

CHAPTER 1

Introduction

THE CENTRAL PLAN OF THIS ESSAY

Alfred North Whitehead is widely recognized as having made profound contributions to the shape of thought in the twentieth century. As a professional mathematician trained at Cambridge, his work with Bertrand Russell, *Principia Mathematica*, gained him a prominent place in the history of logic. His work in the philosophy of physics, particularly his critical evaluation of Einstein and his attempt to advance his own form of relativity theory, made him a central figure in the debate over the emerging scientific hypotheses in the 1920s. And, once he emigrated to America and flourished as a professional philosopher at Harvard, the fruits of many years of philosophic contemplation resulted in a system of metaphysics that radically altered our ordinary thinking about ourselves and our world. His views on science, religion, education, history, and civilization have captured the imagination and inspired numerous thinkers in their own specialized areas of learning. But for all this, Whitehead remains an enigma for most philosophers today and his work has little impact on the mainstream of philosophical thought in the English-speaking world.

By Whitehead's own understanding of the evolution of philosophic trends, historical epochs immerse themselves in speculative construction and are then pruned back by periods of intense analytic rigor and adherence to method. But once the methodologies exhaust themselves and the discussion of the central problems becomes fatigued, speculation again becomes crucial to novelty and the advance of knowledge.¹ During the period in which Whitehead himself produced his metaphysics, speculative construction was flourishing in physics, but otiose in philosophy. The developments in logical positivism and linguistic analysis set the stage for orthodoxy in this century, and Whitehead's thought was left for a handful of his students or for those unswayed by the dominant trends. Today, however, the situation is much more

open to the problems Whitehead attempted to solve and to the subject of metaphysics generally, but still very few thinkers are prepared or willing to master his system. This situation is especially unfortunate since his philosophy offers profound insight into a number of contemporary problems in ontology, epistemology, personal identity, and the philosophy of science. But in what follows it is not my purpose to defend Whitehead's general conception of philosophy against contemporary modes of analysis. Rather I take the endeavor of the speculative philosopher to be an essential undertaking and concentrate my attention on one major influence on Whitehead, namely, nineteenth-century Oxford philosopher, Francis Herbert Bradley.

Although Whitehead is generally regarded as a realist, especially when viewed for his concerns to construct a foundation for twentieth-century physics, the metaphysics put forth in *Process and Reality* cannot be classified strictly as realist in orientation. On many epistemological issues, he retains his loyalty to the line of thought that reacted against neo-Hegelianism, but at the same time, Whitehead's adherence to the idea that experience is the fundamental basis of reality puts him squarely within the idealist tradition. It is in this connection that his relation to Bradley provides an insight into what Whitehead himself thought of his final results. In one of his essays he writes, "I admit a very close affiliation with Bradley . . ." as he explains his affinities and contrasts to idealism.² And again in the preface to *Process and Reality*, Whitehead describes the final outcome of his cosmology as "not so greatly different" from Bradley's position.³ Although he is greatly indebted to Bradley's concept of 'feeling' as an "implicit repudiation of the doctrine of 'vacuous actuality'" his disagreements focus primarily on various problems of accepting the Absolute as the final transcendent Reality. He frequently referred to this position as the "block universe" devoid of process. This is what he means when he says that: "if this cosmology be deemed successful, it becomes natural at this point to ask whether the type of thought involved be not a transformation of some main doctrines of Absolute Idealism onto a realistic basis."⁴ Whitehead turned the Absolute upside down by deriving the solidarity of the universe from the actuality in each individual occasion of experi-

ence. For him, nature grows in a synthetic, creative manner from bottom up.

Whether or not Whitehead is successful in his transformation of absolute idealism largely depends on his interpretation of the nature and function of relations in experience. Hence, in what follows, it is necessary to examine Bradley's arguments against metaphysical pluralism. Although the concept of 'feeling' is a crucial point of departure for both philosophers, Bradley was quite insistent that the very essence of feeling is nondiscrete and nonrelational. Bradley therefore argued that relations are self-contradictory and cannot accurately characterize the nature of ultimate Reality. The strength of this conclusion leads him to the view that a genuine plurality of individuals is impossible and that reality must be a nonrelational One. Whitehead, on the other hand, takes relatedness to be an essential defining characteristic of his occasions of experience; each must enter into relationship as an ingredient of process. This is the fundamental issue of disagreement between Whitehead and Bradley, and in many respects it is the main focus of the present essay. For Bradley the connectedness of Reality cannot be accurately characterized by the relational form of thought, whereas Whitehead contends that nature, divided at its natural joints, proves relational.

The fact that Whitehead was a successor to Bradley and in large measure accepts his theory of 'feeling' provides a certain strategy for the present work. What I offer is an analysis and evaluation of the different consequences drawn from the interpretation of 'feeling', and in so doing I attempt to answer how "the final outcome is after all not so greatly different."

IDEALISM AND REALISM

Idealism as used throughout our philosophical heritage has been attached to numerous and conflicting sources. Though all varieties acknowledge mind as ultimately real, the issues that divide one type of idealism from another could occupy the better part of this introduction. A cursory survey might include: Platonic idealism, panpsychistic idealism, subjective idealism, transcendental idealism and absolute idealism, all of which differ from one an-

other drastically and assert very different principles about the nature of reality. Taken in the most general sense, however, idealism opposes any form of materialism that asserts the insentient, purposeless reality of matter. In this regard Whitehead and Bradley unite in attacking the materialist-mechanistic worldview of a universe composed of what Whitehead calls "vacuous actualities." Sentient experience is therefore fundamental to both Whitehead and Bradley. Experience, or the more specific term, 'feeling', as the basis of reality, provides the point of contact whereby both philosophers align themselves with the idealist tradition.

One difficulty arises that may blur the distinction between absolute idealism and Platonic idealism. That is, in Plato's philosophy, the temporal process is often construed as "appearances" of the fundamental reality of the permanent Forms. This view can be confused with Bradley's distinction between appearance and Reality and with the notion that finite experience transcends its immediacy as it becomes transmuted within the experience of the Absolute. The crucial difference, however, is that Bradley does not espouse a complete disjunction between appearance and reality as Plato is usually thought to do in his middle dialogues. Whitehead seems to mistake Bradley's view when he takes appearance to mean illusory rather than merely finite.⁵ As Bradley put the point, appearance, though incomplete in itself, is "the stuff of which the Universe is made."⁶ Finite appearances might be better characterized as "relatively unreal" instead of illusory since they are mere abstractions of an infinite totality.

Whitehead's insistence on the reality of temporal process was a central concern throughout his philosophical career. He repudiated the view that the supreme reality is a perfection of changeless order. This notion has been dominant in the Platonic and Christian traditions where transience and change are subordinate to the essentially static conception of eternity. It is here that we find the notion of mere appearance, and, unfortunately, Bradley is often mistaken as holding this view. Bradley's Absolute is a timeless perfection unifying the diversity of experience. However, the diverse elements essentially qualify the Absolute in some degree and cannot be taken as illusory.

What is not possible, in Bradley's view, is the genuine individuality of the various appearances. It is on this score that Whitehead parts company with Bradley. The setting of the metaphysical problem, for Whitehead, is both realistic and pluralistic. Each actuality exists in its own right. The notion of a common world, including ourselves and other actualities, is then transformed from strict realism to idealism by the manner in which each individual is temporally connected to form a coherent universe of experience.

WHITEHEAD'S PROCESS REALISM AND PHILOSOPHICAL METHOD

As mentioned above, the basis for Whitehead's realism was closely tied to his concern to construct a cosmology that would accommodate the advances in twentieth-century physics and biology. The beginning of this century was clearly a time of reorganization, and Whitehead recognized that the fall of the seventeenth-century cosmology would require a new comprehensive system that would bring together the fundamental advances under a single unifying concept. In *Process and Reality*, Whitehead achieved the most detailed exposition of this cosmological system, and much of it embodies his earlier interests in the philosophical foundations of natural science. Though the metaphysics contained therein should not be considered a mere continuation of the problems he faced in the philosophy of natural science, the earlier investigations certainly pave the way for the speculative synthesis.

The emphasis on the new realism that dominated philosophical thought at the outset of this century was clearly a result of the discrepancy between the larger conception of idealist systems and the important results that the special sciences accumulated. The nature/spirit dichotomy that was previously reconciled within a Hegelian framework now proved too much slanted in favor of spirit and was of little help in understanding the complexities of evolution, electromagnetic theory, or relativity physics. Since many of the realists believed that idealism was grandiose and actually thwarted the advance of knowledge, they sought to shed any

remnant of a philosophy that was regarded as an antiquated relic of the Victorian age. Russell, Moore, Alexander, Broad, and Nunn were the dominant figures in Britain who reacted against idealism as an inadequate foundation for the sciences. And Whitehead is also justifiably linked with this wave of thought, especially in his premetaphysical period.⁷ However, there is very little in Whitehead's philosophy that he shares with the Russell-Moore line of thought. At no point throughout his philosophy of natural science or his metaphysics did he hold an exclusive doctrine of external relations where entities are believed to exist in complete independence of one another. As early as *The Principles of Natural Knowledge*, his view of nature is essentially holistic, but, unlike Bradley's holism, Whitehead's conception of nature is diversified into overlapping, four-dimensional events structured by various complexities of objects. The fact that he was in a position to take account of the major advances in science gave him a basis very different from Bradley's on which to construct his system of natural knowledge, and finally, his cosmology.

What does justify Whitehead's association with the realists is an epistemological issue concerning the relation between mind and nature—what is perceived is not just one's own mental states but a direct apprehension of nature, and this is quite real. The most important consequence of this epistemological realism is that the datum for natural science is not at all mental. Scientific investigation requires that its objects be separate and prior to perception and thought. Whitehead thus argues against the subjective idealist that no assertions concerning nature can be verified if what is perceived is only a fact of individual psychology.⁸ This doctrine plays an important role throughout Whitehead's work, namely for the sake of securing the basis of scientific objectivity. In *The Concept of Nature*, Whitehead's doctrine that "nature is closed to mind" served the purpose of limiting his inquiry to that which appears to us in sense perception, but this idea did not imply a metaphysical disjunction between nature and mind, for the doctrine as to how mind functions in nature was left to his later work.⁹

Once process is accepted as the fundamental notion in Whitehead's metaphysics, the extensive properties of nature be-

come dependent upon one ontological type that is characterized by the becoming of experience. His thought radiates as he moves from the attempt to provide a philosophy of natural science to a comprehensive metaphysics. Where in his earlier work his aim is to provide a unifying concept for the reorganization of theoretical physics, the ideal of the later work is an all-inclusive theory "which will set in assigned relationships within itself all that there is for knowledge, for feeling, and for emotion."¹⁰ The result is a general hypothesis concerning the nature of ultimate reality, and not just the nature of the physical world.

In the philosophy of natural science, Whitehead says we are thinking "homogeneously" about nature when we are limiting our concerns by confining attention to the natural sciences.¹¹ We are here "concerned only with Nature, that is, with the object of perceptual knowledge, and not with the synthesis of the knower and known."¹² However, once we are thinking "heterogeneously" about nature so as to include mind, the spectrum widens as does the range of application. Insofar as we include the nature of mind in our pursuit, he argues that "it must be one of the motives of a complete cosmology to construct a system of ideas which brings the aesthetic, moral, and religious interests into relation with those concepts of the world which have their origin in natural science."¹³ Here the emphasis is placed on systematic construction, and metaphysical inquiry is pursued with an eye for interconnections between the different departments of knowledge. As he said in one of his few surviving letters, his task was "to evolve one way of speaking which applies equally to physics, physiology, and to our aesthetic experiences."¹⁴ His philosophy of organism begins with the perceiver and his immediate environment. Once generalized to the metaphysical level, this notion becomes the basis for understanding relations between all actualities.

Whitehead saw that while many thinkers accepted the advances of the twentieth-century revolution in physics, they still held an implicit conception of matter from the seventeenth-century cosmology. In this sense the transition from the concept of inert matter to the concept of energetic vibrations was not complete. While many were content to think of energy in conventional materialistic or positivistic terms, Whitehead argued that

this was simply an inability to move forward in accordance with scientific advance. Progress in knowledge demands that science will not "be combining various propositions which tacitly presuppose inconsistent backgrounds."¹⁵ The complete shift in thinking therefore required a new synthesis that would serve as a unifying basis for the special sciences. Whitehead proposed a cosmology that replaces the atomistic conception of matter with a dynamic and fluid conception of reality as processes of events, that is, energy vectors understood in terms of atomic quanta of experience.

In what follows it will be necessary to give definitions of *metaphysics* and *cosmology* for both Whitehead and Bradley. This will allow a clear understanding of their views regarding the task of the metaphysician; it will also raise important points of contrast crucial to subsequent portions of this study.

As Whitehead conceives it, *metaphysics* is "the general ideas which are indispensably relevant to the analysis of everything that happens."¹⁶ On the other hand, he defines *cosmology* as "the effort to frame a scheme of the general character of the present stage of the universe."¹⁷ Cosmology is distinguished by the fact that it seeks the general character of a given epoch. Its scope is limited to the type of order that dominates within that epoch. It is therefore clear that a cosmology will fall with the decline of the epoch in question. The laws of nature, for example, are not considered part of the ultimate metaphysics of the universe; they have their application only within a particular cosmic epoch dominated by particular facts. Metaphysics, however, is more fundamental than cosmology in the sense that the metaphysician seeks the general characteristics that pervade the entire universe. In such an enterprise one attempts to construct a systematic investigation into the nature of being, what Aristotle called "first philosophy" or "first principles." Whitehead viewed metaphysics as the fundamental science. In fact, for him "all difficulties as to first principles are only camouflaged metaphysical difficulties."¹⁸ The real question is whether we pursue it in some open and systematic fashion or presuppose it in the background of our thought. Given Whitehead's own vision of the universe, metaphysics is concerned with the general features of experience, namely, his

“actual occasions” which function as the ultimate constituents of a creative universe.

At times, Whitehead’s use of the terms *metaphysics*, *speculative philosophy*, and *cosmology* seems interchangeable. Though for our present purpose it will not be necessary to distinguish between speculative philosophy and metaphysics, his cosmology is distinguished by the interpretation of actual occasions in terms of the electromagnetic characteristics of energy, and the type of order that follows—electrons, protons, atoms, molecules, cells, and so on. When we apply the generality of metaphysical notions to the present cosmic epoch we are concerned with a cosmological interpretation. However, the common denominator in all of Whitehead’s later thought is the ultimate generality of process. His metaphysics provides an explanation of the rise and fall of cosmic epochs, and of various historical epochs that follow, one after another, analogous with the becoming and perishing of actual occasions.

As regards philosophic method and the evaluation of the metaphysical system, Whitehead views the ideal of speculative philosophy as a combination of both rational and empirical elements. The rational side demands that the philosophical scheme is logical and coherent with respect to the consistency and unity of ideas, while the empirical side involves the application of the scheme and its overall adequacy with respect to the interpretation of experience.

In *Religion in the Making*, Whitehead wrote that metaphysics is a description: from some special field of interest the metaphysician discerns what he suspects to be the general character of reality; he then sets up categories from this investigation and seeks to discover whether they receive confirmation by being exemplified in other fields of interest.¹⁹ We arrive at the categories through the primary stage of assemblage. Such categories attempt to grasp the essence of the universe by the metaphysical notions of the widest extension. This provides the matrix as a body of first principles then judged as coherent and consistent depending on the manner in which each proposition requires the others in systematic interconnection. However, as a whole, the system must be confronted with the facts of experience; the final evaluation

depends on its comprehensive capacity to elucidate immediate experience. In this regard, the metaphysics stands as successful given the degree to which it enlightens observations and illuminates experience in fields beyond its origin.

This method approximates the hypothetico-deductive method of scientific inquiry which Whitehead believes is shared by science and metaphysics alike. The hope of rationalism is that things lie together in a certain coherence in which no element of experience proves incapable of exhibition as an example of general theory.²⁰ But at the same time Whitehead is quite clear that: "Philosophers can never hope finally to formulate these metaphysical first principles. Weakness of insight and deficiencies of language stand in the way inexorably."²¹ Nonetheless the scheme, as a definite statement of first principles, must be sought regardless of the emphasis placed on its hypothetical character. The metaphysician must progressively modify the working hypothesis in his approximation to the ideal scheme, for in the absence of such a well-defined scheme, Whitehead contends that "every premise in a philosophical argument is under suspicion."²²

Whitehead says of his "categoreal scheme" that its purpose is to state the ultimate generalizations with the utmost precision and definiteness, and argue from them boldly with rigid logic. However, in Whitehead's philosophy, argument takes on more of the character of an axiomatic approach in mathematics than straightforward philosophical polemic. That is, he construes argument as a method of deriving consequences from accepted first principles or premises instead of the procedure of destroying rival schemes. This is indeed implied in his notion of metaphysics as a descriptive generalization. But this is not to say that he takes the principles asserted in his categories to be self-evident starting points from which experience is deduced. This was the mistake of Spinoza and other modern philosophers misled by the example of mathematics. Whitehead recognizes that first principles are tentative in the sense that their perfection should be the goal and not the origin of a metaphysics.

Many commentators have been critical of Whitehead's lack of philosophical argument in supporting his principles against those of rival schemes.²³ But for Whitehead the real point was to set

out his system in the ideal form of an axiomatic matrix and modify it as the system evolved in various applications to special subjects.²⁴ Whitehead was never interested in polemic for its own sake. In fact, he thought that the persistent threat to philosophers was that polemic was becoming their chief occupation, supplanting the attempt to discover truth. The proper method of philosophy, as he saw it, is the search for the premises that extend the boundaries of previous philosophical systems and become more comprehensive with respect to the ability to describe the facts. The emphasis is placed on a "more sustained effort of constructive thought."

BRADLEY'S ABSOLUTE AND THE SKEPTICAL METHOD

Bradley was the leading Oxford philosopher of his time and the doyen among absolute idealists. Unlike Whitehead, he was originally a philosopher by training and was more straightforwardly argumentative in his approach to philosophical issues. The dominant influence on Bradley's philosophy was the neo-Hegelianism that formed in Britain against empiricism, or what Bradley mockingly referred to as "the school of Experience." T. H. Green and Edward Caird set off the movement of neo-Hegelianism, though they were eventually eclipsed by Bradley's impact on the British philosophical scene.

In spite of Bradley's protests against the spirit of "discipleship" and his dissent from membership in a Hegelian school, it is still clear that he owes much to Hegel's philosophy.²⁵ One of Bradley's early followers, A. E. Taylor, remarks on this point that " 'Anglo-Hegelianism' has meant in English-speaking countries, especially since the publication of *Appearance and Reality*, to all intents and purposes chiefly the views of Bradley."²⁶ It does, however, become clear that Bradley's work after his *Ethical Studies* moves steadily away from Hegel's influence. He himself attacks the heart of Hegelian logic, namely the dialectical process of deriving a synthesis from a contradiction.²⁷ Instead of viewing contradiction as a positive force in human reasoning, Bradley contends that our ability to discriminate between truth and falsehood requires that we reject self-contradiction as an accurate

characterization of Reality. What is, however, very much consonant with Hegel's thinking is the notion of experience, or 'feeling,' taken from his psychology as the "vague *continuum* below relations."²⁸ Bradley did see in Hegel an important basis for the unity of the Absolute in this conception of experience.

Bradley's approach to metaphysics differs most from Whitehead in three principal ways. First, the metaphysical problem is conceived in such a way as to expose the general principles of the One reality, the Absolute. This is basically the monistic, as opposed to the pluralistic, approach. Second, he was not concerned with a cosmological construction consistent with the science of his time, nor did he attempt to integrate empirical observations in his metaphysics. Empirical knowledge is generally assigned to the realm of appearance; finite facts do not provide knowledge of Reality in any ultimate sense. Bradley, in fact, would reject the elaborate detail of Whitehead's metaphysics as excessive compared with the task of discovering a general and theoretically tenable view of Reality. Insofar as he resists such detailed explanation of the elements of experience, he contends that his metaphysics cannot be called a system.²⁹ Bradley was only certain that logic drives us to general conclusions respecting the Absolute, but the finitude of the human condition ultimately prevents certainty beyond a knowledge of a broad outline of Reality. Finally, from this second point we discover a third difference from Whitehead: It is quite clear that Bradley's general metaphysical principles are construed as absolute foundations and not as tentative generalizations progressively modified, and judged by applications beyond metaphysics. Bradley firmly believed that metaphysics discerns absolute truth beyond all other disciplines.

As to the definition of metaphysics and its general purpose, perhaps the most concise statement of Bradley's position occurs on the first page of his metaphysical essay, *Appearance and Reality*:

We may agree, perhaps, to understand by metaphysics an attempt to know reality as against mere appearance, or the study of first principles or ultimate truths, or again the effort to comprehend the universe, not simply piecemeal or by fragments, but somehow as a whole.³⁰

At first, there seems to be no disagreement between Bradley and Whitehead on these points. Both philosophers seek to know reality or ultimate truth as against mere appearance. But what exactly constitutes “mere appearance” will become an acute problem in the course of this essay. What is particularly revealing about Bradley’s definition is the emphasis placed on knowing reality *as a whole*. Our being, he thinks, is a wholeness that seeks complete satisfaction. It is the metaphysician’s task to consider this when constructing the main characteristics of Reality. Thus, for Bradley, we are misled when “we attempt to set up any one aspect of our nature as supreme, and to regard the other aspects merely as conducive and as subject to its rule.”³¹ The enthronement of one aspect of reality distorts the balance of a *de facto* whole, and is the very temptation of “an uncritical metaphysician.” This holistic approach dominated his entire philosophical career, ethics, logic, and metaphysics inclusive.

The construction of a metaphysics involves the understanding of all that *is* in a completely self-consistent unity. This is the purely logical foundation of Bradley’s metaphysics. As he put it: “Ultimate reality is such that it does not contradict itself; here is an absolute criterion.”³² With consistency as the conceptual foundation of ultimate reality, Bradley believes we arrive at truth. Imperfection and contradiction fail to be true in that they do not satisfy the demands of our whole being. Truth must be unchangeable and perfect. In *The Principles of Logic*, Bradley contends that:

if A both were and were not, that would be because the ultimate reality had contrary qualities. The character in which it accepted A, would be opposite to the quality which excluded A from existence. Under varieties of detail we find the same basis, repulsion of discrepant.

... And again, if we desire to glance in passing at the metaphysical side of the matter, we may remind ourselves that the real is individual, and the individual is harmonious and self-consistent. It does not fly apart, as it would if its qualities were internally discrepant.³³

Contradictory assertions, then, cannot be both true and representative of Reality. “The Absolute holds all possible content in an

individual experience where no contradiction can remain.”³⁴ Diversity of content is reconciled, but not contradiction.

Though Bradley attempts to steer the logical investigations of *The Principles of Logic* clear of first principles, there is the necessity of defending the axiom of contradiction as implying a certain theory of the nature of things.³⁵ Logic investigates the nature of inference. It is an appraisal and interpretation of what is essentially an ideal experiment on the real itself.³⁶ Likewise, metaphysics requires logical consistency. The assumption throughout is that Absolute Reality is without defect; this gives the metaphysician the ability to distinguish between appearance and reality by employing logic as an instrument of evaluation. With this in mind, Bradley’s strategy in *Appearance and Reality* is to expose the contradictions involved in various doctrines of previous philosophical thought and show how such inconsistencies fall into varying degrees of unreality. The final result, he believes, forces us to affirm the existence of the Absolute as a perfect and individual unity.

It is often suggested that Bradley’s thought is primarily negative, or based on a series of rejections and denials.³⁷ This is certainly a prominent feature of Bradley’s method. But his thought must not be underestimated for its positive value inasmuch as his skepticism is constructive in its ultimate intent. Bradley’s negative elimination by logical consistency ultimately leads to his vision of Reality as Absolute. For him there is a knowledge of what is sought with every denial. “Every negation must have a ground, and this ground is positive.”³⁸ Philosophical skepticism, as opposed to psychological doubting, has an advantage in that it transcends itself and arrives at a more general resting place. It is distinguished by the adoption of a notion of truth and reality as the criterion of doubting. As Bradley makes the point:

The doubt here is not smothered or expelled but itself is assimilated and used up. It becomes an element in the living process of that which is above doubt, and hence its own development is the end of itself in its original character.³⁹

The “remedy against doubt” is the positive vision of Reality. It widens its area to an ultimate generality where it cannot, in theory, be transcended or refuted. Where Bradley pushes this

absolutism too far, however, his arguments tend to become somewhat sophistical. His most insightful critic, William James, was indeed quick to point out how, in many cases, Bradley had produced a logic that “overintellectualized” the universe for the sake of his Absolute.⁴⁰ Bradley’s dialectic, on these points, has a definite affinity to the ancients, Parmenides and Zeno. The common end sought is permanence and a vision of reality as One.

For Bradley, there is one theme that infects thought with so much contradiction that it affirms the positive character of the Absolute more than anything else. This is the central issue of relations, around which the whole of *Appearance and Reality* revolves. Bradley’s critical evaluation of this topic provides a sustained attack on the basic unit of pluralism—the fact. Any relation between subjects and objects, or between terms generally, involves isolation and separation of finite facts or units of existence. But for him, this turns out to be an impossibility because it is not only impossible to discover real individuals, but even if we could tentatively identify such units, we eventually discover that their relations to one another involve us in contradictions. These arguments are so fundamental to his conclusions that he suggests, at the end of his chapter “Relation and Quality,” that the convinced reader need not read the remaining chapters of Book I of *Appearance and Reality*.⁴¹ Bradley is convinced that if one accepts the general arguments on the contradictoriness of relations, the more specific topics evaluated—the self, time, space, motion, and causation—easily fall, since they are dependent upon some type of units and relations. The point is, of course, that the problem of relations can only be resolved in a larger Whole that transmutes finite content into unity. It is here, Bradley contends, that the universe as a whole may be called intelligible.

From this it is clear how Bradley’s conception of the metaphysical problem entails a specific method, and how this method attempts to reach beyond the limits of our ordinary, hypothetical and incomplete reasoning to Absolute perfection. Nothing short of the Absolute gives us the whole truth. This is the key concept in Bradley’s ingenious theory of judgment where any judgment claiming to portray a genuine character of reality must fail to take account of the totality of the universe. Every finite judgment will always have a hypothetical character due to the fact that

abstracted content will always fail to represent total reality. Richard Wollheim remarks on this point that for Bradley:

Reality flows uninterruptedly, without divisions, without fissures, from one point in space to another, from one moment in time to another, and it is we thinking beings who carve it up; indeed, even the distinctions of space and time themselves are, as we shall see, importations of Thought into the realm of Reality. And in making these divisions, these breaks, we harm what is really there: our thought, which is based upon them, is therefore always a distortion of the truth.⁴²

This does explain why, in Bradley's view, we can never explain the infinite detail of the Absolute or understand just how all the appearances form a systematic harmony. Where our thought formulates a judgment of the content of a given experience, it necessarily neglects the continuous mass of the Whole. This is a lesson Whitehead understood as well, but he applied it in quite a different manner in his philosophic outlook. Since, for Whitehead, the universe will always be too complex for any finite human system, the principles of a metaphysical system will only be an approximation of the general truths sought. Bradley, on the other hand, argues that logic drives us to certainty in metaphysics, provided that our principles are sufficiently general, but we will always be uncertain when it comes to various attempts to systematize finite content.

For a rough-and-ready description of their conceptions of metaphysics, I propose to view the differences between Whitehead and Bradley through a naturalized/pure distinction.⁴³ For this purpose, *naturalized metaphysics* means the generalizations arrived at through an assemblage of all sorts of knowledge, both empirical and conceptual. It is the traditional notion of metaphysics as the "queen of the sciences," or Aristotle's view of "first philosophy." *Pure metaphysics*, on the other hand, is a conception of a discipline, in and of itself, which, as one discipline of many and one side of our nature, contributes to our whole being. It attempts to arrive at the true nature of reality by purely *a priori* means.

According to this distinction, Bradley's conception would fall under the pure metaphysics in that he does not attempt to inte-

grate current scientific developments into his principles or anticipate the application of the principles beyond the discipline itself. It is however clear that his intentional neglect of cosmology as linked to the construction of metaphysical principles can be traced to his monism and the central criticism of relations. For clearly scientific inquiry requires an isolation of its data as well as a strict independence of thought from the objects under investigation. Where Whitehead's pluralism provides a foundation for scientific inquiry, articulates connections between the various disciplines, and fills the gap between natural science and value experience, Bradley argues that the respective disciplines must pursue their own aims, each with their own methodological concerns. In his view, any form of pluralism is an "ideal construction" for some specific purpose at hand, and must be detached from the metaphysician's task of knowing ultimate truth and reality. Self-contradiction, at this level, where a discipline must isolate some specific subject matter and investigate relations is not of genuine interest to metaphysics. In fact, he thinks, to protest against a particular theory of science as self-contradictory is to bring in metaphysical criticisms at a point where they are inapplicable.⁴⁴ This is not to say that the natural or social sciences are illegitimate means of inquiry but that we must not mistake their "practical constructions" for ultimate truth. Their restriction of attention, for a specific purpose, is necessarily limited. In his view, the evaluation of science, and for that matter, any hypothetico-deductive process, is always in terms of usefulness and not of ultimate truth. As Bradley says, "The ideas, with which it works, are not intended to set out the true character of reality."⁴⁵ Thus, in his view, a conflict between the sciences and metaphysics is impossible provided that we realize that they each have their own proper sphere and function in the human intellect.

Bradley saw that science requires external relations as well as the assumption that the inert particles of matter in time and space are real. It was indeed obvious that the Newtonian scheme of mechanics was useful for the practicalities of everyday life, and in Bradley's time, there was certainly a conflict between science and the idealist view of ultimate reality. However, at the outset of the twentieth century, Newtonian physics lost its reign, and the problem confronting us was the construction of a new system of

reality in which science could be understood as continuous with metaphysics.⁴⁶ A parallel controversy of the late nineteenth century that is very much characteristic of Bradley's view is the conflict between Darwinian evolution and orthodox theology. But the tenability of Bradley's view of metaphysics as separate from the scientific interests of his particular epoch is doubtful. It is hardly likely that any metaphysician can seriously claim that he was not influenced by the science of his time as well as the overall advance of knowledge and its effects on society. Surely the various disciplines have their own particular emphases and methods of achieving their aims, but the view that science is concerned only with practical constructions, as opposed to ultimate reality, cannot be taken seriously. A specific scientific discipline may be distinguished by its particular restriction of subject-matter, but this does not mean the investigation is confined to some lower level of reality.

Whitehead would agree that we must not accept as total truth any specialized system of thought limited to a restricted group of data, but he would not assign to metaphysics the sole task of uncovering the nature of reality. In this sense, Whitehead's view closely accords with the conception of a naturalized metaphysics. Metaphysics gains from the special sciences the empirical discovery of the specific features of order in the present cosmic epoch. It is therefore continuous with science via cosmology. And from the other side, science gains from metaphysics a systematic overview of fundamental concepts lying behind specialized lines of research.

Science and philosophy are merely different aspects of one human enterprise: the understanding of ourselves and the world in which we live. The real task is to find a way to think them together such that each gains insight from the other in the endless task of criticism and revision. Both begin with the same groundwork of immediate experience, and both concern themselves with the embodiment of abstract principles in concrete particular facts.

Having spelled out these differences between Whitehead and Bradley respecting their approaches to metaphysics, we shall, however, find that there are other points in common between them. Both take metaphysics as the philosophical activity that attempts to formulate the most adequate way of understanding reality in

all its experienced forms. In short, they both see the theory of being (Aristotle's Being qua Being) as the fundamental problem of philosophy. Both present a comprehensive and unified worldview, and both would surely agree that the voyage of philosophy is to the higher generalities.

As to the task of the metaphysician, an insight from each will perhaps best illustrate the predicament. For Bradley, "Metaphysics is the finding of bad reasons for what we believe upon instinct, but to find these reasons is no less an instinct."⁴⁷ In Whitehead's view, the metaphysician looks for that which ordinary speech sees no point in saying, because it so pervades our experience that it is taken for granted.

