The Third Period of Whitehead’s Work, c. 1924-1947:
The Philosophy of Organism

I

For three reasons I count 1924 the first year of Whitehead’s third period. (1) In that year he left England and his professorship in Applied Mathematics to take up an appointment (originally for five years) as Professor of Philosophy at Harvard; he held the position for thirteen years, and the American Cambridge was his home for the remainder of his life. (2) In the preliminary correspondence his letter of January 13, 1924, to an intermediary, Mark Barr, included these statements: “The post might give me a welcome opportunity of developing in systematic form my ideas on Logic, the Philosophy of Science, Metaphysics, and some more general questions, half philosophical and half practical, such as Education . . . I should greatly value the opportunity of expressing in lectures and in less formal manner the philosophical ideas which have
accumulated in my mind." 1 This list of subjects includes areas of his previously published work and adds metaphysics, as a field in which he has ideas that he would like to develop. Thus both continuity and expansion are indicated. (3) Whitehead's bibliography includes nothing for 1924, but the one published item which he dated in that year, the Preface to the second edition of *The Principles of Natural Knowledge* ("August, 1924"), is accompanied by Notes which, as we shall see, show a very important movement beyond the point of view of the first edition (1919).

Whitehead's turning toward an all-inclusive speculative construction after his books on the philosophy of natural science ought not to surprise us. He had written several times of the need for a metaphysics which should synthesize mind with nature, and value with fact. In his Tarnier Lectures of 1919 he had described the aim of philosophy as "attainment of some unifying concept which will set in assigned relationships within itself all that there is for knowledge, for feeling, and for emotion" (CN p. 2)—which is both an accurate prescription for the philosophy of organism, and the sort of conception of philosophy we should expect from the unusual mathematician who wrote the *Universal Algebra* and "Mathematical Concepts of the Material World."

But he was also led toward metaphysics by external events. (I do not mean that we can safely assign great weight to these external events.) His appointment to a philosophical professorship and his migration to America 2 probably stimulated him enormously. Also, tragedy has a liberating effect on minds that are capable of expansion. Probably the national tragedy and the personal tragedy of the war of 1914 to 1918 played a part in extending the horizon of his thoughts. However, in Whitehead's published work there is nothing which I can construe as conclusive evidence that but for these tragic events

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1 Quoted by W. E. Hocking in "Whitehead as I Knew Him," *Journal of Philosophy*, 58 (September 14, 1961), 508.

2 Hocking's invaluable article (op. cit.) includes the only account so far published of how Harvard came to offer the appointment, and a persuasive explanation of part of its attractiveness to Whitehead.
he would never have written a metaphysics, and nothing I can construe as good evidence that his metaphysical views in the nineteen-twenties would have been markedly different. But in 1956 Bertrand Russell wrote about the 1918 death of Whitehead’s younger son Eric in the war: “The pain of this loss had a great deal to do with turning his thoughts to philosophy and with causing him to seek ways of escaping from belief in a merely mechanistic universe.” 3 Some day, I hope, biographers will find out what can be known, and will evaluate Russell’s implication that Whitehead at one time privately favored a mechanistic world-view. Since Whitehead expresses substantial dissent from recent antimechanical systems of metaphysics, in his few published references to them, the tragedy of 1918 may have been a cause of his eventually working out his own system.

It seems likely that the production of a grand metaphysical scheme by Samuel Alexander somewhat encouraged him to try his hand. But although Whitehead thinks highly of Alexander’s work, and has been sensitive to the lively originality of James and Bergson also, it is not easy to find in his metaphysical writings clear demonstrations of their influence either in his choice of problems or in the essentials of his solutions. 4

As regards Bergson, it should be noted here that Whitehead’s advance from physics to metaphysics is of an entirely different type from the French philosopher’s. In an Aristotelian Society symposium on the question, “Time, Space and Material: are they, and if so in what sense, the ultimate data of science?,” Mrs. Adrian Stephen (Karin Costelloe), a skillful interpreter of Bergson, said, “If our question were put to him, Bergson would, I think, reply: Material is the ultimate datum of science, space is the form which science imposes upon its objects, science cannot deal with time.” 5

4 See Sect. X, below.
5 Problems of Science and Philosophy, (“Aristotelian Society Supplementary Volume, 2”: 1919), p. 87. The summary of his Principles of Natural Knowledge, mentioned and drawn upon in Sect. VI of the preceding chapter, was Whitehead’s contribution to this symposium.
Whitehead’s answer, however, is not, like this, restrictive. His advance is toward a single unifying concept, not toward a contrasting pair of concepts, the inferior member of which is to be supplied by physical science. When Whitehead first (in print) looks toward metaphysics, he writes that he hopes to *embody* his philosophy of nature “in a more complete metaphysical study” (PNK Preface to 2nd ed.).

In all of Whitehead’s later writings one can see that a strong motive for metaphysical exposition is his belief that the educated man’s implicit conception of the universe has not responded to the advance from the seventeenth-century physics of inert matter to the late nineteenth-century physics of energetic vibrations described in terms of vectors. He sees that, whereas a number of philosophic systems have been produced in the modern period, it is not any system of philosophy, but the success of the materialistic ideas of science, which has shaped the philosophy unconsciously held by mankind. No epistemology and no philosophy of religion, but only a new and equally scientific set of ideas about nature and nature’s relation to human experience, can hope to get this philosophy displaced.

There is no evidence in Whitehead’s writings that any twentieth-century developments in the field of science lured him into metaphysics at this time. The four mathematical developments and the three physical developments earlier enumerated, had been active in his mind for many years. It is natural to include the quantum theory among influences on him; my impression, however, is that this was to him a supporting illustration rather than a formative influence in the creation of his atomic pluralism.⁶ As for the theory of relativity, Whitehead had already made his response to it.⁷

⁶ Robert M. Palter, *Whitehead’s Philosophy of Science* (Chicago, 1960), pp. 214-218, explains the relation of Whitehead’s idea about “non-uniform objects” (in the 1920 books) and “primates” (in SMW) to Bohr’s theory of the atom, and notes the complete absence of allusions to the post-1924 developments in quantum theory (or to their authors) in Whitehead’s works.

⁷ It used to be argued in some quarters that Whitehead was led beyond
Probably the scientific influences whose force on Whitehead increased at this time are those which would naturally accompany the turning of his gaze upon the vastness of the universe. Such are the statistical theory of physical laws and the general theory of evolution. The latter, it must always be remembered, is for Whitehead—who was born in 1861, and once visited Darwin's house—a real and living force, not an item in intellectual history; and that is a great advantage which his thinking enjoys over that of the present generation.

My general conclusion on this subject is that we should accept Whitehead's statement in the Preface to *Process and Reality*, dated January, 1929, that he is endeavoring to “compress the material derived from years of meditation” (though we may have to allow that the meditation was intensified after 1918). Indeed, no other supposition is compatible with the fact that in but a few years—years of university work—he constructed so intricate and so vast a system of philosophy, and expounded it in several books.

The 1920 books by difficulties in reconciling his realistic position in them with the physical theory of relativity, but this line of argument has tended to disappear. I see no evidence in Whitehead's writings that he was aware of any such difficulties. In the Aristotelian Society papers of 1922, "The Philosophical Aspects of the Principle of Relativity" and "The Idealistic Interpretation of Einstein's Theory" he considered and rejected the difficulties of this sort which idealistic philosophers had presented to him. In the first paper—a very penetrating treatment of its topic—he concluded as follows about the philosophical importance of relativity: "The general character of its importance arises from the emphasis which it throws upon relatedness. It helps philosophy resolutely to turn its back upon the false lights of the Aristotelian logic" (IS p. 143; the second paper is also reprinted in IS, with a slight error in its title).

It has also been said that Whitehead set about constructing a philosophy of organism because of the influence of some biologists—J. S. Haldane and L. J. Henderson have been named—upon him. Evidence of this has not, I believe, been published. It would be wrong to assume that there must have been a special influence of that sort at that time. After all, a great deal of Whitehead's life had been spent in conversation with friends who were engaged in every branch of scientific activity; for example, there were Bateson and Sir Henry Head, on the biological side. Furthermore, the concept of organism in *Whitehead's metaphysics* is by no means cut altogether, or even for the most part, out of biological cloth (see Sect. III, below).
Whitehead recognized that many problems were raised by the 1920 books. For one thing, his definitions of spatial con­cepts needed reconsidering. Their defect was brought out by Theodore de Laguna in 1921: if the definitions were correct, men could not have known what they meant by “points” before the days of the Michelson-Morley experiment. That is contrary to common-sense meanings, and to Whitehead’s own appeal to common-sense meanings in his arguments de­fending the concept of simultaneity against Einstein’s criticism. (The new construction by which Whitehead in Process and Reality overcomes this defect was briefly noticed in our third chapter.\textsuperscript{8} We may add that his carrying it through to a new definition of a straight line without making any reference to processes of measurement is the final issue of one of the lines of emphasis we picked up in expounding the Universal Algebra;\textsuperscript{9} and that we should not be surprised when we find this thinker including the definitions of the most general geometrical properties of the world in a book on metaphysics.)

The other problems that were leading him to the specu­lative theories of Science and the Modern World (1925) appear in the brief Notes to the second edition of Principles of Natural Knowledge. Since these Notes are not intelligible to a person who has not freshly studied the book, the leading problems will bear enumeration here.

In the first place, full abandonment of the class theory necessitates a full reconsideration of the question: What, in empirical terms, is a physical object? It is, however, impossible to answer that question without introducing the concept of possibility in addition to that of actuality. Also, Whitehead had noted that his general distinction between an “object”—i. e., what can recur—and an “event” followed roughly the lines of the general division between possibility and actuality;

\textsuperscript{8} At the end of Sect. IV. See notes 38 and 39 there for references to De Laguna.

\textsuperscript{9} Chap. 6, Sect. IV, above.
he would like to work out that division. Another contrast, which he had already suggested to be associated with the event-object distinction, is that between continuity and atomism. What is the sense in which an event is one thing? We must particularly ask about the events we directly live through, which are perceptions of durations.

What is most striking in these Notes is that Whitehead uses for the first time the phrases, “social entity” and “realisation.” “The main point [concerning ‘fuller and more systematic treatment’ of the fundamental concepts of events and objects] hinges onto the ingestion of objects into social entities, and onto the analysis of the process of the realisation of social entities” (PNK Note I). He also writes of a “duration” as “the realisation of a social entity” (Note III). The difference between the words “relatedness” and “realisation” is precisely the difference between the standpoint of the 1920 books and that of Science and the Modern World. The former books had set forth the extensive relatedness displayed in every duration and in the passage of durations. Whitehead’s mind is now probably following the simple and important thought that relatedness does not just happen, but is the skeleton of an active process of becoming which, in ways that he wishes to analyze, is both a complex of objects and an outcome of other becomings.¹⁰

The passage from “relatedness” to “realisation” can also be looked upon as indicating that Whitehead, having begun with the percipient event as one entity, is now asking what is its internal process of constitution.

These Notes suggest pretty clearly that Whitehead thinks of the metaphysical study toward which he is heading, as something which is to work out those “implications” of his earlier ideas which when he wrote the book “had not shaped themselves with sufficient emphasis in my mind” (Note I).

¹⁰ This transition in thought seems also to be at the bottom of the more complex transition from “nature lifeless” to “nature alive,” which is described in Nature and Life (1934), pp. 20 ff. (as reprinted in MT pp. 200 ff.).
(I do not think we may read “implications” in a strictly limited sense. An intention “to embody the standpoint of [the 1920 books] in a more complete metaphysical study” strictly implies some movement beyond their standpoint.)

It seems to me that the idea of significance, above all others, was in need of further elaboration. This is an indispensable idea, but so far it had hardly been more than asserted and assigned a variety of tasks. What does “significance” come to, as a factor in the universe? If the converse of the doctrine is that “Relations are perceived in the making and because of the making” (PNK 3.7), what is the story of their making?

It is reasonable to suppose that when Whitehead wrote the 1920 books he had such metaphysical problems as this vaguely in the back of his mind. That was the impression I got from him in later conversations (1936). Although you can say only one thing at a time and must exclude the wider problems from your explicit consideration, he remarked, it is a desideratum for thoroughgoing work to have them in the back of your mind, vaguely.

III

Two series of Lowell Lectures gave him the opportunity to complete the kind of work that, on his own view, should precede a full-scale attempt at metaphysical construction. Such construction is really the boldest of imaginative generalizations. Consequently it “must have its origin in the generalization of particular factors discerned in particular topics of human interest; for example, in physics, or in physiology, or . . . In this way the prime requisite, that anyhow there shall be some important application, is secured” (PR I 1 ii). To start from an eclectic point of view is to assure a result befitting a dilettante. Whitehead already had hold of an origin. In Science and the Modern World one of the two strands in his main line of generalization—that coming from physics—is woven.
The critical portions of the early chapters of this book are essentially restatements of the previous examination of perceptual knowledge that was made for the sake of the foundations of physics. It was through the contrast between what in Science and the Modern World are called the “separative character” and the “prehensive character” of space (SMW p. 90) that he had in the first article of the Principles of Natural Knowledge sharply distinguished his assumptions from those of scientific materialism. Again, that no element in our perceptual knowledge has the characteristic of being “simply located” in space and time (this “simple location” being the defining characteristic of matter, and being “the very foundation of the seventeenth century scheme of nature” [SMW p. 81]), had been very clearly set forth—without the use of that phrase, but with the help of the same quotation from Berkeley that starts the discussion in Science and the Modern World 11—in a very fundamental passage in the Principles of Natural Knowledge (3.5, 3.6). In the broad sense of “significance” which, as in “Uniformity and Contingency,” includes the contingent relatedness of objects as well as the uniform relatedness of events, the assertion of significance is identical with the claim that “among the primary elements of nature as apprehended in our immediate experience, there is no element whatever which possesses this character of simple location” (SMW p. 81). 12

If this be granted, the “organic theory of nature” is readily

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11 P. 95. The quotation is from Sect. 10 of the Fourth Dialogue of Berkeley’s Alciphron.

12 In The Revolt Against Dualism (La Salle, Ill., 1930; Chap. V), A. O. Lovejoy found seven meanings of “simple location” in Whitehead’s texts. I doubt that this would have been possible, had the critic remembered that Whitehead was concentrating on the contrast between the classical conception of matter and our actual observations of place. Also, it seems to me that Whitehead’s remarks on the connection between the idea of simple location and the relational view of space might not have puzzled Lovejoy (Revolt, p. 160) if he had stuck to Whitehead’s conception of the relational view, instead of going afield to find in a definition by C. D. Broad the usual—and, he seems to assume, most proper—statement of the relational view. Broad’s definition is quite foreign to all Whitehead’s discussions of that subject.
reached from the position of the 1920 books by thinking of their “percipient event” as a temporal process with an internal constitution, and making the following steps.\textsuperscript{13}

1) The “unity of the perceptual field,” which had been set down as an ultimate character of observations, is interpreted as “what it claims to be: the self-knowledge of our bodily event” (SMW p. 103).

2) The previously discriminated awareness, in the percipient event, of “significance” of all other events with respect to it as a locus, is converted into a process of awareness of aspects of all other events as “grasped into a unity,” or “prehended,” in the bodily event (p. 98). The unity is called an “organism,” its constituents being concurrent (more accurately, as in Process and Reality, concrecent) prehensions. By “organism,” Whitehead generally means a temporally bounded process which organizes a variety of given elements into a new fact.\textsuperscript{14}

3) The occurrence of an organism is described as “something which is for its own sake,” or the emergence of a particular \textit{value} in the world. Whitehead argues, “These unities, which I call events, are the emergence into actuality of something. How are we to characterise the something which thus emerges? . . . no one word can be adequate. But conversely, nothing must be left out . . . ‘Value’ is the word I use for the intrinsic reality of an event” (p. 131). This is extremely important.

4) On the principle that the bodily event is a natural event in nature, the generalization is made that every event in nature arises as a unity of concurrent prehensions (p. 103), and is an emergence of value.

5) This conception of natural events is applied to the problem of mechanism and freedom: since every event arises as a prehension of its environment, the characters of the events

\textsuperscript{13}I do not say that Whitehead wrote Science and the Modern World by going through these steps.

\textsuperscript{14}Sect. II of “Time,” Proceedings of the Sixth International Congress of Philosophy (New York, 1927); reprinted in IS.
in the human body are not entirely determined by any absolute properties of the components of bodies in general (molecules), but are modified by the fact that the molecules are in the total organism of the body (the theory of "organic mechanism") (pp. 108-112).

6) The persistence or endurance characteristic of matter is explained (pp. 152 ff.) as reiteration of the same pattern in a succession (the "nexus" of Process and Reality) of events that prehend each other.

7) It is explained how biological evolution, or the rise of complex organisms, is describable in terms of the maintenance and alteration of such nexūs. "Enduring things are . . . the outcome of a temporal process; . . . Only if you take material to be fundamental, this property of endurance is an arbitrary fact at the base of the order of nature; but if you take organism to be fundamental, this property is the result of evolution." \(^\text{15}\)

The concept later called "creativity" is introduced, as a "substantial activity" "underlying" the evolution of the organisms in which it is embodied; this is said to be required by the doctrine of evolution. (But the concept almost immediately becomes a universal category, not limited to processes of biological evolution.)

8) Whitehead had earlier said (CN p. 54) that the process of nature is more than a measurable extended continuum. He now says that the continuum omits the process by which an individual event comes into being. But that is what is happening. Temporal process, then, is a discrete succession of epochs, or arrests, each being the duration required for the emergence of a prehensive unity as a single fact (SMW p. 177). (This is the "epochal theory of time," which might better have been called the epochal or atomic theory of process.)

9) There is a general description of the quantum character

\(^{15}\text{SMW pp. 152, 154; cf. p. 152: "On the materialistic theory, there is material—such as matter or electricity—which endures. On the organic theory, the only endurances are structures of activity, and the structures are evolved."}
of physical action as a fact to be expected if nature is conceived as a complex of organisms.

10) In each of the above steps, objects are implicated along with events, in accordance with their dual association as described in Whitehead’s preceding books. In addition, the realm of objects is widened by being explicitly identified with the realm of possibility (pp. 222 ff.). The emergence of new properties in events, which is required for (7), is due to the prehension of objects other than those that characterize the events prehended.

This enumeration is not, of course, intended as a substitute for a logical analysis. The appeals to evidence are also omitted. (Their general character will appear in the final sections of this chapter and the opening section of the next.)

It may be useful to remark that Whitehead has not yet, at this point, got his labels fixed; so that he often uses “event,” “prehension,” and “organism” synonymously, and even says, “A ‘prehension’ is a ‘prehensive occasion’” (SMW p. 101). In *Process and Reality* a determinate terminology is introduced: “prehensions” are the threads of process, the vectors, between “actual occasions,” which are concrescent unities analyzable into such threads.

In addition to the argument just summarized, Whitehead’s writings contain another line, of comparable importance, which leads from physics to metaphysics. This second line is occasionally discussed in *Science and the Modern World* in connection with the main argument. It may be found clearly presented in its own unity in *Nature and Life* (1934). It does not begin with Whitehead’s own analysis of physical observation, but with the general character of physical theory in which mass is subordinated to energy, and “simple location” has evaporated, being replaced by vector relations and fields; Whitehead’s generalization proceeds toward a panpsychistic type of metaphysics.
We now come to the generalization from religious experience. It is the topic of the four Lowell Lectures which Whitehead gave in 1926 and published that year with the title, *Religion in the Making*. He published no extended discussion of religion before "Religion and Science," which appeared as a chapter of *Science and the Modern World* the year before. Our ignorance of what he earlier thought but did not publish is vast. Consequently, what we can say about religion in the development of his philosophy must be brief out of all proportion to its final importance.

We know from his Autobiographical Notes (LLP-W) that religion was an important element in his childhood and youth. Sir Edmund Whittaker wrote in his obituary notice of Whitehead: "His father, an Anglican of the Evangelical school, brought him up in an atmosphere of simple and even narrow piety. As an undergraduate, he talked openly and often to his friends about religion, and especially about his interest in Foreign Missions." 16 Bertrand Russell says, "As a young man, he was all but converted to Roman Catholicism by the influence of Cardinal Newman." 17 (The Whitehead we knew at Harvard held Newman as a thinker in high regard.) Lucien Price, reporting Whitehead's conversation of November 2, 1940, writes:

He told of an episode early in their wedded life when they had read a great many books on theology. This study went on for years, eight of them, I think he said. When he had finished with the subject, for he had finished with it, he called in a Cambridge bookseller and asked what he would give for the lot.18

Whittaker records that Whitehead's early religious convictions

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17 *Portraits from Memory*, p. 96.
18 *Dialogues of Alfred North Whitehead* (Boston, 1954), Dialogue XIX.
“lost their hold on him [he mentions no year], and for a time he became an outspoken and even polemical agnostic.”  

Russell has confirmed this for me: “Throughout the time that I knew him well—that is to say, roughly, from 1898 to 1912—he was very definitely and emphatically agnostic.”

According to Whittaker, “This phase again did not endure, and in mature life there was a reflux towards spiritual belief: Process and Reality is theistic...” We should add, that this element in Process and Reality is an original and profound philosophical theology.

Like the great majority of Whitehead readers, I find it impossible to read that theology and the discussions of religion in any of Whitehead’s metaphysical books—beginning with the first, in 1925—except as written by a deeply religious man, though a man who retained a highly critical attitude toward church creeds and toward traditional separations of God from the world. When and how Whitehead ceased to be an agnostic is a question which we must leave to future biographers, if they wish to pursue it.

Because his concept of God is indispensable to the coherence of the realm of possibility with the realm of actuality, and because he endeavors to assimilate the formal characteristics of God to those of every other actual entity, it is sometimes supposed that Whitehead’s God is a mere binder for the theoretical structure of the philosophy of organism, and lacks all religious character. The criticism is based either on a misunderstanding of what system is for Whitehead and why he seeks it, or on a limited range of religious feeling. For the extreme position taken by W. Mays throughout his Philosophy of Whitehead—namely, that when Whitehead wrote about God he was only writing in obscure language about the logical structure of space-time—I have been unable to find in Whitehead’s books any justification that goes beyond the sort of thing we noted on p. 110, above.

19 Loc. cit.
20 Letter of September 26, 1959.
Though Whitehead’s basic metaphysical concepts—creativity, prehension, eternal objects, actual occasions—had made their bow in the latter chapters of *Science and the Modern World*, the best introduction to their metaphysical relationships occurs in Chapter III, Section iii of *Religion in the Making*. That Section is preceded by a lucid statement of Whitehead’s view of the relation between metaphysics and religion. Much of the remainder of the book is metaphysical exposition, and some of this, to my mind, is not lucid. Probably Whitehead was on his way to something further; at any rate, his expositions in later books often seem more comprehensible as well as more comprehensive.

To present a short description of the way in which the author of what I have called “the 1920 books” now handles religion, I cannot do better than quote Mason W. Gross: “Just as in his works on the philosophy of science Whitehead sought in experience the roots of the scientific concepts, so here he seeks the basis of religious concepts in religious experience and traces the growth of dogmatic theology from those roots” (N&G p. 469). It is a small book; it does not contain much history of theology, but the reflections on evil and on concepts of God, in addition to those on topics we discussed in Chapter 4, are priceless.

V

The most casual reader of *Science and the Modern World* will observe that no account of sense-perception alone can possibly provide an epistemology corresponding to the “organic theory of nature.” That theory implies that our general response to nature, or prehension of our environment, includes a reception of causality: the “intrinsic reality” of one event is affected by the “extrinsic reality” of another. But this was not elaborated. The main outline of Whitehead’s mature epistemology is laid down in another book (*Symbolism, Its
Meaning and Effect [1927]) which precedes the publication of his metaphysics. Thereafter, he writes more about the Hume-Newton situation than about the Newtonian deposition. Two thoughts guide his criticism: that Hume’s otherwise accurate description of sense impressions omitted the fact that they are perceived as significant of existent things; and that sense-perception is the superficial part of our experience, causal experience of existents being fundamental. In every succeeding book the strength and centrality of his conviction about the superficiality of sense-perception grows greater.

There is no need to hunt for a cause for the omission of the perception of causal efficacy from Whitehead’s writings on the philosophy of natural science. Scientific observations are perceptions of sense-data. Whitehead comes to another kind of experience when he comes to consider other aspects of human activity. Even in the scientific field he had limited himself to the perceptual basis; he might, I imagine, have now proceeded by examination of the character of scientific laws. His main course, perhaps more natural for an empiricist who is also trying to englobe physical science in a wider sphere, is a more general examination of experience—beginning with our feeling of the efficacy of the body in sense-perception.

An auxiliary course is more closely connected with Whitehead’s earlier work: in a valuable paper of 1926 he arrives at the causal character of physical prehension through an analysis of time. That paper includes Whitehead’s first exposition of his new theory that the perception of sense-data is an act of “physical imagination, in a generalized sense of the word”—an act that is useful because of a symbolic reference to causal actualities.

In Symbolism, Whitehead’s theory of perception suffers from

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22 There were starting points for such an examination in his 1920 books, and in his paper of 1922 on “Uniformity and Contingency.” Whitehead’s final position on scientific laws appears in Chaps. vii and viii of Adventures of Ideas (1933).

23 “Time,” Proceedings of the Sixth International Congress of Philosophy, pp. 59-64; reprinted in IS.

24 Ibid., Sect. v.
a confusion which seems to be due to his tendency to think of the two elements of a dualism as on a par with each other.\textsuperscript{25} Thus he balances "the two pure modes of perception" ("causal efficacy" and "presentational immediacy"), and discusses their "intersection." At the same time, he obviously believes that perception of causal efficacy is by far the more fundamental. In \textit{Process and Reality} Whitehead will assign an experience of "sensa" to even the lowest grades of actual existents, after introducing a completely generalized meaning of the term (we shall see the importance of this in Chapter 14, Section IV). Readers must take care not to be confused by his continued use of "sensum" and "sense-perception" in many discussions (especially in \textit{Adventures of Ideas}) in their customary meanings, which presuppose an organism with sense organs.

We should remember that Whitehead's thought in 1927 was preceded by a stage in which—as I interpret it—causality was not fully analyzed. A contemporary world of things was assumed as a datum, and the characteristics of the sense-data were related together by a primarily atemporal theory of their multiple inherence in events. Their transmission and generation could not be fully treated in the absence of a theory of the full functioning of events. There was a systematic relatedness evident in nature which had to be got hold of somehow—from some limited standpoint. One does not, at first trial, find the conception that is adequate for all purposes. Whitehead got hold of "significance in a presented duration," and expanded the notion and shifted its emphasis as he expanded his field of inquiry. On passing from examination of perception to examination of experience, he adopted the view that it is the \textit{antecedent} environment that is the datum for an occasion of experience.\textsuperscript{26} Then there is no awareness of absolutely contemporary occasions: \textit{they} constitute no datum for the present. But after that we find, as we must expect, that some of Whitehead's discussions of the contemporary world

\textsuperscript{25} See p. 253, below.

\textsuperscript{26} Why he adopted this will be discussed in Sect. VIII, below.
retain language which, as ordinarily used, is appropriate only if that world is considered as a datum.

It is of the essence of the philosophy of organism that its epistemological realism is based squarely on the rehabilitation of causality. If Hume is right about sense-data, then a realist must appeal to some other given, unless he is to abandon all idea of providing his "common world" with empirical credentials. In fact, this is no predicament, but an opportunity for the realist to build a much deeper realism than is possible on a phenomenalistic basis. For "experience," instead of being a "selection" of sense-data—a notion that is logically possible, but which has no evidence in its favor and requires a devious recasting (at best) of the physiological evidence—instead of this, experience becomes an individual reaction to things which exist for their own sakes and are felt as imposing their own weight and value on the experient. (A doctrine of "real" causality I take to be indispensable for a system of realistic pluralism. With causality accepted, one can proceed to work out a scheme in which, "though each event is necessary for the community of events, the weight of its contribution is determined by something intrinsic in itself" [SMW p. 147].)

One of the many important functions of the theory of symbolic reference in Whitehead's philosophy is to replace the principle of inferential constructions which we discussed earlier.\textsuperscript{27} It was faulty psychology to try to explain our knowledge of common-sense objects entirely in terms of that principle (S 12). But on looking at this change from a broad point of view, we can see the similarity of approach as between Whitehead's prespeculative epistemology and the epistemology which he now develops to be the empirical anchorage of his metaphysics. Both were written out of an awareness of a fundamental contrast in experience—between elements of inescapable actuality, and the response of thought, creating elements that provide "accurate definition." The contrast is pushed to a deeper level in the second inquiry—that is all. The sense-perceptions which constituted the primordial pole

\textsuperscript{27} Pp. 184-186, above.
in the first inquiry—rightly, in view of the limitation to the observational basis of natural science—have become the derivative pole now.

The intermediate period, in which common-sense objects have an independent but not clearly elucidated status with respect to sense-data, began with the adoption of “significance” and the event-object duality in the *Principles of Natural Knowledge*. Five years after its publication it appeared to Whitehead that he had been “waving between the ‘class-theory’ of perceptual objects and the ‘control-theory’ of physical objects” (Note III to 2nd ed.). He added that he had been trying to get away from the class-theory, and no longer held it in any form. The word “control” first appeared in the Aristotelian Society address of November, 1922, “Uniformity and Contingency,” as referring to control of the ingress of sense-objects into events by objects of other types. This notion of control was an expansion of the notion of significance.28

The theory of symbolic reference effects a considerable change, or rather expansion, of Whitehead’s theory of space-time. The theory becomes more plausible (and also more complicated, so that it is difficult to understand its details from the imperfect exposition given in Part IV of *Process and Reality*). When nature is no longer conceived as only the terminus of sense-perception, but as a cumulative nexus of occurrences, it is hard to suppose that the spatio-temporal relatedness throughout the entire universe is uniform; in fact, it is impossible to do so while holding—as Whitehead does—that the spatio-temporal relations are the outcome of the natures of the occurrences, and with these natures shift from cosmic epoch to cosmic epoch. Thus the uniform geometry of the 1920 books does not characterize the universe

28 See the discussion of the address in the preceding chapter; also Palter, *Whitehead’s Philosophy of Science*, Chap. VII, Sects. 1, 6. An excellent detailed examination of Whitehead’s successive treatments of perception was made by Prof. Paul F. Schmidt in his doctoral dissertation (Yale, 1952; unpublished). There are probably others.
itself. But that geometry was always assumed to be a public fact given in relation to a percipient standpoint, and such givenness is still held to occur; it becomes a natural event with its cause, context, and purpose. The act of “spatialization” (as it can accurately be called) is part of the process of responding to the qualitative and geometrical complexity of the world of things by transmuting it into a definitely colored and uniformly structured “projected” field which appears as given. This is an act which animals have learned to perform through long ages of the evolution of their sense-organs and nervous systems.

The theory of symbolic reference has, if I am not mistaken, a very great importance, entirely apart from the role it plays in Whitehead’s speculative construction. But this is not the place to urge philosophers to work with it. My final comment on the theory must concern the belief of some philosophers, that it is its author’s way of returning to the bifurcation of nature which he had previously condemned. To those who bifurcate nature, the connection between private sense-data and physical causes must finally be summed up in the word, “somehow” (sometimes dressed up as “animal faith” or “peculiar but well-known transcendent reference”); and only the sense-data are experienced. Whitehead admits, nay insists upon, the numerical and qualitative distinction between sense-data and things. But (1) he has offered a theory of the “somehow”; (2) this theory is based on an independently established doctrine that we experience causes. The defect I think I find in Whitehead’s earlier description of nature has been mentioned above.29 The supposition that he reaffirms the bifurcation he had previously condemned is often aided by passing in discussion from the 1920 books to Symbolism, in defiance of the difference between them in subject-matter and in the aim of the analysis.

29 Chap. 8, end of Sect. IX.
In the succession of Whitehead’s books the generalizations from science and religion, and his epistemological statement, are followed by the full metaphysical scheme (*Process and Reality*). This statement will not be misleading if we remember that Whitehead had all his life been reflecting on (and probably generalizing about) other matters which are very important for his kind of metaphysics. Art and the history of European civilization should particularly be mentioned. His sustained treatment of them did not appear in print until *Adventures of Ideas* was published in 1933. But we are told in its Preface that some lectures given at Dartmouth College in 1926 “embodied a preliminary sketch” of its topic. This was but two years after he exchanged his obligations as a Dean and Professor of Applied Mathematics in the University of London for those of a Professor of Philosophy. Lucien Price reports that on June 19, 1945, Whitehead said: “My writings on philosophy were all after I came to this country; but the ideas had been germinating in me for the better part of a lifetime.”

In Chapters 1 and 2 we became acquainted with Whitehead’s conception of the ideal of a metaphysical system. It is a foregone conclusion, as we can now see, that the form of his system will be semimathematical. An exposition closer than Whitehead’s to the axiomatic method in mathematics may perhaps be made of this cosmology by someone in the future. The expression of metaphysical schemes in symbolic logic has not yet progressed very far. But it is important now to realize that the semimathematical method employed in *Process and Reality* is not a result of the bare fact that the author happened to have been a mathematician before he became a philosopher. The method is semimathematical because the

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20 *Dialogues of Alfred North Whitehead*, Dialogue XL. The impression I got from talking with Whitehead accords with this.
The author is aiming at a single concept of the universe, in which the various ideas form a natural circle from which none can be excised without leaving a gap between principles concerning the others—for each fundamental idea is metaphysical, i.e., expresses an ultimate factor relevant to everything that happens. Now the various ideas in a branch of mathematics form such a natural circle. In fact mathematics, divested of its limitation to quantity and number, is in Whitehead’s view nothing but the instrument for expressing such connectedness. (Also, as in speculative philosophy, there are alternative circles, some wider than others.)

I am not forgetting that one of the famous sentences in Process and Reality is, “Philosophy has been misled by the example of mathematics” (I i iii). What is referred to in that dictum is the fact that the great historical branches of mathematics have been able to start from premises which were reasonably regarded as clear, distinct, and certain (and the secondary fact that mathematicians have been able to use ex absurdo arguments with a justified freedom, because in practice there was little doubt as to which premise was at fault). Philosophical discussion, Whitehead holds, is not mathematical deduction, but an examination and generalization of experience. Neither the philosopher, nor the scientist, should look first to mathematics—that is medievalism. But when the universal factors of experience have been so far as possible discerned, the effort to understand their operation should proceed by conjecturing a scheme, in form analogous to a set of interrelated assumptions, primitive ideas, and definitions. The reason for this ideal is at bottom the same as the reason for unitary theory in any science. Whitehead could have recommended nothing else.

He places much emphasis upon the metaphysical desideratum which he calls “coherence.” Its pursuit in a limited area was evident in his philosophy of nature. Since critics of his turn to metaphysics tend to forget this, I set down a few passages from the 1920 books.
The false idea which we have to get rid of is that of nature as a mere aggregate of independent entities, each capable of isolation. According to this conception these entities, whose characters are capable of isolated definition, come together and by their accidental relations form the system of nature. . . . With this theory space might be without time, and time might be without space. [Compare Whitehead's reference to Descartes' philosophy as an example of "incoherence," in Section ii of the first chapter in Process and Reality.] . . . The explanation of nature which I urge as an alternative ideal to this accidental view of nature, is that nothing in nature could be what it is except as an ingredient in nature as it is. . . . An isolated event is not an event. . . . The isolation of an entity in thought, when we think of it as a bare 'it,' has no counterpart in any corresponding isolation in nature. Such isolation is merely part of the procedure of intellectual knowledge.—CN pp. 141 f.

The point of this doctrine [the doctrine of "significance"] on which I want to insist is that any factor, by virtue of its status as a limitation within totality, necessarily refers to factors of totality other than itself.—R p. 17.

And the key passage which we quoted in our last chapter:

. . . in the place of emphasising space and time in their capacity of disconnecting, we shall build up an account of their complex essences as derivative from the ultimate ways in which those things, ultimate in science, are interconnected.—PNK 1.5.

In Process and Reality, "the ideal of speculative philosophy that its fundamental notions shall not seem capable of abstraction from each other" is intended to be met by the cosmological principle that "the process, or concrescence, of any one actual entity involves the other actual entities among its components" (PR I i, ii).

Here a conviction which Whitehead probably acquired early in his association with Russell comes to play a role in the construction of his metaphysics: his conviction of the inadequacy of the subject-predicate logic. Whitehead thinks—I believe rightly—that the orthodox conception of "having an experi-
ence” has been shaped according to the subject-predicate mould: the experient is the subject, and is qualified by his sensations. In *The Principle of Relativity* Whitehead had said,

> If you once conceive fundamental fact as a multiplicity of subjects qualified by predicates, you must fail to give a coherent account of experience. The disjunction of subjects is the presupposition from which you start, and you can only account for conjunctive relations by some fallacious sleight of hand, such as Leibniz’s metaphor of his monads engaged in mirroring. The alternative philosophic position must commence with denouncing the whole idea of ‘subject qualified by predicate’ as a trap set for philosophers by the syntax of language.—R pp. 13 f.²¹

Thus Whitehead’s philosophic endeavor is to state literally that coherence of ultimate factors which Leibniz could express only metaphorically.

In philosophy as it has come down to us, dualisms form, with multiple solipsisms, the two main types of incoherence. The source of multiple solipsisms is the dualism of subject and object, the private and the public. The duality of private subject and public object is a fundamental fact stamped on the face of experience. To achieve coherence, Whitehead begins with this principle: “The sole concrete facts, in terms of which actualities can be analysed, are prehensions [of objects by subjects]; and every prehension has its public side and its private side” (*PR* IV 1 v). But, further, his basic conceptions are intended to be so inclusive in scope, and so interlocked, as to overcome all the classical dualisms of metaphysics: mind and matter, God and the world, permanence and transience, causality and teleology, atomism and continuity, sensation and emotion, internal and external relations, etc., as well as subject and object. Thus, e.g., “physical” inheritance from the environment and novel “mental” reaction to it, are

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²¹ See also: IS pp. 138 f., CN p. 150, AI VIII vii; on “experience,” *PR* II vii i.
both, in principle, ascribed to every occasion, as respectively its public basis and its private culmination. It makes no difference that the "mentality" involved in inorganic occasions is slight in proportion as spontaneity is negligible. The objections to this are not as good as the objections to calling "zero" a number.

VII

There is a human temptation for idealists to believe that in erecting his metaphysics Whitehead in fact turned his back on "his previous realism." But, as may be seen from our discussion in Section VIII of the preceding chapter, that realism was relative to a limited purpose. The closure of nature to the observing mind, interpreted as it was intended to be interpreted, is not repudiated at any later point. In Whitehead's metaphysics, it is true, sense-data are creations of mentality; but this is on Whitehead's definition of mentality, which is so far from the idealistic epistemologist's notion of the conscious mentality of the observing human mind that it might be called, per contra, biological. The creation is really a transmutation (so evolved in man's history as to be now automatic) of given elements which are physical. There is compensation for idealists in the fact that Whitehead's final account of the occurrence of sense-perception is equally distant from the account given in G. E. Moore's "Refutation of Idealism."

Idealists are right in seeing a certain kinship between Whitehead's pursuit of a coherent scheme and their pursuit of a coherent system of experience; there is much difference in the manner of the pursuit.

The world, as Whitehead finally describes it, is in some fundamental respects similar to the world idealism has traditionally pictured. His working hypothesis is that the structure of every organism is analogous to that of an occasion of experience. (I do not see what other hypothesis would be compatible
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with the aim at the coherence of all human experience and all nature.) The employment of the hypothesis consists in rounding out our immediate knowledge of our experiences by interpreting them in the light of what we know of other events in nature, and conversely interpreting the other events in the light of the generic traits of the experiences we live through. Thus Whitehead tries to make full utilization of natural science and of immediate experience.

A result is that he ascribes value, feeling, purpose to every actuality. This accords with the results of idealistic philosophies. But the setting of the metaphysical problem is realistic. What is “experience?” It is “the self-enjoyment of being one among many, and of being one arising out of the composition of many” (PR II vi i). Whitehead starts as the American realists did, with the notion of a “common world” in which we find ourselves, a world full of minds and of other things which also exist in their own right.

The important moral for idealism concerns the way in which teleology and value took their place in this philosophy. Whitehead’s difference from others who arrive at idealism from the study of physics, lies in the fact that he did not look at the structure of the spatio-temporal continuum, or some other aspects of the physical scheme, and ask, “What role did mind play here?” or “How is all this understandable without teleology?” He first examined the logical and empirical defects in the orthodox scientific conception of nature (“scientific materialism”); then he proposed an amazingly detailed, comprehensive theory of nature—nature taken, as the scientist must take her, in and for herself; he next examined our immediate, naive experience of nature and our practice of life (and appealed to the romantic poets to remind us “how strained and paradoxical is the view of nature which modern science imposes on our thoughts” [SMW p. 118]);

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82 For example, we know—and Whitehead takes it very seriously—that man is one of the animals.

83 An example is the fourth step in the account I gave of the argument of Science and the Modern World (Sect. III, above).
then, and then only, guided by the rationalist ideal of one set of concepts in which human experience and physical nature are understood together, he framed such an account of the teleologic and nonteleologic factors involved in our experience as allows of their universal conjoint application in the understanding of existence. (Anybody can raise a cry about "the omissions of science.")

VIII

One very important originative factor in the development of Whitehead's philosophy has not yet been taken up in this Part. I shall introduce it by considering again the doctrine of the little book on Symbolism, which lies at the very heart of Whitehead's philosophy. When a student finishes the first two chapters of this book and turns to the third, where the meaning and effect of symbolism in human society are discussed, he is likely to stop because the epistemological analysis is over. If he does, he misses the true Whitehead altogether. Although the arguments of the first two chapters are not as a rule dependent on any other considerations for their validity, they are dependent on the third chapter for their full setting and import. The evidence from which the epistemology grows has a much wider base than inspection of given experience (about which disagreement is notorious). Whitehead's central doctrine of causal inheritance seems to me to have sprung chiefly from his reflections on the characteristics of human society. The reflections are of the sort made, on a smaller scale, by Burke in his conception of "prejudice." Whitehead sees the actual, specific character of human individuals, and the specific character of a part of human society (say, New England), and the specific character of a home, or of a tree, as the outcome of an inescapable inheritance transmitted from the past, and of sporadic or purposed deviations from that inheritance. Such a conclusion is obvious to an English-
man who dispassionately considers the institutions, the edifices, the customs about him. In an article on "The Education of an Englishman," Whitehead describes this beautifully. But anyone can see the truth in his point of view, merely by observing the comparatively insignificant effect which the actually presented sense-data of the moment have in determining the diverse judgments, mental processes, and reactions of different men; the cumulative effect of personal and social history is what counts most.

Some critics, observing the humanistic setting of Whitehead's argument in Symbolism, condemned him for giving us generalities instead of the accurate logical analyses of his earlier books. They forgot that the subject matter was not the same. Eventually, Whitehead hoped, we may be able to use symbolic logic in the description of our experience generally, not merely of its spatio-temporal aspects. For the present, we must look for generic traits and formulate them as well as we can.

A cardinal point about his humanistic reflections on man is that the concept of evolution (not necessarily progress), biological, sociological, intellectual, constantly colored and reinforced them. Whitehead believed that when a philosopher talks, say about language and reality, he should not forget that the precise entities he is holding up "by the scruff of the neck" for examination did not long have their present character, and are not going to keep it for long; they are occurrences thrown up from a long, long past. The eternally fixed term ought to have gone out of philosophical discussion when the eternally fixed species went out of biology. The retention of the former gives a show of exactness; but "the exactness is a fake." 35

When we discussed Whitehead's way of handling the scien-

34 Atlantic Monthly, 138 (August, 1926), 192-198; reprinted in ESP and AESP.
35 From Sect. xix of Whitehead's last lecture, "Immortality" (in LLP-W, ESP, and IS). For the connection with the presumption of the fixity of species, see his first paragraph in Sect. x.
tific concepts of space and time,\(^36\) we became acquainted with his view that exactness should be pursued but never assumed, that humans ought to be aware of the roughness of their knowledge, consider what assumptions they are making, and advance by defining routes of approximation; and we noted that he found this as true concerning social and political matters as it is for points and instants. Here is a consistent strain which runs through all of Whitehead's thought, bursts into print with the doctrine of the rough world and the smooth world in the essays of 1915 to 1917, and continues to increase in force. An incidental fact, amusing if not significant, is that Whitehead's first serious publication, a paper in mathematical physics dated 1888, bears the subtitle, "A method of approximation."\(^37\)

To recur to the doctrine of evolution. The bifurcation of nature that Whitehead condemned in *The Concept of Nature* became prominent as an effect of the transmission theories of seventeenth-century physics on the common-sense conception that matter is the passive support of qualities. But there is also in modern philosophy a bifurcation of experience into experience as given datum and experience as process of reaction to the environment. This bifurcation became acute for cosmology with the emergence of evolutionary ideas and biological accounts of experience in the nineteenth century. It is the foil of Whitehead's final delineation of experience. He bridges it by designing an account of experience that applies to the unborn child, the infant in the cradle, our hours of sleep, as well as to "normal" sense-perception.

To understand Whitehead's central doctrine of causal inheritance, we should have in the backs of our minds Burke, and evolution, and—we must not forget it—mathematics. The logic of relations and series is an instrument with which the dependence on each other of derivation-series of various com-

\(^{36}\) Chap. 3, above—especially Sect. II and III.

Complexity can be defined. The definitions in *Process and Reality* of "society" in general, and of several types of societies, are examples (PR I III ii; II III, iv). The vector character of physics, and the absolute generality of the mathematical notion of a series, and the way in which the functioning of the human body is centered mainly toward the experience enjoyed by the brain: these are the reasons why the doctrine of inheritance, whose truth is discerned in human society, can be applied to all events in the universe. Physics and mathematics and physiology make possible a generalization from sociology.

As we know, in Whitehead's metaphysics the doctrine of inheritance from the past is always coupled with the idea of novel, individual reaction to that past. Every individual is new, and none merely repeats its past; it is animated by its own purpose. This idea too is suggested by the history of societies. But Whitehead's metaphysical generalization of the idea of new achievement is phrased in aesthetic terms—in terms like harmony and discord, rhythm, intensity, massive simplicity, narrowness and width, inhibition and contrast. He has been noticing these things all around him! As was said in our second chapter, his fundamental concept of order and the principles of his new teleology are, broadly speaking, aesthetic.

Of course there is no one line of generalization in this philosophy. Several lines, which have been meditated upon for years, mingle. In the succession of Whitehead's books we can easily see the line which comes from physics, and the line which comes from religion. But his philosophical theology is mainly expressed in aesthetic language, and he interprets physical wave-vibration as a simple union of repetition and contrast. It would be a mistake to think of Whitehead as writing his metaphysics primarily out of a scientific background, if "science" has its ordinary unsophisticated meaning, namely, the systematic study of the causes of various types

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88 Russell aptly said, "The old logic put thought in fetters, while the new logic gives it wings" (*Our Knowledge of the External World* [New York and London, 1914], p. 68).
of natural events. Whitehead was aware of all sorts of things; but the three most important sources of his metaphysical thought seem to me to be these: reflections on aesthetic unity; reflections on history and society; and the study of theory—the vision of the possibilities of mathematics in the widest sense, in which it is far more than the study of quantities.

The first two are inevitably put under the head of “Whitehead’s humanistic background.” That background included a very great deal. Whitehead noticed and thought about the conditions of achievement in art, and in science, and in education; and equally the conditions involved in the mere survival and destruction of societies. I suggest that thinking about the patterns discernible equally in—to take one example—the conditions of the growth of human individuals or societies, and the conditions of the growth of forests, is at the bottom of Whitehead’s whole constructive effort. Ordinarily one does not join thoughts about such different things. Only a philosopher or a mathematician might be expected to do so. One would say that the philosopher was aiming at a synthesis, the mathematician making an abstraction. Both are “seeking the forms in the facts.”

An essential part of Whitehead’s greatness is his profound understanding of human life. That he drew so much on this in building his philosophy, was probably inevitable. What might, by critics at least, be called the contribution that comes from his amateur side, had been a subject of meditation for decades; this appears plainly in every account he has ever given of his life’s activities.

Whitehead made no attempt to write as a research scholar in the humanistic field. Relying considerably on secondary sources, he repeated some old errors of historical fact. But

39 Read the opening pages of Part V of Process and Reality!

40 Lucien Price adds, “Whitehead's classical training stuck, it was cultivated by him for the rest of his days, and as the twentieth century went on and so many men of science were found to be lamentably lopsided, this benign balance in him between science and humanism became one of his unique distinctions. It was a common saying that ‘Whitehead has both’” (Dialogues of Alfred North Whitehead, Prologue).
that does not affect his philosophy. Anyone who supposes that in criticizing him for such errors he criticizes Whitehead's thought, has a curious sense of importance. It would be more reasonable to wish that he had spent a little less time on social, political, and church history. When we remember that the system set forth in *Process and Reality* is an essay in cosmology, and reflect that its future may very well depend more on the scientists than on the philosophers, and also recall that on Whitehead's own grounds the system is a failure if science is not affected by it, we begin to wonder whether he might not to our advantage have done more to indicate possible uses of it in science. The discussion in *Process and Reality* of some of the general theories of some of the sciences, and of the divisions between sciences, is so short! New developments in psychology and the life sciences could have used some theoretical unification. Freud had taken the physics of Helmholtz's school for his model; according to Whitehead, that model was outdated. In psychoanalysis and elsewhere the concept of homeostasis was riding high when Whitehead came to America. If the mind is not a mechanism oriented toward a tensionless state, what Whiteheadian alternative was sufficiently worked out for scientists to use? —But I am probably being naïve; we have no assurance that these scientists would have used a more worked-out Whiteheadian framework any more than physicists used what he had produced for them. And doubtless this hypothetical Whitehead would have been not so complete and civilized a man as the real Whitehead was. Parts of *Adventures of Ideas*, too, would never have been written. Whitehead, of course, was not worried about his philosophy. Its real application may lie in a remote future.

IX

Having recognized Whitehead's historical bent, we are bound to balance our earlier notice of the importance of mathematical and physical ideas for his work by noting certain
positive relations of the philosophy of organism to some of the great metaphysical depositions in Western thought. Among the ancients, Plato, Aristotle, and Epicurus are the only metaphysicians he discusses (unless we count Zeno the Eleatic). Although he loved Plato and did not love Aristotle, his own doctrine of forms is much more Aristotelian than Platonic. (It is also original, as Ivor Leclerc has shown by comparing Whitehead and Aristotle.41) Whitehead's relation to Epicurus is more negative than positive.


In his book, Whitehead's Metaphysics: An Introductory Exposition (London, 1958; reviewed by the present author in Philosophy of Science, 27 [October, 1960], 410-414), Leclerc expounds Whitehead's system as a modern endeavor to solve the classic metaphysical problem of the nature of being—more specifically, Aristotle's problem of describing that which has being in the primary or full sense of the term, to which all other being, such as the being of Platonic Forms, refers. (Whitehead wrote, "The final problem is to conceive a complete [παρελκή] fact" [AI ix viii]). This way of interpreting Whitehead is very helpful, and is fairly justified by the fact that in Process and Reality and Adventures of Ideas he set forth his metaphysics in the context provided by the great thinkers of the European philosophical tradition. (He re-read them when he came to Harvard; his books pay little attention to philosophers of second rank in the historic stream, and he was probably not widely read in them.) It is a mistake to imagine that you cannot get a decent understanding of the philosophy of organism if you are ignorant of Principia Mathematica. But knowledge of Whitehead's first period does enlarge our understanding of his metaphysics.

In the recent strong renewal of interest in the philosophy of organism, interpretations which differ very widely on its relation to the early Whitehead have appeared. At one end of the spectrum we have a separation of Whitehead's work in England from his work in America, with the latter construed in Leclerc's manner. At the opposite end we have W. Mays's interpretation, which leans heavily on "Mathematical Concepts of the Material World," and scarcely permits its author to leave the English Cambridge. In his Philosophy of Whitehead Mays holds that "... the two key notions of Whitehead's later philosophy are the postulational method of modern logic with its emphasis on complex relational systems, and the field theory of modern physics with its emphasis on the historicity of physical systems" (London and New York, 1959; p. 20). "Looked at in this way," he explains, "Whitehead's account does not seem to be as outrageous nor as metaphysical as some philosophers have made it out to be, since what he seems to be doing is a sort of applied logic." On its positive side this type of interpretation also is helpful;
Before considering certain modern philosophers, I must confess to sympathy with those critics who find Whitehead’s piety toward the great thinkers of the past excessive. It cannot be salutary to tell the philosophers of the future that Plato divined “seven notions” and that “All philosophical systems are endeavours to express . . . [their] interweaving” (AI ix iv, viii). Then there is the raising of John Locke to divinity. Of course Locke is a very useful man to study—very: and that for the reason Whitehead gives, his “admirable adequacy.” Also, this adequacy can be of use to a man engaged in Whitehead’s great investigation, cosmology. But the type of question raised by Locke is so infinitely narrower! When, in the first paragraph of the preface to Process and Reality, Whitehead says,

The writer who most fully anticipated the main positions of the philosophy of organism is John Locke in his Essay, especially in its later books (Cf. Bk. IV, Ch. VI, Sec. 11),

one can be thankful that Whitehead’s own work follows to set the reader right. His statement that “the philosophy of organism . . . does start with a generalization of Locke’s account of mental operations,” and that “prehensions” in particular “are a generalization from Descartes’ mental ‘cogitations,’ and from Locke’s ‘ideas’” (PR I ii i), is doubtless true in the

the negative side is another matter. The author of the memoir of 1906 is surely present in the pages of Process and Reality, but so is a serious student of the metaphysical difficulties which beset Aristotle, Descartes, Kant, and others; we may not treat his long discussions of his predecessors as window-dressing. And it is not credible that when Whitehead framed his own “description generalizations of experience” (as he called them) after “his translation to Harvard”—Mays’s give-away phrase—he used his humanistic reflections of many years’ growth merely to clothe his real thought in verbal obscurities. In carrying out such an interpretation, “experience” is necessarily replaced by “the perceptual field,” and not only Whitehead’s new philosophical theology, but his new teleology, his doctrine of causal experience, his appeal to practice, are reduced to useless shadows.

I.e., the interweaving of seven main factors of fact, divined and crudely expressed by Plato. Whitehead appeals mainly to the Timaeus and Sophist, but also to the Statesman, Theaetetus, Laws (Books V, X), and Symposium.
double sense that there is a significant connection between his concepts and theirs, and that he was reading and appreciating these men when he began to expound his metaphysics; still the statement is misleading if it is not supplemented by attention to the ideas, and the sources of the ideas, in his pre-metaphysical work.

The perhaps excessive space devoted to Locke and Descartes in Whitehead's essay on cosmology is more than an effect of his philosophical professorship. It is an effect of his strong feeling for continuity in the history of ideas. It is, even more, an effect of his belief that any new interpretation of human experience has an obligation to test itself against previous interpretations. This belief is one of the things that separates Whitehead and Russell. If some support for a new thesis cannot be found in a position proposed by any major philosopher in the long history of European thought, the thesis is not credible to Whitehead. This method of partial confirmation is part of his appeal to a broader experiential base than mere inspection of "the given" provides. (It was in the course of explaining it that Whitehead made his celebrated and usually misquoted statement," "The safest general characterization of the European philosophical tradition is that it consists of a series of footnotes to Plato" [PR II i].)

When Whitehead says in his last book that, although process is universal, "The essence of the universe is more than process," he explains that "The alternative metaphysical doctrine, of reality devoid of process, would never have held the belief of great men, unless it expressed some fundamental aspect of our experience" (MT v 8). A standing danger in pursuing the ideal of coherence after Whitehead's manner is, evidently, the acceptance of both poles of historically important antitheses as equally fundamental for metaphysics.

Some of Whitehead's appeals to Plato are weakened when

43 My reason for italicizing certain words is that I have heard a scholar of the highest reputation begin a paper by saying that according to Whitehead the history of European philosophy is a series of footnotes to Plato, and proceed to demonstrate that this is only half true.
the idea which he finds in a dialogue is considered more Whiteheadian than Platonic by specialists on Plato. Concerning Descartes and Locke, I may perhaps be allowed to opine that, since the future rests so much with the scientists, it was somewhat more important to emphasize what Whitehead remarked but can scarcely be said to have emphasized—the utilization of scientific and theoretical conceptions in the philosophy of organism, and the importance of the philosophy for such conceptions—than to make sure of gaining the authority of Descartes and Locke.

Some Whitehead scholars find that his completed system is closest to the metaphysics of Leibniz, which he never discussed in detail, and the metaphysics of Hegel, to which he made only passing references. I think this is true, but I should not go so far as to say that the philosophy of organism is in effect a revision and union of their positions.

Concerning Hegel, this delightful passage occurs in Whitehead’s Autobiographical Notes:

I have never been able to read Hegel: I initiated my attempt by studying some remarks of his on mathematics which struck me as complete nonsense. It was foolish of me, but I am not writing to explain my good sense.—LLP-W p. 7; ESP p. 7.

Earlier, Whitehead had said, “I remember when I was staying with Haldane at Cloan I read one page of Hegel. But it is true that I was influenced by Hegel” (ESP p. 117; IS p. 217). He explained that he had had many, many conversations with his close friend J. M. E. McTaggart and with Lord Haldane, and that he had read books about Hegel. Although my own first-hand acquaintance with Hegel is not much better than Whitehead’s, I should like to set down three points which others have noticed and which I think should be borne in mind.

J) Max H. Fisch, upon surveying the classic period in American philosophy (which includes Whitehead) and remarking that, “Philosophically, the nineteenth century lived
in the shadow of Hegel, . . . and the twentieth has scarcely emerged from it,” wrote, “Whitehead’s use of the term ‘speculative philosophy’ and his general conception of it were in the Hegelian tradition.” 41 Professor Fisch was well aware of the great differences between Whitehead and Hegel; I take it he was emphasizing the important fact that Whitehead shares with the Hegelian tradition the aim at a comprehensive interpretation of the experienceable world in process by a system of categories constructed for that purpose. The contrast between Hegelian construction and Kantian criticism comes to mind; more, though Whitehead in particular respects is a great deal closer sometimes to one and sometimes to another philosopher than to Hegel, he is in general more different from other nineteenth- and twentieth-century philosophers than from Hegel 45 (Samuel Alexander seems to me the outstanding exception).

2) Concerning particular theses in the systems of Hegel and Whitehead, Professor Fisch makes this significant remark, which follows the quoted statement about speculative construction: “He [Whitehead] saw an analogy less obvious to others between the Hegelian development of an idea and the con­ crescence of an actual entity as the development of a subjective aim in his own philosophy.”

3) The best short comparison of Whitehead’s doctrines with Hegel’s that I know was published by Gregory Vlastos in 1937. 46 In it Whitehead’s pursuit of a coherence of contrasting conceptions, each requiring the other, is called dialectical (Process and Reality was preceded by what Vlastos refers to as the “dialectic of objects and events” in the 1920 books); but the contrast between this “heterogeneous” dia-

45 Prof. Fisch has referred me particularly to the long ninth and thir­ eleventh paragraphs of the Preface to Process and Reality, which are indispensable keys for our understanding of Whitehead; and to pp. 16, 66 f., 152-154 of the second edition of Wallace’s translation of Hegel’s shorter Logic (Oxford, 1892).
lectic, which is not based on contradiction, and Hegel's dialectic is made clear. I refer the present reader to Professor Vlastos' paper, though I am bound to say that if application of the term dialectic to Whitehead's philosophy were to become prevalent the misunderstandings would surely outweigh the benefits.

Whitehead's general comment on Hegel was made in a one-paragraph response to the reading of Professor Vlastos' paper: "He is a great thinker who claims respect. My criticism of his procedure is that when in his discussion he arrives at a contradiction, he construes it as a crisis in the universe. I am not so hopeful of our status in the nature of things. Hegel's philosophic attitude is that of a god" (ESP p. 131; IS p. 213). Whitehead's specific comments in Process and Reality, which supplement the one noticed by Professor Fisch, are only these: (1) "In the place of the Hegelian hierarchy of categories of thought, the philosophy of organism finds a hierarchy of categories of feeling" (II vii iv). (2) Whitehead finds an "analogy to philosophies of the Hegelian school" in his own theory of the transformation of actual occasions in the consequent nature of God. But his Preface, to which he refers the reader, mentions Bradley rather than Hegel. I suspect that even the analogy to Bradley was somewhat overestimated.

It remains to be said that in Adventures of Ideas—the only book of Whitehead's which is in large part devoted to discussion of institutions and the idea of civilization—Hegel gets no more than incidental mention. Whitehead's ideas on those subjects are his own wise response to history and the aesthetic element in experience. Only in his metaphysics—particularly in his doctrine of coherence—is a Hegelian influence notable. Had there never been a Hegel, I think Whitehead would still have been led to that by his instinctive acknowledgment that the truth is complex and that different thinkers have got hold of contrasting aspects of it.

It is neither Hegel nor Leibniz nor Descartes nor Locke, but Berkeley, who seems to me—judging from our examination of the foundations of Whitehead's philosophy of natural sci-
ence—to have been the member of the European tradition in philosophy who was most relevant to Whitehead’s own conceptions in their formative stage. I should not, however, ascribe to any philosopher an influence on him comparable to that of mathematical and physical conceptions. Even Plato, I think, primarily provided an illustration after the fact, though on a grand scale. Some of those who know Whitehead wonder if William Wordsworth did not influence him quite as much as any other man—and Shelley almost as much as Wordsworth.

X

In this Section we consider the possible importance of Whitehead’s contemporary, Bergson, for his metaphysics. When Bertrand Russell reviewed Science and the Modern World he wrote: “What can we regard as really concrete? On this point, Dr. Whitehead is profoundly influenced by Bergson’s belief in interpenetration, which he even carries further. . . . We are to understand that the world is a logical continuum, not validly analyzable into bits, and that, when it dreams of things to come, these things are already existing now in the dream.” 47 This is evidently written from the point of view of logical atomism. Whitehead for his part was carrying out the idea he had expressed in “Uniformity and Contingency” of the significance of an event for earlier and later events. The only way of answering Hume that will yield a basis for induction is to find something in the immediate occasion which connects it with its past and future (SMW pp. 61 ff.). Possibly it was acquaintance with Bergson’s thought which first led him so to think of the immediate occasion. Confirmation of this must be left to biographical research.

It is fatal to the understanding of Whitehead’s constructive metaphysical effort to define it in Bergsonian terms. There

47 Nation and Athenaeum, 99 (May 29, 1926), 207. Russell adds, “The view that the world is a logical continuum had been made familiar by the Hegelians, before Bergson.”
are many reasons for saying this besides the one given in the first section of the present chapter.

"It must be thoroughly understood," Whitehead wrote in his Preface to *Process and Reality*, "that the theme of these lectures is not a detached consideration of various traditional philosophical problems which acquire urgency in certain traditional systems of thought." But the topics to which Bergson devoted his successive works were just such problems, problems which acquired urgency for him in the Cartesian, Kantian and Spencerian systems—the nature of our consciousness of time and space, the reciprocal action of mind and body upon one another, the force behind evolution, the sources of morality and religion. When he goes about relating mind and body, Bergson ascribes to the events in the nervous system purely physical properties only—the power of receiving, preserving, and continuing movements; he comes close to swallowing Cartesian natural science whole. Whitehead's entire conception of the speculative reason and speculative metaphysics clearly stands beyond the orientation which Bergson advocated by writing (in 1922) : "To metaphysics, then, we assign a limited object, principally spirit, and a special method, mainly intuition"; and "Let us have done with great systems embracing all the possible, and sometimes even the impossible! Let us be content with the real, mind and matter." 48

In sum, Whitehead comes to the metaphysics of experience as a Plato-loving theorist who wishes to construct an all-inclusive cosmological scheme; Bergson as a half-Cartesian intuitionist cleanly and systematically setting off his own meditation from other types and areas of thought.

The most significant passage on Bergson in Whitehead's metaphysical writings I take to be this:

> On the whole, the history of philosophy supports Bergson's charge that the human intellect 'spatializes the universe'; that is to say, that it tends to ignore the fluency, and to analyse

the world in terms of static categories. Indeed Bergson went further and conceived this tendency as an inherent necessity of the intellect. I do not believe this accusation; but I do hold that 'spatialization' is the shortest route to a clear-cut philosophy expressed in reasonably familiar language.—PR II x i.

As we saw earlier in this chapter, Whitehead also, in his theory of "presentational immediacy," generalizes the idea of spatialization far beyond its meaning in Bergson. Thus in place of the dualism of a living absolute (within which the philosopher and artist place themselves) and inert, perspectival relatives (the work of homo faber's intellect), he has a unitary cosmological theory of all existence as perspectival, perspectives being in diverse ways transformed into effective aesthetic simplicity by conceptual feeling, and their contents unconsciously displayed to the experient—spatialized—in its perceptive process. Note also how un-Bergsonian is Whitehead's treatment of teleology, and of the order and disorder of nature (Bergson repudiates the notion of disorder, and divides order into two kinds, vital and geometrical). 49

In his view of the general relation of conceptual language to philosophy, Whitehead contradicts Bergson by maintaining that the inadequacies of conceptual language are diminishable, though never eliminable. Their source lies beyond the tendency to spatialize process; it lies in the contrast between the pervasive traits of the infinite universe and that which is variable, special, and hence easily noticeable and namable by finite man; a further obstacle is the dominance of Aristotelian categories in the learned tradition. Here again Whitehead is the innovator, Bergson the conservative to whom logic is forever Aristotelian and the intellect forever excluded from metaphysical penetration. When Whitehead asks philosophy to mobilize and make manifest the basic experience which is lived, he is in accord with Bergson. "If you like to phrase it so," he grants in 1935, "philosophy is mystical. For mysti-

cism is direct insight into depths as yet unspoken” (MT Epilogue). But he continues as no Bergsonian can: “... the purpose of philosophy is to rationalize mysticism ... by the introduction of novel verbal characterizations, rationally co­ordinated.” Though “akin to poetry,” philosophy “allies itself ... to mathematic pattern.” Metaphysics is decidedly not what Bergson said it was—“the science which claims to dispense with symbols.”

Whitehead’s philosophy and Bergson’s are both of them “process philosophies,” but they are largely of opposed types. Throughout Whitehead’s metaphysics the flux of things is taken as “one ultimate generalization around which we must weave our philosophical system”; he shows the evidence for this necessity by referring not to Bergson but to the poetry of the Psalms, to Heraclitus, to the Anglo-Saxon story of the sparrow flitting through the banqueting hall of the Northumbrian king, to poetry in all stages of civilization (PR II x i). (His other “ultimate generalization” is the antithetical idea of permanence.) Whitehead expounds process in his elaborate theory of prehensions; Bergson, believing theory of no avail, uses poetic imagery to supplement his references to “melting” and “interpenetration.” Both men hold that a true process is indivisible; but for Whitehead it always has the shape of an analyzable concrescence, whereas the issue of Bergson’s meditation was an intuition of “pure, unadulterated inner continuity (duration), continuity which was neither unity nor multiplicity, ...” For Whitehead, the continuity of the stream of experience is a surface feature prominent in consciousness, the underlying reality being a succession of “drops of experience”; for Bergson, continuity is the fundamental fact, and there are no drops in Whitehead’s sense, but only static states artificially abstracted by our acts of attention or by psychological analysis. Whitehead applies his principles

61 PR II x i; italics added.
of process to all existents, Bergson only to spiritual or at least living existents. Whitehead’s concept of “creativity” cannot—A. E. Taylor and other scholars to the contrary—be identical with Bergson’s *élan vital*, for “creativity” does not admit of an inverse. Whitehead draws a distinction between becoming and change, Bergson does not.

Were these differences not present, we should still have to call Whitehead’s and Bergson’s opposed types of process philosophy, in virtue of the root fact that Whitehead always thinks of the creativeness of processes as their appetite for, and evocation of, timeless potentials, whereas in Bergson’s eyes this mode of thought subjects change to the static. So in “The Possible and the Real,” written in 1920, Bergson denies that the possible is real. But *Process and Reality* sets as the central problem of Whitehead’s metaphysical system the relation between process and reality which is more than process just because it harbors real possibility.

Quite possibly Bergson’s homage to life impressed Whitehead; but we can hardly be surprised by his comment on the other’s doctrine. “We all remember Bergson’s doctrine of the *élan vital* and its relapse into matter. The double tendency of advance and relapse is here plainly stated. But we are not given any explanatory insight” (FR p. 23). While Bergson, as the historian Höfding well said, takes as his basis an absolute opposition between the organic and the inorganic, Whitehead works out their relative differences in novelty of appetite, in rhythm, and in structural integration. Another great divergence—concerning consciousness—joins this one. For the French dualist, but decidedly not for Whitehead, “the living is conscious by right,” for life is “consciousness launched into matter.” (Bergson’s conception of life is fundamentally monistic, Whitehead’s pluralistic.) It is hard to imagine Whitehead seriously entertaining Bergson’s conviction that

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53 *Dublin Review*, 181 (1927), 34 f.
54 CM pp. 107-125.
"the appearance of man or of some being of the same essence is the raison d’être of life on our planet." And Whitehead rejects the comforting anthropocentric tradition (accepted by Bergson) which makes freedom co-extensive with consciousness.

Since Bergson is not much read today, I shall bring these comparisons to a close. Some day people will return to him. My concern has been to make it impossible then to look upon Whitehead as Bergson’s mathematically trained alter ego. What is there in Bergson’s thought that corresponds to the three conceptions—of actual entity, prehension, and nexus—with which Whitehead tries to assure the concreteness of his own? How small a part of the Categorial Scheme in Process and Reality parallels anything in Bergson’s writings!

The acknowledgment of indebtedness in the Preface to Process and Reality is often cited. After referring to “the English and American Realists,” Whitehead wrote:

I am also greatly indebted to Bergson, William James, and John Dewey. One of my preoccupations has been to rescue their type of thought from the charge of anti-intellectualism, which rightly or wrongly has been associated with it.

A survey of Whitehead’s work suggests that the acknowledgments which occur in his various prefaces are somewhat overstated. I suggest that here Whitehead was paying a tribute to, and showing his sympathy with, the three men who had done most to encourage philosophers in the first quarter of

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67 See the first paragraph of Chap. 12, below.
68 On the other side, see how un-Whiteheadian the main basis of Bergson’s philosophy appears. A. O. Lovejoy summarized it as consisting of two Cartesian propositions, namely, the affirmation of a division between extended things and consciousness, and the proposition that consciousness is the more certainly known, and one Kantian proposition, to wit, that time is the essential characteristic of consciousness ("Some Antecedents of the Philosophy of Bergson." Mind, n.s., 22 [1913], 465 f.). Although this summary seems not quite just to Bergson’s originality of thought, it has a wide enough application to contrast strongly with its gross inapplicability to Whitehead.
the twentieth century to think of the process of experience in terms other than those of pure cognition. His articulation of a rational metaphysics of living, emotional, purposive experience rescues their emphasis from the charge of anti-intellectualism. But we should remember that Whitehead's own attitude toward life and his own intellectual interests required him to adopt a wider-than-cognitive conception of experience.

XI

For the reasons detailed in the preceding Section, I think that in trying to understand Whitehead we are more likely to be misled than aided by bringing Bergson into the picture. The reverse is true in the case of James and Whitehead, for the difference between them immediately strikes us, and we are more likely to underestimate the areas of contact. It is helpful to observe, for example, that when James wrote, "Perception changes pulsewise, but the pulses continue each other and melt their bounds," 59 he was not so much expressing a standpoint which he would develop until discreteness and continuity were conciliated in a new understanding, as a feeling for a state of affairs falsified by earlier theorists; that Whitehead makes the development by taking on a problem which James, prejudiced by the traditional empiricism in which he had been reared, rejected—the problem of how pulses of experience are formed; and that James's unmatched psychological observations provide the chief outside evidence to show that Whitehead's theory ofprehensions is not a castle in the air.60

Whitehead's response to James's way of philosophizing is better called one of sympathy and of appreciation of "that adorable genius" (SMW p. 3) than a case of influence. In May, 1941, he said as much in conversation with the present

59 Some Problems of Philosophy (New York, 1911), pp. 87 f.
60 This point is developed in Chap. 13, below.
author, adding that there was no question of James affecting the direction of his thinking. Some writers assume that Whitehead’s pluralism was partly an effect of James’s arguments that experience comes in drops. The similarity between their pluralisms is important. But, remembering the force with which Whitehead used to exclaim before his Harvard classes, “Hang it all, there must be individual actual things!” and the tenacity with which in a variety of ways he enforces this conviction in all his philosophical writings, I think it far more likely that his pluralism expressed a conviction native to the man. In 1939 he told me that he began with such a general conviction, then found supporting examples. The phrase, “drop of experience,” used by Whitehead, is James’s, but what it names is the natural candidate for the unit of existence in the eyes of a metaphysician who wants to develop a new monadic theory of experience.

I have known Whitehead, in a conversation about Bergson, to inject the remark that the contemporary from whom he actually got most was Samuel Alexander: he and Alexander “conceived the problem of metaphysics in the same way.” In particular, Alexander had the important idea that the unity of the universe (Spinoza’s emphasis) and the many individuals (Leibniz’) had somehow to be reconciled. Another common element which I have heard him mention is the fact that Alexander, almost alone among Whitehead’s contemporaries, did not, implicitly at least, assume that our experience is basically an experience of sense-data. On the positive side, Whitehead observed in Process and Reality (II i i) that his basic term, “feeling,” “has a close analogy to Alexander’s use of the term ‘enjoyment.’” Another specific statement

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61 This is obvious in his metaphysical, educational, and historical writings. Perhaps it appears also in his philosophy of physics: cf. PNK 17.4, CN pp. 5-15, and SMW pp. 98-102, 145, 185-189.

62 From “William James’s Pluralistic Metaphysics of Experience,” In Commemoration of William James: 1842-1942 (New York, 1942), pp. 157-177, the reader may see how near, and how far, James at various times came, in my judgment, to the pluralistic conceptions later elaborated by Whitehead.

63 In August, 1942.
concerns Whitehead’s metaphysical concept of the primordial nature of God: “It is Alexander’s nīsūs conceived as actual” (ESP p. 118; IS p. 219). A sketch of Whitehead’s world view in his last book (MT v 9) is written in terms of Alexander’s title-phrase, “Space, Time, and Deity.” In the Preface to his first metaphysical book, *Science and the Modern World*, Whitehead had said that he was “especially indebted to Alexander’s great work,” which he had found “very suggestive.” (It had been published five years before.) Alexander, for his part, once observed that Whitehead’s cosmological scheme had superseded his own.

To this evidence several comparative observations could be added. For example, that according to both philosophies, activity and value exist throughout nature. Both philosophers work out an intimate union of static form and process. And Alexander’s interpretation of perception, as consisting in a “compresence” of an object and a percipient who enjoys his “togetherness” with the object, is a rough adumbration of Whitehead’s notion of “prehension”: thus Alexander offered an alternative to the idea of “simple location.” The study of *Space, Time, and Deity* can sharpen our understanding of Whitehead by showing us the need of some of the concepts which he introduced into his more subtle system.

May we also conclude that Alexander exercised an indispensable influence on Whitehead’s metaphysics? I doubt it, because these leading ideas of the philosophy of organism already had firm taproots in Whitehead himself. Besides, the pluralistic theory at which he aimed—as *Science and the Modern World* shows—is of a much thicker kind than Alexander’s pluralism of point-instants. Alexander’s metaphysics seems to have been elaborated in response to the early twentieth-century dispute between realism and idealism, which colors his whole work; Whitehead, paying much less attention to that dispute, aimed primarily at displacing scientific materialism. When we remember the memoir, “On Mathematical Concepts of the Material World,” it seems better, in the absence of biographical investigations, to describe the
relation between Alexander and Whitehead as more one of encouragement and sympathy than of indispensable influence.

What about Americans other than James, in the development of Whitehead’s philosophy? Fascinating comparisons can be drawn between Peirce’s and Whitehead’s metaphysical doctrines; but in Whitehead’s texts there is no evidence that before he wrote his philosophy of organism he was familiar with any of Peirce’s work outside logic. The same is true of Royce, who is mentioned in a note in the “General Considerations” part of the memoir of 1906. I do not know when Whitehead first seriously studied Dewey. In his two-page contribution to the Dewey volume in “The Library of Living Philosophers” he both admires the man and subtly conveys his dissatisfaction with Dewey’s limitation of philosophic thought to human problems.64 Some students of Dewey think that his influence is manifest in the first appearance—in Symbolism (1927)—of Whitehead’s doctrine of a direct experience of causality. Though it is possible that Dewey had something to do with this, I cannot believe that Experience and Nature, or any book of the nineteen-twenties, was half as influential on Whitehead as the deep-lying sources described in Section VIII of the present chapter. Dewey himself thought of Whitehead as a first-rate thinker whose scope and range were beyond his own—a man of such originality that his appreciation of a contemporary, though it could be a confirming or deflecting factor, can never be considered a primary one.

The significance of contemporary American philosophy for Whitehead’s thought during his productive years here is difficult to estimate from his conversations, because he loved to savor, and to express his appreciation of, the many and varied intellectual adventures of his contemporaries; also he loved people, and his manners were supremely good. As a result, visitors often left his company with the feeling that their philo-

\[64\] The Philosophy of John Dewey, ed. P. A. Schilpp (Evanston and Chicago, 1939); Whitehead’s contribution is reprinted in ESP. Cf. also his comparison of James and Dewey, as reported by Lucien Price, Dialogues of Alfred North Whitehead, Dialogue XLI; and our references in Chaps. 3 and 10 to Whitehead on Dewey.
Sophistic problems were what Professor Whitehead was most concerned with. That this concern continued in full force when he retired to his study to work at his own system, is a hazardous assumption; I suspect that it has largely contributed to the belief, held by some American philosophers, that one of the main objects of the author of *Process and Reality* was to come to terms with American analyses of experience.

On turning to the general circumstances which Harvard and America provided for Whitehead in his third period, it seems to me from Price's *Dialogues*. Hocking's article, and Whitehead's own statements (allowance being made for good manners), that the British detractors of his metaphysics are right in holding this country partly responsible, though I should not go so far as to join his American admirer, H. B. Van Wesep, in calling Whitehead "the latecoming but almost violent convert to America." There is a certain congeniality between the outlook of Whitehead's American books and a great deal of what was best in American philosophy before him.66

We do well to keep a close watch on our readiness to discern influences from earlier philosophers in Whitehead's metaphysics. He was like one of his "actual occasions"—a prehension of manifold data, on which he imposed his own unique "subjective aim." It is natural for us, upon looking into a new philosophy, to say forthwith, "I know where he got that idea!—and that one! and that one!" Natural, yes, but it is also likely to be nine-tenths projection. We have here, to use James's phrase, a disease of the philosophy-shop—or, rather, the typical fallacy of the well-read Ph.D. The gain, of course, is that we need not sweat for long over the idea if we read it as another version of one we know; or if,

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67 I owe this *aperçu* to Prof. Raphael Demos.
when still puzzled, we assume that what puzzles us is only a new twist in the treatment of a familiar problem. Because philosophic ideas make up our frames of reference for understanding other ideas, the understanding of novelty is in this field peculiarly difficult, and the price of its exclusion ruinously high. First-rate philosophers, to be sure, do read books and are influenced by them, even when they misread them. But let us allow that they may see some things for themselves, and that the core of their thought must be grasped in its own terms, not those of earlier systems.

We can now understand more fully what was said about the philosophy of organism at the end of Section I in Chapter 2: It “can neither be subsumed under any movement of the twentieth century nor accurately represented as the joint influence of recent thinkers on its author.” There is in Whitehead a touch of Bergson, a touch of James, a touch of Samuel Alexander, more of Wordsworth and Shelley, and a good deal of Plato (though not so much as Whitehead thought there was). His sympathies were wide; his work was his own.