be added. . . . Our psychic states, separating then from each other, will get solidified . . . little by little, as our consciousness thus imitates the process by which nervous matter procures reflex actions, automatism will cover over freedom. . . . at this point . . . the associationists . . . come in . . . As they look at only the commonest aspect of our conscious life, they perceive clearly marked states, which can recur in time like physical phenomena . . ." (p. 237).[6]

Homogeneous Time. " . . . if space is to be defined as . . . homogeneous, it seems that . . . every homogeneous medium will be space. For, homogeneity . . . consisting in the absence of . . . quality, it is hard to see how two forms of the homogeneous could be distinguished. . . . We may therefore surmise that time, conceived under the form of a homogeneous medium, is some spurious concept, due to the trespassing of the idea of space upon the field of pure consciousness" (p. 98). " . . . time conceived under the form of a . . . homogeneous medium, is nothing but the ghost of space haunting the reflective consciousness" (p. 99). "There are . . . two possible conceptions of time, the one free from all alloy, the other surreptitiously bringing in the idea of space" (p. 100). " . . . from the moment . . . you attribute the least homogeneity to duration, you . . . introduce space" (p. 104). " . . . it will be said . . . that the time which . . . our clocks divide . . . must be a measurable and therefore homogeneous magnitude. It is nothing of the sort . . . and a close examination will dispel this last illusion" (p. 107). "It is . . . obvious that, if it did not betake itself to a symbolical substitute, our consciousness would never regard time as a homogeneous medium. . . . But we naturally reach this symbolical representation . . . Principally by the help of motion . . . duration assumes the form of a homogeneous medium, and . . . time is projected into space. But . . . any repetition of a well-marked external phenomenon would suggest to consciousness the same mode of representation. Thus . . . we are necessarily led to the idea of a homogeneous time, the symbolical image of real duration" (p. 124). " . . . daily experience ought to teach us to distinguish between duration as quality . . . and time so to speak materialized" (p. 127). "Below homogeneous duration . . . a close psychological analysis distin-

[6] *Cf.* pp. 200, 201, 219, 239.

guishes a duration whose heterogeneous moments permeate one another . . ." (p. 128).[7]

Relation of the Material World to Time. "To put duration in space is . . . to contradict oneself. . . . we must not say that external things endure, but rather that there is in them some inexpressible reason in virtue of which we can not examine them at successive moments of our own duration without observing that they have changed" (p. 227). "It . . . follows that there is neither duration nor even succession in space, if we give to these words the meaning in which consciousness takes them: each of the so-called successive states of the external world exists alone; their multiplicity is real only for a consciousness that can first retain them and then set them side by side by externalizing them in relation to one another" (p. 120). "It is because I endure . . . that I picture to myself what I call the past oscillations of the pendulum at the same time as I perceive the present oscillation. Now, let us withdraw . . . the ego which thinks these so-called successive oscillations: there will never be more than a single oscillation . . . hence no duration. . . . within our ego there is succession without mutual externality; outside the ego . . . mutual externality without succession . . . no succession, since succession exists solely for a conscious spectator who keeps the past in mind. . . . Now, between this succession without externality and this externality without succession, a kind of exchange takes place . . . similar to what physicists call . . . endosmosis. . . . the oscillations of the pendulum . . . profit . . . from the influence which they have exercised over our conscious life. Owing to the fact that our consciousness has organized them as a whole in memory, they are first perceived and afterwards disposed in a series: in a word, we create for them a fourth dimension of space, which we call homogeneous time . . ." (p. 108). " . . . science seems to point to many cases where we anticipate the future. Do we not determine beforehand . . . the greater number of astronomical phenomena? . . . No doubt. . . . Indeed . . . the reasons which render it possible to foretell an astronomical phenomenon are the very ones which prevent us from determining in advance an act which springs from our free activity. For the future of the material universe, although contemporaneous with the future of a conscious being, has no analogy to it" (p. 192).[8]

Spatiality of Motion. " . . . to . . . confusion between motion and . . . space . . . the paradoxes of the Eleatics are due; for

[7] *Cf.* pp. 106, 110, 115, 116, 120, 121, 181, 188, 193, 194, 195, 196, 197, 198, 218, 226, 228, 229, 230, 238.

[8] *Cf.* especially pp. 116, 205, 206.

the interval which separates two points is infinitely divisible, and if motion consisted of parts . . . the interval would never be crossed. . . . This is what Zeno leaves out of account . . . forgetting that space alone can be divided and . . . confusing space with motion. Hence we do not think it necessary to admit . . . a discrepancy between real and imaginary motion. . . . Why resort to an . . . hypothesis . . . about . . . motion, when immediate intuition shows us motion within duration, and duration outside space" (p. 112)? "We generally say that a movement takes place *in* space. . . . Now, if we reflect . . . we shall see that the successive positions of the moving body . . . occupy space, but that the process by which it passes from one position to the other . . . eludes space. . . . motion . . . is a mental synthesis, a psychic and therefore unextended process" (p. 110). "This is just the idea of motion which we form when we think of it by itself, when, so to speak, from motion we extract mobility. . . . A rapid gesture made with the eyes shut, will assume for consciousness the form of a purely qualitative sensation as long as there is no thought of the space traversed. In a word, there are two elements to be distinguished in motion, the space traversed and the act by which we traverse it, the successive positions and the synthesis of these positions. The first of these elements is a homogeneous quantity; the second has no reality except in a consciousness: it is a quality. . . . But here again we meet with a case of endosmosis, an intermingling of the . . . sensation of mobility with the . . . representation of the space traversed. . . . we attribute to the motion the divisibility of the space which it traverses and . . . accustom ourselves to projecting this act itself into space . . . as if . . . localizing . . . a progress in space did not amount to asserting that, even outside consciousness, the past co-exists along with the present" (p. 111).[9]

Does Mind Always Progress into Novelty? " . . . the process of our free activity goes on . . . in the obscure depths of consciousness at every moment of duration . . ." (p. 237, note). " . . . determinism can not help substituting words for . . . the ego itself. By giving the person . . . a fixed form by means of sharply defined words, it deprives" the person "of living activity. . . . But this mechanism . . . can not hold good against the witness of an attentive consciousness, which shows us inner dynamism as a fact" (p. 171). " . . . freedom must be sought in a certain . . . quality of the action itself. . . . The difficulty arises from the fact that both parties" (to the dispute over freedom) "picture the deliberation under

[9] *Cf.* pp. 49, 107, 120, 124.

the form of an oscillation in space, while it really consists in a dynamic progress in which the self and its motives . . . are in a constant state of becoming. The self, infallible when it affirms its immediate experiences, feels itself free and says so; but as soon as it tries to explain its freedom to itself, it no longer perceives itself except by a kind of refraction through space" (p. 182). " . . . . we are free when our acts spring from our whole personality, when they express it" (p. 172). "Freedom . . . is not absolute . . . it admits of degrees . . . many live . . . and die without having known true freedom. . . . the most authoritative education would not curtail any of our freedom if it only imparted to us ideas and feelings capable of impregnating the whole soul" (p. 166). " . . . we are rarely free. . . . To act freely is to . . . get back into pure duration" (p. 231). " . . . although we are free whenever we are willing to get back into ourselves, it seldom happens that we are willing" (p. 240).[10]

The Problem of Free-Will. " . . . the confusion of quality and quantity . . . gives rise to the problem of free-will. . . . instead of seeking to solve the question we shall show the mistake of those who ask it" (p. 74). "defenders and opponents of free-will agree in holding that . . . action is preceded by a kind of mechanical oscillation between . . . two points X and Y . . ." (p. 179). But "do not ask me whether the self . . . could or could not choose Y: I should answer that the question is meaningless. . . . To ask such a question is to admit the possibility of adequately representing time by space . . ." (p. 180). " . . . it is . . . devoid of meaning to ask: Could" an "act be foreseen, given . . . its antecedents" (p. 189)? " . . . when we ask whether a future action could have been foreseen, we unwittingly identify that time with which we have to do in the exact sciences . . . with real duration, whose so-called quantity is really a quality . . ." (p. 197). "In whatever way . . . freedom is viewed, it can not be denied except on condition of identifying time with space . . ." (p. 230). "The problem of freedom has thus sprung from a misunderstanding . . . it has its origin in the illusion through which we confuse succession and simultaneity, duration and extensity, quality and quantity" (p. 240). But: "freedom is denounced as being incompatible with . . . the conservation of energy . . ." (p. 142) and although "the parallelism of the physical and psychical series has been proved in a fairly large number of cases . . . to extend this parallelism to the series themselves in their totality is to settle *a priori* the problem of freedom" (p. 147). " . . . while the material point, as mechanics under-

[10] *Cf.* pp. 165, 168, 169, 170, 220, 229, 233, 237.

stands it, remains in an eternal present, the past is a reality . . . for conscious beings. . . . Such being the case, is there not much to be said for the hypothesis of a conscious force or free-will, which, subject to the action of time and storing up duration, may thereby escape the law of the conservation of energy" (p. 153)?

The Conservation of Energy. (A compendium of M. Bergson's argument, in his own words.) " . . . freedom is denounced as being incompatible with the . . . conservation of energy. . . . We shall show that . . . physical determinism, involves a psychological hypothesis" (p. 142). "As . . . the conservation of energy has been assumed to admit of no exception, there is not an atom," it is supposed, ". . . whose position is not determined by the . . . actions which the other atoms exert upon it. And the mathematician . . . could calculate . . . the future actions of the person . . . as one predicts an astronomical phenomenon. We shall not raise any difficulty about recognizing that this conception of . . . nervous phenomena . . . is a natural deduction from the law of the conservation of energy. . . . but . . . we propose to show that . . . the very universality of the principle of the conservation of energy can not be admitted except in virtue of some psychological hypothesis. . . . if we assumed . . . the position . . . of each atom of cerebral matter . . . determined at every moment of time, it would not follow that our psychic life is subject to the same necessity. For we should first have to prove that a strictly determined psychic state corresponds to a definite cerebral state, and the proof is still to be given (p. 144). . . . But . . . we do not prove and we shall never prove by any reasoning that the psychic fact is fatally determined by the molecular movement. . . .the unvarying conjunction of the two terms has not been verified . . . except in a . . . limited number of cases. . . . But it is easy to understand why physical determination extends this conjunction to all possible cases. . . . the majority of our actions can be explained by motives. But . . . the determinist, . . . led astray by a conception of duration . . . we shall criticise later, holds that the determination of conscious states by one another is absolute. . . . It seems natural that this . . . approximate determinism should seek support from the same mechanism that underlies the phenomena of nature (p. 147). . . . the transaction would be to the advantage both of psychological determinism . . . and of physical determinism, which would spread over everything. . . . The physical determinism reached in this way is nothing but psychological determinism, seeking to verify itself . . . by an appeal to the sciences of nature.

But we must own that the amount of freedom left . . . after complying with the . . . conservation of energy is . . . limited (p. 149). . . . . We are thus led to inquire whether the very extension conservation of energy to all bodies in nature psychological theory, and whether the scientist . . any prejudice against human freedom up this principle as a universal law (p. 150). nservation of energy certainly seems to apply sychico-chemical phenomena. But . . . the phenomena" might "reveal . . . some new may" rebel "against calculation. Physical reby lose any of its . . . geometrical rigor. te that the . . . conservation of energy can system of which the points . . . can return ions. This return is at least conceived of as the instinctive . . . belief of mankind in the l quantity . . . of energy, perhaps has its root ert matter does not seem to . . . preserve any But this is not the case in the realm of life. Here utting things back in their place at the end of a a kind of absurdity. . . . But let us admit s a mere appearance . . . at least it will be thesis of a turning backwards is almost meaning- f conscious states. . . . the past is a reality dies, and certainly for conscious beings (p. 151). s not a wish to meet the requirements of positive a psychological mistake which has caused this of mechanics to be set up as a universal law (p. 154). ought to say (if we kept aloof from all presupposi- -will) that the law of the conservation of energy enomena and *may*, one day, be extended to all logical facts also prove favorable to it . . . we le of the conservation of energy as a law which enomena whatever. . . . Science, properly so- nothing to do with all this. We are simply nfusion between concrete duration and abstract ord, so-called physical determinism is reducible erminism . . . and it is this doctrine, as we we have to examine" (p. 155).

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The Conservation of Energy. (A compendium [illegible] ment, in his own words.) " . . . freedom is incompatible with the . . . conservation of ene show that . . . physical determinism, invol hypothesis" (p. 142). "As . . . the conserv been assumed to admit of no exception, there is supposed, ". . . whose position is not determ actions which the other atoms exert upon it. An . . . could calculate . . . the future act . . . as one predicts an astronomical phenom raise any difficulty about recognizing that this c[illegible] nervous phenomena . . . is a natural deducti[illegible] the conservation of energy. . . . but . . . v that . . . the very universality of the princip tion of energy can not be admitted except in virt logical hypothesis. . . . if we assumed . . . t of each atom of cerebral matter . . . determin[illegible] of time, it would not follow that our psychic life is necessity. For we should first have to prove th mined psychic state corresponds to a definite cer[illegible] proof is still to be given (p. 144). . . . But . . and we shall never prove by any reasoning that fatally determined by the molecular movement. . conjunction of the two terms has not been verified a . . . limited number of cases. . . . But i stand why physical determination extends this possible cases. . . . the majority of our actior by motives. But . . . the determinist, . . . ception of duration . . . we shall criticise la determination of conscious states by one another i It seems natural that this . . . approximate [illegible] seek support from the same mechanism that unde[illegible] of nature (p. 147). . . . the transaction would b both of psychological determinism . . . and o nism, which would spread over everything. . . . minism reached in this way is nothing but psychol seeking to verify itself . . . by an appeal to the

But we must own that the amount of freedom left . . . after complying with the . . . conservation of energy is . . . limited (p. 149). . . . We are thus led to inquire whether the very extension of the principle of the conservation of energy to all bodies in nature does not involve some psychological theory, and whether the scientist who did not possess . . . any prejudice against human freedom would think of setting up this principle as a universal law (p. 150). . . . The . . . conservation of energy certainly seems to apply to the whole range of psychico-chemical phenomena. But . . . the study of physiological phenomena" might "reveal . . . some new . . . energy which may" rebel "against calculation. Physical science would not thereby lose any of its . . . geometrical rigor. . . . Let us also note that the . . . conservation of energy can only be applied to a system of which the points . . . can return to their former positions. This return is at least conceived of as possible . . . and the instinctive . . . belief of mankind in the conservation of a fixed quantity . . . of energy, perhaps has its root in the very fact that inert matter does not seem to . . . preserve any trace of past time. But this is not the case in the realm of life. Here . . . the idea of putting things back in their place at the end of a certain time involves a kind of absurdity. . . . But let us admit that the absurdity is a mere appearance . . . at least it will be granted that the hypothesis of a turning backwards is almost meaningless in the sphere of conscious states. . . . the past is a reality perhaps for living bodies, and certainly for conscious beings (p. 151). . . . In truth it is not a wish to meet the requirements of positive science, but rather a psychological mistake which has caused this abstract principle of mechanics to be set up as a universal law (p. 154). . . . while we ought to say (if we kept aloof from all presuppositions concerning free-will) that the law of the conservation of energy governs physical phenomena and *may*, one day, be extended to all phenomena if psychological facts also prove favorable to it . . . we lay down the principle of the conservation of energy as a law which *should* govern all phenomena whatever. . . . Science, properly so-called, has therefore nothing to do with all this. We are simply confronted with a confusion between concrete duration and abstract time. . . . In a word, so-called physical determinism is reducible to psychological determinism . . . and it is this doctrine, as we hinted at first, that we have to examine" (p. 155).

M. Bergson admits (p. 149) that there can be no freedom of any significance as long as the law of the conservation of energy is presupposed unmitigated, but does little to mitigate its severity in the argu-

ment concentrated above, where the principle of the conservation of energy is ambiguously identified with "physical determinism," with the "universality of the principle of the conservation of energy," and with "a physical determinism spread over everything"; and where the subject-matter of the law of the conservation of energy is mentioned as, first, "matter," then "things," "phenomena," "bodies," and at last "beings." An easy-going reader is apt to pass over the ambiguity of this argument because M. Bergson seeks to reduce the hypothesis of "physical determinism" to "psychological determinism," by two sets of considerations which, as they are arranged in his text, distract the attention of the reader from one another.

Regarding the eleven topics, cited antecedently to the argument concerning the conservation of energy, on which we gave examples of M. Bergson's conflicting statements, it will be seen that a uniform principle of contradiction obtains: In the statements which we quote first under each topic M. Bergson affirms or implies either that quality and quantity, in general or in a particular aspect, are not mingled at all, or else that some proposition following from the fact of their separation is valid;—at this point of his various contentions the "confusion of quality and quantity" is treated as a false idea; a case of confused thinking, in the sense of the predication of an attribute of a subject from which it is absent. But this first attitude of mind is modified more and more as we follow the list of M. Bergson's statements under each topic, till at last we find M. Bergson affirming that quality and quantity are really mingled (or stating as true what consists with the fact of their mingling), and the "confusion of quality and quantity" has come to be looked on as an actual process of mixing or pouring together, due to one cause or another; to the inevitable interaction of mind and matter in common experience, the influence of language, the requirements of social life, or to something else.

Perhaps instead of describing the argument of *Time and Free-Will* as a system of contradictions constructed around the propositions that the confusion of quality and quantity is a false predication and that it is an illegitimate fact, it would be more accurate to describe this argument as a mass of ambiguity in which two opposite tendencies of thought are manifest,—a tendency towards the assertion that, for theoretical reasons, quality and quantity can not be mingled with one another, and a tendency to acknowledge that their mingling is actual. The elaborate ambiguity of the argument of *Time and Free-Will* can be fully comprehended only by means of a patient study of the numerous details of its constitution, but we must give a few

further indications in the subject before passing on to a general discussion of the meaning of the peculiarity of the book.

To illustrate the ambiguity anew we shall take the topic of psychic intensity. M. Bergson, we said, to return to the principles of our analysis, is convinced that the mind can not be quantitative. From this he concludes that there can not be any more-and-less of quality manifested in mental alteration. But what passes for mental change in intensity: the progress, for example, of moods from higher to lower degrees of exhilaration or sadness, or the appreciation of a progressive increase or abatement in temperatures or pains, is so obviously a quantitative alteration, that the only method by which it is possible to reconcile the observable character of change in the immediate with the supposition that there can be no psychical magnitude, is directly or indirectly to subsume that part of change in the immediate which makes it describable as intensively quantitative, under the material division of the world, and no longer under the heading of mind. Yet to go the full length of this re-classification explicitly would be to give up the dualistic premise of the argument, according to which the immediate *is* mind, and matter and mind *are* separate. Consequently the status of the material of M. Bergson's contention concerning intensity is ambiguous. The quantitative part of the intensity may be treated as mental or as material, or as really mental and illegitimately material, or as really material and illegitimately mental, and so forth. In short, the subject-matter of M. Bergson's argument wavers back and forth across the line of division, in dualism, between mind and matter.

If we search Chapter I of *Time and Free-Will* for an answer to the query: Does the mind exhibit intensive magnitude? we find the following uncertain statements: That although psychologists "see no harm in" speaking of states of consciousness as intensive, what they say "involves an important problem" (p. 1); the problem, namely, why intensity can be "assimilated" to magnitude (p. 2); for, M. Bergson says, common sense agrees with philosophers in "setting up" intensity as a magnitude (p. 3); although, for instance, "the distinct phases in the progress of an esthetic feeling . . . correspond less to variations of degree than to difference of state or nature" (p. 17). "Though the intensity of . . . sensation can not be defined by the magnitude of its cause, there undoubtedly exists some relation between these two terms" (p. 20). "Science . . . tends to strengthen the illusion of common sense . . . that a purely psychic state . . . can . . . possess magnitude" (p. 21). "We maintain that the more a given effort seems to us to increase, the

greater is the number of muscles which contract in sympathy with it, and that the apparent consciousness of a greater intensity of effort . . . is reducible . . . to the perception of a larger surface of body . . . affected" (p. 24). "When you press your lips more and more tightly against one another, you believe that you are experiencing . . . one . . . sensation which is . . . increasing. . . . Reflection will show you that this sensation remains identical, but that certain muscles of . . . the body have taken part in the operation. You felt this . . . encroachment . . . which is . . . a change of quantity; but as your attention was concentrated on your closed lips, you localized the increase there and you made the psychic force there expended, into a magnitude, although it possessed no extensity" (p. 25). "I can picture . . . a nerve transmitting a pain . . . and I can . . . understand that stronger or weaker stimulations influence this nerve differently. But I do not see how these differences of sensation would be interpreted by our consciousness as differences of quantity unless we connected them with . . . reactions that usually accompany them. . . . Without these . . . reactions, the intensity of the pain would be . . . quality, and not . . . magnitude" (p. 37). There is something "in common, from the point of view of magnitude, between a physical phenomenon and a state of consciousness . . ." (p. 34). "When it is said that an object occupies a large space in the soul . . . the reflective consciousness . . . will assume . . . that . . . such and such a desire has gone up a scale of magnitude, as though it were permissible . . . to speak of magnitude where there is neither multiplicity nor space" (p. 9).

If, dissecting the ambiguity of these statements, we ask whether, according to M. Bergson, intensity is or is not a magnitude, we discover that intensity, by implication, is a magnitude (p. 1); by implication, it is not (p. 3). Further, M. Bergson writes that we "experience . . . an analogous impression" in the case of both intensity and extensity (or magnitude) (p. 3). "In the idea of intensity . . . we find the image of . . . something virtually extended. . . . We are thus led to believe that we translate the intensive into the extensive . . ." (p. 4). Intensity of effort "seems to be presented immediately to consciousness under the form of quantity or at least of magnitude" (p. 20). A "crude conception of effort plays a large part in our belief in intensive magnitudes" (p. 21). "To sum up . . . we have found that the notion of intensity consists in a certain estimate of the magnitude of the cause by means of a certain quality in the effect; it is . . . an acquired perception," or "we give the name

of intensity to the larger or smaller number of simple psychic phenomena which we conjecture to be involved in the fundamental state: it is no longer an acquired perception, but a confused perception" (p. 72). In the next chapter M. Bergson remarks that "pure duration . . . must . . . be reckoned among the so-called intensive magnitudes, if intensities can be called magnitudes (p. 106)." On pages 3, 5, 6, 7, 20, 25, 42, 43, 70, 185, 222, intensity is subjective and opposed to extensity; on pages 48, 50, 54, 55, 57, 60, 145, it is objective and identified, more or less, with extensity itself.

Pursuing this ambiguity into the subject-matter of M. Bergson's discussion, in the plane of a more specific description, we note that the subjects to which M. Bergson ascribes the imperfectly localized attribute of intensity tend to lose their precise position in his dualistic theory. The discussion on page 5 might make one surmise that the author of *Time and Free-Will* considers that psychic states present an objective aspect, since he seems to mention the "subjective aspect" of "psychic states." Movements, though commonly supposed objective and usually treated as such in the book we are studying, become more or less subjective at several points in its argument; we have "conscious movements" (p. 26); "organic disturbances" are altogether unconscious as movements (p. 32), but "future automatic movements" are "likely to be conscious as movements" (pp. 34, 35). Effort or muscular tension is at once subjective and objective in a vague way (pp. 9, 22, 29). Sensations are subjective by definition (p. 1); they are "peripheral" (p. 26); "peripheral sensations" "accompany psychic states" (p. 27); "peripheral sensations are substituted for inner states" (p. 31); and furthermore we gather that there are sensations which do not occupy space, and others which do (p. 32). Finally, it is written that in attention "the feeling of a muscular contraction" is not "a purely psychic factor" (p. 28); and that in anger organic sensations are not the psychical element (p. 29).[11]

In contending that so-called psychic magnitude—psychic intensity in particular—is spatial, M. Bergson becomes a pure experience philosopher, after a fashion, though when he describes the presence of space in the mind, or of the mind in space, it is as though the conjunction were illegitimate, or at least abnormal, and deserving to be discontinued completely, or—sometimes—eliminated from philosophy and psychology, with the concession that mind, so far as practical life and common sense are concerned, may be quantitative. This explains, within the supposition of our analysis, how M. Bergson comes to make a class of remarkable statements which we exemplify as

[11] *Cf.* pp. 7, 30, 39, 47, and *passim.*

follows: " . . . if we hold a pin in our right hand and prick our left hand more and more . . . we . . . feel . . . a tickling, then a touch . . . a prick . . . a pain localized at a point, and finally the spreading of this pain. . . . And the more we reflect . . . the more clearly we shall see that we are here dealing with so many qualitatively distinct sensations. . . . But . . . we spoke of one . . . sensation which spread . . . of one prick which increased in intensity. The reason is that, without noticing it, we localized in the sensation of the left hand, which is pricked, the progressive effort of the right hand, which pricks. We thus introduced the cause into the effect, and unconsciously interpreted quality as quantity, intensity as magnitude" (p. 42). "The magnitude of a representative sensation depends on the cause having been put into the effect" (p. 47). "We confuse the feeling which is in a perpetual state of becoming, with its permanent external object, and especially with the word which expresses this object. In the same way as the fleeting duration of our ego is fixed by its projection in homogeneous space, our constantly changing impressions, wrapping themselves round the external object which is their cause, take on its definite outlines and its immobility" (p. 130). " . . . as external objects . . . are more important to us than subjective states . . . we have everything to gain by objectifying these states, by introducing into them . . . the representation of their external cause. And the more our knowledge increases, the more we perceive the extensive behind the intensive, quantity behind quality, the more also we tend to thrust the former into the latter, and to treat our sensations as magnitudes. Physics, whose particular function it is to calculate the external cause of our internal states . . . deliberately confuses them with their cause. It thus encourages and even exaggerates the mistake which common sense makes on this point. The moment was . . . bound to come at which science, familiarized with this confusion between quality and quantity, between sensation and stimulus, should seek to measure the one as it measures the other. . . . For if we grant that one sensation can be stronger than another, and that this inequality is inherent in the sensations themselves, independently of all association of ideas, of all more or less conscious consideration of number and space, it is natural to ask by how much the first sensation exceeds the second, and to set up a quantitative relation between their intensities" (p. 70).[12]

M. Bergson's argument on intensity, then, is an elaboration of the two propositions that quality and quantity can not come into contact

[12] *Cf.* pp. 28, 30, 44, 47, 48, 50, 54, 70, 71.

with one another or be mingled together, and that they *are* mingled together by an encroachment of space on the realm of the psychic. The above citations are meant to mark out the principal developments of this original ambiguity, but—we reiterate—its complete figure can only be comprehended by a study of Chapter I of *Time and Free-Will*, page by page; for the modification of nouns that carry the suggestion of materiality by adjectives which are ordinarily thought of as referring to what is psychic, and *vice versa*; the description of the process of incursion as real with the reality of illusions, shadows, phantoms, and errors, and as being the result of an association of ideas in which ideas turn out to be the things, sometimes of immediate experience, sometimes the meanings of the mind, and sometimes, again, entities half way between meanings and mere existences, serve, along with a variety of other means, to sustain the fundamental ambiguity in M. Bergson's exposition in Chapter I of *Time and Free-Will*, as to the locus of intensity.

Under the topic of intensity we thus find M. Bergson's ambiguity as to whether mind has magnitude, whether quality and quantity are confused actually, or only by the false predication of intensity and multiplicity and pure space of the psychic, branching out in a number of ways. A symmetrical development of the ambiguity in each of the dozen topics which were enumerated in illustration of the difficulty encountered by M. Bergson in his attempt to reconcile the theory that the immediate is pure quality with the observable nature of experience, might be traced; but without further citations we proceed to consider the meaning of the contradictions which we have quoted in substantiation of our analysis.

According to this analysis M. Bergson is ambiguous in specifying what features of immediate experience constitute mind, because, although he is forced to ascribe intensity and multiplicity to the material division of the world, he is prevented from re-defining intensity and multiplicity as material out and out, not only by the obvious character of immediate experience, but especially by the danger of converting his new form of dualism into an apparently arbitrary doctrine, which it would become if there were no illusion to be dispelled as to the nature of immediate experience; for it is precisely by showing that the immediate is spatial *illegitimately* that M. Bergson expects to point out the way to a philosophical reform, and to a valuable method in psychology. Indeed, if M. Bergson rejected intensity and multiplicity utterly from the immediate, the subject-matter of psychological investigation would become unrecognizable to common sense, incapable of definition, and incommensurable with language or

any other systems of signs. This explains why M. Bergson is ambiguous as to the status in dualism of multiplicity and intensity, and why he takes advantage of dualism's ill-localized inextensive immediate to harbor the imperfectly identified mind of his novel psychology.

But why should the combination of the fact of uniqueness with the dualistic hypothesis, which was the simplest form of our analysis of *Time and Free-Will*, grow into the contradictory propositions: that mind is pure quality—something not tangible enough to provide a subject-matter for psychological science; and that mind, contrary to the premises of dualism, is extended by the very possession of multiplicity and intensity?

The answer to this question can be made to emerge from a comparison of the epistemological aspects of M. Bergson's original premises. In the first place, in so far as the theory of knowledge is concerned, dualism is primarily a device for palliating the difficulties of the resemblance theory of cognition. In this theory of knowledge an idea is true of its object by the resemblance it bears to that object; but since no resemblance short of absolute coincidence of attributes, or identity, appears to be perfect, absolute truth would seem to be found only where the idea is the same as the object. Following this train of thought further, it seems in addition that if an absolutely true idea coincides with its object, every object must be the absolutely true idea of itself. But in this case the possibility of error would be excluded, and in order to find some sort of lodging for error, object and idea would once more necessarily have to be distinguished and placed apart. The resemblance theory of knowledge, then, is threatened by the paradoxes that if idea and object are not different there can be no error; and, on the other hand, that as long as idea and object are different at all, genuine truth will appear precluded. Now, as was said, dualism, epistemologically speaking, is an arrangement for warding off these complementary paradoxes.

Dualism provides that idea and object shall absolutely resemble each other and yet be different, by means of the doctrine that mind corresponds to matter absolutely, though mind and matter remain distinct, since the one is unextended, the other extended. The most significant feature of dualism, then, from the point of view of the theory of knowledge, if our exposition is correct, is the doctrine of correspondence; and we noted at the commencement of this analysis how the fact of uniqueness, when combined with dualism, acted to modify the correspondence aspect of this theory. We must look for the source of M. Bergson's ambiguities and contradictions, conse-

quently, in the relation of the doctrine of correspondence to the epistemological significance of the fact of uniqueness.

The fact of uniqueness was described at the opening of our analysis as the fact that associationistic psychology is incompetent to describe the subject-matter of psychology accurately in terms of ideas or mental atoms or states of mind, since these terms are abstract whereas the world that surrounds and impresses us at any particular time is individual and unanalyzed into psychological elements. In other words, the fact of uniqueness is the fact that since science is abstract and its subject-matter concrete, a discrepancy inevitably exists between scientific knowledge and its object. The factual premise of M. Bergson's fundamental logic was thus that a true idea is in some measure different from its object. But the fact that psychology proceeds by the method of abstractions meant to M. Bergson's mind not that the resemblance theory of knowledge is at fault, but that abstract psychology is not genuinely scientific. He reasoned that if psychology does not absolutely reproduce its subject-matter, psychology must be false, from the premise that true knowledge resembles its object. The fact, then, which M. Bergson set out to combine with the dualistic hypothesis, was that a true idea is different from its object; but this fact went along in his mind with the premise that an idea which is not identical with its object can not really be true.

We have, then, the correspondence feature of dualism, which preserves in a kind of solution the contradictory notions that a true idea is absolutely like and yet different from its object, united painstakingly with the fact that true ideas are decidedly unlike their objects, and with the confident assumption that ideas are absolutely similar to objects of which they constitute true knowledge. M. Bergson's fact, as may be said, precipitates the ambiguity of the correspondence feature of dualism; it acts to diminish the correspondence aspect of the dualistic theory, and to lessen the theoretical resemblance of mind to matter. But as M. Bergson assumes that knowledge should be quite like its object, his development of the consequences of the view that mind must be dissimilar to matter is complicated and contradicted by the effects of his epistemological belief that they should be alike, and by the fact that their likeness is an empirical truth. In this way the contradictions and ambiguities illustrated under the dozen principal heads of our analysis are explained.

The epistemological contradiction of the argument proceeds naturally into the propositions that immediate experience is the truth of itself; and that it is the falsehood or merely approximate truth of something else lying beyond or within. In the first case immediacy

is supposed to be epistemologically sufficient to itself (p. 183), knowing is seeing (pp. 197, 198) or acting (pp. 187, 220, 230), the very attempt to inquire or discuss the true nature of mind misleads (pp. 183, 221), and language (p. 130) and conception (p. 236) are a source of illusions since they detach speculative curiosity from immediate contact with its subject-matter. This attitude in the theory of knowledge is not removed, by very much, from philosophical skepticism, since if each thing is the true idea of itself, truth as distinguished from error is in danger of vanishing. In the second case, where M. Bergson regards immediate experience as an approximation to something more true than itself, his estimate of the value of conception is reversed; psychological truth is to be got by inquiry, discussion, analysis, and abstraction; and language is not regarded as misleading generically.[12]

What M. Bergson thinks that he proves in *Time and Free-Will* is very different, in our opinion, consequently, from what he proves in reality. He thinks he proves that what passes for mind in science and common sense is, strictly speaking, not mind at all, since he believes that mental intensity and multiplicity result from an incursion of space into mind, and from a projection of mind into space. Mind comes to mean in his theory whatever immediate experience may be, minus not only extension, but intensity and multiplicity as well, and the empirical philosopher's pure experience, or immediate datum of consciousness, is elaborately explained in *Time and Free-Will* as an illegitimate pouring together, for unphilosophical reasons—for the sake of language, the saving of time, the requirements of life, the convenience of practise, or the habits of the intellect—of elements that should, by hypothesis, be apart. In so far, however, as M. Bergson tries to describe a process of confusion of mind and quantity, he gives up his dualistic premise; and his accounts of the mingling of quality and quantity, in terms of confusion, incursion, projection, assimilation, translation, exchange, imitation, osmosis, and so forth, are not evidence that dualism requires reformation, but evidence fatal to dualism itself.

It has been shown that there are grave contradictions in M. Bergson's exposition of all the capital topics treated in *Time and Free-Will*, and that these contradictions can be brought under the ambiguity of a theory regarding the relation of quantity to quality. Incidentally it has been shown that the interrelation of these contradictions points to their probable origin in an attempt to combine what we called the fact of uniqueness with the dualistic hypothesis, turning on a revision

[12] See *Time and Free-Will, passim.*

of the correspondence theory. Supposing such an attempt to have been the underlying principle of M. Bergson's work, not only the argument, but the extraordinary arrangement of the elements of the argument, the arbitrary nature of these elements, and even some of the literary characteristics of M. Bergson's text, are rendered explicable. Were we interested primarily in the argument of *Time and Free-Will*, as a whole, we should try to confirm our view that the doctrine of correspondence occupies a cardinal position therein, by showing the doctrine of parallelism, which is a ramification of the correspondence theory, to have engaged M. Bergson's mind prior and subsequent to the writing of *Time and Free-Will*, quoting relevant passages from his publications as follows: *Extraits de Lucrèce*, Introduction; *Matter and Memory*, *Bulletin de la Société Française de Philosophie*, Volumes 1 and 5; *Le Paralogism Psycho-Physiologique*, *Revue de Metaphysique et de Morale*, Volume 12. Seeing, however, that our study of the argument of *Time and Free-Will* is for the sake of the light it sheds on M. Bergson's formulation and renunciation of a theory of mind, we shall proceed forthwith to the special question of M. Bergson's psychology.

M. Bergson defines the principle of his psychology, in *Time and Free-Will* (Conclusion), as a reversal of the Kantian doctrine of perception, proposing the idea that inasmuch as the forms through which we know the material world are constantly employed by our minds, since the external world is vitally important to ourselves, we are likely, when we turn our attention inwards, to apprehend the soul in material terms. To perceive the soul—the object of psychology—as it is really, in his idea, consequently, we must subtract from our ordinary experience of mind what it has in common with matter, and this dematerialization of ordinary experience will reveal the veritable nature of the soul to psychology. The principle of M. Bergson's doctrine, therefore, in his own terms, is that mind is not whatever matter may be.

In the preceding analysis of *Time and Free-Will* we supposed M. Bergson to conclude from the fact of the interpenetration of elements in immediate experience, interpreted with the aid of the dualistic hypothesis, that matter and mind, rightly speaking, have nothing in common, and it will be well to mention why the results of a combination of these premises can be expressed in terms of the Kantian philosophy.

The epistemological upshot of M. Bergson's premises was an ambiguity containing the contrary views that immediate experience is true in its own right by itself, and that it is the falsehood of something

else lying beyond which it hides. This ambiguity we traced to the premises themselves: The notion that absolute truth is the limiting case of increasing resemblance—that whatever is, is the truth of itself—and that object and idea differ permanently in order that error may find lodgment between the two terms we discovered suspended in solution in the doctrine of correspondence, and inhering separately, the one in M. Bergson's factual premise, the other in his assumption concerning the significance of that fact itself. Be it now noted that the same sort of ambiguity is embodied in the scheme of the Kantian philosophy.

In this scheme to know is to apprehend a material by an act of the mind which makes its object knowable by knowing it. If we take this formula in one of its phases it seems as if, since what we know can only come to us through the forms of knowledge, we must know completely whatever is known at all, and as if, for this reason, we could never fall into error; it seems, in other words, as if the experience of which we become aware must have been perfectly shaped by the forms of the mind before or simultaneously with the event of our awareness, as if knowledge, that is, were the given structure of experience, and therefore as if the phenomenal world were impervious to error. To make room for error in his scheme Kant is forced to move experience downwards from its position above the laws of the mind towards the things-in-themselves; in so far as experience moves in this direction in the Kantian scheme it loses its organization and shape and grows pervious to error. Thus the position of experience is indeterminate in Kant's philosophy for the same reason that dualism contends at once, by means of the correspondence theory, that matter and mind are absolutely similar to one another and different nevertheless. Hence there is no difficulty in explaining why M. Bergson can express his views in a vocabulary of Kantian ideas, although he may have reached his conclusions unaffected by direct preoccupation with the distinctions of the philosophy of Kant. In either case, whether M. Bergson was originally convinced that mind must be opposite in nature to matter because our habits of apprehending matter appeared to him likely, *a priori*, to vitiate the perception of inner experience; or whether he came to this conviction because it inevitably grew out of the combination of the fact of uniqueness with the theory of dualism—the fact remains that, according to the fundamental principle of his psychology, mind must differ from matter in every respect.

The premises out of which M. Bergson undertakes to develop a doctrine of mind are, therefore, simply that mind is a concrete unique interpenetration of elements (by observation), and that mind is the

reverse of whatever matter may be (by deduction). Being the opposite of what matter is, it may be said at length that mind is without any magnitude—without intensity, without multiplicity, and without repetition, since if it manifested recurrent likenesses it would be quantitative in two or more ways. Mind, therefore, can not grow or diminish, be multiple, exist in space or in time (conceived as a homogeneity or dimension), nor can mind be caused in the sense of exhibiting regular sequences. Finally mind can not be described by means of abstractions nor depicted in words. Now what can M. Bergson do with this knowledge concerning the mind?

Obviously, it will enable him to assail with effect the traditional teachings of psychology; to dispose of psychophysics, associationism, and determinism, since in part these doctrines stand on the theoretical foundation of his own deduction; and to disprove several other much-cherished doctrines besides; but the more he urges his attack against the traditional psychology the clearer it must become that his own novel psychology is not a scientific doctrine at all, since it admits, in its logical form, that mind is ineffable and the attempt to explain the nature of mind not only foredoomed to failure, but positively pernicious. At this pass M. Bergson's novel psychology becomes a regimen of life, a rule of freedom, and a prescription for looking at the immediate in a particular way in order thoroughly to see the interpenetration of elements there, with which he set out; not the interpenetration, it is true, as a confluence precisely, for M. Bergson's deduction curtails most seriously the primary fact that gave it a start, and he is forced by his logic to affirm that the real immediate is not that simple interpenetration of which, for example, we have a description in William James's *Stream of Thought*, but an interpenetration of elements that are not distinct, in a medium that is not continuous. From the fact that the deduction infringes his original observation we shall now go on to note why M. Bergson relinquishes his psychology.

He relinquishes his psychology, in the first place, because he has made the principle of his doctrine the assumption that science must reproduce whatever there is in its subject-matter, and—since abstract terms are necessarily discrepant from what is concrete—he assumed in this way that the very abstractness of science is unscientific. But without some use of abstraction M. Bergson would be unable to make his ideas explicit; unable, perhaps, to have any ideas in the sense of meanings, and mind in the literal significance of his novel psychology could be neither generalized nor described. He abdicates his psychology, in the second place, because from his deduction he acquires a definition telling merely what mind is not; and for the purpose of

constructing a positive doctrine it is necessary to alter this negative proposition concerning the mind into propositions with a tangible content. He is assured deductively that mind is not intensive and not multiple, but in disproving the intensity and multiplicity of mind his demonstration becomes a contention that since mind is not intensive it is discontinuous, and since it is not multiple it must be continuous in its change.

We have here the reasons for M. Bergson's abdication of his novel theory that mind is really mere quality or pure heterogeneity. This abdication results in a number of what may be called longitudinal contradictions, since M. Bergson is required to modulate each one of his contentions: that mind is non-intensive, non-multiple, non-divisible, temporally non-dimensional, and so forth—into its opposite; as has been shown in the preliminary analysis, the relevance of each one of the topics of contradiction illustrated above thus being direct in the matter of our special concern in this dissertation. The abdication results in, and can be demonstrated by, as well, a further series of contradictions which may be described as transverse; for not only does each line of M. Bergson's argument conflict with itself, but the several lines conflict with each other—since in permitting his negative propositions concerning the mind to take on their colloquial or conveniently opposite positive significance, M. Bergson comes to maintain at once that mind is continuous and discontinuous, and its alteration discontinuous and continuous.

It seems improbable that the underlying argument of *Time and Free-Will* has been manifest to a great many of its readers, since M. Bergson is almost universally regarded as an unequivocal champion of the continuity of immediate experience, though the argument of the first chapter of his earliest book is meaningless in itself and in relation to the following chapters, except as an attempt to demonstrate that states of consciousness can not increase or diminish continuously. The contention to this effect is, moreover, clearly made in many passages. " . . . although," says M. Bergson (p. 57), in discussing the growing intensity of a luminous source, "the extensive cause varies continuously, the changes in the sensation of color are discontinuous." " . . . the successive shades of gray produced by a continuous decrease of illumination are discontinuous, as being qualities" (p. 58). " . . . sensation varies by sudden jumps while the stimulus increases continuously (p. 64)." "Assume that I experience a sensation S, and that, increasing the stimulus continuously, I perceive this increase after a certain time . . . I am now notified of the increase of the cause; but why call this notification an arith-

metical difference? . . . It could only be called an arithmetical difference if I were conscious . . . of an interval between S and S′ . . . By giving this transition a name . . . you make it . . . . a reality and . . . a quantity . . . Now you are not only unable to explain in what sense this transition is a quantity, but reflection will show you that it is not even a reality; the only realities are the states S and S′ . . ." (p. 65).[13] " . . . the decreasing intensities of white light illuminating a given surface would appear to an unprejudiced consciousness as so many different shades, not unlike the various colors of the spectrum" (p. 54). "Ce qui le prouve bien, c'est que le changement n'est pas continu dans la sensation comme dans sa cause extérieure. . . . " (p. 40 of the French text.)

The termination of the last quotation is given in French because in translation the sense of the original has been reversed. This takes us to the subject of the disparities between the English and French editions of *Time and Free-Will*, which illuminate to a considerable degree the matter we are discussing.[14]

The doctrine of *Time and Free-Will* has been viewed throughout the course of our preliminary analysis as a complicated deduction unfolding into the contentions, among a number of others, that immediate experience is really continuous and discontinuous. At first, it appears, M. Bergson was inclined to lay more emphasis on the former of these contradictory contentions, and this inclination was, as it seems, strengthened in the progress of his later writings not only by the attempt to avoid contradiction, which would have encouraged increasingly whichever inclination had first been preferred, but by other influences within and without the field of M. Bergson's own speculation. Without this field, but acting upon it, was the influence of William James's chapter in *The Principles of Psychology* on "The Stream of Thought"; and the fact that William James—under whose auspices the philosophy of M. Bergson first grew familiar to many readers of English—was interested largely in the phase of that philosophy which assisted the vindication of the continuity of immediate experience. The English-reading public has possibly overestimated M. Bergson's interest in the contention that immediate experience is continuous, being far more than M. Bergson taken with the idea that if the immediate is not made up of discrete parts, no "trans-empirical

[13] *Cf.* especially pp. 68, 69.

[14] The disparities between *Les Données Immédiates de la Conscience* and *Time and Free-Will* are so marked in a good many passages that we suppose they must exhibit the effect of M. Bergson's revision. The translator writes in his Preface to *Time and Free-Will*: "In making the following translation of . . . (the) *Essai sur les Données Immédiates de la Conscience* I have had the great advantage of . . . (M. Bergson's) coöperation at every stage . . . "

connective tissue" will be required to join these parts to each other. At any rate, the view that the mind is ineffable and continuous and discontinuous—with which, on the only supposition that renders the arguments of *Time and Free-Will* comprehensible, M. Bergson, as we believe, proceeded—is more clearly presented in *Les Données Immédiates de la Conscience* than in the English version of that work, and the disparities between the original and translation, which are too numerous to have been the effect of an accident, fall in harmoniously with the explanations advanced in this dissertation concerning the significance of M. Bergson's epistemology.

For example, in *Les Données Immédiates de la Conscience* (p. 80) M. Bergson describes pure duration, which is the same as pure mind or the unvitiated datum of immediate consciousness, as an *indistincte* multiplicity with no relation to number; in *Time and Free-Will* (p. 105) the word corresponding to "*indistincte*" is "continuous," which converts the negative term into a term of positive significance. Here the English version, more than the French, departs from the original contention, arising from M. Bergson's premises, that mind is neither continuous nor discontinuous. Later in the French edition (p. 91) pure duration is again defined to be "*heterogène*" and "*indistincte*"; but the corresponding definition in English (p. 120) is "heterogeneous" and "continuous"; and again, in English (p. 238, note), the word "continuous" is used to translate "*indistincte*," modifying "*durée*" (French, p. 183, note). Similarly, since—in so far as M. Bergson departs from the fundamental logic of his position he conceives of the "confusion" of quality with quantity as being a real process of incursion or osmosis or whatever, and of the falsity of the confusion as being an illegitimate association of ideas in which the ideas are mere existences more than meanings—we find that whereas M. Bergson, in French (p. 55), originally spoke of this confusion as corrupting our "*representation*" of change; in English (p. 74) it is our "feeling" of change which he describes as corrupted. In the same manner the real self is said to be reached by "*une réflexion approfondie*" in *Les Données Immédiates de la Conscience* (p. 178); but in the English translation (p. 231) by a "deep introspection"; and past states of the mind which "represent" phases of our real duration in French (pp. 183-184), "are" these phases in English (p. 239).[15]

To sum up: M. Bergson attempts to establish an anti-material psychology by defining the mind as non-quantitative, non-repetitious,

[15] For other alterations explicable analogously see *Time and Free-Will*, pp. xix, 6, 12, 26, 77, 87, 93, 101, 128, 139, 142, 164, 167, 183.

and undetermined. But in adhering to the terms of this definition he finds that his anti-material mind is not amenable to investigation by means of abstractions nor commensurable with words—that his psychology is a method of intuition or behavior; not a doctrine that can be formulated or communicated; not a natural science. From this skeptical position M. Bergson recedes by dividing the contention that mind is non-quantitative into the contentions that mind is non-multiple and non-intensive, altering these separately into the contentions that mind is continuous and discontinuous, and palliating the contradiction as best he is able. He alters the contention that mind is non-repetitious into the statements that it is heterogeneous in its depths or on critical occasions. The contention that it is undetermined is modified into the view that mind is probably or possibly uncaused, or uncaused in a certain sense, aspect, or manner.

From this attempt to formulate a science by adding to descriptions of immediate experience abstract statements as to what a true science of immediate experience can not be, altered by roundabout methods into contradictory propositions as to what the *real* immediate must be, M. Bergson emerges with his epistemological convictions unmodified. We have next to observe the repetition in *Matter and Memory* of this attempt to formulate a science in terms of epistemological objections to the attributes which natural science is actually found to possess.

II

(1) MATTER AND MEMORY

The chiefly significant difference between the arrangement of M. Bergson's assumptions and observations in *Time and Free-Will* and *Matter and Memory* is that he accepts the extension of immediate experience as a genuine philosophical fact in the latter work, whereas in *Time and Free-Will* space is supposed to be present in the immediate illegitimately. M. Bergson's recognition that the immediate is really extended was encouraged, perhaps, by an advance in psychological doctrine in various quarters, but the development of the doctrine itself of *Time and Free-Will* from the premise that the immediate data of consciousness are unextended, to the demonstration that practise and language and abstract thought involve the confusion of quantity and quality in the sense of an actual mingling or pouring together of matter and mind, brought M. Bergson close to the complete admission that the immediate is extended. Postulating the extension of immediate experience, but retaining the dualistic hypothesis and the theory that genuine knowledge must coincide with the object of knowledge, M. Bergson proceeds to develop a doctrine epistemologically similar to the doctrine of *Time and Free-Will.* The principal peculiarity of that book lay in its attempt to combine the fact that a discrepancy separates the terms of the science of psychology from psychology's subject-matter, with the theory that knowledge is true of its object in the measure of their resemblance. Now in granting the extension of immediate experience M. Bergson accepts the presence of matter in immediate consciousness and confronts a discrepancy separating the terms of conceptual physics from the immediate material of physical science, parallel to the discrepancy between the terms and subject-matter of psychological science. Hence, in *Matter and Memory* M. Bergson attempts a reform of the science of matter similar to the reform he attempted in *Time and Free-Will* of the science of mind.

Due to his epistemological presupposition M. Bergson tended to identify knowledge of mind with the subject-matter of psychological science, but the tendency was checked by the danger of excluding the possibility of error from psychology. Hence the "genuine" mind of *Time and Free-Will* was sometimes concrete experience and sometimes an abstraction therefrom, according to the circumstances of M. Bergson's treatment. Similarly in *Matter and Memory* M. Bergson

attempts to identify "genuine" matter with immediate experience, and then, reversing this tendency, grants that matter is an abstraction really, just as the physical scientists claim that it is. But in addition to an indeterminate doctrine of physics in which real matter is defined alternately as the abstraction that physics describes and as a concrete immediate experience, *Matter and Memory* once more presents an indeterminate psychology in which genuine mind approaches and recedes from immediate experience. Hence two general statements in *Matter and Memory* concerning experience: Allowing both matter and mind to coincide with the immediate data of consciousness, and consequently with one another, M. Bergson treats all reality as of a piece, thereby satisfying his premise that veritable knowledge is one with its object. But the necessity of providing a position for error bars him from the hypothesis that reality is all of a piece, and causes M. Bergson to distinguish matter and mind from one another by distinguishing both from immediate experience.

The former descriptive treatment of the make-up or character of reality is exemplified in *Matter and Memory* in numerous passages. Thus in setting forth the results to which the application of his method of trusting (p. 245) to "immediate knowledge" may lead, M. Bergson formulates a number of propositions (pp. 246–291) which are intended, according to himself (p. 267), to narrow the interval between heterogeneous qualities and homogeneous movements, or sensations and matter. And in this phase of his thought he describes matter and mind as different rhythms of duration, or different degrees of tension of consciousness in a scale of being (p. 275). For the most part M. Bergson, however, breaks reality into separate terms: mind, matter, and immediate experience. In outline the indetermination of the nature he ascribes to matter and mind develops the following variations.

When, in order to satisfy his epistemological premise, M. Bergson begins to reduce the interval between immediate experience and matter by treating the abstractness of conceptual matter as false, the "pure perception" in which M. Bergson supposes mind and matter partly to coincide, tends to take on the character of conceptual matter. As the interval disappears and matter becomes immediate experience, quality is treated as actually present in matter; matter acquires the characteristics which physical science disregards in immediate experience; matter is no longer a determined system of movements, but exercises the faculty of choice; and "pure perception" is concrete immediate experience. And so, as matter moves towards immediate experience, "pure perception" is identified with ordinary perception; that is, memory is treated as the mark of whatever is mental, and as constituting

perception, and even matter, perhaps. But, contrarily, when matter regresses from immediate experience in the direction of conceptual space, memory is treated as falsifying perception. Now, when matter coincides with the immediate data of consciousness, ceasing to be a determined system of movements, the nerves choose and deliberate and do the work of the mind; and mind, or the past, influences matter directly by affecting the brain. Naturally, when matter falls in with immediate experience, the abstract space of mathematical physics is described as an instrument of falsification vitiating concrete extensity. But when the identification of mind with the immediate forces matter towards conceptual matter, space is treated as valid philosophically.

In his Introduction to *Matter and Memory* M. Bergson states his project of reforming philosophy by identifying matter with immediate experience. The difficulties of dualism are due for the most part, he declares (p. vii), to the conceptions which philosophers entertain of matter; Descartes, he continues (p. ix), put matter too far from us when he made it one with geometrical space, and Berkeley exceeded the truth in an opposite direction when he made matter coincide with mind. "We place ourselves," says M. Bergson, "at the point of view of a mind unaware of the disputes between philosophers. Such a mind would naturally believe that matter exists just as it is perceived. . . . In a word, we consider matter before the dissociation which idealism and realism have brought about between its existence and its appearance (p. viii)." The difficulty, as we have said, connected with the enterprise of identifying matter and immediate experience, appears in a loss of the distinction between the object of physical science and that science itself, involving the preclusion of error in physics. In accordance with our preliminary outline above let us record some of the ambiguities springing from the difficulty of identifying matter with immediate experience.

We start from perception and note that as matter recedes from the immediate, perception is dragged in the direction of space. Sometimes in M. Bergson's exposition matter is qualitative; that is, it partakes of the nature of immediate experience: " . . . the sensible qualities of matter would be known in themselves . . . could we but disengage them from that particular rhythm of duration which characterizes our consciousness" (p. 75). " . . . we must leave to matter those qualities which materialists and spiritualists alike strip from it" (p. 180). " . . . there is no impassible barrier, no essential difference, no real distinction even . . . between quality and move-

ment" (p. 291).[1] At other points in his exposition M. Bergson seems to argue that matter is not legitimately possessed of its perceived qualities: "The qualitative heterogeneity of our . . . perceptions of the universe results from the fact that . . . memory condenses in each an enormous multiplicity of vibrations. . . . If we were to eliminate all memory, we should pass . . . from perception to matter . . . Then matter . . . would tend more and more towards that system of homogeneous vibrations of which realism tells us . . ." (p. 76). Concomitantly perception recedes from mind: "Pure perception . . . however rapid we suppose it to be, occupies a certain depth of duration, so that our successive perceptions are never the real moments of things . . . " (p. 75) " . . . spirit" is "in perception already memory . . . " " . . . the humblest function of spirit is to bind together the successive moments of the duration of things . . ." (p. 295). Yet: " . . . pure perception is . . . in a sense matter . . ." (p. 325). Further: " . . . matter . . . coincides, in essentials, with pure perception . . ." "It is in very truth within matter that pure perception places us . . ." (p. 235). "These . . . terms, perception and matter, approach each other in the measure that we divest ourselves of . . . the prejudices of action . . ." (p. 293).[2]

Does memory then falsify or does it constitute perception? As matter progresses in the direction of the immediate, forcing perception towards mind, memory seems to be essential to perception, perhaps even to matter itself: "Does not . . . an irreducible opposition remain between matter . . . and the lowest degree of . . . memory? . . . the distinction subsists, but union becomes possible, since it would be given, under the radical form of a partial coincidence, in *pure* perception. . . . We may go further: memory does not intervene as a function of which matter has no presentiment and which it does not imitate in its own way" (p. 297). But: " . . . what can be a non-perceived material object . . . unless it is a kind of unconscious mental state" (p. 183)? " . . . matter as grasped in concrete perception . . . is in great part the work of memory" (p. 237). "Theoretically . . . the part played by consciousness in external perception . . . [is] to join together, by the continuous thread of memory, instantaneous visions of the real. But, in fact, there is for us nothing that is instantaneous. In all that goes by that name there is already some work of memory" (p. 75). "Your perception, however instantaneous, consists . . .

[1] *Cf.* pp. 75, 183, 237, 238, 244, 268, 271, 276, 293.
[2] *Cf.* pp. 78, 183, 306.

in an incalculable multitude of remembered elements; and in truth every perception is already memory" (p. 194). " . . . to perceive consists in condensing enormous periods of an infinitely diluted existence" (p. 275). Slightly different is the following view of the subject: " . . . the subjective side of perception . . . [is] the contraction effected by memory, and the objective reality of matter . . . [is] the multitudinous and successive vibrations into which this perception can be internally broken up" (p. 77). As matter approaches homogeneous space, memory is treated more and more like a foreign element in perception. M. Bergson argues (pp. 24, 25) that perception must not be supposed to differ from memory in degree of intensity only; that in order to make our idea of matter clear we must neglect the contraction operated by memory; and that perception as confined to the present, over against perception impregnated with the past, would mould itself truthfully on its object. "Our perception of matter is . . . [not] relative or subjective, at least in principle, and apart from memory" (p. 48). "The capital error, the error which, passing over from psychology into metaphysic, shuts us out . . . from the knowledge . . . of body and of spirit, is that which sees only a difference of intensity, instead of a difference of nature, between pure perception and memory" (p. 71). " . . . memory above all . . . lends to perception its subjective character; the philosophy of matter must aim in the first instance . . . at eliminating the contributions of memory" (p. 80). "Either . . . our conception of matter is false, or memory is radically distinct from perception" (p. 318).[3]

Similarly, as matter progresses in the direction of the immediate it ceases to be the system of determined interactions defined by physics, and takes on indetermination in the form of a faculty of choice. " . . . matter, the further we push its analysis . . . [tends] more and more to be only a succession of . . . movements which may be deduced each from the other . . ." (p. 295). "To reply to an action received by an immediate reaction . . . this is the fundamental law of matter: herein consists necessity" (p. 279). " . . . we may say that the nervous system, a material mass presenting . . . physical properties only . . . can have no other office than to receive, inhibit, or transmit movement" (p. 78). " . . . the living body in general, and the nervous system in particular, are the only channels for the transmission of movements . . ." (p. 81). " . . . as soon as we compare the structure of the spinal cord with that of the brain, we are bound to infer that there is merely a difference of complication, and not a difference in kind, between the functions of the

[3] *Cf.* pp. 45, 64, 72, 75, 78, 84, 315.

brain and the . . . activity of the medullary system" (p. 18). Nevertheless: " . . . there is . . . a radical distinction between the pure automatism, of which the seat is mainly in the spinal cord, and the voluntary activity which requires the intervention of the brain" (p. 18). " . . . the cells of the various regions of the cortex . . . allow the stimulation received to reach *at will* this or that motor mechanism of the spinal cord, and so to choose its effect" (p. 19). " . . . if there exist in the material world places where the vibrations received are not mechanically transmitted . . . [these] zones of indetermination . . . must occur along the path of what is termed the sensori-motor process" (p. 37). "The afferent nerves bring to the brain a disturbance, which, after having intelligently chosen its path, transmits itself to motor mechanisms created by repetition" (p. 96).[4]

In the measure that matter moves from pure space towards immediate experience, acquiring the character of concrete perception, which is constituted by memory, the past, from being invalid takes on a clearly admitted potency: " . . . though the whole series of our past images remains present with us, still the representation which is analogous to the present perception has to be *chosen*" (p. 114). "In the degree that . . . recollections take the form of a more complete, more concrete, and more conscious representation, do they tend to confound themselves with the perception which attracts them . . ." (p. 160). "Virtual, this memory can only become actual by means of the perception which attracts it. Powerless, it borrows life and strength from the present sensation in which it is materialized" (p. 163). " . . . the past tends to reconquer, by actualizing itself, the influence it had lost" (p. 169). "It is just because I made . . . [pure memory] active that it has become actual, that is to say, a sensation capable of provoking movements" (p. 179). "Memory . . . [is] powerless as long as it remains without utility . . ." (p. 181). Injure the cerebral mechanism and " . . . you deprive . . . [the past image] of all means of acting upon the real and consequently . . . of being realized" (p. 88). " . . . our memory directs upon the perception . . . the memory-images which resemble it . . . Memory thus creates anew the present perception" (p. 123). "We will try to follow pure memory . . . in the continuous effort which it makes to insert itself into motor habit" (p. 202). " . . . it is necessary that . . . recollections . . . should be able to set going in the brain the same machinery that perception ordinarily sets to work" (p. 316).[5]

[4] *Cf.* pp. 2, 5, 10, 20, 21, 30, 32, 35, 40, 46, 68, 80, 86, 178, 299, 309, 331.
[5] *Cf.* pp. 87, 97, 98, 103, 119, 131, 168, 176, 180, 185, 197, 299, 319, 320.

In so far as the past is viewed by M. Bergson as endowed with potency the distinction of function between the spinal cord and the brain becomes more marked; since it is upon the brain that he considers the past to act: "There is . . . only a difference of degree —there can be no difference in kind—between what is called the perceptive faculty of the brain and the reflex functions of the spinal cord" (p. 10). "In our opinion (p. 19) . . . the brain is no more than a kind of central telephonic exchange . . . its office is limited to the transmission and division of movement" (p. 20). "The truth is that my nervous system interposed between the objects which affect my body and those which I can influence, is a mere conductor, transmitting, sending back, or inhibiting movement. This conductor is composed of an enormous number of threads which stretch from the periphery to the center, and from the center to the periphery" (p. 40). On the other hand: "Our contention . . . is that . . . there are . . . in . . . [the substance of the brain], organs of *virtual* perception, influenced by the intention of memory, as there are at the periphery organs of *real* perception, influenced by the action of the object" (p. 164, note). The " . . . organ of sense . . . is like an immense keyboard, on which the external object executes at once its harmony of a thousand notes. . . . Now, suppress the external object or the organ of sense, or both: the same elementary sensations may be excited, for the same strings are there, ready to vibrate in the same way; but where is the keyboard which permits thousands of them to be struck at once? . . . In our opinion the 'region of images,' if it exists, can only be a keyboard of this nature. Certainly it is in no way inconceivable that a purely psychic cause should directly set in action all the strings concerned" (p. 165). " . . . in the case of mental hearing . . . [there is] only one plausible hypothesis . . . namely that . . . [the temporal lobe] occupies with regard to the center of hearing itself the place that is exactly symmetrical with the organ of sense. It is, in this case, a mental ear."[6]

As matter moves from space to immediate experience, the concept of homogeneous space, by means of which physics abstracts matter from the immediate, is treated as an illegitimate substitute for concrete extensity. When M. Bergson regards the science of physics as speculatively true, saying for example that " . . . the object of science is . . . to rediscover the natural articulations of a universe we have carved artificially" (p. 260), and that Faraday and Kelvin (p. 265) are the two physicists of the nineteenth century who have penetrated farthest into the constitution of matter, he certainly accepts as specu-

[6] *Cf.*, pp. 86, 167, 168, 299.

latively valid the concept of geometrical space. And when M. Bergson criticizes the notion of homogeneous time (p. 273), he seems to regard space as a legitimate philosophical concept. But later on (p. 276), space is mentioned as merely "underlying" phenomena, and as not being (p. 280) a "property of things," but a "wholly ideal diagram (p. 278) of arbitrary and infinite divisibility," which, for the sake of action, "we throw . . . beneath concrete extensity" in order to "persuade ourselves that the real is divisible at will." Space, he writes, is "the diagrammatic design of our eventual action upon matter" (p. 280); and is neither (p. 281) a reality contemplated nor a form of contemplation, from the speculative point of view. "The artifice of the philosophical method proposed," says M. Bergson (p. 243), "consists . . . in distinguishing the point of view of customary or useful knowledge from that of true knowledge." The question whether such a method is applicable to the problem of matter (p. 244), is the question whether "in this 'diversity of phenomena' of which Kant spoke, that part which shows a vague tendency towards extension could be seized by us on the hither side of the homogeneous space to which it is applied and through which we subdivide it . . ." "Certainly it would be a chimerical enterprise to try to free ourselves from the fundamental conditions of external perception. But the question is whether certain conditions, which we usually regard as fundamental, do not rather concern the use to be made of things . . . far more than the pure knowledge which we can have of them. . . . In regard to concrete extension . . . we do not see why it should be bound up with the amorphous and inert space which subtends it. . . . It might, then, be possible, in a certain measure, to transcend space without stepping out of extensity, and here we should really have a return to the immediate, since we do indeed perceive extensity, whereas space is merely conceived—being a kind of mental diagram" (p. 45).

Just as in *Time and Free-Will* the material of M. Bergson's argument wavered back and forth between space and pure uniqueness, so here his material moves between space and "pure perception," and between "pure perception" and "pure memory." He has spaced out his original scheme of two points: quality and quantity, with a third term in which they legitimately meet. And the difficulty experienced by M. Bergson in satisfying the implication of the resemblance-theory of knowledge: that each object is the only genuine knowledge of itself, which made it difficult for him to secure the separateness of qualitative mind from quantitative matter, recurs now in the difficulty of preventing matter from coinciding with pure perception. Symmetrically, to

provide for error (and to provide for the possibility of abstraction, and for the undeniable validity of physical science), it is impossible for M. Bergson fully to identify matter with pure experience; it is impossible for him to be faithful entirely to his intention of considering matter "before the dissociation which idealism and realism have brought about between its existence and its appearance," just as it was impossible for him to admit the confusion of matter with mind, in *Time and Free-Will*, as a legitimate fact. In order better to envisage the relation between the distribution of M. Bergson's epistemological elements in *Time and Free-Will*, and their distribution in *Matter and Memory*, we must compare his opinions as to the sources of the corruption of immediate experience as they are set forth in the one book and in the other.

In *Time and Free-Will* M. Bergson concluded,—after discovering an element of experience different from the matter of physics and from what the mind of associationistic psychology has in common with the matter of physics,—that real mind or the real immediate is the opposite of the abstract matter of physical science. He concluded that what was originally real mind has become falsified by being materialized through the influence of language, stupidity, social life, or what not. In *Matter and Memory*, having admitted to his philosophy a new term in which matter and mind are supposed coincident, he is able no longer unequivocally to claim that matter falsifies the immediate, since he has brought matter into the immediate, and the immediate could not readily be imagined to falsify itself. He is therefore forced, in so far as he makes pure perception a fraction of the material world, to suppose matter falsified by mind; for he must suppose the immediate falsified because he finds in it an element—uniqueness—not represented in physics, where it should be represented, in his view, in order to satisfy the implication of the resemblance-theory that an idea must be one with its object to be genuinely true. But, when he regards the immediate as especially mental he is forced to find in matter an influence reaching out to falsify mind. In order that matter may falsify the immediate it must be distinct therefrom, and thus must take on the abstract character ascribed to it ordinarily by physics. By legitimatizing the extension of the immediate, in other words, M. Bergson breaks down the principal distinction between mind and matter, and over against the concrete unique phases of immediate experience he can set not only abstract matter, but abstract mind as well, attributing the abstractness of the sciences of the immediate to the illegitimate influence of first one side of the dualistic world and then of the other.

Real matter, therefore, will be defined by the absence of certain attributes treated as veritably present in mind and thence illegitimately transferred to the material world. Real mind will be defined by the absence of these same attributes now supposed veritably proper to the nature of matter and introduced illegitimately to the realm of consciousness. The reconciliation of these contradictory views will be achieved by giving up the dualistic distinction and treating all reality as concrete and unique in a variety of ways, and as lacking in all of these forms the characteristics that distinguish the terms of abstract science from immediate experience.

What, then, are the causes, according to M. Bergson, that have led philosophy to mistake the real nature of matter? Sometimes the corruption of matter and of experience in general is ascribed to causes determined vaguely, as for instance: to "the need of symmetry" (p. 250), "the exigencies of social life" (p. 239), an "invincible tendency" (p. 154), "instinct" (p. 186), "reflexion" (p. 216), a "metaphysical error" (p. 45), "life" (p. 194), "language" (p. 159), "scientific thought" (p. 154), and so forth. But on the whole M. Bergson ascribes the falsity of our idea of matter to an influence of mind: for example, to "intellect" (p. 190), "memory" (p. 76), "perception" (p. 178), "will" (p. 278). On the other hand he ordinarily traces the falsification of our psychology to some material influence; to "body" (p. 233), "material needs of life" (p. 185), "needs of the body" (p. 47), "images drawn from space" (p. 191), "space" (p. 293), and so forth. Since M. Bergson defines the body, on the whole, as a center of action, and mind as a practical instrument, it is from action that he derives the positive characteristics by the absence of which he defines real mind and real matter; and which, illegitimately present in mind and in matter, he traces back in the one case to matter and in the other to mind. Let us observe the ambiguous position and definition of action in M. Bergson's dualism, and its changeable status in the scheme of his philosophical values.

Sometimes M. Bergson finds the source of the imperfection of our knowledge of all things in an indefinite practise to which the real is adapted (p. 239); the internal and external continuities of pure intuition being thus displaced by distinct words and independent objects, respectively. Just because the adaptation is in the interest of practise, it is argued (p. 240), this adaptation does not follow the internal lines of the structure of things. Philosophy should consequently seek experience "above that decisive turn where . . . [it takes] a bias in the direction of utility" (p. 241); our ordinary and scientific knowledge, at this point, is not relative to the fundamental structure of our minds,

according to M. Bergson, nor to the real nature of matter, but only to matter "disorganized, and to the superficial and acquired habits" of our mind. On the contrary, when M. Bergson is engaged with the construction of his psychology he treats action as "the fundamental law of our psychical life" (p. 234); as "the fundamental law of life" (p. 194); and as "a faculty . . . towards which all the powers of the organized body are seen to converge" (p. 67). Science, at this point, is regarded as essentially true, because, although it is symbolic, "philosophy is bound to ask why . . . [the symbols of science] are more convenient than others, and why they permit of further advance" (p. 266).

Since physics and psychology formulate their subject-matters in abstract and, therefore, distinct terms, the fundamental discrepancy between science and the field of immediate experience is that the latter presents continuities, the former discontinuities. Whenever M. Bergson is not in the constructive phase of his psychological work, consequently; whenever, that is, he insists on the distinction between ordinary knowledge and philosophical or pure knowledge, he treats action as a discontinuous function. When discontinuous action is lodged in the mind it is continuous matter that gets falsified by its influence; but when action is material, mind receives the spurious discontinuity from the material division of the world. Thus: "Homogeneous space and homogeneous time . . . express . . . the . . . work . . . of division which we effect on the moving continuity of the real in order to obtain there a fulcrum for our action . . ." (p. 280). " . . . the divisibility of matter is entirely relative to our action thereon . . ." (p. 292). Homogeneous space ". . . interests the behavior of a being which acts upon matter, but not the work of a mind which speculates on its essence" (p. 293). The atom " . . . is hardly anything but an outward projection of human needs . . ." (p. 269). Contrarily: "The impotence of speculative reason . . . is perhaps at bottom only the impotence of an intellect enslaved to certain necessities of bodily life . . ." (p. 241). " . . . we are . . . accustomed to reverse, for the sake of action, the real order of things, we are so strongly obsessed by images drawn from space . . ." (p. 191). " . . . we extend to the series of memories, in time, that . . . which applies only to the collection of bodies instantaneously perceived in space. The fundamental illusion consists in transferring to duration itself, in its continuous flow, the form of the instantaneous sections which we make in it" (p. 193). (The material world has been defined as such a section, p. 178.) "It is certain that mind, first of all, stands over against matter as a pure unity in face of an essentially divisible multiplicity . . ." (p. 235).

Seeing that memory and perception are not stably localized in M. Bergson's scheme, as has been shown above, we find that these elements of his argument take on successively the properties of genuine reality and of vitiated or vitiating reality. M. Bergson has it, for example, that perception (p. 237) is part of the material world; that matter is, therefore, of the nature of perception, which in turn is mental, since perception is largely the creation of memory. From this he concludes that, philosophically, mind and matter are essentially the same, since the discontinuity of perceived qualities must be reflected in real matter (p. 238), which, were it pure quantity or homogeneity, would be nothing at all. Here the condensation effected by memory is constitutive of genuine reality. In fact: " . . . the external object yields to us deeper and deeper parts of itself, as our memory adopts a correspondingly higher degree of tension . . ." (p. 145). The greater or less degree of this tension expresses the greater or less intensity of life (p. 279). Nevertheless, being active for the sake of utility memory "supplants" real intuition (p. 71). ". . . the philosophy of matter must aim . . . at eliminating the contributions of memory" (p. 80). " . . . our memory solidifies . . . the continuous flow of things" (p. 279). The basic error of philosophy is to regard memory as an operation of pure knowledge, neglecting its relation with conduct; memory is turned toward action (p. 302). But, to return to the other position: " . . . memory is . . . essentially a knowledge . . . [addressed to a pure spirit, as having a purely speculative interest]" (p. 125). Again, action abolishes memory since it is useless (p. 186); action causes memory to shrink into the impersonal (p. 130); to remember one must withdraw from action; one "must have the power to value the useless" (p. 94). But: Action employs memory (p. 188); action, to be adequate to its circumstances, requires memory (p. 198).

In the same way perception plays various parts, sometimes as a source of illegitimate discontinuity, sometimes as the bearer of that continuity which marks out reality itself. To "obtain a vision of matter," says M. Bergson (p. 276), " . . . pure, and freed from all that the exigencies of life compel you to add to it in external perception . . . try to connect together the discontinuous objects of daily experience . . ." (p. 276), and consider the mobility of the qualities of these objects: That undivided act which our consciousness becomes aware of in our own movements . . . " "Our perception . . . terminates . . . [the objects of the material universe] at the point where our possible action upon them ceases. . . . Such is the primary . . . operation of the perceiving mind: it marks out divisions

in the continuity of the extended . . ." (p. 278). But is not then the discontinuity real at least in action? No; for, "the duration wherein we see ourselves acting, and in which it is useful that we should see ourselves, is a duration whose elements are dissociated and juxtaposed. The duration wherein we act is a duration wherein our states melt into each other. It is within this that we should try to replace ourselves by thought, in the exceptional and unique case when we speculate on the intimate nature of human action . . ." (p. 243). Moreover, the "opposition between perception and matter is the artificial work of an understanding which decomposes and recomposes according to its habits or its laws: it is not given in immediate intuition" (p. 326).

Our expectation that M. Bergson's reform of dualism in *Matter and Memory*, based on the attempt to identify matter with pure experience, would issue in various contradictions, has been justified by the preceding citations, which by no means, however, exhaust the catalogue of ambiguities that might be drawn up from M. Bergson's book. From the point of view of the theory of knowledge the difference between *Time and Free-Will* and *Matter and Memory* is not great, since M. Bergson's epistemological assumptions are identical in the two books. He assumes that perfect knowledge is wholly similar to its object, and endeavors to combine this view with the dualistic theory, which, as has been noted already, separates knowledge and object-of-knowledge from one another. The attempt, in *Time and Free-Will*, resulted in a capital ambiguity as to whether mind and matter, or quality and quantity, are together or separate; in *Matter and Memory* it resulted in an ambiguity as to whether matter is or is not the same as our immediate perception, and whether our perception is or is not the same as mind. The tendency of thought that brought matter and mind together in *Time and Free-Will*, made matter and perception, and perception and mind, coincide alternately; in the first case the epistemological scheme of dualism was preserved by changing the sense in which the "confusion" of quality and quantity had been affirmed; from factual the confusion came to be treated as suppositional. In the second case the dualistic scheme was preserved, on the whole, by changing the kind of perception with which mind and matter were allowed alternately to coincide. When matter had been brought up to perception, the perception with which it coincided was different from mind in lacking the depth conferred by a condensation of memories, relatively or absolutely; but as matter receded from perception, perception was defined as thickened by memories legitimately. This

change in the definition of perception corresponds to the working out, first in physics and then in psychology, of the implication of the resemblance-theory of knowledge that knowledge shall coincide with its object. There is also a tendency in *Matter and Memory*, less elaborate, but more fundamental, to give up the distinction between physics and psychology, shown in the characterizing of matter by the traits of real mind—as where matter is distinguished from extension by means of memory (p. 296); or where the mental is spoken of as drawing nearer to extension "in the measure in which it evolves towards actuality" (p. 294).[7]

Matter and Memory, we may then say, is related to the development of M. Bergson's epistemological science of the immediate as follows: The distance between *Time and Free-Will* and *Matter and Memory* is measured by the admission, embodied in the latter work, that immediate experience is extended. This admission carries with it the implication that in some sense matter is present in immediate experience. But since M. Bergson's first step was the condemnation of all psychology as not reflecting its subject-matter—the immediate, his second step, following on the admission that matter is in the immediate, is to condemn, in some sense, all physics, which distinguishes matter from immediate experience itself. And since M. Bergson must provide, or at any rate promise, some substitute for the psychological and physical sciences he condemns, he is led to redefine the immediate in the one case as real mind and in the other case as real matter, in terms of his condemnation of ordinary psychology and physics. From these redefinitions he derives one or more sets of immediate data of consciousness, which he takes to be the real immediate and the real object of philosophical knowledge, or that knowledge itself. Basing his condemnation of psychology in *Time and Free-Will* on the idea that if mind and matter are distinct they must be dissimilar, he defines his real mind as not whatever matter may be, and alters this negative definition, as we have seen, into a more or less arbitrary ascription of positive attributes to the mind. In *Matter and Memory* M. Bergson fastens on the practical character of the mental faculties and, playing these off against his view that knowledge should resemble, and hence, in the limit, coincide with, its object, he defines the really-known—mental and material—as possessed of a nature opposite to the nature he more or less loosely connects with practise. Hence again, as in *Time and Free-Will*, M. Bergson defines his philosophical or epistemological reality in negative terms, and inasmuch as both the mental and material aspects of reality are defined as non-practical, real mind and

[7] *Cf.* pp. 238, 241, 267, 268, 269, 270, 275, 282, 293.

real matter are alike on the terms of M. Bergson's deduction; and action, the source of the double corruption, has no abiding place in reality, but wanders from mind to matter and back again.

Seeing that *Matter and Memory* comprises for the most part a demonstration of the practical nature of mind, there is little elaboration of the negative definition of real mind and real matter as what is unadapted to action; we are told merely here and there in the course of the book, that if perception and memory were not practical, if they were not analytical and discriminative, that is, illuminating reality fitfully, we should have a genuine philosophical knowledge of matter and mind. The elaboration of these epistemological implications must be studied in M. Bergson's later work, *An Introduction to Metaphysics*, where the process of reflection that led him to include the science of physics under the head of imperfect or non-philosophical knowledge, along with psychology, receives a clear and comprehensive formulation.

(2) AN INTRODUCTION TO METAPHYSICS

In *An Introduction to Metaphysics* the epistemological assumptions that underlie M. Bergson's philosophical work first explicitly come to the surface of his thought. We have shown that the doctrine of *Time and Free-Will* originates in the observation of a discrepancy between the subject-matter of psychology and the terms of that science, and that the metaphysics of matter put forward in *Matter and Memory* is based on the fact that physics is a science of immediate experience: on the discrepancy, that is, between the world of the concrete, unique, and altering objects that play on our organs of sense, and the world of the abstract, invariable elements that physics describes. The fundamental spring of M. Bergson's objections to psychology and physics is thus the fact that these sciences do not absolutely resemble, that is, coincide with, their objects. From the condemnation of the sciences of mind and matter on this score an easy step brings one to the condemnation of all natural science on the same ground; and the taking of this step is precisely what separates *An Introduction to Metaphysics* from *Matter and Memory*.

In *An Introduction to Metaphysics* M. Bergson classes all scientific knowledge as relative over against metaphysical or philosophical knowledge, which is absolute. He leaves to scientific knowledge a certain qualified validity and is less severe in condemning natural science as a whole than he was in condemning analytical psychology

in *Time and Free-Will*, for naturally the validity of physics is more difficult to explain away than whatever validity associationistic psychology may be said to possess. That the reasons for M. Bergson's refusal to admit that the knowledge furnished by any natural science is philosophically genuine are the same as his reasons for objecting to psychology and physics, however, can without difficulty be shown by reference to numerous passages in his book.

M. Bergson introduces the argument of *An Introduction to Metaphysics* with the statement that philosophers agree in distinguishing two profoundly different ways of knowing a thing: a relative way and an absolute. Relative knowledge, he pursues, implies that from a point of view external to the object we express the object by means of symbols; whereas absolute knowledge is dependent on no symbol (p. 1), but implies the insertion (p. 2) of the subject into the object by imagination, the identification (p. 3) of subject with object in a simple feeling, or, in another word, the "coincidence" (p. 4) of the knowing subject with what is known. Relative knowledge (p. 7) is acquired by analysis; absolute knowledge, on the contrary, by "intuition." Analysis, M. Bergson says (p. 7), is the operation which reduces the object to elements common to both it and to other objects, and intuition is that by which one places oneself within an object in order to coincide with what is unique in it and consequently inexpressible.

It is obvious that we are dealing here with a generalization of the distinction made by M. Bergson between the anti-material psychology and the ordinary psychology of *Time and Free-Will*, and the metaphysics of matter and the science of physics in *Matter and Memory*. If we note what the subject-matter of absolute or intuitive knowledge is given as, in *An Introduction to Metaphysics*, we shall have further evidence that the book formulates epistemological assumptions that were implicit in M. Bergson's preceding work. He describes intuition (p. 9) as the instrument by which we seize on our own personality, on our self which endures, if on nothing else. This self as given in intuition is (p. 11) a "continuous flux" in which all so-called states interpenetrate; it is a "pure duration" (p. 13) in which no two identical moments (p. 12) occur; something not capable of being represented by concepts (p. 15), that is, "abstract" or "general" ideas, nor even by images, although images have the advantage over concepts (p. 16) of keeping us in the concrete. In most men the awareness of their own consciousness is "fettered by habits of mind more useful to life" (p. 16). Abstract ideas symbolize the impersonal aspects of objects; they generalize, and hence " . . . are incapable of replacing intuition, that is, the metaphysical investigation of what is essential and unique in the object"

(p. 18). " . . . analysis operates always on the immobile, whilst intuition places itself in mobility, or what comes to the same thing, in duration. There lies the very distinct line of demarcation between intuition and analysis. The real, the experienced, and the concrete are recognized by the fact that they are variability itself" (p. 47).

If the intuitional science of *An Introduction to Metaphysics* is a generalization not only of the anti-material psychology of *Time and Free-Will*, but of the metaphysics of matter of *Matter and Memory* as well, we should be able to show that matter, for intuition, is a form of duration: a perceived object different from our ordinary perception in not being thickened by the pressure of memory. " . . . if intuition has the mobility of duration as its object," writes M. Bergson, "and if duration is of a psychical nature, shall we not be confining the philosopher to the exclusive contemplation of himself" (p. 55)? No. "The consciousness we have of our own self in its continual flux introduces us to the interior of a reality, on the model of which we must represent other realities" (p. 65). " . . . the intuition of our duration, far from leaving us suspended in the void as pure analysis would do, brings us into contact with a whole continuity of durations which we must try to follow, whether downwards or upwards . . . In both cases we transcend ourselves. In the first we advance towards a more and more attenuated duration, the pulsations of which, being rapider than ours, and dividing our simple sensation, dilute its quality into quantity; at the limit would be pure homogeneity, that pure repetition by which we define materiality. Advancing in the other direction, we approach a duration which . . . intensifies itself more and more; . . . at the limit would be eternity" (p. 63).

Intuitional metaphysics is distinguished from positive science, in its original definitions, at least, by the same traits that distinguish M. Bergson's earlier more special sciences of the immediate from the sciences he would have had them replace. Metaphysics is not an "expression, translation, or symbolic representation" (p. 9) of its object; it is not "useful" (p. 16); not an "artificial reconstruction of its object" (p. 18); not a "shadow" (p. 19); it is "disinterested" (p. 40), "a reversal of the usual work of the intellect" (p. 40); it is independent of "homogeneous time" (p. 46), and of homogeneous space (p. 52), and it does not represent to itself states and things by fixing the undivided mobility of the real (p. 65), as do language, common sense, and practical life" (p. 66). Significantly, at the same time that he includes all positive scientific knowledge in the class of relative, philosophically imperfect knowledge, M. Bergson grants to psychology the right to the use of analysis. "Psychology . . . proceeds like all the other

sciences by analysis. It resolves the self . . . into sensations, feelings, ideas, etc. . . ." (p. 24). " . . . without this effort of abstraction or analysis there would be no possible development of the science of psychology" (p. 25). "On the level at which the psychologist places himself, and on which he must place himself . . . " there is "nothing else to do but analyze personality . . ." (p. 30).

Thus it is here M. Bergson's view that all of the natural sciences are valuable and adequate as natural sciences, but that since the uniqueness and concreteness of experience escape from the formulations of science, something else, metaphysics, must be found to capture what concepts are unable to fix. It is the thesis of this dissertation that in the course of his successive attempts to tell what such an epistemologically necessitated science of the complete concrete unique immediate would be M. Bergson invariably falls back on some aspect of the ordinary science he condemns and that this renunciation of the strict definition of his supplementary science, tells, in a measure, against the theory of knowledge in which the notion that subject knows object in the degree of their resemblance had its start. It remains, consequently, for us to show that the intuitional science of *An Introduction to Metaphysics* is identified, in the progress of M. Bergson's exposition, with the positive science from which, theoretically, it should be distinct.

M. Bergson defines metaphysics as the science which claims to dispense with symbols (p. 9). " . . . the main object of metaphysics is to do away with symbols" (p. 79).[8] But he modifies this view elsewhere, saying that true empiricism, which is the true metaphysics (p. 36) " . . . is obliged for each new object that it studies to make an absolutely fresh effort. It cuts out for the object a concept which is appropriate to that object alone, a concept which as yet can hardly be called a concept . . ." (p. 37). " . . . metaphysics . . . if it is a serious occupation of the mind . . . must transcend concepts. . . . Certainly concepts are necessary to it, for all the other sciences work as a rule with concepts, and metaphysics can not dispense with the other sciences. But it is only truly itself when it goes beyond the concept, or at least when it frees itself from rigid and ready-made concepts . . ." (p. 21).

At one time M. Bergson writes as though the use of intuition marked off metaphysics from science (p. 30); at another he speaks of positive science as passing "immediately to analysis" on getting its material from an intuition which "one must add" is "very indis-

[8] *Cf.* pp. 15, 18, 30.

tinct" (p. 32). But again he explains that as to the relativity of scientific knowledge, "what is relative is the symbolic knowledge by pre-existing concepts . . ." (p. 74). "Science and metaphysics . . . come together in intuition. A truly intuitive philosophy would . . . make of metaphysics a positive science . . . " " . . . all that is greatest in the sciences, as well as all that is permanent in metaphysics" (p. 70) is due to intuition (p. 69).[9] Yet, in the early portion of his exposition (p. 24) the "confusion between the function of analysis and that of intuition" is spoken of as the chief source of philosophical controversies. Although in certain passages M. Bergson separates metaphysics from positive science by confining science to a consideration of what is immobile and unreal,[10] in other passages he writes of positive science as working in the real and mobile.[11] Thus there are sometimes two varieties of knowledge, sometimes all knowledge is one: "A comparison of the definitions of metaphysics . . . leads to the discovery that philosophers, in spite of their apparent divergencies, agree in distinguishing two profoundly different ways of knowing a thing. . . . The first depends on the point of view at which we are placed and on the symbols by which we express ourselves. The second neither depends on a point of view nor relies on any symbol" (p. 1). M. Bergson goes on to attach the name of metaphysics to this second sort of knowledge, as we observed above. But later on (p. 74), he speaks of the need of putting more science into metaphysics and more metaphysics into science. Finally he says (p. 75), "That there are not two different ways of knowing things fundamentally . . . is what the ancient philosophers generally thought. Their error did not lie there."

Looking over the aspects of positive science with which M. Bergson identifies intuitional science, when he gives up his strict definition of metaphysics, we find that metaphysics becomes identified sometimes with a fragment of the doctrine of positive science, as with the infinitesimal calculus (p. 70), or with "modern mathematics," which "is precisely an effort to substitute the *being made* for the *ready made* . . . to grasp motion no longer from without and in its displayed result, but from within and in its tendency to change; in short to adopt the mobile continuity of the outlines of things." [12] Or again, metaphysics is identified with the original strokes of genius that enabled men of intellect to advance positive science: " . . . a profoundly-considered history of human thought would show that we owe to"

[9] *Cf.* pp. 81, 82, 83.
[10] See pp. 26, 27, 43, 44, 45, 46, 47, 48, 62, 67.
[11] *Cf.* pp. 75, 76, 87.
[12] *Cf.* p. 77.

(p. 70) the inversion of our habitual or practical habits of thought "all that is greatest in the sciences . . . "[13] Finally, M. Bergson identifies metaphysics (p. 90) with a state of the mind reached by means of a study of the "sum of observations and experience gathered together by positive science" (p. 91); "something in philosophers" (p. 88) and not "fixed and dead in theses." We shall now prosecute the investigation of intuitional metaphysics, and of the manner of its renunciation, in *Creative Evolution* and in one or two of the occasional addresses of M. Bergson.

(3) CREATIVE EVOLUTION

Creative Evolution illustrates in two ways M. Bergson's renunciation of the strict definition of his metaphysical or intuitional science. First the renunciation is presented in terms which are nearly identical with the terms in which he formulated the doctrine of his preceding work; and secondly it is presented in terms of a theory of evolutionary biology. To begin with we shall point out the biological aspect of the subject of our study, and then briefly indicate the passages in which the contradictions common to *An Introduction to Metaphysics* and *Creative Evolution* may be found.

In his biological theory M. Bergson identifies the activity of instinct, especially as manifested in the life of certain species of insects, with the intuition which separates metaphysics from positive science. " . . . instinct and intelligence imply two radically different kinds of knowledge" (p. 143). "Intelligence by means of science which is its work, will deliver up to us more and more completely the secret of physical operations; of life it brings us, and moreover only claims to bring us, a translation. But it is to the very inwardness of life that intuition leads us . . . by intuition I mean instinct that has become disinterested, self-conscious, capable of reflecting upon its object and of enlarging it indefinitely" (p. 176). "The theory of knowledge must take account of these two faculties, intellect and intuition . . . for want of establishing a sufficiently clear distinction between them it becomes involved in inextricable difficulties" (p. 178). Now first of all it will be shown that the distinction M. Bergson draws between instinct and intelligence is epistemological rather than biological in origin, since the distinction is not required by M. Bergson's biological philosophy, but, on the contrary, is in opposition thereto.

What biological arguments are advanced in *Creative Evolution* in favor of radically distinguishing instinct from intelligence in connec-

[13] *Cf.* pp. 31, 32, 86, 87.

tion with the theory of knowledge? In a great many passages of his book M. Bergson reasons sub-audibly that since evolution is a differentiation along lines that diverge, the process of vital development necessarily grew into diverse modes of knowing. "The cardinal error which, from Aristotle onwards, has vitiated most of the philosophies of nature," he says, "is to see in vegetative, instinctive, and rational life, three successive degrees of the development of one and the same tendency, whereas they are divergent directions of an activity that has split up as it grew" (p. 135). Our reason for believing that the view, according to which life evolves into forms which exhibit dissimilar modes of noetic activity is by no means essential or even natural in M. Bergson's biology, is to be found in the general trend of his contentions concerning the character of life. The course of biological development as described by himself is a continual elaboration of certain originally interpenetrating potentialities or tendencies, which spread and unfold into innumerable forms; nevertheless, inasmuch as life is single in its origin, the end-products of evolution are supposed to participate in a common character. " . . . when species have begun to diverge . . . they accentuate their divergence as they progress. . . . Yet, in certain definite points they may evolve identically; in fact, they must do so if the hypothesis of a common impetus be accepted" (p. 87). Indeed the very argument by which M. Bergson aims to refute mechanism in biology depends on his demonstration that the various developments of life may eventuate in like organs, expressive of an identical underlying impulse which breaks out at very distantly separated points of time and space.[14] Thus it is argued that although no complicated visual organ had appeared at that point of the geneological tree of life where the ancestors of vertebrates and molluscs parted company with one another, the eye in man and in the pecten present an astonishing similarity of structure, and that consequently the essential uniformity of life has been proved. If it should be objected to our exposition that vertebrates and molluscs are nearer akin than men and wasps or similar insects, it could be answered that, although animals and plants are still more remote from each other than molluscs and vertebrates, M. Bergson mentions (p. 59) the parallel progress that has been accomplished in the animal and vegetable divisions of evolution in the direction of sexuality, as evidence supporting his theory of the homogeneity of life. Moreover, if there is no innate tendency in the various branches of developing life towards the elaboration of dissimilar faculties of reproduction, the tendency towards diversity would be even less likely to manifest itself

[14] See pp. 54, 55, 56, 87, 96, 112.

in the faculty of understanding, which, in M. Bergson's own words is " . . . a more and more precise . . . and supple adaptation of the consciousness of living beings to the conditions of existence that are made for them" (p. ix). For must not insects and vertebrates adapt themselves to similar conditions of life? We conclude, then, that it is not the investigation of biological facts that led M. Bergson to regard instinct as a kind of philosophical intuition, but that he has introduced foregone epistemological conclusions, formulated in *An Introduction to Metaphysics*, into his treatment of biology.

Taking it for granted that the distinction drawn between instinct and intelligence in *Creative Evolution* is a transposition of the distinction established in *An Introduction to Metaphysics* between intuition and intellect, we proceed to note the marks by which instinct is contradistinguished from intelligence in the context of M. Bergson's biology. When he fulfilled the requirements of his initial epistemological assumptions, M. Bergson assigned the task of knowing concrete uniqueness or duration or mobility to intuition. In the same vein it is written in *Creative Evolution* that "In order to get at . . . [the cardinal difference between instinct and intelligence] we must . . . go straight to the two objects, profoundly different from each other, upon which instinct and intelligence are directed" (p. 146). "Of immobility alone does the intellect form a clear idea" (p. 155). "The intellect is not made to think *evolution*, in the proper sense of the word —that is to say, the continuity of a change that is pure mobility" (p. 163). "The intellect is characterized by a natural inability to comprehend life. Instinct, on the contrary, is molded on the very form of life" (p. 165). "Instinct is sympathy. If this sympathy could extend its object and also reflect upon itself, it would give us the key to vital operations . . . just as intelligence, developed and disciplined, guides us into matter. For—we can not too often repeat it—intelligence and instinct are turned in opposite directions, the former towards inert matter, the latter towards life" (p. 176). "The double form of consciousness is . . . due to the double form of the real . . . " (p. 178). Now, just as in *An Introduction to Metaphysics* we found M. Bergson giving up his distinction between the metaphysics of pure duration and the positive science of abstractions or repetitious elements in experience, so here instinct and intelligence, separated rigorously in the above-cited passages, are united again in other clearly phrased portions of M. Bergson's text. Reversing his proposition that the knowledges of matter and of life fall to intelligence and instinct, respectively, M. Bergson says " . . . we see in these two modes of psychical activity [instinct and intelligence] above all else, two

different methods of action on inert matter" (p. 136). Again: "Instinct and intelligence . . . represent two divergent solutions, equally fitting, of one and the same problem" (p. 143). [The problem of action.]

We may expect that in discussing the methods of biology and the value of ordinary biological science M. Bergson will shift from the contention that ordinary analytical biology is inadequate to its object, to the admission that instinctive or intuitive metaphysics is no scientific substitute for positive science, but something of a quite different sort. In fact, M. Bergson tells us (p. 198) that conceptual physics touches the absolute, but that " . . . it is by accident—chance or convention, as you please—that science obtains a hold on the living analogous to the hold it has on matter. Here the use of conceptual frames is no longer natural . . . the further [science] . . . penetrates the depths of life, the more symbolic, the more relative to the contingencies of action the knowledge it supplies to us becomes. On this new ground, philosophy ought, then, to follow science in order to superpose on scientific truth a knowledge of another kind, which may be called metaphysical." [15] From having followed M. Bergson's attempt to formulate into a scientific or metaphysical knowledge the naked fact that immediate experience is undivided and novel in its unrationalized phases we are enabled to anticipate the nature of his proposed substitute or complement for scientific biology, which is an experience, namely, of the pure quality, or duration, or genuine consciousness, of *Matter and Memory* and *Time and Free-Will*. In order to transcend intelligence, for the purpose of apprehending life, it is thus proposed that we " . . . seek in the depths of our experience the point where we feel ourselves most intimately within our own life. It is into pure duration that we then plunge back" (p. 199). And there we find a past "swelling unceasingly" and moving on into a "present that is absolutely new" (p. 200). We are told to seek ourselves where "our actions are truly free," and thus to replace ourselves in life; a life which is a state of consciousness "incommensurable with the intellect, being itself indivisible and new."

M. Bergson sometimes argues in general that intelligence can not know life because intelligence, which has been molded on matter for the sake of action, differs from life as the part from the whole (p. x), and, consequently, can not be "applied to the evolutionary movement itself." And he argues in particular that since intelligence and instinct are differentiated parts of a whole (p. 174), instinct is not "resolvable into intelligent elements," or even "into terms entirely intelligible."

[15] *Cf.* pp. 174, 175, 196, 197, 207, 342, 343, 359, 360.

It is in "the phenomena of feeling" . . . he continues (p. 175), that "we experience in ourselves . . . something of what must happen in the consciousness of an insect acting by instinct." With this evidence that, epistemologically speaking, M. Bergson still clings to the resemblance-theory of knowledge, we go on to note that the chief difficulties already recorded in our consideration of *Time and Free-Will*, *Matter and Memory*, and *An Introduction to Metaphysics* reappear in the course of *Creative Evolution*.

These chief difficulties uniformly grow out of the fact that although the abstract terms of all of the natural sciences are discrepant in kind from their subject-matter—concrete immediate experience—M. Bergson infers from his observation of this discrepancy that natural science is not genuinely scientific, reasoning from the premise that knowledge must copy its object. At first M. Bergson accepted conceptual physics as adequate on the supposition that physics is not a science of immediate experience, and confined his attack on science to associationistic psychology. But on admitting immediate experience to be extended he was led to condemn ordinary physics as well, since physics resembles psychology in being abstract. From the citations above in which M. Bergson lays it down that intelligence is naturally adapted to matter, it might have appeared that he had established himself in a view dissimilar to the general view expressed in *An Introduction to Metaphysics*, according to which *all* analytical or symbolical knowledge is relative and unsatisfactory in part. But he writes of intelligence as providing a genuine philosophical knowledge of the material world only when he treats of action as being a function of life really exercised in a portion of reality endowed with the characteristics to which our activity relates. Thus: " . . . our intellect," he writes (p. ix), " . . . is intended to secure the perfect fitting of our body to its environment, to represent the relations of external things among themselves—in short, to think matter." "Action can not move in the unreal . . . an intellect bent upon the act to be performed and the reaction to follow . . . is an intellect that touches something of the absolute" (p. xi).[16] And when, on the other hand, M. Bergson is reasoning from the premise of the resemblance epistemology in which he persists, he reverts to the view, expounded in *An Introduction to Metaphysics*, that all species of conceptual science are false, reversing his estimate of the epistemological value of physical science. For instance, "From mobility itself," he tells us (p. 155), "our intellect turns aside, because it has nothing to gain in dealing with it. If the intellect were meant for pure theorizing, it would take its place within

[16] *Cf.* pp. 198 and 207.

movement, for movement is reality itself . . . But . . . to the stable and unchangeable our intellect is attached by virtue of its natural disposition." "Matter or mind," M. Bergson writes in another passage (p. 272), "reality has appeared to us as a perpetual becoming. . . . Such is the intuition that we have of mind when we draw aside the veil which is interposed between our consciousness and ourselves. This, also, is what our intellect and senses themselves would show us of matter, if they could obtain a direct and disinterested idea of it. But, preoccupied before everything with the necessities of action, the intellect, like the senses, is limited to taking, at intervals, views that are instantaneous and by that very fact immobile of the becoming of matter."

We noted that in *Matter and Memory* the action to which M. Bergson ascribes the role of falsifying our knowledge of things is a philosophical element of indeterminate locus. This indetermination takes its rise, in the final analysis, in the fact that there is no room, on M. Bergson's epistemological premises, in either matter or mind, for any source of the falsification of immediate experience; since the genuine matter and mind of M. Bergson's dualism coincide with each other in what is immediate. Action, as long as action is regarded as possessing the properties that falsify reality, is transferred from matter to mind and from mind to matter, according to the circumstances of M. Bergson's discussion. Similarly, in *Creative Evolution*, as long as the epistemological motive dominates the course of his thought, it is impossible to trace the characteristics of action, that appear in reality as falsifications, to any permanent position in the world of M. Bergson's philosophical discourse. Taking discontinuity as a property of reality falsified, we find it contended (p. 11) that were action suppressed, the lines traced in the entanglement of the real would disappear, and bodies would be reabsorbed in the "universal interaction which . . . is reality itself." " . . . the subdivision of matter into separate bodies is relative to our perception . . ." (p. 12). "Of the discontinuous alone does the intellect form a clear idea" says M. Bergson (p. 154), after explaining that our manipulations require us to regard the material object as "provisionally final." The possibility of our doing this, he continues, is due to the continuity of material extension, which continuity, in turn, "is nothing else but our ability . . . to choose the mode of discontinuity we shall find in . . . [matter]." Concepts are defined (p. 160) as representations of the act by which the intellect fixes on concrete things. Logic is spoken of as derived from solids. " . . . the intellect behaves as if it were fascinated by the contemplation of inert matter. It is life

looking outward . . . adopting the ways of unorganized nature . . . in order to direct them . . ." (p. 161), " . . . to modify an object we have to perceive it as divisible and discontinuous" (p. 162). Further, M. Bergson explains (p. 299) that since intellect presides over actions, and only the results of actions interest us, we overlook the movements that are in action, seeing only (p. 300) the image of the movement accomplished. "Now in order that it may represent as unmovable the result of the act which is being accomplished, the intellect must perceive, as also unmovable, the surroundings in which this result is being framed." "In order that our activity may leap from act to act, it is necessary that matter should pass from state to state . . . " Finally, M. Bergson writes: " . . . that action may . . . be enlightened, intelligence must be present in it, but intelligence in order thus to accompany the progress of activity . . . must begin by adopting its rhythm. Action is discontinuous, like every pulsation of life; discontinuous, therefore, is knowledge" (p. 307).

Again, we find that the novelty of reality is obscured by the effect of conduct on intellect (p. 29). "The intellect can no more admit complete novelty than real becoming . . . here again it lets an essential aspect of life escape . . ." (p. 164). It applies its principle "like produces like," which constitutes common sense (p. 29). "Science carries this faculty to the highest possible degree of exactitude and precision, but does not alter its essential character. . . . Science can work only on what is supposed to repeat itself . . . on what is withdrawn . . . from the action of real time." On the other hand, in another connection, M. Bergson writes: " . . . in the field of physics itself, the scientists who are pushing the study of their science furthest incline to believe that we can not reason about the parts as we reason about the whole. . . . Thereby they tend to place themselves in the concrete duration in which alone there is true generation and not only composition of parts" (p. 368). "The primal function of perception is precisely to grasp a series of . . . changes under the form of a . . . simple state, by a work of condensation" (p. 301). But scientific analysis resolves these states into movements." " . . . it is always provisionally, and in order to satisfy our imagination, that we attach movement to a mobile. The mobile flies forever before the pursuit of science, which is concerned with mobility alone."

So, through his various subject-matters M. Bergson rings the changes made possible by his incompatible premises. On the assumption that knowledge must resemble its object he condemns analy-

tical psychology in *Time and Free-Will* and imagines a novel psychology which shall reflect the immediate and be the opposite of what, in general, the matter of physics is, on which the mind of the associationistic psychologists was modeled. Hence, two novel definitions of mind—the unanalyzed immediate, and the immediate minus whatever matter may be. When attacking the doctrine of analytical psychology M. Bergson opposes to the doctrine of associationism the simple fact that the immediate does not present itself in our every-day awareness as already analyzed into psychological elements; when he undertakes to formulate a new science of psychology he defines the immediate in terms of what he considers mind can not be, or, in other words, of what matter is. But, as we have seen, the definition of real mind by negations is unenlightening, and in the event, by an indirect process, gets altered into the ascription of positive attributes to the mind, which reduce it in part to the very mind that M. Bergson rejected to begin with. Again, on the assumption that knowledge must resemble its object, in *Matter and Memory* the material bodies described in physics are condemned as artificially selected from the continuity of experience for the purposes of action, and a metaphysics of matter is proposed that defines real matter as unanalyzed immediate experience, or as a complete interaction and interpenetration of all of the contents of space. In the measure that M. Bergson proceeds from the disparagement of ordinary physics to the attempt to formulate a new doctrine of matter, by so much does he proceed from the view that genuine matter is simply the continuum of immediate experience to the view that matter is immediate experience minus the effect of the mind exerted through perception and memory. But, once more, in attempting to describe what the immediate would be unenforced and unselected by memory and perception, M. Bergson falls back on views of matter proposed by the exponents of stresses and strains in the ether, or lines of force, which, being an elaboration of the practical science of ordinary physics, he had begun by rejecting. In *An Introduction to Metaphysics* we find the same alteration in the definition of the subject-matter of intuitional metaphysics, as set over against the subject-matter of positive science. When M. Bergson evaluates conceptual science from the stand-point of epistemology, he condemns it as symbolic in all its parts, and the subject-matter of metaphysics is simply immediate experience unvitiated by points of view or by symbols; but in filling in the definition of intuitional metaphysics he employs aspects of positive science to define a genuine immediate experience which thus is assimilated to the terms of science. Finally, in *Creative Evolution* when the distribution of the elements

of M. Bergson's thought is determined by his attack on science, the reality revealed by intuition is our immediate feeling of life; but when he offers an intuitional doctrine of reality, on the other hand, his doctrine of reality is made up of a portion of ordinary physics and of other branches of positive science.

Summing up it may be said that whenever M. Bergson is pressing his attack on analytical, selective, conceptual science, pure duration is simply immediate experience; but that whenever he is trying to build up an intuitional psychology, physics, or biology, pure duration becomes more or less than ordinary concrete experience. The former view of the nature of pure duration is best expressed in M. Bergson's address on *La Perception du Changement:* " . . . in answer to those," writes M. Bergson (p. 26), "who suppose 'real duration' to be something or other mysterious and ineffable, I say that it is the clearest thing in the world: 'real duration' is what has always been called time, but time perceived as indivisible." Compare with this the following statement from *Time and Free-Will* (p. 106): " . . . we find it *incroyablement difficile* to think of duration in its original purity." Real change is described in *La Perception du Changement* (p. 27) as the "most substantial and durable of all things," although in defining the intuitional method in *Matière et Mémoire* (*Avant-Propos*, p. iii.) M. Bergson speaks of interior change, which is duration, as of something difficult to seize in its "fleeting originality." True, the contrary view of the nature of immediate experience is presented in more than one passage of *La Perception du Changement*, as, for instance, where the ordinary data of our senses and of consciousness are asserted to be "relative" (p. 16).

As a variation of the shift between the views that duration is immediate experience and that it is the movement to which physics reduces material atoms, we may compare M. Bergson's statement in *La Perception du Changement* (p. 25), that matter is proved to be really mobility by physical science, with the statement in *Time and Free-Will* (p. 206), that the movements in the ether to which atoms have been reduced are not actual movements; " . . . all movement taking place within this fluid [the ether] is really equivalent to absolute immobility." Besides illustrating the ambiguities and contradictions to which we have become accustomed in studying M. Bergson's principal works, *La Perception du Changement* brings out into special clearness the idea from which we have maintained that all of his epistemological writing proceeds, the idea, namely, that reality is simply unanalyzed experience, true in its own right, and that it is illegitimately affected by the action of concepts.

Thus M. Bergson writes in *La Perception du Changement* (p. 5) that it will be agreed on all hands that if our faculty of perception were unlimited we should never need to have recourse to the faculty of reasoning. Concepts are makeshift substitutes for percepts, he says, useful indeed, but sources of disturbance in philosophy. The task of philosophy (p. 8) is the task of enlarging and purifying perception. In what sense is perception to be purified and enlarged? Not only by the reversal of our practical habits, as in *Creative Evolution* and the preceding books, but somewhat as the perception of poets and musicians and painters is enlarged by their impartial observation or intuition of reality. By this means, says M. Bergson, it shall be brought about that "The multiplicity of conceptual systems, struggling against each other, will be succeeded by a solitary doctrine capable of reconciling all thinkers in a single perception" (p. 9). And it is not difficult to believe that if the truth of philosophy inheres in perception, the contradictory answers to philosophy's problems might be reconciled in M. Bergson's intuition, since philosophical problems themselves would, on this theory of knowledge, tend likewise to disappear. By this philosophy, says M. Bergson (p. 36), "We live more amply, and this superabundance of life brings with it the conviction that the most serious enigmas of philosophy can be resolved, or, perhaps, that they no longer exist, being born of a stereotyped vision of the universe . . . of a certain artificial weakening of our vitality."

This attitude towards the problems of philosophy seems seriously skeptical in its explicit tendency, just as in the theory of knowledge elaborated in *Time and Free-Will* and *Matter and Memory*, there was an implicit skepticism, since the coincidence of subject and object leaves no intervening place for relevant error. M. Bergson condemns ordinary science because it falls short of his epistemological requirements, but there then remains to him, on his own terms, only an absolute immediate which can hardly be true or false, seeing that it is not in relation to anything else. The really skeptical upshot of his primary assumptions appears, moreover, in *L'Intuition Philosophique* even more clearly than in *La Perception du Changement.*

In *Time and Free-Will* we observed M. Bergson renouncing the possibility of a psychological science of uniqueness by identifying his novel psychology with the associationistic or analytical theory of mind; and in his subsequent works we observed a repetition of the renunciation of the science of uniqueness as strictly conceived. In *L'Intuition du Changement*[17] not only does M. Bergson once more

[17] *Revue de Metaphysique et de Morale*, Volume 19, p. 809.

renounce his distinction between intuitional knowledge and positive science, on which his epistemology rests, but, more plainly than elsewhere, he describes the subject-matter of intuition as ineffable, and states that the truly philosophical portion of a system of philosophy is the expression it gives to the uniqueness of its author's personality.

In this work it is stated (p. 823) that there would not be two modes of knowledge, philosophy and science, were there not two forms of experience: juxtaposed, repetitious, measurable facts, and pure, continuous duration, which is a reciprocal interpenetration of elements, refractory to law and measure. Both forms of experience are consciousness, in the one case, consciousness expanded, in the other, consciousness contracted. Philosophy is defined (p. 824) as consciousness in contact with the contracted form of itself. The renunciation of this distinction is given in the further statement (p. 823) that when consciousness contracts and gathers itself together it penetrates not only into life and reality in general, but also into matter; it is given again when M. Bergson says (p. 824) that philosophy is not only a contact with concentrated reality, but an impulse which spreads and overtakes and molds itself on the outline of science. The philosophical intuition is thus from this point of view analytical; it begins in unity and expands.

But, returning to the other point of view, according to which philosophy is a contact with reality gathered up into itself, or simply reality thus concentrated, we discover M. Bergson explaining at length (p. 810) how, by a patient study of the details of a philosophical system, one may approach coincidence with the original intuition of its author. Should one succeed in coinciding with a philosophy by this synthetical process, the philosophy would turn out to be something inexpressible (p. 810); something less tangible than an "*image fuyante et évanouissante*" (p. 811); something not veritably connected to the temporal and spatial conditions to which it seems attached (p. 812); something, in fine (p. 812), independent of other philosophies and of positive science and of the very problems on which the philosopher was engaged; the science and the problems being a medium of expression that the philosopher chanced to adopt, thanks to the circumstances of his birth. Here more manifestly than anywhere else, we have M. Bergson between the horns of his own dilemma: if philosophy and science are not distinct modes of knowledge, then philosophical intuition tells the same story about reality as positive science; if they are distinct, philosophy's deliverance is independent of observation; it is personal to the individual philosopher (since the problems

of science and philosophy are circumstantial to it), and it is incommunicable as well.

Let us now gather together the results of our investigation by stating the general characteristics of M. Bergson's epistemology. In the light of the preceding evidence we consider that M. Bergson's speculation in the theory of knowledge may be described as centrifugal. The belief that knowledge must absolutely resemble its object is central in his thought. From this belief he infers that so-called knowledge which analyzes, conceptualizes, selects, alters, or does anything more or less than coincide with its subject-matter, must be unsatisfactory to philosophy. For the most part his expositions are an attempt to demonstrate that scientific and ordinary knowledge is analytical or selective or conceptual or practical, so that, in the detail of his work, M. Bergson recedes, in as many directions as he discovers positive characteristics of scientific knowledge, from his central belief. He expiates his dereliction, in repeated retrospects, by denying that what he has found to be true of the nature of knowledge actually, is true from the philosopher's point of view. Hence the major contradictions of his doctrine.

For example, he notices that psychology analyzes experience; that language itself is an analysis of experience; and that all thought about the freedom of the will must go forward in terms that are analytical. Having demonstrated these facts he concludes that psychology is not really psychology, that language is incommensurable with the truth of the mind, and that in order to understand the freedom of the will it is necessary, as a preliminary, to give up thinking about the question of freedom in terms of thought. Again, he defines perception and memory by the selection they practise in the material of experience; he points out that physics interprets experience with the aid of an abstract or conceptual space. But from these facts he concludes that to perceive and remember correctly or philosophically, one must invert or undo the structure or habit of one's mind; and that in order to be genuinely physics, physics must forget what it has learned of experience by the employment of the concept of space. In the same way M. Bergson reverts from the fact that not merely psychology, but that all natural science and ordinary knowledge is conceptual in character, to the inference that the universal employment of concepts proves all science to be illegitimate philosophically. The paradox reappears in his notion that man coincides with his own life and is human truly, only when he suppresses his proper intellectual nature and expands the vestige of instinct, which M. Bergson considers to

assimilate vertebrates to insects, into a coincidence with the whole movement of life. In short the centrifugal character of M. Bergson's epistemology leads him to suppose that man can come into genuine contact with reality only by ceasing from the activities that determine man's position and function in the universe. It may be said in general, then, that M. Bergson throws light on the nature of knowledge when the theory of knowledge does not preoccupy his mind; that his detailed analyses are usually valid, but that his conclusions therefrom are almost invariably false. In their destructive aspect his expositions are most often sound, since they attack the assumption that ordinary knowledge resembles its object; in their constructive aspect, on the other hand, his expositions are inadmissible, since they uniformly identify some property of positive science, transferred ambiguously from its own to an alien context, with the intuitional knowledge necessitated by M. Bergson's original premise.

From the dualistic point of view the centrifugal character of M. Bergson's epistemological speculations throws light on a number of peculiarities in portions of his work which have been left unmentioned hitherto. At the center of his doctrine the belief that reality is incommensurable with concepts causes M. Bergson to define reality as pure uniqueness or an unintermitting progress into novelty. Having begun by criticizing the science of psychology epistemologically, M. Bergson classifies this unique reality as mind; and his earliest step is a division of the terms of experience into a new dualistic mind, on the one hand, which comprises no more than uniqueness—denominated pure quality or qualitative multiplicity or genuine duration or free-will; and into an enlarged material division, on the other hand, which is the whole of experience minus uniqueness. As M. Bergson recedes from his central epistemological assumption, however, by showing that the several sciences of experience define reality in conceptual terms, he is forced to transfer to his mental division of dualism, which comprises reality, the terms which his original premise forbade to be there. Hence he describes reality as becoming what it should never be; he treats the world of immediate experience where uniqueness and quantity are intermingled or confused, as an illegitimate portion of existence whose character results from a percolation of matter into mind, brought about by habit or stupidity or practical haste. In other words, M. Bergson explains the immediate by combining conceptual matter and conceptual mind, traversing, in this way, his frequent contention that although from reality to concepts the passage is possible, there can be no passage from concepts to reality. And he is forced to derive experience from concepts, in spite of his view that

concepts are epistemologically unsatisfactory attenuations of the real, inasmuch as he undertakes to reform philosophy by means of the dualistic hypothesis, according to which there is a separation between the object and subject of knowledge, or matter and mind, though, all the time, he believes that knowledge, to be genuine, must coincide with its subject-matter. Now, since M. Bergson derives the important elements of his philosophical doctrine, almost without exception, from this revision of the dualistic hypothesis, the fundamental peculiarity of his epistemological speculation reappears in branches of his doctrine which might seem to be altogether remote from the theory of knowledge.

This epistemological property of his doctrine is exemplified in his treatment of the subject of chance. Supposing what is meant by disorder to be the superposition in thought of the vital order, or uniqueness, on the material order, or *vice versa*, M. Bergson concludes that disorder can not be veritably conceived; that it belongs, that is, to the illegitimate region of confusion between the divisions of dualism. But in essaying further to reduce the notion of chance to this confused or illegitimate idea of disorder, M. Bergson draws remarkably near to the theory of universal determinism, which is opposed to his fundamental theories of novelty and free-will and creative evolution.

M. Bergson's theory of laughter provides another example of the cropping up of the difficulties of his dualism in branches of investigation apparently remote from epistemology. He starts out from the notion that laughter is a corrector of manners, inciting the members of society to modes of behavior conformable to the varying circumstances of community life. In this supposition laughter encourages an elastic adaptation of conduct to conditions external to the individual's existence. The theory is not elaborated in its integrity by M. Bergson, however, since from his epistemological assumption that reality is pure uniqueness, he gets carried on to the hypothesis of a life, which, to be perfectly real, must be a succession of unique phases; that is to say, a succession of attitudes or acts that can not be adapted to a common or social criterion, or to groups of circumstances that present any aspect of similarity. A parallel difficulty appears in M. Bergson's esthetics. On the basis of his epistemological metaphysics he states that the function of the artist is to express the unique periods of his own personality. But the appreciation of a work of art can not then possibly be a duplication in the mind of another person of the expressed mood of the artist, since the original mood is by definition unique, and consequently M. Bergson is forced to maintain that really to appreciate a painting, for instance, is not to see what its creator saw, but

to be encouraged to discern in one's own consciousness something else. This difficulty arises from the fact that for combinations of repetition and novelty, or of sameness and difference, there is theoretically no place in M. Bergson's philosophy, as we may once more note in connection with his proposed solution of the eleatic paradoxes.

Since the resemblance theory of knowledge, as developed in M. Bergson's thought, issues in the conviction that to be genuine, knowledge must coincide with its object, M. Bergson supposes that each reality is the genuine truth of itself. Truth in his hypothesis, consequently, can not be expressed in terms of a relation holding between different realities, and he adopts implicitly the view that predication is falsification, since it brings one reality into relation with another not itself. The implication manifests itself in connection with the criticism of associationistic psychology contained in *Time and Free-Will*, at the points in his exposition where M. Bergson denies that pure quality, which is genuine mind, can come into contact with quantity. To this very "confusion" of quality and quantity, in fact, M. Bergson traces the paradoxes of the eleatic philosophers.[18] And his refutation of Zeno consists in denying that motion and the measure of motion, or quality and space, can legitimately be related. Zeno went wrong, M. Bergson argues, in confusing various motions with each other by means of dimensional space; since each motion is in reality one and indivisible, and incommensurable with everything else. Motion, strictly speaking, is pure unextended mobility, and can not be measured, because the "only thing we are able to measure is space."[19] Obviously this solution of the paradoxes of Elea is merely a restatement in terms of extensity and change, of M. Bergson's conviction that quantity and quality are different and, therefore, quite separate from one another; this conviction in turn derives from his peculiar theory of epistemological dualism. M. Bergson's refutation of Zeno is, therefore, a development of the assumption that in order to be true knowledge must absolutely resemble its object.

We may say in conclusion that the contradictions that split the chief branches of M. Bergson's philosophical doctrine into two parts originate unexceptionally in his discovery that the knowledge of positive science is different from what the resemblance-epistemology teaches that knowledge should be. Clinging to his epistemological assumption M. Bergson rejects or condemns or disparages the knowledge of positive science; whenever his philosophy has an alternative

[18] *Time and Free-Will*, p. 74.
[19] *Time and Free-Will*, p. 230.

choice between positive science and epistemology, the resemblance-epistemology is preferred. But instead of sacrificing knowledge to a theory of knowledge it would be possible to shape one's epistemology on what an observation of science shows human knowledge to be. Only in such a procedure, we believe, could the contradictions and difficulties that trouble the course of M. Bergson's speculation in philosophy be escaped.

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