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THE PROBLEM OF TIME IN RECENT FRENCH PHILOSOPHY.

II. TEMPORALISM AND ANTI-INTELLECTUALISM: BERGSON.

THE logical point of departure of the metaphysics of Bergson is practically that of later neo-criticism; it consists in the conjunction of a fundamental conviction common to both systems with a preoccupation with two special problems, through their opposed solutions of which the two systems are brought to differing conclusions with respect to the relation of logic to reality. (a) The common fundamental doctrine is, of course, a radical temporalism. No one has ever been more emphatic than Bergson in declaring that "all immobility is relative and movement alone is real." And with both, this temporalism takes the form of an indeterminist doctrine of radical spontaneity and creative becoming. (b) But, as James has remarked, M. Bergson seems to have come "into philosophy through the gateway of mathematics. The old antinomies of the infinite were," apparently, "the irritant that first woke his faculties from their dogmatic slumber." Consequently, his philosophizing has from the first been largely devoted to considering the bearing of these difficulties upon temporalism, and ostensibly to discovering *in* temporalism a way of escape from them. It was, he has declared,¹ "in the arguments of Zeno of Elea concerning change and motion that metaphysics was born." This ascription of the primary place, logically and historically, in metaphysics to the Zenonian paradoxes is, of course, equally characteristic of the neo-criticists. (c) Both to them and to Bergson, again, has occurred the suspicion that some of the obscurities of this problem in the past have been

¹ *La Perception du changement*, Oxford, 1911, p. 16. Bergson's writings will be here designated by the following abbreviations: *DI*, *Essai sur les données immédiates de la conscience* (pub. 1889), 7th ed., 1910; *MM*, *Matière et Mémoire*, (pub. 1896), 6th ed., 1910; *IM*, *Introduction à la métaphysique*, in *Rev. de Métaphysique et de Morale*, Jan., 1903; *EC*, *L'Évolution créatrice*, 1907; *PC*, *La Perception du changement*, 1911.

due to a tendency of the human mind to ascribe to time the attributes of space, and through this confusion of *genres* to create for itself gratuitous and spurious difficulties. Both, therefore, have been much occupied with the task of discriminating the ideas of extension and duration and of eliminating from each all alien and unessential attributes.

Upon this last problem Bergson's characteristic doctrine made its appearance in his earliest volume, and has since been frequently reiterated. "Real duration," the time that is an immediately certain reality, the actual succession of inner experience, he constantly insists, is not subject to the categories of number or quantity. Though it is a sort of "multiplicity," it is not a multiplicity composed of numerically distinct parts; it is "indivisible, though moving," its successive elements (*i. e.*, the states of consciousness of consecutive moments) are "without reciprocal externality," they "mutually permeate" or "interpenetrate" one another. Magnitude and number in the proper sense are predicable only of space and spatial things; when we think of time as an aggregate of numerable moments, of the whole of a duration as a sum of lesser durations, it is because we have "spatialized" it and thus falsified this nature. "Strictly speaking, it is not a quantity" (*DI*, 81). A mind which had the idea or the experience *only* of time, and was wholly ignorant of space, would necessarily represent duration as "at once self-identical and changing," "as a succession without distinction," as a "solidarity" (*DI*, 77). "Even the idea of a certain *order* of succession in time involves the representation of space, and should not be used in the definition of time" (*ib.*). "That time implies succession" is not denied, but that "succession presents itself primarily as the distinction of a juxtaposed 'before' and 'after'" Bergson cannot admit. In listening to a melody, "we have an impression of a succession—an impression as far removed as possible from that of simultaneity—and yet it is the very continuity of the succession, the impossibility of decomposing it into parts, which gives us this impression. If we cut it up into distinct notes, into as many 'befores' and 'afters' as we choose, we do so by interpolating into it spatial imagery and impregnating succession with simultaneity" (*PC*, 26).

It is in this paradoxical conception of the nature of real time that the genuine anti-intellectualism of Bergson consists. His doctrine of the essentially instrumental office of thought—the part of his system which is akin to pragmatism—of itself need have had no radical anti-intellectualist consequences. To say that thought has developed as a means to efficient action does not necessarily imply that thought wholly falsifies the nature of the reality upon which it enables us to operate; the opposite inference would, indeed, seem the more natural one. An instrumentalist in epistemology may well have doubts about the finality and completeness of our knowledge, and be sceptical about the fitness of the intellect for dealing with purely speculative questions, if there be any such; but, *qua* instrumentalist, he can have no ground for declaring that he actually knows reality to have *a positive character other than* that which thought ascribes to things and irreconcilable with the categories and logical principles of which the intellect makes use. But this latter position is the one taken by Bergson. Reality—such is his underlying argument—is pure duration; duration is without quantity, is a multiplicity without number, is a succession in which the moments are in no sense external to one another; ‘intellect,’ however, infected with spatial ideas as it is, inevitably applies to all things the category of quantity, inevitably assumes all multiplicity to be composed of distinct units, inevitably represents the moments in a succession as reciprocally exclusive. Hence it is that intellect is known to be incapable of representing the true character of reality, which is disclosed in ‘intuition’ alone. In other words, in the proper logic of Bergson’s system, his temporalist metaphysics is prior to his instrumentalist epistemology; for it is the former that accounts for his anti-intellectualism, to which his instrumentalism is a sort of explanatory addition.

It ought to be evident, also, that this anti-intellectualism is (at least by implication) of the full-blown sort defined in the previous part of this study: it amounts to the doctrine that reality in its true nature is self-contradictory. Bergson, to be sure, never quite unequivocally asserts this doctrine; he commonly seems to wish to avoid it; and if it were put explicitly

before him, he would probably not subscribe to it. But the specific attributes which he does unequivocally ascribe to reality (*i. e.*, to duration) *are* reciprocally contradictory, unless they are meaningless; and their being so is the ultimate and decisive reason why the nature of duration is declared to be so alien to the intellect. A consciousness of succession in which there is no distinction of 'before' and 'after'; a 'duration' which is not instantaneous, and yet has no quantitative character; a sequence to which the idea of serial order is wholly inapplicable; an indivisible totality of the past and the present which is at once continually present and continually moving (*PC*, 30):—if these phrases are not *contradictiones in adjectis*, it would be hard to know where to find examples of such things. But the true logical character of his conception of time is concealed from Bergson, and from some of his expositors and critics, by several circumstances, of which I may now mention two. The first is the fact that he is prone to reason also in the following manner: What is real and actually given in intuition cannot be self-contradictory; pure duration, with the above-specified attributes, is a reality given in intuition; *ergo*, contradictions discovered in the attributes of pure duration cannot be real contradictions. It is through this reasoning that Bergson has been led to suppose that he has given us, in his account of the nature of time, a solution of the Zenonian and Kantian antinomies, when in fact he has merely given us a reaffirmation of both sides of those antinomies. Metaphysics, he writes, would no doubt "end in irreducible oppositions, if there were no way to *accept at the same time, and upon the same ground, both the thesis and the antithesis of the antinomies*. But philosophizing consists precisely in placing oneself, by an effort of intuition, *inside of* that concrete reality, about which, so long as he looked upon it only from the outside, the philosopher of the *Kritik* was constrained to take the two opposed views." In the same way, Bergson seems to imagine, so long as one had never seen the color gray, the idea of the "interpenetration of white and black" would appear self-contradictory; but when that color has once been intuited, one "easily understands how it can be envisaged from the double point of view of

white and black." (I refrain from comment upon this analogy.) Thus "the doctrines which have a basis in intuition escape the Kantian criticism (*i. e.*, the antinomies) in the precise degree to which they are intuitive; and these doctrines comprise the whole of metaphysics" (*IM*, 34). And thus, "in order to rid ourselves of such contradictions as Zeno pointed out, and to free our knowledge from that relativity with which Kant believed it to be stricken, we need only to make an effort to recapture change and duration" in their true nature (*PC*, 17). But obviously, a conception cannot lawfully be acquitted of the charge of self-contradiction merely by a change of venue from the court of logic to that of intuition. For the charge is one that can be properly tried only in the former court, from whose decision there can, on that particular count, be no appeal. If after full analysis two predicates are found to be reciprocally repugnant, the case, so far as the 'laws of thought' are concerned, is ended. By contradiction one *means* logical contradiction, and one is referring to concepts and not to 'intuitions' absolutely incapable of conceptual interpretation. It is a pity, therefore, that Bergson has failed to see that simply to assert, upon the alleged warrant of intuition, "both thesis and antithesis of the antinomies," is no *logical* solution of those difficulties; and that he did not say explicitly and in general terms what, implicitly and piecemeal, he maintains: that temporal consciousness is a logically self-contradictory kind of existent, but is not on that account a whit the less 'real.'

A second reason why this trait of Bergson's doctrine has escaped many of those who have written about him lies in a certain elusiveness of his language. His reader may at times suppose him to mean by the 'indivisibility' of time merely the smooth fluidity of the stream of consciousness, the uninterruptedness of the ordinary sequence of mental states, or the imperfect definition of much of our imagery; and by the 'interpenetration' of moments merely the survival in the present moment's consciousness of part of the preceding moment's content, of memories from the remoter past, and of effects produced by vanished impressions. One cannot be at all sure that it is not of facts of this sort that

Bergson himself frequently is thinking, when he is endeavoring to describe "pure duration." But it is obviously not to these harmless commonplaces that he can be supposed to refer when he speaks of the "extreme difficulty" which all must experience in recapturing the intuition of pure duration (*IM*, 27). Nor, unless he is using language with a looseness unprecedented in modern philosophy, can his usual expressions be regarded as conveying any doctrine less paradoxical than that which I have indicated. It would be unfair not to assume that when he describes something as "without quantity or number" he means that quantitative and numerical attributes cannot be predicated of it; that when he says that "successive" moments of consciousness are "without reciprocal externality" he means, not that they follow one another without a break and contain in part the same imagery, but that—they are not external to one another. That time as a whole, or any 'part' of it, is completely innocent of all internal plurality, or distinction of elements, that the moments of consciousness, in the true intuition of duration, are "not even distinguished as *several*" (*DI*, 91)—these singular assertions are the truly original, and the most constantly reiterated, doctrines of Bergson's philosophy. They are not the less to be ascribed to him merely because they coexist there with (and even themselves imply) other assertions which are meaningless unless time be credited with quantitative determinations and internal multiplicity. For the peculiar character of this philosophy consists precisely in its conjunction of these two sets of assertions.

The self-contradictory view of duration which Bergson espouses (it should further be observed), though it is adopted in the name of the absolute 'mobility' of duration, in fact implies no less (and no more) plainly a doctrine of absolute immobility, of the unreality of what is ordinarily meant by succession—*i. e.*, the banishing of certain content of consciousness to the limbo of the dead past, through the emergence into present existence of new—and hitherto merely potential—content. In a "succession without before or after" no such psychological tragedy could ever occur; no one would ever need to cry "*Verweile doch, du bist so schön!*" And in his recent Oxford lectures (as well as in *MM*)

Bergson avows as plainly as possible that for him there is no genuine ontological difference between present and past. People incline, he remarks, to represent the past as non-existent, and philosophers have encouraged them in this idea. But the idea is illusory—"an illusion useful and even needful for the life of action, but dangerous in the highest degree for speculation. In it you may find in a nutshell most of the illusions which vitiate philosophical thinking." For, of course, the present as a mathematical instant, the boundary between past and future, is a nonentity, a pure abstraction. What, then, is the present of which we ordinarily speak? Clearly, we mean by the term a certain "interval of duration." And the limits and extent of this interval are fixed by the limits of our field of attention. But this field is arbitrary—it may be lengthened or shortened at will. There is no reason why its bounds should not be indefinitely extensible, "so as to include a portion as great as you please of what we call our past." "A sufficiently powerful act of attention, and one sufficiently detached from practical interests, would therefore embrace in an undivided present the entire past history of the conscious person" (*PC*, 30-31). Now since, for Bergson, complete acquaintance with the *durée réelle* would demand a complete detachment from practical interests and involve an entire freedom from the limitations which they impose, it should follow that in the true intuitive experience of duration this existence of one's "entire past history in an undivided present" is actually realized. Here, then, we have in Bergson's philosophy nothing less than the *totum simul* which such an eternalist as Royce declares to be the true nature of reality—*i. e.*, of the Absolute Experience; though with this one difference (which renders Bergson's position still more singular), that *his* undivided present fails to include the future, of which the content will yet eventually become past, and so become part of an undivided present. True, Bergson makes haste to add that this merging of present and past in a complete identity is not "a simultaneity"; but he thereby merely reminds us of the other half of the fundamental contradiction in his account of real duration. One of the most acute remarks that have been made about Bergson is that

of Professor A. E. Taylor, who observes that the author of "*Matière et Mémoire*" is "at heart as much of an Eleatic as Mr. Bradley." But the whole truth is that Bergson is at once a thorough Eleatic and a thorough Heraclitean; that the essence of his philosophy consists in an analysis of the time-concept which leads him to just this contradictory combination of doctrines; and that he is a radical anti-intellectualist because, while thus led (in fact, if not in intent) to describe the temporal as self-contradictory, he, unlike Bradley, is unwilling to call it "mere appearance."

To this analysis of the time-concept—that is, to the reasons which impel Bergson to his paradoxical characterization of *durée réelle*—I now turn. The main reasons offered in his earliest work for the contention that the ideas of quantity and number and "reciprocal externality of parts" are applicable solely to space and not at all to time, seem to be fairly reducible to two arguments, here designated *A* and *B*, each of which I shall first summarize and then criticize. Two other arguments (*C* and *D*) are rather more fully presented in his later writings.

(*A*) (1) Since the representation of an aggregate of parts or numerable units involves at once distinguishing the units and summing them in a collective unity, it manifestly cannot be given through a *purely* successive apprehension of the units separately, as each makes its transitory appearance in consciousness. To add a series of units, so as to think them as constituting a sum, we must have them all represented simultaneously. (This is the third of the paradoxes left unrelieved by Renouvier.) (2) To represent two or more units simultaneously means to think of them as simultaneously juxtaposed in space. (3) Therefore, the representation of any sum or aggregate composed of parts is always the representation of a simultaneous juxtaposition of units in space. (4) But such a representation is not only different from, it is obviously exclusive of, the idea of duration. (5) Hence, duration cannot properly be thought as a numerical sum or aggregate of *partes extra partes*.

Of these propositions, the second, which in diverse forms is reiterated a score of times in the second chapter of the volume

mentioned, is the keystone of the whole argument in its distinctively Bergsonian form. But taken literally it seems palpably untrue. It gets such plausibility as it has from a confusion of 'representing simultaneously' with 'representing as simultaneous.'¹ When I compare (and, therefore presumably 'represent simultaneously') my expectations of yesterday with my experiences of today, I am certainly not representing these two states of mind as simultaneous, nor yet, strictly speaking, as in space. In a single specious present I am capable of thinking *about* two or more non-present moments, and of distinguishing them as temporally earlier and later. The coexistence, in the mind, of two ideas of objects or events is not necessarily identical with the idea of the coexistence of the two objects or events. If it were, we should obviously be unable to make any distinction between the coexistent and the non-coexistent; since the idea of the latter must coexist in the mind with the idea of the former in order that the two may be contrasted. But this distinction is in fact one which we all of us make with entire clearness and logical efficiency every hour of our waking lives. It is true that when, in a single moment, I think about two other moments, and contrast them as 'before' and 'after,' certain spatial imagery is usually, if not always, present. Those of a visualizing habit, at least, are likely to think of the successive moments as points in a vaguely pictured line in space. But this mere association of imagery (which, moreover, we have no good reason for supposing universal) no more proves that the idea of a succession of discrete moments is identical with the idea of a line of coexistent points, than the fact that most people think of space as colored proves the idea of space to be reducible to that of color. We constantly and perfectly discriminate the sort of one-dimensional magnitude in which the elements are thought as coexistent and juxtaposed—

¹ An illicit transition from the first to the second of these ideas is frequent and unmistakable in the chapter cited. Thus Bergson writes: "When I say, for example, that a minute has just passed, I mean that a pendulum, beating every second, has made sixty oscillations. If I represent these sixty oscillations to myself all at once, and by a single act of the mind, I exclude *ex hypothesi* the idea of a succession: I think, not of sixty beats succeeding one another, but of sixty points of a fixed line" (*DI*, 79).

which is the spatial line—from the sort in which the elements are thought as never being in existence together—which is the time-sequence.

Thus Bergson's first argument appears to result from a singular confusion of ideas and to imply the indistinguishability of two concepts which in fact we constantly distinguish. Meanwhile, the real difficulty about our time-consciousness is not very clearly brought out. But one ought, perhaps, to assume that it is this real difficulty which Bergson has had in mind, and that he has confused it with the paralogsism just criticized. The difficulty consists in that paradox of time-perception to which reference has been made in the previous article. To experience succession means primarily to experience the transition from one presentation to an immediately following presentation. As successive these presentations must, it would seem, exist, and be experienced, at different though contiguous moments; one must be gone by the time the other comes. But on the other hand, it has appeared to many psychologists¹ axiomatic that in (Lipps's words), "if two sensations are to be represented as following one another, the first condition is that the two be contained in one and the same act of representation,—that, accordingly, we have them in in consciousness contemporaneously, not now one and then the other." For to be aware of a succession is to discriminate the antecedent from the consequent term. But how can two terms conceivably be compared and discriminated unless they are both present in consciousness together? Here, then, seems to be at least a *prima facie* antinomy. To constitute an experience of succession, the two representations must be experienced one after the other; but just as truly, it would appear, must they be experienced simultaneously.

Most psychologists, however, have not regarded this as a real antinomy.² They have rather divided into opposed schools upon

¹ For example, to Lipps (*Grundtatsachen des Seelenlebens*, 1883, p. 588), to Meinong ("Beiträge zur Theorie der psychischen Analyse" in *Zeitschrift f. Psychologie*, 6, 1894, p. 446) to Strong (*Psych. Rev.*, 3, 1896, p. 150), to Ward (*Enc. Brit.*, art. "Psychology") and to Royce (*The World and the Individual*, II, p. 117).

² Royce, it is true, asserts both thesis and antithesis, apparently with equal literalness. But he does not seem explicitly to note that he has thereby set up an antinomy, and given an anti-intellectualist account both of our own and the Absolute's experience.

the point, each embracing one alternative and rejecting the other. Some, to avoid the paradox of the simultaneity of the successive, have gone to the extreme of denying¹ that "there is any such datum in consciousness as a present moment" without experienced duration, a mere simultaneity without apprehended succession and temporal magnitude. L. W. Stern² has with especial vehemence assailed what he calls the "dogma" that "*nur solche Inhalte zu einem Bewusstseinsganzen gehören können, die zu irgend einer Zeit gemeinsam vorhanden, simultan sind.*" He endeavors to prove that, on the contrary, it is entirely possible for a "unitary and relational act of consciousness to be constituted by a psychic process lasting for a certain length of time, in spite of the non-simultaneity of its component parts." He urges as evidence for this view the fact that the rejection of it implies the denial of the possibility of our having any direct perception of temporal sequence; *i. e.*, if the terms of any actually experienced relation must be given at once, then succession is never experienced, but only inferred. This consequence, however, has been accepted readily enough by Strong and others of those who hold to the opposite horn of the dilemma. Strong, for example, declares that only the present is an actual datum of consciousness, and that time is a sequence of 'real presents' none of which contain any admixture of past or future. "The lapse of time," he writes, "is not directly experienced but constructed after the event. The succession of our feelings is a fact external to our feelings themselves. If it were not for memory"—for memories of the past surviving as static content in each present moment—"we should never have any consciousness of succession at all." Such a description of our time-experience, however, Stern, Royce,³ and others declare to be in conflict with the facts revealed by introspection.

Here, I can't but think, are the materials for a clearer and more plausible argument from temporalism to anti-intellectualism than any which Bergson explicitly presents. The argument, though

¹ So James in *Psych. Rev.*, 2, 1895, p. 111; Hodgson, *Phil. of Reflection*, I, pp. 24 ff.; Fouillée, *Psych. des Idées-Forces*, 1883, II, p. 84.

² *Zeitschr. f. Psych.*, 13, 1897, p. 326.

³ *The World and the Individual*, II, p. 118.

it begins with the same consideration as his actual argument, does not involve an untenable identification of the idea of temporal sequence with the idea of spatial juxtaposition; it does not involve an impossible separation of the categories of quantity from the idea of time. It consists merely in declaring the *prima facie* antinomy of temporal perception to be for 'the intellect' a real and absolute antinomy, and the destructive reasonings of both schools of psychologists to be sound, though their conclusions are reciprocally contradictory. The argument could be accepted, however, only if the anti-intellectualist could show that both of these opposed lines of reasoning *are* sound, and that neither the way of escape from the paradox of the simultaneity of the successive which is proposed by the one side, nor yet the opposite way of escape, proposed by the other side, is logically practicable. This certainly has not been shown by Bergson; the sequel will, I think, prove that it cannot be shown. But it is time to pass to the second of the two principal arguments upon which he actually relies in his first book.

(*B*) The first argument, as we have seen, finds its premises in certain asserted conceptual necessities. The second is drawn from certain alleged facts of inner experience, revealed by introspection. Bergson's typical empirical example of the purely qualitative nature of the time-consciousness is the phenomenon of rhythm-perception. In identifying a rhythm or a melody, or in distinguishing one rhythm from another—we are told—we do not discriminate and count the beats or notes composing the complex; rather, we recognize the rhythm by a distinctive qualitative 'feeling' characteristic of it as a whole. It is obvious that the units, objectively considered, are actually successive and actually numerable; but in the experience of the subject they are not separately apprehended at the successive moments of their occurrence. They are given only as organized into an indivisible but qualitatively definite unity. Thus when M. Bergson hears the clock strike four, his mind, he tells us, "notes the succession of the four strokes, but quite otherwise than by a process of addition. The number of strokes is perceived as a quality and not as a quantity" (*DI*, 97). Here, then, he finds a

concrete instance of a real experience of succession and duration which involves no representation of number or quantity or reciprocal externality of parts. To this specific psychological example Bergson adds the remark that none of our more naïve states of consciousness ever succeed one another as discrete and numbered particles of experience, but “permeate” and “melt into” one another. This is especially evident, he finds, in our dream states, states in which the ego is cut off from the need of those artificial constructions and ‘standardizations’ of the elements of experience which are useful for social intercourse. “In dreams we no longer measure duration, but simply feel it; instead of quantity it has once more become a quality;” its phases confusedly and indiscriminably lapse into one another. The same is true, even in the waking state, of the deeper self of strong emotion. “Let a violent love, a profound melancholy, take possession of the soul:—it is made up of a thousand diverse elements, which fuse and penetrate one another, without definite contours, without the least tendency to remain external to one another (*à s’ extérioriser les uns par rapport aux autres*).”¹

If, now, we examine the specimen of “purely qualitative duration” which Bergson supposes to be found in the recognition of a rhythm, it is easily apparent that (even assuming the correctness of his introspective psychology here) the example fails to prove what is required. When, and in so far as, the successive beats of the rhythm do not separately enter consciousness at all, the recognition, simultaneously with the hearing of the last beat, of the qualitative character of the rhythm, *ex hypothesi* is *not* an experience of succession or duration. It is simply a case where a series of stimuli which objectively considered—from the point of view, for example, of the psychologist conducting the experiment—are successive, has finally produced in the consciousness of the subject an instantaneous apprehension of a certain definitely qualified content, *not* apprehended as a numerical aggregate nor as a succession. Bergson has simply treated as one the two experiences of the subject and of the experimenter; it is the former alone which is pertinent to his argument, and it

¹ *DI*, 100.

—if there be in it the complete absence of numeration and discrimination of moments which he supposes—can in no wise illustrate the nature of the experience of succession, since it bears no resemblance to an experience of succession. As for the argument from the confused character of our dreams and more turbid waking states, it seems to rest chiefly upon a confusion of two senses of the “melting” of one state into another. It is true that in our waking memories of our dreams (with the dreams themselves it may be otherwise) we find ourselves suddenly transferred from one situation to another which, according to the causal sequences of our normal experience, ought to be separated from the first by many intervening happenings. And when phase *B* supervenes upon phase *A*, we often in dream seem in some vague way to think of *A* as having always been *B*, though when immediately present *A* was something quite different. But in these oddities of our dream life there is nothing that can in the least be described as “a succession without distinction of parts.” If dream images are experienced as temporal at all—*i. e.*, if they are linked together from moment to moment by even a brief span of continuous memory—they are *eo ipso* external to one another. Certainly in my own dream-experiences, the moment when one falls from the roof is (happily) always “external to” the moment when one is about to be dashed to pieces on the ground—and awakes. Thus far, then, introspective psychology seems to offer no better warrant than did logical analysis for Bergson’s account of the nature of the time-experience.

(*C*) In his first and in his latest book, Bergson seems somewhat obscurely to present an argument referred to in the former paper of this series—the argument from the continuity of time to its logical inconceivability. If duration is a continuum, the passage from any given moment to any subsequent moment would involve the summation of an infinite series. In other words, Zeno’s paradox of Achilles and the tortoise can be transferred from motion in space to duration itself, and to “evolutionary becoming” (*EC*, 337), so long as duration is conceived as divisible, as having those spatial characters by which the Achilles paradox is engendered. Hence we must learn to think of time

as indivisible, and as destitute of all space-like attributes. The difficulty urged by Zeno is a real one so long as we take the movement, or the time it occupies, as "a length"; on this ground, M. Evellin is entirely in the right (*ib.*)—though, it should be noted incidentally, the result of his being so is to render the neo-criticist combination of temporalism and finitism impossible, except at the cost of anti-intellectualism. But in truth, declares Bergson, "the movement is not a length," and we must not treat it (or its temporal aspect) "as we treat the interval passed through, *i. e.*, as decomposable and recomposable at will. Once subscribe to this primary absurdity, all the others follow" (*EC*, 337; *cf. DI*, 87).

The reader will of course remark (as Bergson scarcely does) that the proposed way of escape from this absurdity lies in a flight to the equally great paradox of an indivisible and non-quantitative duration. On this sort of consideration, however, it is not necessary to dilate further here. It is more to the point to note that the whole of the present argument, as applied to pure duration (in distinction from spatial motion), rests upon a certain assumption: namely, that if time were a quantity at all, it would necessarily be a continuous, infinitely divisible quantity. This assumption, so far as I can recall, Bergson nowhere attempts to justify; he merely takes it for granted. A contrary supposition is conceivable; namely, that the succession of our actual duration-experience is not a true continuum, but rather a series of discrete, internally stable states, each of them containing a peculiarly temporal sort of backward and forward 'pointing.' Until this latter possibility (into which we shall later have to inquire) is excluded for explicit reasons, Bergson's third argument must be regarded as logically unsupported.

(*D*) In the greater part of *L'Évolution Créatrice*, Bergson is dealing with a conception of time wholly different from that to which we are introduced in his first book. Yet in this and other of his later writings there occurs an argument (closely related to the preceding, and already foreshadowed in *DI*) which is apparently regarded as supplementary to the three hitherto discussed, and as tending to the same conclusion. This argument, em-

bodied in the famous analogy of the cinematograph, is an application to time of another paradox of Zeno, that of the moving arrow—with a reversal of the Zenonian inference. If—Zeno pointed out—the arrow at each moment of its flight ‘fills’ some particular position, it must at that moment be at rest in that position; for it cannot at any given instant be both in and out of the portion of space in which it is. But if the flight as a whole is the sum of these moments, and of the corresponding series of positions, then it follows that at no time in its flight is the arrow otherwise than at rest—which is an absurdity. Zeno employs the absurdity against the idea of motion; he might equally well, Bergson finds, have employed it against the supposition that a motion is a sum composed of positions as its units. We arrive, observes Bergson, at a parallel absurdity if we suppose a conscious duration to be composed of states. A state is something of which you can say ‘it is’; it is like one of the single pictures (which of themselves contain no representation of motion) in the moving-picture film. A multiplication, or even a (mere) serial arrangement, of such static units can never be equivalent to a duration. Time, then, can as little be a quantity composed of moments as motion is a quantity composed of positions. The positions are not really *parts* of the movement at all, nor the moments parts of time;¹ the positions are not even ‘under’ the movement, as its *loci*. “*Jamais le mobile n'est réellement en aucun des points*” (IM, 19). Suppose the points or the moments to be as numerous as you will, and diminish the gaps between them *ad indefinitum*; “*toujours le mouvement glissera dans l'intervalle, parce que toute tentative pour reconstituer le changement avec des états implique cette proposition absurde que le mouvement est fait d'immobilités*” (EC, 323).

This, like the preceding variation upon a theme of Zeno's, seems to me a more serious and plausible argument than either of the first two. But one must note of it, first of all, that it does not necessarily tend to prove the same conclusion as that which

¹ Here the analogy between the intellect and the moving-picture machine breaks down—unless M. Bergson seriously maintains that the cinematograph gives a false picture not merely in the sense that it shows less than the reality contained, but also in the sense that nothing which it shows was in the original reality at all!

those two were supposed to prove. Even if valid, it shows only that a duration is not a quantity composed of states; it does not show that a duration is not a quantity at all. Time might conceivably be as truly characterized by an "internal multiplicity" of elements as space is, provided only that the elements were not "immobilities." Some further evidence would be requisite in order to show that, if time *were* a sum or a magnitude, the only elements which it could be composed of would be 'states' wholly divorced from transition. But let us, for the sake of getting forward with the argument, assume this last; let us grant that if our time-experience is to be regarded as containing parts or moments, those parts must be units none of which (nor, consequently, all of them together) contain any experience of transition as such, of passing (with the emphasis upon the *-ing*) from one state of consciousness to another. I would then simply ask: What reason is there for maintaining that we have any direct experience of transition as such? Suppose that when Bergson invites us to concentrate our thought "*tout entier sur la transition et, entre deux instantanés, chercher ce qui se passe,*" he is inviting us to look for something which isn't there—something which very naturally baffles the intellect, for the simple reason that it is at once an unreality and an absurdity! To this question, at any rate, concerning the actual verifiability of the occurrence of an experience of *pure* transition—as distinct from the experience of a sequence of discrete momentary states, each of which contains as part of its content memory and anticipation and the past-present-and-future schematism—the issue respecting the value of the fourth of Bergson's arguments reduces—when the assumption mentioned is made. Upon this underlying question Bergson can hardly be said to offer argument. Certain psychologists, as we have already seen, deny that introspection reveals any such experience. Bergson does not directly meet the contentions of these writers; he merely habitually assumes the falsity of their contentions. In doing so he undoubtedly has common belief on his side; this basis of his argument for anti-intellectualism is drawn from a prejudice of common-sense. But it remains to

be inquired, after our review of the positions of Pillon and James, whether that prejudice is defensible, and whether a consistent temporalism involves the assertion of the reality of the experience of pure transition.

Meanwhile, it is to be observed that if such experience be a fact, it is a queer kind of fact from which to infer the non-quantitative nature of time. For surely 'transition' means nothing without a 'before' and 'after'; it implies at least two points or *termini* external to one another—and if external, then distinguishable and numerable. But perhaps this additional paradox—the deduction of the indivisibility of inner duration from the fact of its divisibility, which is involved in the fact of conscious transition—is not so much an objection against the anti-intellectualist as it is grist for his mill. Doubtless, the more numerous the self-contradictions in the anti-intellectualist's own philosophy, the more abundant is the evidence of the futility of the intellect. This particular contradiction, in any case, is an aspect of the more general one characteristic of Bergson's whole system. From the beginning, as I have already remarked, he has had, side by side with his non-quantitative conception of duration, another and an essentially quantitative conception. For example, he is fond of referring us to the experience of impatient waiting as an illustration of the nature of "real," *i. e.*, of psychological time, in contrast to the abstract time of the physicist's formulas; he "always comes back to the glass of sugar-and-water" of the French university lecturer, as a convenient illustration of the secret of the universe. "I am obliged to wait for the sugar to dissolve. This duration is an *absolute* for my consciousness, for it coincides with a certain degree of impatience which is itself strictly determinate. Something compels me to wait, and to wait *during a certain length of psychic duration* which is forced upon me, and over which I have no control" (*EC*, 367). One is tempted here to the remark that if this is the sort of experience in which real duration is revealed to us, the attainment of the mystical intuition of that reality is scarcely so rare and difficult an achievement as many of M. Bergson's utterances have led us to fear; impatience is beyond the reach of few of us. But the

fact is, of course, that we are introduced here to a quite distinct and far less paradoxical idea of time: a time that always has a *longueur déterminée*, a duration which is absolutely quantitative, though perhaps continuous; which as a whole ever receives, and is apprehended as receiving, a definite increment of magnitude; which, however, is not represented as in the least infected with "spatiality."

And it is in his developments of this second idea of time that the profitable and important part of Bergson's philosophy appears to me to consist. *This* duration (or the consciousness of it, of which he conceives the essential to be the conservation and continuous augmentation of the past in the form of stored-up memory¹) is a cumulative process, and because cumulative, creative. At each present moment it is (not absolutely, but in some degree) new, because at each moment it contains, in addition to the preceding moment's content, a fresh bit of reality. "*Notre passé nous suit, il se grossit sans cesse du présent*" (IM, 5). "There are no two moments that are identical in the same conscious being; a being which had two such moments, would be a being without memory," and therefore unconscious (*ib.*). Here, surely, we are dealing as explicitly as possible with quantitative categories, and have to do with an experience of which "internal multiplicity," and especially the distinction of each present movement from all the past, are of the very essence. Yet—to the reader's astonishment—on the very same page from which the last-quoted phrases come, Bergson returns to his original *leit-motiv*: "Anything that is pure duration excludes all idea . . . of reciprocal externality."

It might suffice to leave here our examination of Bergson's position. We should then have his anti-intellectualism standing clearly before us, as the joint assertion, in perfectly plain language, of these two absolutely contradictory accounts of the nature of "real duration"—for one of which, however, our analysis has shown that no convincing argument is offered. Yet I am afraid that to drop the matter here would be to fulfil the task of exegesis somewhat imperfectly. For, as has been mentioned, an

¹ *Conscience signifie mémoire* (IM, 5).

anti-intellectualist in the extreme sense¹ Bergson is only reluctantly, perhaps even *sans le savoir*. And to the two reasons already suggested to explain why the precise logical character of his own position is somewhat hidden from him, why he habitually fails to see both sides of it synoptically, one other probable reason may now be added. This is that in the conception of the individual's past (*i. e.*, his past experience) as accumulated without loss, and as therefore existent in its totality at each present moment, the two ideas of duration may, at first sight, seem harmonized. For in this view, the whole past (as has already been remarked) also is present. Introspection, to be sure, does not reveal it so; but that, we are given to understand, is because ordinary introspection does not penetrate to the true time-experience. Upon the perpetual presence of the past—and thus, in a sense, upon the “indivisibility” of all *realized* time—the very possibility of the augmentative, and the consequent “inventive,” process of becoming is supposed to depend. But a little further reflection would show that the essence of even this representation of “duration,” as an ever-enlarging and never-melting snowball, is the assumption that, while every present contains all the past, it also contains *more* than all the past, and must (if it is a consciousness of time that one is talking about) in some fashion apprehend the new total's distinctness from any previous total. Who has ever insisted more vigorously than Bergson that between “actually present sensations and pure memory there is a difference not of degree but of kind”? Though memory may engender a present sensation, “at that very moment it ceases to be memory and is transformed into something present, something that is now being lived through, *actuellement vécue*” (*MM*, 150). True (such are the tortuous windings of the Bergsonian doctrine) the existence of this present (and therefore the discrimination of the *actuellement vécu* from the *souvenir pur*) is based upon the necessity for action, and any way of thinking which is influenced by the necessity for action is always, according to Bergson, a falsification of reality. Hence we apparently ought to say that in reality nothing ever is *actuellement vécu*. But

¹ Defined in the previous paper, this REVIEW, XXI, p. 12.

this is a strange conclusion for a temporalist philosopher, unless the philosopher deliberately means to be so radical an anti-intellectualist as to balance his temporalism by an equally complete anti-temporalism. In fact, as we have seen, if we take Bergson's various utterances seriously and put them together, this *is* his position. But in so far as it is not with him a deliberately chosen position, but one from which he would desire to escape,—in other words, in so far as he wishes to be a genuine temporalist, and not one who reduces his temporalism to a nullity by the simultaneous affirmation of its opposite,—we should have to take the last citation as the statement of a real fact about “duration.” Temporal experience would thus fall into the usual two parts: the true present, “that which is now being lived through”; and the past, summed up in “pure memory,” which differs from the present by an absolute difference of kind. And that “continuous becoming which is reality itself” would consist in the increase of the sum of “memory” by the constant lapse of the concrete content of each given present into the status of a past, through the constant birth of ever-new ‘presents.’

But this obviously quantitative conception of duration and becoming would, as we have seen, not involve anti-intellectualism of the extreme sort—would not even ‘baffle the intellect’ at all—unless at least one of three conclusions were proven: (1) that the possibility of an actual experience of succession implies the psychological paradox of ‘the simultaneity of the successive’; (2) that we have an experience of pure transition not composed of ‘states’; (3) that experienced time, *if* a quantity, must be a continuum; and that a transition or ‘getting-over’ from one moment to another, existentially ‘external’ to the first, would therefore involve the actual summation of an infinite series. None of these real *prima facie* difficulties about time, I have tried to show, has been altogether clearly presented by Bergson; though he has offered an argument remotely related to the first, and has incompletely elaborated the second and third. Certainly he has not given any good reasons for accepting any of the conclusions mentioned. Whether they ought in fact to be accepted must be a matter for subsequent consideration. The answer must depend

upon our attainment of a satisfactory analytical account of the actual nature of our consciousness of time—such as Bergson, with his strange description of duration as wholly alien to the categories of quantity and number, has failed to give us. As an aid to this analysis, I shall next examine some of the opinions of Pillon and of James about the characteristics of the time-experience, its relation to the idea of space, and its consistency with the principle of contradiction.

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