

GOD AND THE COSMOS ACCORDING
TO TEILHARD AND WHITEHEAD

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TO TEILHARD de CHARDIN
AND
ALFRED NORTH WHITEHEAD

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For Kathleen, Erin and Mark

ABSTRACT

In this dissertation I examine some possible areas in which Pierre Teilhard de Chardin and Alfred North Whitehead share similar interpretations of the nature of the cosmos and the nature of God. Further, I seek to illustrate areas of their cosmological-theistic interpretations where they offer distinctive views.

Several recent authors have made references to apparent similarities between specific areas contained in the writings of Whitehead and Teilhard. For the most part these references are made somewhat in passing and are, therefore, undeveloped.¹

However, two articles by Ian Barbour deal at some length with a comparison of Whitehead and Teilhard. The first "Five Ways of Reading Teilhard," (in The Teilhard Review, III (1968) 1, 3-20) is an attempt to show ". . . . that Teilhard's most significant intellectual contribution is a 'process theology' which combines Christian theology and process philosophy." The second article, "Teilhard's Process Metaphysics," (Journal of Religion, 49 (1969) 2, 136-159) is an exploration of "some of Teilhard's metaphysical categories which reflect both evolutionary and biblical assumptions." While each of these articles is a clear interpretation of Teilhard's thought and of significant value for anyone interested

¹For example: Hans Jonas, The Phenomenon of Life (New York: Dell Publishing Co., 1968), p. 25n and; Philip Hefner, The Promise of Teilhard (New York: J. B. Lippincott Co., 1970) pp. 60-61.

in comparing Whitehead and Teilhard, nevertheless, they tend to describe Teilhard as closely allied to the general scheme of Whitehead's 'process' philosophy. While I agree with Dr. Barbour on many of his points, I am led to challenge an interpretation which too closely allies Whitehead and Teilhard. Therefore, while a number of authors have suggested some similarities between Whitehead and Teilhard, no one (to my knowledge) has presented a developed comparison of their thoughts. Among the many possible areas for comparison, I have chosen to concentrate on two; namely, their respective interpretations of the structure and activity of the cosmos and their respective interpretations of the nature and activity of God. While noting several similarities between the thoughts of these two thinkers, I have been led to conclude that their distinctive interpretations are of greater importance. Briefly, I maintain in this study that each describes the universe as having a different structure and guided by God described as having a different nature and function.

Hopefully, this dissertation will have scholarly significance not only because of its 'pioneer' quality, i.e., because it raises issues others might wish to challenge and pursue further, but also, because of its concentration on specific pivotal issues, this dissertation might be useful to those suspecting some alliance of these two systems with one another.

STRUCTURE AND DEVELOPMENT

In Chapter One, I seek to organize Teilhard's cosmological ideas. In Chapter Two, I consider Whitehead's cosmological categories and present a preliminary comparison between his cosmology and that of Teilhard.

Next, in Chapter Three I turn my attention to Teilhard's 'theism,' examining what his cosmological proposals lead him to say regarding the existence of God. Also, within this chapter, I take note of the 'theological' interpretation of God which Teilhard appears to incorporate into his system. In Chapter Four, I turn my attention to Whitehead's 'theism,' noting his discussion of God's existence and activity relative to the cosmos. Also, in this chapter I offer a preliminary comparison of the 'theisms' of Teilhard and Whitehead. Next, in Chapter Five, I consider, in summary, the principle areas in which Teilhard and Whitehead agree and, specifically, where their interpretations differ. The latter portion of this chapter is devoted to what might be a central critique of Teilhard's scheme from a Whiteheadian point of view. Finally, in an Appendix I consider Teilhard's "Christology," asking whether his interpretation of Christ provides a theme indicating that Teilhard's God is mutable (i.e., passive) and asking, further, whether Teilhard's interpretation of Christ revises the cosmological issues of irreversibility and infallibility I found so prominent in Teilhard's system.

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ABBREVIATIONS

A.E.	Teilhard, <u>Activation of Energy</u> .
A.I.	Whitehead, <u>Adventures of Ideas</u> . (Free Press Edition).
A.M.	Teilhard, <u>Appearance of Man</u> .
C.J.V.	Teilhard, <u>Comment je vois</u> .
C.N.	Whitehead, <u>The Concept of Nature</u> .
D.M.	Teilhard, <u>Le Milieu Divin</u> . (Fontana Books Edition).
F.M.	Teilhard, <u>The Future of Man</u> . (Fontana Books Edition).
H.E.	Teilhard, <u>Human Energy</u> .
H.U.	Teilhard, <u>Hymn to the Universe</u> .
M.P.N.	Teilhard, <u>Man's Place in Nature</u> .
M.T.	Whitehead, <u>Modes of Thought</u> . (Free Press Edition).
P.M.	Teilhard, <u>The Phenomenon of Man</u> . (Harper Torch Books Edition).
P.R.	Whitehead, <u>Process and Reality</u> . (Free Press Edition).
R.M.	Whitehead, <u>Religion in the Making</u> . (Living Age Books)
S.M.W.	Whitehead, <u>Science in the Modern World</u> . (Free Press Edition)
V.P.	Teilhard, <u>Vision of the Past</u> .
W.T.W.	Teilhard, <u>Writings in the Time of War</u> .

References to these primary sources are abbreviated in parenthesis within the text. References to secondary sources and commentaries are numbered within the text with full references given at the end of each chapter.

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INTRODUCTION

Clearly, the past 100 years has been an era of remarkable productivity for scientific investigation and discovery. The influence of the variety of scientific proposals has not been confined only to the area of science itself, but these proposals have had a decisive impact on philosophical and religious thought as well. Under the influence of scientific thought, contemporary man has been moved to re-picture the world in which he lives. The theory of evolution, as initiated by Charles Darwin, displaces the picture of a biologically static world, replacing this classical view with one which argues for the progressive emergence of species. Just as Darwin revised man's understanding of the 'biosphere,' Einstein's work in mathematical physics altered what we are to understand as "space, time, matter, force and so on."¹ The paradigms for understanding the structure and pattern of activity of the cosmos provided by Darwin, Einstein and others have importance for the study of philosophy and religion. The classical view of an essentially static but accidentally moving universe comes to be reconsidered, along with a variety of classical cognitional theories. In the study of religion, the existence of God, the meaning and destiny of human existence come to be re-evaluated.

It is the historical and intellectual era of the first half of the twentieth century which provides the period from which the writings of Alfred North Whitehead (1861-1947) and Pierre Teilhard de Chardin (1881-1955) develop. Whitehead's life was devoted almost entirely to the study

and teaching of mathematics in Great Britain. At a time when most men retire, Whitehead came to Harvard University pursuing his teaching and writing on philosophical subjects. His writings in philosophy have the character of synthesis, that is, the unification of both his scientific and philosophical reflections. As he tells us, his philosophical endeavor encompasses the totality of things experienced, i.e., ". . . everything of which we are conscious, as enjoyed, perceived, willed or thought. . . ." (P.R. 5). He is a speculative philosopher who seeks to account for the "ordinary stubborn facts of daily life" (P.R. viii).

Teilhard de Chardin was educated in the philosophical-theological tradition of the Society of Jesus as well as in the modern techniques of geology and paleontology. His intellectual career was not that of theologian, but of scientist. As is well known, his life in the Jesuits was not without difficulties and discouragements. His scientific investigations and writings were judged to be of high quality, but his philosophical-theological proposals were suspect. While he received encouragement from his close friends, he was not able to gain the approval of his ecclesiastical superiors concerning his philosophical-theological speculations. It was not until several years after his death that his writings gained widespread popularity, at first, mostly within the circles of French and American Roman Catholicism, but eventually interest developed for his work within wider circles of scholarship.

COMPARISONS AND CONTRASTS

This dissertation had its beginnings in my reading of Teilhard and Whitehead. What struck me, and others as well, I suspect were the prima facie similarities between the systems developed by these two authors. The

question I raised for myself, then, had to do with whether these similarities indicated a substantial similarity between Teilhard and Whitehead, or whether these similarities (although real) were of tangential importance? That is, whether at a deeper level Teilhard and Whitehead held substantially different views regarding the structure and process of physical reality and whether they held substantially differing views regarding the nature and activity of God? For the purpose of introducing the reader to this dissertation and for the purpose of partially (at least) justifying this study, it seems appropriate that I enumerate some of the ideas which (initially) appear shared by each thinker. Others might be included, but for the purposes of my study the following ones seem most worthy of mention. Finally, the enumeration of similarities here will be brief, insofar as these ideas are given extended consideration within the chapters which follows.

(1) With regard to their cosmological views, both Teilhard and Whitehead appear to reject Cartesian dualism in favor of a form of "panpsychism." According to Teilhard, the "cosmic stuff" is constitutively physical and psychic even in its most elementary condition (P.M. 72). These two "variables" (the physical and psychic) are never disassociated and exercise a mutual influence for the progressive organization of the Weltstoff (P.M. 56). In Whitehead's scheme

. . . an actual entity is essentially di-polar, with its physical and mental poles; and even the physical world cannot be properly understood without reference to its other side, which is the complex of mental operations" (P.R. 280).

Further, both find the contemporary interest in evolution an insightful model for their respective enterprises. Teilhard makes numerous references to evolution. Among his more illuminating articles on

this topic is his essay "The Human Rebound of Evolution and its Consequences" (F.M. 204, 211). For Whitehead, "Nature exhibits itself as exemplifying a philosophy of the evolution of organisms subject to determinate conditions" (S.M.W. 93). For Teilhard, evolution manifests the development of the cosmic stuff in which ". . . the Physical and the Psychic, the Without and the Within, Matter and Consciousness, all are found to be functionally linked in one tangible process" (F.M. 218). In Whitehead's system, the "determinate conditions" (laws of nature) are the "outcome of a wider evolution beyond nature itself, and within which nature is but a limited mode" (S.M.W. 93). That is, the process of evolution is an expression of the creative advance of being as a whole.

Also, both thinkers view the world functioning as an organism and not as a machine. Whitehead entitles his system a "philosophy of organism" (P.R. V; 23). Whereas Teilhard, at times, speaks of the world as a "machine-in-motion" and man as a "machine-entity" (A.E. 158), nevertheless, "life" and "organism" are his favored and basic categories; the "organism" is the fundamental quality of the cosmic stuff itself (A.E. 30f.).

Finally, both Teilhard and Whitehead seek to re-introduce teleology and final causality into the modern interpretation of the world. In this sense they challenge the philosophical and scientific rejection of purposefulness offered by Descartes, Boyle, Newton and others. When seen in its entirety, Teilhard's cosmology is an attempt to demonstrate that the cosmic stuff (constitutively) is directed toward a state of completion (unification) and that all intervening epochs are instances of this process toward final consummation. In Whitehead's system, a principal cosmological question concerns "an explanation by final cause" (P.R. 124). In summary, Whitehead contends:

The doctrine of the philosophy of organism is that, however far the sphere of efficient causation be pushed in the determination of components of concrescence--its data, its emotions, its appreciations, its purposes, its phases of subjective aim . . . there always remains the final reaction of the self-creative unity of the universe. This final reaction completes the self-creative act by putting the decisive stamp of creative emphasis upon the determination of efficient cause (P.R. 61).

(2) Along with these briefly mentioned cosmological similarities, Teilhard and Whitehead share positions regarding the relation of their understandings of the cosmos with their understandings of God. For Whitehead the World-God relation ". . . constitutes the last chapter of Cosmology" (P.R. 402). Whereas, for Teilhard, the increased understanding of the structure and processes within the cosmos gives rise to "the problem of God" (F.M. 187).

Further, Teilhard and Whitehead, on the basis of their respective examinations of the World-God relation, have exercised striking influences upon contemporary religious thought. Teilhard's influence has been, primarily, upon Roman Catholic philosophical-theology, whereas Whitehead's influence has been, primarily, upon English-speaking Protestantism.

Finally, and at first glance, both thinkers appear to suggest that their revised understandings of the World require them to offer a revised understanding of the nature and activity of God. This is clearer in the case of Whitehead. His understanding of God--according to his "Primordial" and "Consequent" natures represents Whitehead's most striking contribution to contemporary theism. In Teilhard's thought, a revisionist understanding of God is less explicit. Teilhard, however, hints on occasion that he tends toward a position which diminishes the absolute self-sufficiency of God, in favor of a position in which God is said to be "completed" by "our journey" into Him (D.M. 88).²

(3) The final consideration of similarities concerns the systematic nature of each proposal as a whole.

Whitehead's system is said to be one of "speculative philosophy," i.e., "the endeavor to frame a coherent, logical, necessary system of general ideas in terms of which every element of our experience can be interpreted" (P.R. 5). Consequently, Whitehead seeks to discover a "general scheme" (or first principles) which never fails of exemplification in particular instances (P.R. 5). In this sense, the "general scheme" will be "necessary" and indicative of the invariant traits of reality as a whole.

In Whitehead's view, the speculative scheme, the process of discovering these "generalizations," begins from "observation" and moves to a level of "free imagination, controlled by the requirements of logic and coherence" (P.R. 7). The "general scheme" is then subjected to "renewed observation" (P.R. 7), i.e., its adequacy and applicability are tested (P.R. 6).

As a speculative scheme, metaphysics, in the Whiteheadian sense, is open to the contributions (insights, discoveries) of a variety of special disciplines, e.g., physics, psychology, aesthetics, ethics, etc. (P.R. 8). It is the purpose of metaphysics, however, to clarify the invariant character or structure of reality as a whole. That is, its generalization will find applicability beyond the ground of observation which initially generates them. Therefore, the Whiteheadian metaphysical scheme seeks the general and invariant character of reality and an application of these generalizations to their particular exemplifications.

In the Whiteheadian view, a metaphysical scheme will take into consideration (a) what is necessary (required) to be said of reality as

a whole, if such a scheme is true; (b) what is not necessarily required by the scheme, but allowed to be predicated of reality according to particular observations or disciplines; (c) finally, what this system neither requires to be said, nor allows to be said, of reality, either at the level of generalization or as descriptions and interpretations of particular instances. In regard to these interpretations, special sciences or disciplines can be helpful to metaphysics (at b) or rejected at (c). According to the Whiteheadian position, states Charles Hartshorne,

Metaphysics gives us no fact, ordinary or superior, but it gives us the key to fact, in both levels, the clue or ideal by which factual experience is to be interpreted.³

Teilhard calls his system "hyper-physics" (P.M. 30) which, in the context of The Phenomenon of Man, he distinguishes from metaphysics:

If this book is to be properly understood, it must be read not as a work on metaphysics, still less as a theological essay, but purely and simply as a scientific treatise. The title itself indicates that. This book deals with man solely as a phenomenon; but it also deals with the whole phenomenon of man (P.M. 29).

Teilhard does not provide a detailed or extended explanation of what he means by "hyper-physics". In one sense he seems to associate his enterprise with the contributions of the "great modern scientists, such as Poincaré, Einstein and Jeans," insofar as their scientific treatises impress Teilhard as "giving the impression of trying to explain it (the universe) through and through" (P.M. 30). Accordingly, Teilhard seeks to "establish a coherent order between antecedents and consequences," (an "experimental law of recurrence") without "venturing" into the field of the essence of being" (P.M. 29). While The Phenomenon of Man provides us with Teilhard's most systematic work, nevertheless, it forms only a part of his total contribution. When taken as a whole, Teilhard's writings appear to assume

the characteristics of metaphysics, i.e., he seems to address himself to questions concerning the "totality of things," according to the invariant generalizations of reality as a whole. Indeed, on the one hand, Teilhard appears to reject a metaphysical understanding of being which is a priori (A.E. 361). On the other hand, however, Teilhard does not hesitate to describe his system as a "metaphysics of union."⁴ Therefore, while Teilhard disclaims affinity with a philosophical procedure which develops a priori, he is not adverse to describing his system as a metaphysics which emphasizes the relation of being and union, or a metaphysics which proceeds from the ground of observation. While Teilhard is best known for his cosmological theory and his Christology, nevertheless, at the center of his specualtions a principle is found which he applies to the totality of things (both actual and possible) and which seems to relate his cosmological and theological proposals, namely "fuller being is closer union" (A.E. 113).

Regarding the question then whether Teilhard is engaged in a metaphysical enterprise, it must be recognized that he denies engaging in a metaphysics which proceeds from a priori knowledge. He does not deny, however, engaging in speculations which touch the 'totality of things,' nor does he dismiss from his system ideas which are applied to the generality of being according to its invariant structure or character. He says of his system that "It is not an abstract metaphysics, but a realist ultraphysics of union" (A.E. 99). Consequently, while Teilhard's system contains themes which have the character of 'special sciences' (that is, concerned with issues not required, but in principle allowed, by metaphysics), nevertheless, his system also treats 'ontological' issues (that is, it contains

principles which describe the invariant character of being as such.) Therefore, while Teilhard's 'special' descriptions and explanations are centrally important for his system (it will be shown in the subsequent chapters that he and Whitehead share similar positions regarding some of these), nevertheless, consideration also needs to be given to whether according to their generic descriptions of being Teilhard and Whitehead agree.

The structure of this dissertation is decided by the issues and questions I have been mentioning above. In Chapter One I attempt to organize with clarity and precision Teilhard's principal cosmological ideas. In Chapter Two, I consider Whitehead's cosmological categories and offer a preliminary comparison between his cosmology and that of Teilhard. Next, in Chapter Three, I turn my attention to Teilhard's theism, noting the 'theological' influence within his system and examining, also, what his cosmology leads him to propose regarding the existence and nature of God. In the following Chapter, I examine Whitehead's theism and offer, again, a preliminary comparison of Whitehead's theism with Teilhard's. In Chapter Five, I intend: (1) to speak directly to the question of coherence involved in Teilhard's system; (2) to examine more fully the distinctiveness of these two cosmological/theisms; (3) to suggest a critique of Teilhard's system from a Whiteheadian point of view. Finally, in an Appendix, I will examine the implications of Teilhard's "Christology" for his cosmological-theism.

These brief statements concerning the issues considered in this dissertation and the general structure for dealing with them are intended to give the reader an over-view of the problems to be dealt with here.

For the purpose of further introducing the reader to the subject matter of this dissertation I intend now to provide a preliminary discussion of several key issues which continually influence my investigations.

ORGANIZING THE CENTRAL IDEAS

Organizing Teilhard's Central Ideas

The initial problem for anyone seeking to interpret and evaluate Teilhard's work as a "whole" is to arrange or organize the ideas or themes which are central to his work. That is, one needs to identify those ideas to which he continually appeals throughout his analysis and explanation of reality (as a "whole.") Teilhard does not intend to provide us with another philosophical or metaphysical system, at least, not the kind proposing and defending a set of a priori ideas which form the basic categories from which all reality is deduced.⁵ Teilhard intends, rather, to begin his reflections from an examination of phenomena, confining his explanations to "the plane of experience" (P.M. 29). His method, then, at least in The Phenomenon of Man is guided by the method of investigation pursued in science (P.M. 30). In this regard, Teilhard does not provide us with a selection of categories, as, for example, in the metaphysical/cosmology of Alfred North Whitehead (P.R. 25ff). Therefore, in order for an interpreter of Teilhard to achieve a precise understanding of his proposals, it is necessary to discover and arrange the ideas at the center of his system. This effort is particularly important when his work is brought into comparison with a system such as Whitehead's in which a categorical scheme is suggested.

I have chosen to investigate Teilhard's work as a "whole" according to what I judge to be its three primary aspects. First, I seek to examine his cosmology, that is, his analysis and explanation of nature. In this regard, I am led to identify and arrange the themes central to his cosmological theory. Second, I seek to examine his theism, that is, I am particularly interested to understand what Teilhard proposes regarding the existence and nature of God. Consequently, I am led to identify those ideas which Teilhard applies to God in accordance with his cosmological investigations and those he accepts from theology. Finally, in this regard, I intend to investigate how he relates the cosmological and theological ideas of God. Third, I intend to examine Teilhard's 'ontology' that is, I seek to understand Teilhard's definition of 'being,' which appears to have reference to both his cosmological and theistic positions.

It may be of help for the reader's understanding of what I am doing in this dissertation, if I provide an extended reference to Teilhard's summary reflections on his work. This quotation is found in his essay on an "Outline of a Dialectic of Spirit" (A.E. 150-151). Following this reference I will offer comments important for my interpretation of Teilhard's work.

To sum up, the complete series of these ascending and descending reflections may be tabulated as follows:

MORE KNOWN	LESS KNOWN
Phase 1. (1) The Phenomenon of Man	Transcendent Omega Ingathering Center, Irreversible (2)
Phase 2. (3) Evolutionary creation	God, mover and revealer (4)
Phase 3. (5) The Christian phenomenon	God incarnate (6)
Phase 4. (7) The living church	Christ-Omega (8)

An examination of this table calls for the following comments:

1. That a number of my essays may have caused some bewilderment is generally due to the fact that, since I was writing for non-believers, my argument did not go beyond phase 1. If in other writings again, I may have given the impression of jumping directly from (1) to (8), it is either because, presuming my readers to be sufficiently informed, I did not think it necessary to distinguish the intermediate stages (to set out the intermediate operations) - or because there is a real difficulty, for a mind that is already Christian, in thinking of Omega (even at its elementary stage 2) without realizing that its function of gathering up and uniting necessarily implies that it is, in one way or another, to some degree involved in the world (cf. Duns Scotus' views on the necessity of some form of incarnation).

2. In any case, the great advantage of the dialectic suggested here is that from the initial steps (phase 1) it shows that we must admit not only the mere existence of God but a qualified existence - this, acting as a unitive rather than an efficient cause, is from the outset seen by us to be clothed in the actual powers and dimensions of the world. This stuff of the cosmos then enters into all the later determinations of Omega, up to and including Christ, so that nothing is left of the conflict that seemed as though it could not but introduce an ever more dangerous opposition between the majesty of the universe and the primacy of God.

With regard to this tabulation, the areas of Teilhard's thought with which my work is primarily concerned are phases 1 and 2. In these phases Teilhard's cosmological ideas are most evident (particularly in phase 1), whereas in phases 3 and 4, his attention is directed toward issues clearly theological in character, requiring consideration of presuppositions and methods which necessitate discussions beyond the scope of this study. The reader needs to be reminded that I seek to engage in a comparison of Teilhard and Whitehead, so that engaging in a consideration of phases 3 and 4 (because of their theological concentration) would be (for the most part) outside the focus I have chosen for comparing Whitehead and Teilhard. However, because of

issues raised in this study, I consider (in an Appendix) Teilhard's 'Christology,' (numbers 6 and 8) by asking if his understanding of Christ provides an additional insight into his cosmological theory (i.e., providing a basis from which to challenge my interpretation of his cosmological/theism,) or whether his Christology tends to confirm my interpretation of his cosmological theism.

The reader's attention is now directed to Teilhard's comments regarding his tabulation. While Teilhard's comments serve as something of an apologia, they contain important statements for the structure and development of my study.

First, Teilhard refers to distinguishing "the intermediate stages." His tabulation in the "Outline of a Dialectic of Spirit" makes no reference to the ideas he employs to describe and explain each phase. Further, in his comments, Teilhard implies that an understanding of the progressive development from phases 1 to 8 requires attentiveness to the ideas developed in each phase. Since my study examines Teilhard's cosmology, I seek to understand the ideas he employs, particularly at phase 1 (numbers 1 and 2.)

Second, Teilhard suggests "that we must admit not only the mere existence of God but a qualified existence--this acting as a unitive rather than an efficient cause." In this regard my attention is directed toward God as a second central theme within this dissertation. Here my examination concerns phase 2 particularly and, again, I attempt to discover the ideas (both scientific and theological) employed by Teilhard for explaining the existence and nature of God.⁶

Third, in The Phenomenon of Man, Teilhard claims "to develop a homogeneous and coherent perspective of general extended experience of man, a whole which unfolds" (P.M. 35). While this statement has specific applicability to The Phenomenon of Man, it needs to be asked if these criteria have reference to the progression indicated in the "table" mentioned above. That is, Teilhard's consideration of 'the phenomenon of man' appears to be supported by his cosmological ideas and is, apparently, extended to his consideration of God. Therefore, how does Teilhard employ these criteria ('homogeneity' and 'coherence') in his treatment of the 'whole' of things". With regard to this question, I examine (thirdly) the application of his statement, "fuller being is closer union" (P.M. 31) to the cosmological and theistic portions of his scheme.

Fourth, Teilhard remarks, "This stuff of the cosmos then enters into all the later determinations of Omega, up to and including Christ. . . ." Although my study is devoted to considering phases 1 and 2 of Teilhard's scheme, nevertheless, it needs to be asked whether Teilhard's treatment of Christ complies with the criteria of 'homogeneity' and 'coherence,' and whether, his Christology provides considerations which weaken my interpretation of Teilhard's cosmology and theism.

Organizing Whitehead's Central Ideas

The problem of identifying and organizing Whitehead's categories is not as challenging as in the case of Teilhard. In Process and Reality (pp. 22-42) Whitehead enumerates and initially defines the "categoreal scheme" he employs in interpreting the elements of man's extended experience. Insofar as I intend to engage in a comparison of the cosmologies

of Teilhard and Whitehead and insofar as this comparison needs to be focused, my consideration of Whitehead will concentrate on his cosmological ideas of "actual occasions," "order" and "final causation." These ideas, with appropriate adjustments, have counterparts in Teilhard's scheme.

Also, insofar as I intend to compare the 'theisms' expressed in these two systems, I will consider Whitehead's defense of God's existence, along with his discussion of the nature of God. Throughout my examination of Whitehead's idea of God, I will compare his theory with that of Teilhard's where appropriate.

Finally, I will examine Whitehead's "ontological principle," which he applies to the totality of things experienced, in order to discover its possible comparison with Teilhard's 'ontological principle,' namely, "fuller being is closer union."

Having considered the themes which are central to my study and having previewed the structure for developing them, I will now direct my attention to Teilhard's cosmology in an effort to discover and investigate Teilhard's understanding of the cosmos as he 'sees' it.

REFERENCE NOTES TO THE INTRODUCTION

1. Thomas S. Kuhn, The Structure of Scientific Revolutions (Chicago: University of Chicago Press, 1970), p. 149.

2. See: Christopher Mooney, Teilhard de Chardin and the Mystery of Christ (London: William Collins and Sons and Co., 1964), pp. 174 and 253 (notes 63 and 64.)

3. Charles Hartshorne, The Logic of Perfection and Other Essays in Neo-Classical Metaphysics (LaSalle, Ill: Open Court Publishing Co., 1962), p. 297.

4. Emile Rideau, The Thought of Teilhard de Chardin, trans. Rene Hague (New York: Harper and Row, 1967), pp. 154 and 512. See also: Henri de Lubac, The Religion of Teilhard de Chardin (New York: Doubleday and Co., Image Books, 1968), p. 232.

5. This is not to say, however, that Teilhard's system lacks themes having a metaphysical character and metaphysical significance for his work as a whole. See Rideau, p. 42.

CHAPTER 1

TEILHARD'S COSMOGENETIC SCHEME

The following chapter is divided into two parts. In the first of these consideration is given to two diagrams which graphically illustrate: (1) the pattern of the transformation of energy as proposed by physics; and (2) the pattern of the transformation of energy as proposed by Teilhard's "hyper-physics." By juxtaposing these two graphs, Teilhard demonstrates his understanding of the "energetics of physics," as well as distinguishing his position from that of physical science. Since at this early stage my purpose is to identify and clarify Teilhard's scientific-philosophical position with regard to the development of cosmic reality, these graphs aid in distinguishing Teilhard's theory from that of science. Further, these diagrams (particularly #2) provide a reference point to which I return, occasionally, in order to clarify and apply some difficult Teilhardian ideas.

The second part of this chapter is devoted to what I call Teilhard's "foundational ideas," namely, those ideas which form the basis for his cosmological theory. The purpose of this rather lengthy part is to place in sharp focus Teilhard's cosmology which is of central importance when I come to compare Teilhard and Whitehead according to their respective interpretation of the nature of the cosmos and the nature of God.

TWO DIAGRAMS

As mentioned above, by an appeal to the following two figures, Teilhard provides a graphic and general description of his "cosmogenetic theory," while distinguishing it from the "energetics of physics" (A.E. 331 and 335; A.M. 216).

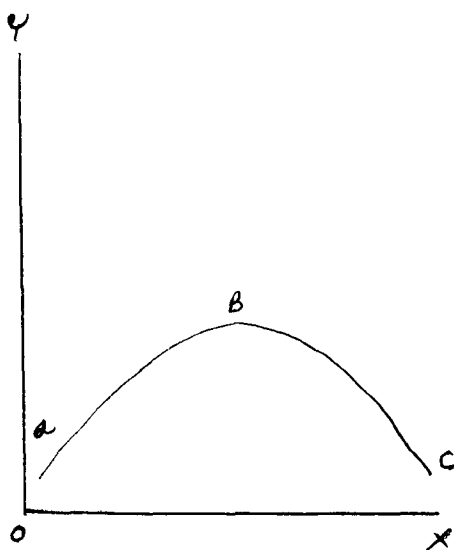


FIGURE # 1

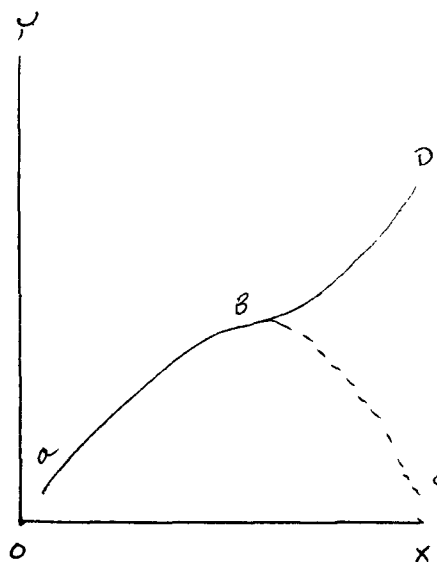


FIGURE # 2

In both figures the axis o.y. represents the direction of cosmic development toward increased transformation or complexity. The axis o.x. represents the direction of the cosmic process moving toward increasing disarrangement or disassociation.

In Figure 1, the line a-b depicts the path of material structuralization, which reaches maximum organization at point b. The line b-c represents the path of gradual disarrangement, i.e., the gradual dissipation of structuralized energy.

In Figure 2, on the other hand, the line a-b-d represents Teilhard's theory of progressive complexification along the axis o.y., i.e., the organization of cosmic energy along the path of "orthogenesis." The dotted line c indicates that entropy is subservient to the force of psychic energy seeking an increasingly intense solidarity.

Figure One: The View of Physics

According to Teilhard, Figure 1 illustrates the process of gradual cosmic structuralization and de-structuralization as proposed by the physical sciences. The axis o.x. represents a direction of "greater probability," while o.y. is the axis of "greater complexity." The curve a-b-c illustrates the transformation of "matter" according to its elementary form of measureable energy.

Teilhard notes that in the view of physics matter (as energy) displays three fundamental properties: (1) Conservation, i.e., energy is not destroyed; (2) Transformation, i.e., energy appears to assume new structural forms; (3) Dissipation, i.e., the structural forms of energy tend to gradually break down (P.M. 42-43; A.E. 330-332). Further, Teilhard calls attention to two general principles predicated of physical energy. (1) During the process of transformation no new measureable energy appears, i.e., no influx of new energy is observed providing for the process of transformation. Therefore, the energy requisite for transformation is defined by the cosmic resources of energy. (2) The process of transformation is characterized by a subjective loss of energy: "every synthesis costs something: (P.M. 50f). In Figure 1, therefore, the line a-b illustrates the gradual transformation of matter in the direction of increased synthesis, i.e., energy concretes or "bundles," forming

subjects of increasing immensity, structure and stability. However, at point b, the limited "quantum" of energy achieves its maximum structuralization and in view of the principle that no new energy is observed in transformation or structuralization, it is concluded according to the law of entropy, that present structures are destined to decompose. Therefore, as Teilhard understands it, the line b-c illustrates the path of cosmic de-structuralization, so that, in this diagram the axis o.x. represents the direction of "greater probability."

Figure Two: The View of Hyper-physics

Teilhard's critique of the position illustrated by Figure 1 does not provide a direct refutation of its underlying laws or principles. Rather, it is Teilhard's view that this position provides only a "partial" account of the cosmic process. This is to say, the laws which support Figure 1 do not take into account "consciousness" or "mind" (P.M. 55). The Teilhardian view maintains that insofar as the "stuff of the universe" is considered only in terms of physical energy, its destiny is correctly described and explained according to the laws of entropy. However, it is the purpose of "hyper-physics" to consider "total-matter" and, therefore, Teilhard suggests a form of energy which is concomitant with physical energy and together with it provides for a complete understanding of cosmic energy. The dimension which Teilhard adds to physical energy is that of spiritual or "psychic" energy (P.M. 53ff).

At the level of what might be called his 'scientific' investigation, Teilhard does not discount the possibility of the cosmic process developing in the direction of the axis o.x. (P.M. 50-52). Teilhard sees, what he calls, "two fundamental cosmic currents," namely the law of

entropy and the "Law of Complexity/Consciousness" (A.E. 289-290). Insofar as the analysis of cosmic energy is concerned only with "matter", the axis o.x. is correctly termed the "line of greater probability," whereas, once energy is understood as having a constitutively spiritual dimension and once "we are alive to the 'demand for irreversibility' that is inherent in the very nature of the evolutionary phenomenon of reflection," the development of the cosmic "stuff" along the axis o.y. assumes increased probability (A.E. 332ff). In Teilhard's scheme point b is the critical instance of structuralization or complexity, since at this point man emerges and "evolution becomes conscious of itself" (P.M. 220; A.E. 333). The appearance of man suggests to Teilhard that the complexification of the cosmos proceeds according to an energetic force which has two properties and not one as physics proposes (P.M. 63-66). Consequently, it is Teilhard's intention to demonstrate that the law of entropy pertains only to one dimension of cosmic transformation and must be understood in light of the "Law of Psychic Energy" (A.E. 120ff). Therefore, in Figure 2, the line a-b-d represents not only the physical complexification (structuralization) of the "cosmic stuff," but more significantly, the concomitant path of "hominisation" (P.M. 164).

THE FOUNDATIONAL IDEAS OF COSMOGENESIS

The two diagrams just considered help to describe, in general, Teilhard's cosmology, as well as demonstrating, in general, his position as contrasted to that of physics. In the following sections my purpose is to move from the level of general description (as in the previous part) to

a level of particular analysis and explanation. In the following sections I will concentrate upon those ideas to which Teilhard appeals in order to support his contention that cosmic advance (when taken as a whole) is not destined toward a gradual transformation toward disassociation, but a gradual transformation toward eventual increased unity and solidarity.

Teilhard consistently appeals to four major ideas or themes in order to support his particular understanding of cosmic being and its processes:

- (1) "The Stuff of the Universe."
- (2) "Energy."
- (3) The distinction of "Energy" into its
 - a) "Tangential" properties and, its
 - b) "Radial" properties.
- (4) The "Law of Complexity/Consciousness."

I choose to call these the "Foundational Ideas of Teilhard's Cosmogenesis" since the emphasis here is on the supportive function which these ideas have for Teilhard's cosmology. However, these ideas could easily have been designated the "categories" or "pre-suppositions" of Teilhard's "cosmogenesis." As Teilhard employs these ideas, every cosmic reality is understood and explained either by one of these ideas or by several in combination. I have avoided using the term "category" (or one of its derivatives) since Whitehead clearly proposes a "categoreal scheme" and in order to retain the distinctiveness of Whitehead's pre-suppositions and those of Teilhard, the term "Foundational Ideas" has been applied to Teilhard's scheme.

The Stuff of the Universe

Recalling the diagrams cited earlier in this Chapter, we note that in Figure 1 the line a-b-c represents the cosmic process understood by modern science according to its particular definition of "matter." In Figure 2 (the view of "hyper-physics") the line a-b-d illustrates the path of the "Stuff of the Universe," which Teilhard defines as: "the ultimate residue of the evermore advanced analysis of science" (P.M. 39).

Again, Teilhard maintains that science (particularly physics and biology) presently provides merely a partial account of phenomena, since its attention is limited to the "mechanistic" - "measureable" properties of things (P.M. 43). Now, while Teilhard respects ". . . the proofs and indisputable measurements of physics" (P.M. 43), nevertheless, these proofs apply only to a single and incomplete aspect of "total-matter." Indeed, the limitations of the scientific account are self-defeating for the scientific enterprise, since, in Teilhard's view science seeks a level of understanding from which it can provide a coherent and comprehensive account of the world, without considering the phenomenon of "thought."¹ Consequently, unless this phenomenon is coherently integrated into the scientific account of things, that particular understanding of man and nature necessarily remains incomplete. Teilhard's position, then, is that the scientific analysis needs to move beyond the "mechanistic" and "material" paradigms to a consideration of the basic "cosmic stuff" in which the properties of "matter" and "mind" are constitutively and concomitantly present and active (P.M. 175-176). Teilhard identifies

this basic "cosmic stuff" or substance as the "stuff of the universe," or the Weltstoff (A.E. 302).

Two procedural issues need to be noted here. (1) Teilhard begins his analysis and explanation from man's experience of self-unity, i.e., the concrete unity of matter and mind. Teilhard notes that "to think we must eat" (P.M. 63) and this formula succinctly summarizes what he considers the actual unity of matter and mind. This experience of the actual unity of matter and mind is the basis for Teilhard's contention that man is "thinking matter" and not an "anomaly" within the order of nature, but a product of the cosmic process itself (P.M. 153). In Teilhard's words, "the cell has become someone" (P.M. 173). (2) While this previous observation appears to be the product of extrapolation, Teilhard seeks to defend it systematically according to the following rule:

In the world, nothing could ever burst forth as final across the different thresholds successively ~~transversed~~ by evolution (however critical they be) which has not already existed in an obscure and primordial way (P.M. 71).

This statement is central to Teilhard's "cosmogenetic" theory, indeed, in the Phenomenon of Man he claims it is ". . . the refrain that runs all the way through this book" (P.M. 71). Here Teilhard expresses a central element of his special understanding of evolution. Not only does evolution unveil a continuity in the development of the "cosmic stuff," but Teilhard also finds that the "cosmic stuff," at each level of complexity exhibits the same fundamental properties and structure (P.M. 166ff). According to Teilhard, "The story of life is no more than a movement of consciousness veiled by morphology" (P.M. 167).

Teilhard maintains, therefore, that mental activity, while highly developed in the human species is not a quality particular to that species alone, but is a constitutive quality of "concrete being itself" (P.M. 43; W.T.W. 291). Therefore, in seeking to relate the human species with those below it, Teilhard describes a developmental continuum of the Weltstoff from its primordial condition to man in which the essential constituents of the "cosmic stuff" achieve a more highly developed organization (P.M. 249ff), and in this sense it appears to have the functional equivalence of Whitehead's "actual occasions" as the "building blocks of the universe" (P.R. 23). In considering the "stuff of the universe" as "the ultimate residue of the evermore advanced analysis of science" (P.M. 39), Teilhard maintains that the scientific investigation of the "cosmic stuff" concludes prematurely, giving insufficient attention to the qualities of "life" and "thought." Teilhard proposes that the "stuff" out of which the cosmos is organized contains, constitutively both material and psychic properties. Therefore, in identifying the basic cosmic stuff, Teilhard requires a definition which includes both matter and a fundamental germ of consciousness. Whitehead also seeks "the final real things of which the world is made up," which he terms "actual entities" or "actual occasions" (P.R. 23). While Teilhard's Weltstoff tends to be limited by its scientific applicability, Whitehead's "actual entity" has metaphysical relevance. Nevertheless, from the cosmological point of view each functions, within its respective context, to define "the final real things of which the world is made up." This parallel is noted, primarily, to identify the status of Teilhard's Weltstoff. The distinctiveness of

these two basic ideas becomes central when consideration is given to each author's philosophical proposal for God's existence and nature.

The second parallel concerns each author's choice of the "cell" as paradigmatic of the structure of the cosmic stuff from its most elemental organization to the most complex. Whitehead speaks of his philosophy as a "cellular theory of actuality" (P.R. 256), while Teilhard notes the paradigmatic character of the cell for his "hyper-physics" (P.M. 79). Again, while Teilhard's identification of the "cell" is in biological terms and Whitehead's in metaphysical (analogical) terms, nevertheless, in each instance the model of the "cell" is chosen to identify the irreducible unit of actuality. As Whitehead remarks, the cell-complex is the ultimate unit "not analyzable into components with equivalent completeness of actuality" (P.R. 256). For both Teilhard and Whitehead the characteristics of actuality are predicated at both the microscopic and macroscopic levels. Therefore, the more complex and stable organisms exhibit more highly developed expressions of the categoreal properties of cosmic being, which are also predicated of elementary units of actuality.

These two parallels briefly indicate that Teilhard and Whitehead find that the cosmos is structured with elemental units which contain a basic coded message which is processively translated into subjects with increasingly complex organic structures.

Energy

This "Foundational" idea emphasizes the essential activity of the Weltstoff according to its irreducible form of energy. Here Teilhard

agrees with the standard scientific proposal that energy is the elementary form of matter, and, insofar as energy is identified with force or activity, he maintains that the Weltstoff is constitutively active. Clearly Teilhard accepts the scientific definition of energy, particularly, its emphasis on energy as the force for transformation: "energy is . . . the measure of that which passes from one atom to another in the course of their transformation" (P.M. 42). Accordingly, the essential form of the Weltstoff (i.e., its activity) is productive of structural transformation, accounting for both the complexification-stability of the cosmic stuff and its decomposition. In the scientific account, structural transformation of matter is gradually drawn toward the decided probability of entropy (the line a-b-c along the axis o.x.), since the available-complexifiable energy gradually loses its cohesive force, thus beginning the transformation of dis-association (A.E. 330-332). On this point, Teilhard offers his "re-constructed" view of energy.

While he agrees that the elementary form of the cosmic stuff is energy (as the force for transformation), Teilhard asks about the line of decided probability, i.e., is the destiny of cosmic energy clearly predictable in terms of its gradual dis-~~as~~association, or is there evidence that its telos is predictable in terms of incessant complexification-unification, so that, at least a portion of the cosmic stuff escapes the pull of entropy? Both physics and "hyper-physics" consider point b critical in the process of Transformation, however, the distinction between these two points of view is decided by their understanding of the process consequent to b. For physics, the lack of "additional" energy leads to the prediction that the organization of matter (as perceived)

is destined to decomposition. According to "hyper-physics", however, the energetic form is not predicated exclusively in terms of physical energy. Physical energy (matter) comprises only a partial dimension of the energetic form of the Weltstoff along with its concomitant psychic dimension. Therefore, on the basis of these first two categories (the Weltstoff and energy), it is clear that the cosmic stuff, by reason of its elementary form, is essentially engaged in a process of transformation. Further, these two "Foundational" ideas initially indicate that Teilhard defends a "Transformation" toward increased unity as distinct from the eventual dis-association envisioned by physics.

Teilhard's statements concerning the morphological character of energy are further developed by his distinction between "tangential" and "radial" energy. It should be kept in mind that Teilhard is not speaking of two energies, but a single energetic form having a two-fold expression (P.M. 258; A.E. 329). The first expression, "tangential energy" ("the Without of Things") represents Teilhard's adherence to the idea of energy commonly held by science. The second expression, "radial energy" ("the within of things") represents Teilhard's departure from common scientific understanding and is the element Teilhard thinks must be added to the scientific account of things, if this account is to be comprehensive and coherent.

Tangential Energy

According to Teilhard "tangential energy" is identified with matter as mass, i.e., energy proper to the "world of organic compounds" (P.M. 70). Therefore, "hyper-physics" initially distinguishes energy

according to the understanding of matter which occupies the physical sciences, namely, the structure of material things.

Teilhard's analysis indicates that "tangential energy" is characterized by apparently antithetical activities. First, tangential energy undergoes progressive transformation by means of "crystalization," "polymerization," or "concatenation" (P.M. 68-70). This is to say, the transformation of "tangential energy" is a corporeal fusion into units (or subjects) of increased size and "density" (P.M. 70). This is also called the activity of "additive complexification into larger molecules" (P.M. 70). The process of fusion accounts for both the formation of subjects exhibiting increased molecular structure and the successive zones of cosmic development (P.M. 68). Therefore, the line a-b in both figures, illustrates the historical route of the Weltstoff (its concatenation into increasingly mature subjects and its emerging successive zones or epochs) according to its activity of "additive complexification," "polymerization," or "crystalization." Second, "tangential energy" has an entropic character (illustrated by the line b-c). Following the "general law of thermodynamics" (A.E. 331 n7; P.M. 51, 72), Teilhard affirms that the Weltstoff, considered according to its material condition (i.e., the "without" or "tangential energy"), is subject to dissipation or dis-association; what he calls the "descent of matter toward death" (V.P. 149). Returning to Figure 1, the line a-b-c depicts the process of cosmic stuff according to its "without." The line a-b illustrates the "additive complexification" into larger molecules, while the line b-c depicts the process of dis-association. Therefore, insofar

as the cosmic stuff is considered according to its "tangential" character, its destiny is predicated along the line of probable dissipation or dis-association.

Radial Energy

The three "Foundational" ideas considered thus far present an image of the Cosmos not unlike that of standard science. However, Teilhard's idea of "radial energy" (the "within of things") marks his departure from the common view of science. My examination of this "Foundational" idea proceeds as follows: (1) I will attempt to situate this idea within the context of Teilhard's project; (2) I will consider the evidence Teilhard finds for this idea; (3) I will examine Teilhard's definition of "radial energy" as well as the terms which appear synonymous with it; (4) finally, I reflect on the consequences of Teilhard's view of "radial energy," both for his cosmogenetic theory and the scientific and philosophical understanding of man and nature.

The need for Radial Energy At the heart of Teilhard's "hyper-physics" is his firm belief in the value and importance of scientific investigation, and his particular understanding of what that investigation ought to accomplish. Teilhard is thoroughly convinced that a coherent and comprehensive account of the "totality of things" is attainable, and such an account requires to the fullest possible extent a coherent integration of the scientific and religious views of reality (P.M. 30). The integration of these views, considered unreconcilable by many, necessitates a re-examination of the appropriate boundaries within which these disciplines pursue their appropriate analyses. At present

my attention is focused on the re-examination Teilhard requires of science, leaving to a later chapter the issue of theological re-examination.

It is Teilhard's position that modern scientific theory, insofar as it seeks a "general interpretation" of the universe, gives "the impression of trying to explain it through and through" (P.M. 30), while confining itself to the boundaries of "phenomena" and making no appeal to metaphysical reason (P.M. 30). Physics, he maintains considers only the "without" of things, i.e., its interpretation of the 'whole' is limited by its definition of matter (physical energy) (P.M. 30). However, Teilhard notes that biological science is confronted by a "within," i.e., "a variety of psychic expressions" (P.M. 53f), which are outside the considerations of present physics. Consequently, if a thorough and comprehensive scientific account of the universe is to be attained, an integration is required of the principles of energy and the forms of psychisms.

Clearly, Teilhard thinks he has fashioned an "introduction" to a more comprehensive scientific interpretation of the "whole." Briefly, he asserts that the "cosmic stuff" presents itself in two layers: (a) the mechanical, associated with the structuralization of physical energy; (b) the biological, associated with life and its teleological processes. It is the intent of "~~hyper~~physics" to provide a coherent and comprehensive account of cosmic "being," by initially distinguishing these two layers in preparation for demonstrating their concomitant presence and function. Therefore, while the curve a-b-c attends to the mechanical layer (the "without," "tangential energy"), it gives no attention to the vital (psychic) forces at work in the cosmos (the

biological layer). The Teilhardian scheme attempts to overcome the deficiencies of the mechanical view, by demonstrating mind as an energetic force thus indicating an alternative line of decided probability. In light of the issues of comprehensiveness and decided probability, Teilhard asserts that the Weltstoff expresses itself both mechanically (the "without," "tangential energy") and bio-teleologically (i.e., according to its "within," the "primitive germ of life" or "consciousness") (P.M. 56; 88; A.E. 133).

Method and Evidence Both Gaston Isaye and Emile Rideau find marked parallels between Teilhard's method of explanation and that of classical metaphysics.² These two interpreters of Teilhard's thought point to his intention of proceeding inductively. Isaye contends that Teilhard grounds his reflections in man's grasp of his own interiority, i.e., the direct awareness of Ego.³ Coupled with this awareness, as Isaye notes, Teilhard appeals to "language" as the revelation of ego in other men, leading to the predication in others of that interiority of which man subjectively, is aware directly. Language (communication) reveals to Teilhard, as it does to classical thinkers, the relationship of conscious, self-reflective subjects. It is by means of experiencing--as phenomena--the fruits of thought (language and symbols expressing thought and meaning) that Teilhard predicates a "within" to the human species. These are facts which elicit a search for ". . . a vision of the real, but a vision that is intellectual and logical, governed by all the minds' resources."⁴ Teilhard's intention to limit his cosmological reflections to the facts of experience, as the analysis of Isaye and Rideau indicate, aligns him with the inductive method of Scholasticism

and the scientific concentration on data. However, he introduces into this standard inductive approach, what he calls "seeing" or "vision" (voir) (P.M. 31-36). In this regard Teilhard encourages his readers to 'look' more closely at phenomena--at themselves and the facts of experience. This effort, Teilhard is convinced, reveals an aspect of reality missed, to now, by systematic philosophy and science. Isaye is correct by considering Teilhard's injunction as a call to 'intuition'; i.e., seeing into beyond the surface of things experienced.⁵ However, "vision," including imagination and presuming a "complex of assumptions" (P.M. 30), is not without the regulating norms of systematic reason. It is clear that Teilhard presents his "cosmogenetic theory" as introductory and "tentative" (P.M. 29), but it is also evident that he thinks his theory is guided by the dictates of logicity, coherence and homogeneity. Therefore, whatever the influence of his disposition, imagination or particular "assumptions," Teilhard holds to the common norms of philosophical and scientific thought. It would be an advantage to his readers if Teilhard provided a developed discussion of the methods employed in constructing his system. However, Teilhard does not dwell on matters of methodological or cognitional theory, nor does he claim that his "vision" of the universe ought to take precedence over any others. His claim that "fecundity" is the mark of truth (P.M. 53) implies his conviction that the application of his theory to human experience and observation has priority over the procedures employed for constructing it.

While Teilhard does not develop precisely methodological issues, it is clear what he seeks and what he rejects. He seeks a coherent

explanation of man and nature, which on the one hand is attentive to the discoveries and analysis of science and on the other, one which preserves the value of human life and recognizes man's natural relation with the cosmic process. Accordingly, he rejects any philosophical position which considers man an "anomaly" within the cosmos and any scientific account which disregards a "within" of things (P.M. 56). His intention is to provide a corrective to these two points of view by attempting, through appeal to intuition a coherent interpretation of man and the cosmos (i.e., nature as a "whole.")

Before proceeding further with my analysis of Teilhard's method and his evidence for predicating a "within of things," I am led to suggest that at the level of basic method, Teilhard and Whitehead are similar. In this regard Whitehead's appeal to the "flight of an aeroplane" is particularly helpful as illustrating the process of systematizing ideas (P.R. 7). Briefly, I find both Teilhard and Whitehead directing their attention to man's experience of selfhood and his experience of the world as 'objective.' In order to provide a systematic account of this experience, both proceed by selecting general statements which are intended to account for extended experience, moving initially from the facts of experience to generalizations by imaginative leaps, which look to the criteria of logicality and coherence for formal vindication. Therefore, the process from facts as experienced to generalizations is due largely to extrapolation or imagination (P.M. 289), while the systematization or organization of general ideas (categories) is conducted according to the norms of reason. The next move concerns the adequacy and applicability of these general ideas (P.R. 5-7). For both Whitehead and Teilhard, the value of systematic categories is not resolved merely according to the formal norms of logicality. These ideas, as Whitehead

emphasizes, must be applicable to the experience which generates them initially, and as mentioned previously, Teilhard maintains the predication of truth is dependent upon the 'fruitfulness' of ideas (P.M. 189). Therefore, both Whitehead and Teilhard are attentive to the importance of a somewhat unsystematic move in the formulation of systematic categories. However, it is the aim of each thinker to organize these categories according to the rigors of rationality. For my part, I am concerned to discover if, in particular, Teilhard's organization conforms to the rigorous criteria he sets for himself, namely, logicity, coherence, and comprehensiveness. Finally, in Teilhard, as well as in Whitehead, one finds a methodology particularly "pre-Kantian" in its confidence that human thought is able to construct a "complete cosmology" inductively (P.R. vi).

With this in mind I turn my attention to the warrants Teilhard employs in his consideration of the "within of things."

I am convinced that the two points of view require to be brought into reunion and that they soon will unite in a kind of phenomenology or generalized physic in which the internal aspect of things as well as the external aspect of the world will be taken into account (P.M. 53).

Here Teilhard indicates both his counsel to science and his confidence in human reason. His theory is an attempt to implement his advice and an expression of his confidence. Teilhard notes the scientific ambition of seeking the "single energy" which accounts for cosmic structure and activity (P.M. 250). He is also impressed by the simplicity, directness and comprehensiveness of modern scientific formulations (i.e., its equations, models, etc.) The simplicity of these formulations, unifying

the results of extensive research, appeal to Teilhard's own disposition toward simplicity and unity, so that, in organizing his interpretation of cosmic reality, Teilhard seeks a similar economy and directness. The theory which most appeals to Teilhard is that of evolution (P.M. 83, 140n). His geological and paleontological research convinces him of the value of a general theory of progressive structuralization, and the relation of man with species below him. Consequently, the theory of evolution, as Teilhard understands it, requires a re-examination of man's understanding of himself, since if the theory in its general proposals is correct, then it must be understood how man, as a self-conscious, free subject, emerges from a process in which these attributes seem not expressed at lower levels.

Now, Teilhard appeals to a principle stating that "nothing emerges which is not somehow present at previous stages" (P.M. 71). This statement resembles the principle of physics which maintains that energy is irreplaceably quantified so that no significant amount of additional energy is available within the cosmos. Specifically, Teilhard's formulation indicates his position which maintains that the attributes (particularly those associated with increased structural complexity and psychic qualities) found in higher organisms exist (at least primordially or embryonically) in lower, less complex, organisms. According to what was said regarding Teilhard's method and the "fecundity" of truth, I am of the opinion that this rule (P.M. 71) is not argued for, but merely suggested in anticipation that its truth is manifested in light of the comprehensiveness and fruitfulness of his entire theory, (i.e., the fruitfulness of his "synthesizing hypothesis.")⁶ However,

I do find a parallel between this principle and the "three properties of energy," in that, it seeks to narrow the gap between self-conscious and non-self-conscious species. More importantly, the principle (or "Rule") of emergence required Teilhard to demonstrate the 'primordial' presence of consciousness in sub-human species.

The human experience of self-consciousness and free decision-making is at the center of Teilhard's reflections on the "within of things." From this vantage point he looks backward toward sub-human species to discover if 'primordial' expressions of psychic activity exist there. Teilhard traces the development of life from "micro" to "macro-organisms" (P.M. 31ff) in which each successive zone exhibits an increasingly complicated structure and vitality (P.M. 84). The energy of life, according to Teilhard is found in the radical components of macro-organisms and he calls the process from "micro-molecule to mega-molecule to the cell," "Orthogenesis" (P.M. 108). The process of "Orthogenesis" is a movement toward increasing structure and stability and while it develops "jerkily," nevertheless, it goes on "ceaselessly and in a constant direction" (P.M. 148). The "impetus" of "Orthogenesis" is, according to this view, inexorably directed toward more complicated forms of life. "Orthogenesis" crosses critical thresholds with the emergence of stable plant and animal life, thus expressing particular specializations, organizations and diversifications of the "cosmic stuff." Teilhard interprets these specializations, organizations and diversifications in animal forms as due to cephalization (P.M. 152). Thus, life becomes increasingly self-directed and selective, so that, the development of "psychism" (P.M. 153) gives rise to species with greater sentience and self-orientation, until

with man "evolution becomes conscious of itself." The emergence of self-consciousness is, therefore, in direct correlation to the "complexification" of the cosmic stuff. Life, according to Teilhard, "is the rise of consciousness: in that the attributes of macro-organisms, particularly man, result from the complicated organization of elementary particles which in themselves possess these attributes primordially or genetically. The distinction between self-conscious subjects and the non-self-conscious is thus attributed to a greater "complexity" of the former.

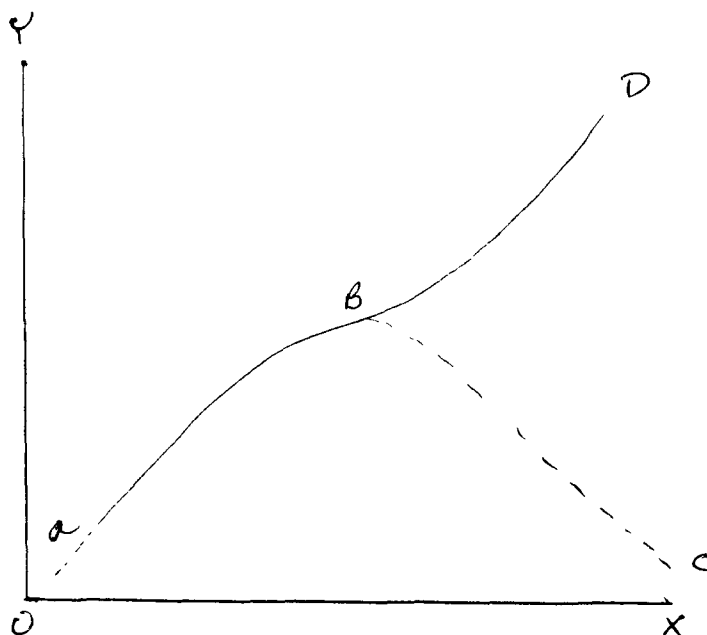
The Meaning of Radial Energy Teilhard intends to replace the "energetics" of matter with the "energetics of mind," by re-interpreting the elemental form of "cosmic stuff" (P.M. 289). He proposed that in order to account for consciousness, the stuff of the cosmos needs to be re-interpreted, by predicating of it a "new aspect" (P.M. 55) and he calls this "new aspect," "radial energy," i.e., that energy which "draws the stuff of the universe towards ever greater complexity and centreity--in other words forward" (P.M. 65). Teilhard's idea of "radial energy" represents, in "hyper-physics," that "single energy" which science seeks to discover and explain (P.M. 55). It is "psychic" or spiritual in character and functionally accounts for the "cosmic stuff's" increased complexification and progress toward unity (P.M. 64-65). In Teilhard's view, matter and spirit are "synonymous," that is, "they are not two heterogeneous or antagonistic things coupled together by accident or force" (A.E. 124). Rather, they are genetically (A.E. 124), two "variables" (P.M. 307-208) of the single radical form of the "cosmic stuff." Matter accounts for the phenomena of multiplicity, according to this interpretation, while spirit accounts for the phenomenon of unity.

Therefore, the dominant form of energy in the universe is not matter as physics maintains, but psyche or spirit.

The particular expression of "radial energy" of most interest to Teilhard is "consciousness," taken in its widest sense to indicate every kind of psychism, from the most rudimentary forms of interior perception imaginable to the human phenomena of reflective thought (P.M. 57n; M.P.N. 34), which he thinks must be coherently accounted for within the scientific understanding of the cosmos. In order to include consciousness as a matter for scientific concern, Teilhard counts it among phenomena by citing the phenomena of subjective self-consciousness and the phenomena of intelligent activity, namely, "abstraction, logic, reasoned choice and inventions, mathematics, art, calculation of space and time, anxieties and dreams of love . . ." (P.M. 165). All of these, according to Teilhard, are observable "activities of inner life" and "nothing else than the effervescence of the newly formed center as it explodes onto itself" (P.M. 165). "Radial energy" achieves self-possession, and self-consciousness: The "animal knows," but man "knows that he knows" (P.M. 165), so that, the emergence of self-consciousness and its expressions is the "specific effect of organized complexity," that is, the emergence of thought is concomitant with the progressive complexification-organization of the Weltstoff (P.M. 301-302).

From Imaginative Idea to Category Teilhard's idea of "radial energy" ("consciousness") indicates his fundamental "pan-psychism." In his view, matter devoid of life (devoid of the "germ of consciousness") does not exist (P.M. 56-57, 71, 243; A.E. 156). This "germ of consciousness" is, for Teilhard, the unique essence of things (V.P. 225; A.E. 315)

so that not only are "systems" (organisms) alive, but the elemental constituents of these systems possess, at least virtually, the property of life. Evolution, then, is the rise of life, and the rise of life is the rise of consciousness in particular, the rise of self-consciousness (P.M. 243). The reader's attention is again called to Figure 2:



The path a-b-d not only represents the increased structuralization of matter, but the concomitant rise of "thoughtful" activity. As Teilhard sees it, the Weltstoff at point a is in a state of fragmentation, disjunction, or granulation (P.M. 58). As energy, the Weltstoff is "quantified," so that the energy available for organization is present at a with no anticipation of additions or replacements. This primordial condition of disjunction is eliminated through a process of organization according to the unifying tendency of its essential "center," that is, the Weltstoff proceeds toward organic synthesis. The resultant organisms exhibit both increased material structure and vital activities.

The process toward "mega-synthesis," occurs, according to what Teilhard calls, "concatenation," "polymerization" or "additive complexification" (P.M. 70-71, 239). This fusion takes place, primarily, at the level of "ego" which Teilhard distinguishes into "peripheral" and "nuclear" (A.E. 108). The "nuclear ego" is complete (i.e., individualized) and, therefore, indivisible. The "peripheral ego," on the other hand, is incompletely individualized and, therefore, divisible. During the "concatenation" of elements the "nuclear ego" retains its identity, i.e., the subject does not relinquish its individuality. However, at the level of "peripheral ego," Teilhard posits its dissolution in the bringing to life of a novel subject with increased complexity (A.E. 125). The fusion of "peripheral egos" accounts for the emergence of the new "nuclear ego," which identifies the novel subject (P.M. 139). Therefore, by appeal to the idea of "concatenation" and his distinction between the "nuclear" and "peripheral ego," Teilhard attempts to explain the transformation of the Weltstoff into increasingly complex subjects. The fusion (transformation) of "tangential energy" is the only context in which physics considers the process of organization, but according to Teilhard, an account of "transformation" must also provide for the observable increase of vital characteristics in more complex organisms. His theory of "concatenation" maintains that stable "transformation" is grounded in the fusion of "centers of interiority," i.e., the fusion of "radial energy" (the "small within") which is a "universal molecular property" of the "cosmic stuff" (A.E. 101).

The action of progressive "mega-synthesis" gives rise to organisms of increased structure, stability, diversification and unity. These

characteristics, in Teilhard's view, are consequences of the power of "radial energy." While Teilhard speaks of an ipso facto emergence of conscious activity (P.M. 89; A.E. 155; 315), concomitant with increased complexification, this complexification is fundamentally attributed to the drive of "radial energy" toward increased union (P.M. 143; A.E. 134) and in this sense, "radial energy" is the dominant force in the cosmos, since its power accounts for the phenomena of material structure. The fusion of particles of the "cosmic stuff" gives rise to a variety of subjects or organisms which are diverse in organization, at the same time exhibiting a pattern toward greater unity. It should be noted, that in Teilhard's view, "the play of chance" is a condition for the concatenation of the "cosmic stuff" in its elemental stages, namely, at that level where a dominant predictable pattern has not emerged (A.E. 315). Teilhard also refers to this as the "groping" of elemental units for more stable and structured subjectivity (P.M. 310). However, as the Weltstoff complexifies, the "play of chance" diminishes. Teilhard maintains that an initial consequence of stable fusion is the emergence of "physical" and "biological" laws, which provide increased structure and predictability to cosmic activity (F.M. 188; A.E. 123, 125). He considers these laws (or determinisms) as "secondary effects of elemental arrangements," i.e., "epi-phenomena" (H.E. 102). (The primary effect, of course, is the concomitant increase of material organization and sentient activity.) In Teilhard's view, then, "physio-biological laws" are elementary arrangements selected by the Weltstoff during its progressive trend toward intense "complexification" and "centrality" (H.E. 120, A.E. 72). Therefore, "physio-biological" determinisms are the ordered modes of

action selected by the "cosmic stuff" as it progresses toward its telos of union and freedom.

We have seen Teilhard's special concern with the rise of "self-consciousness" and now I focus on Teilhard's ideas about the rise of freedom.

It is Teilhard's view that the Weltstoff is characterized by a "determinate without and a free within" (P.M. 57). He maintains that the "cosmic stuff," at its elemental stages (i.e., the random association of particles in which free choice is not a factor) while at a somewhat higher level (along the path a-b) narrowly determined possibilities of behavior are imposed by "physio-biological determinisms." However, according to Teilhard, as the Weltstoff complexifies and becomes more "centered," free choice emerges. That is, at point a free-choice is embryonic, however, by reason of progressive complexification, freedom (as an essential property of "radial energy") is increasingly operative and maximal along the path b-d, i.e., the more spiritualized stages of cosmic actuality. Therefore, Teilhard's idea of freedom includes both a freedom from the restraints of narrow possibilities imposed by physio-biological determinisms and the freedom to decide appropriate paths from among diverse possibilities recognized through the maturity of self-consciousness (F.M. 75; V.P. 74). The freedom of choice is available only to those subjects in which the "physio-biological" limitations are subservient to the power of "radial energy."

The leap across the "threshold" of self-reflection requires, according to Teilhard, the history of progressive complexification of the Weltstoff. At the center of this process is the power of "radial

energy" (the universal molecular property) which achieves its maximum expression in man, in whom the "cosmic stuff" becomes "conscious of itself," thus giving rise to free self-directedness and the increased possibility of more complete union.

The "Foundational" ideas considered to this point support Teilhard's description of "cosmogenesis" along the path a-b. However, Teilhard extends his analysis and explanation to the path b-d, since he thinks a coherent predication of a future state of affairs is possible on the basis of the development of the Weltstoff along the path aa-b. Teilhard's discussion of the future of "cosmogenesis" is supported by what he terms the "Law of Complexity/Consciousness." While it can be said that this "Law" represents Teilhard's most systematic statement regarding "cosmogenesis" as a whole (he identifies it as "the universal law of nature" P.M. 306), the importance of this "Law" is most apparent in Teilhard's consideration of the path b-d.

The Law of Complexity/Consciousness Appealing to the phenomenon of human self-consciousness; to the recognizable trend of the "cosmic stuff" toward increased sentient activity; and to his rule of 'emergent characteristics', Teilhard assigns to the Weltstoff a constitutive "within of things." At advanced levels, Teilhard defines the "within" as "consciousness". In order to summarize the Weltstoff's "drift" toward self-consciousness, Teilhard proposes the "Law of Complexity/Consciousness," i.e., the law of "persistent relationship between the psychic perfection and the organic complexity of living beings" (A.E. 157;315).

(1) The evolutionary process reveals to Teilhard that the Weltstoff is active in the directions of both increased material

structuralization and the gradual manifestation of consciousness. The "Law of Complexity/Consciousness" is Teilhard's comprehensive statement regarding "cosmogenesis" and, thus, reveals Teilhard's position regarding the nature (or essence) of cosmic being. This is to say, the "Law of Complexity/Consciousness" has application not merely at the higher levels of cosmic organization, but is applicable to the "cosmic stuff" at its most primordial and disjunctive level as well. This law is, for Teilhard, the "universal of universals" (to borrow Whitehead's phrase) (P.R. 25) and as I will seek to demonstrate later, is the functional equivalent (cosmologically) of Whitehead's "creativity." Teilhard maintains, therefore, (according to the "Law of Complexity/Consciousness") that it is the nature of cosmic being to become progressively more organized, thus manifesting with increasing insistence its essential interiority. Consequently, the most fundamental statement possible regarding cosmic being is the essential "relationship between organic complexity and consciousness" (A.E. 155).

(2) The Weltstoff, in this theory, proceeds from a level of unorganized "multitude" to that of a unified "multiple" (P.M. 61). Teilhard maintains the evolutionary process demonstrates that a portion of this "multitude" unifies or converges" to form "macro-organic units." Further, this convergence is characterized by a progressive dominance of consciousness, so that at more advanced levels of complexification the transformation of matter is less significant than the emergence of "psychic" activity. However, as indicated previously, psychic activity is not independent of material transformations, but that the material and psychic dimensions of the Weltstoff are inter-related. Therefore, the

material transformation of the Weltstoff and the emergence of progressively more intense psychic characteristics result from a single "system" (P.M. 45) which is identified according to the "Law of Complexity/Consciousness."

An effort will be made later in this dissertation to demonstrate that this 'cosmogenetic principle' (the "Law of Complexity/Consciousness") is related to (and a special application of) an 'ontological principle,' namely "Fuller being is closer union" (P.M. 31). For the present, I will simply note that Teilhard's theory considers the totality of cosmic being, from its primordial condition of disjunction (the level of least being) to its telos (the completeness of cosmic being.) The relative completion or perfection of cosmic being is determined progressively, according to the degree of individual unity (initially achieved in realized self-consciousness) and cosmic unity whereby the "stuff of the universe has been woven into a single piece" (P.M. 45). Therefore, while Teilhard's 'cosmogenetic principle' is experimentally grounded in an observation of progressively emergent self-realization and unity, nevertheless, the "law defining the single cosmic system" is fundamentally grounded in the coherence of an "ontological" formula (or law.) I will eventually maintain, with greater insistence than here, that Teilhard appeals to an ontological principle in order to justify his cosmology and that this same ontological principle has application to his consideration of God.

(3) Consideration of Teilhard's "Law of Complexity/Consciousness" is concluded with an investigation of the causal influence of "radial energy." Thus far I have sought to investigate Teilhard's cosmogenetic

theory through an examination of its "Foundational" ideas. Teilhard's theological or metaphysical ideas have not been given extended consideration thus far, since he seems to intend that his cosmological theory should remain faithful to the discoveries found through scientific investigations (P.M. 300). However, Teilhard raises the issue of causality within his cosmogenetic consideration and the following section is devoted to an examination of how he understands and employs this idea. It is generally maintained that with the rise of modern science there is an "agnostic resignation" with regard to the idea of causality, particularly, the idea of final causality.⁷ Against the background of this scientific attitude and in light of Teilhard's intention to be scientific, an attempt is now made to discover whether Teilhard stands on the side of scientific "agnosticism" or on the side of traditional metaphysical confidence.

Teilhard maintains that his consideration of causality is limited to the immediate experiences of succession and repetition and not to an underlying (essential) cause of the cosmic process as a "whole" (P.M. 29). Therefore, he appears to limit his consideration of causality to a discussion of those 'forces' which are appropriate to scientific investigation, so that, while not obviously "agnostic," he is cautious. However, it appears that this intention (to concentrate on the appearance of succession and repetition) is superseded by his attention to "ontological causality." Briefly, although he asserts that physio-biological determinisms (forces) are the by-products (the "epi-phenomena") of elementary selectivity and complexity, Teilhard also predicates a "super-determinism" (a super force) (F.M. 133). He identifies this "super-determinism as Omega (F.M. 207; A.E. 125), which is both the future state

of cosmic fulfillment and the fundamental causal condition for cosmogenesis. (A) Omega is a future condition insofar as it is the temporal-posterior term of complexification/consciousness. (B) Further, Omega is not caused by the successive emergence of psychic unity, but is the "ultimate source" of the cosmogenetic drift (A.E. 137-138). Omega is actively present at each moment of cosmogenesis, so that, Omega is "ontologically" and causally prior to each particular "sphere" of cosmogenesis. Therefore, Omega is both a condition "ahead" (P.M. 251, 259) and the causal influence "within" the cosmic stuff.

Omega is, then, the "lure" for the cosmic process (A.E. 112-113, 121-122), which irreversibly draws the Weltstoff into subjects with more intense complexity and, concomitantly, more advanced psychic qualities. The process toward developing subjects of increased complexity/consciousness is the central feature of a more total process which aims at the ultimate union of that portion of the cosmic stuff which escapes the "drift toward disassociation."

Teilhard's scheme proposes that cosmogenesis is the process whereby the cosmic stuff becomes progressively more sentient and unified. Now, while Teilhard recognized "chance" as an important element in this process, his complete theory holds to only the symbiotic relation of the elements of "chance" and "selectivity" (P.M. 149n). Indeed, Teilhard maintains that the process of complexification/consciousness exploits "for its own creative arrangements--fortuitous reactions between material and animate masses" (P.M. 149; A.E. 134), so that, these "fortuitous reactions," (within the total cosmic process) are random instances within a planned arrangement, since the mechanical energies (the "without of things") are nourished by, subservient to, and caused by, "radial

energy" (A.E. 133). "Beneath the tangential we find the radial" (P.M. 149, 157). Clearly, the structure and pattern of the cosmic process (as a whole) is caused by radial energy.

Teilhard refers to his theory as scientific and not metaphysical. Thus, he proposes an "experimental law" rather than a system of "ontological causality" (P.M. 29), i.e., it is Teilhard's intention to "establish a coherent order between antecedents and consequences. . . ," by which he means an "experimental law of recurrences" (P.M. 29). Again, his professed intention is "to see and not to explain" (P.M. 29). However, it would appear that Teilhard's "experimental law" presupposes something about the essential nature of the "cosmic stuff." In other words, the "experimental law of recurrence" (i.e., "complexity/consciousness") is intelligible only on the basis of the supposedly adequate hypothesis that matter and mind are essential and concomitant constituents of the Weltstoff, and that the axis of conscious energy is directed along a path leading toward self-consciousness and cosmic unity.

Clearly, Teilhard detects "some deep creative force in the universe," revealed in the shape of phenomena (H.E. 23n; V.P. 73), i.e., indicated by the shape of the path a-b along the axis o.y. The movement of this "creative force," according to Teilhard, accounts for the structural complexification of the Weltstoff and is its cause. In this sense "centrogenesis" (i.e., "the process whereby the universe becomes interiorized and spiritualized. . . under the impact of complexification upon itself") (A.E. 105f; 125) describes the process (and its causality) providing for the structural and psychic unity of subjects. Therefore, it is the process of "centrogenesis," (i.e., the "cosmic

stuff" itself described according to its evolution by "involution") which accounts for the movement from disjunctive multiplicity to a unified multiple. However, the "shape of phenomena" presupposes the influx (the influence) of the term of cosmogenesis, i.e., the path a-b-d along the axis o.y. presupposes the causal influence of Omega at every stage of cosmic development (A.E. 125). Consequently, "centrogenesis" is "held together" and forwarded from "above," i.e., by its final term as the source of processive impulses (A.E. 112-113, 126). In effect while Omega (d) is temporally posterior, nevertheless, it is ontologically prior as both efficient and final cause of comogenesis. Consequently, the pattern of cosmic development is caused (irreversibly) by the influence of Omega as the essential form of the Weltstoff (P.M. 306; A.E. 121n). Therefore, the influence of so-called 'immediate causes' (or what would be better called here, the causality of tangential energy) appear to have no 'systematic' importance. The dominant causality of cosmogenesis is Omega, which is the primary definition of "psychic energy," i.e., as radial energy, Omega is the fundamental cause of "centreity" and unification (A.E. 126).

According to Teilhard Omega is a transcendent reality in that it is not restricted by the determinisms of time and space (A.E. 122; P.M. 259). His brief argument for this is that if Omega is a temporal-spatial reality, its influence over the entire span of temporal-spatial cosmogenesis is thus restricted (A.E. 112-113). However, as Teilhard asserts, Omega is a reality active throughout the history of evolution, since it is identified with the internal constitution of the Weltstoff, i.e., it is identified with radial energy--especially in its transcendent

aspect (A.E. 112). Therefore, Omega as an anticipated real condition (or epoch) is "somewhere ahead" of the cosmic process; as efficient causality it transcends the cosmic process insofar as it influences the process at each point or moment without itself being restricted. (In effect, Teilhard is claiming that Omega transcends entropy.) Further, Omega, is the "lure" for cosmogenesis (its final cause) and an active presence which moves the process along the orthogenic axis (the efficient cause). Finally, Omega gives to the cosmic stuff its shape or form and, in this sense, Omega functions as the formal cause of the cosmic stuff.

Now let us consider Omega as 'formal' and 'efficient' cause of cosmogenesis. Briefly, Omega, insofar as it is active at the level of "radial energy," is the principle of structure and pattern for both emergent individuality and the totality of the cosmic organism. In this sense, Omega is the formal cause (the morphological principle) of cosmic being, so that each complexified unit of the Weltstoff "is what it is" (to again borrow a Whiteheadian phrase) by reason of its relative expression of the universal internal-formal principle of consciousness. For Teilhard, it is according to this realization (manifestation) that species are identified (A.E. 102,167). Therefore, while for Whitehead, a being is individualized (or identified) by its process (considered in the following chapter), for Teilhard a being is identified by its realization of the unity of consciousness.

Teilhard offers two interpretations of efficient cause. First, he suggests Omega cannot act on "pre-centered" or pre-living" elements, since these lack individualization, i.e., they lack an established

interiority which provides some release from change. In this case Teilhard indicates that some sort of external impulse sets these particles in motion a retro, leaving unanswered what this efficient cause might be (A.E. 121). However, this position is not the one Teilhard appears finally to accept. His second interpretation of efficient causality maintains that Omega can make itself felt internally even in "pre-individualized" units (A.E. 121-122). This interpretation affirms the universal presence of Omega (under the aspect of radial energy) in the Weltstoff, even in its primordial state of disjunction. On the basis of this affirmation Omega is active efficiently, formally and finally at all stages of complexification. Consequently, at a, Omega is active as the essential constituent of cosmic being. Therefore, viewed as a whole, the cosmos exists according to "one consistent unified system of internal relations which is operative at every stage of cosmic existence" (P.M. 45), from the disjunctive to the unified. In this case the tangential relations (i.e., having to do with structural complexity) are by-products of the play of great numbers of infinitesimal inorganic free (spontaneous) impulses. Accordingly, physical energy is no more than the materialization of cosmic energy which at its center is psychically teleological. Consequently, the Weltstoff at a is internally and effectively influenced by Omega, insofar as Omega is identified as the essential interiority of the cosmic stuff. Omega, then, is the efficient cause of cosmogenesis, structuring and moving the particles along the axis o.y.; Omega is the formal cause giving shape to the

Weltstoff; Omega is the final cause luring the process irreversibly toward its destined fulfillment.

Summary

In this chapter I have sought to identify and clarify the four "foundational ideas" of Teilhard's theory of cosmogenesis. His theory, as I have noted, is constructed in reaction to his understanding of the deficiencies of modern science and, in particular, its exclusive consideration of the "cosmic stuff" only according to its material form, namely, measureable energy. Teilhard's view is that the standard scientific account, according to the three fundamental properties of energy (viz., conservation, transformation and dissipation) concludes that the structured cosmos, as now considered, is destined to dis-arrangement or de-composition. What strikes Teilhard about this account is the ultimate victory accorded entropy.

While choosing not to repudiate the importance and coherence of the "scientific" view, Teilhard maintains that it reflects a limited perspective. Consequently, he sets out to provide a scientifically coherent position supporting his belief in the unity of matter and spirit and the cosmic destiny of complete union. To the scientific concern with "partial" matter, Teilhard reacts by developing his idea of "total" matter, by maintaining that matter and mind are two variables of a single cosmic energy or force.

Teilhard's account, which he intends to be more comprehensive than those of the physio-biological sciences, retains the scientific concern with energy. However, the Teilhardian view maintains that

energy is perceived in two conditions: (1) the condition of externality identified with mass or density (tangential energy); (2) a condition of interiority or centreity, identified with psychic activity (radial energy.) These two conditions (or expressions of energy) are not distinct nor accidentally fused in the cosmic stuff, but are two expressions of a single cosmic force which provides the path and shape of cosmic reality. Consequently, the "without" and "within" function homogeneously and are co-relatively influential, so that, material complexification accounts for the increase of psychic expression and, conversely, the teleological orientation ("drive") of "radial energy" effects this necessary material complexification.

Finally, Teilhard asserts that cosmogenesis proceeds according to a "single system" (the "Law of Complexity/Consciousness")--the universal law of nature maintaining the persistent (and necessary) relationship between psychic perfection and the organic complexity of living beings--so that, his theory of cosmogenesis recognizes a tension between the entropic and orthogenic, i.e., between decomposition and complexification or unity. In this theory these two "conjugate axes" exert a pull on the cosmic process, but it is Teilhard's position that the history of cosmogenesis (the rise of consciousness and unity) indicates a pole of attraction potentially more powerful than the pole of de-composition. But it is clearly the case that Teilhard's cosmogenesis does not conclude with the postulation of a merely potential condition of unification. Indeed, his theory predicates that the decided line of probable cosmogenesis is in the direction of cosmic unity. While at one point in his analysis Teilhard admits that a condition of cosmic

unity is merely conjecture, nevertheless, his completed theory postulates this unity is the irreversible destiny of cosmic reality.

The question I raise from these considerations concerns the probability of line a-b-d along the axis o.y., viz., on what grounds did Teilhard think it coherent, logical and homogeneous to suggest (against the scientific account of things) that the path of cosmic development is in the direction of greater psychic realization and not in the direction of material de-composition? It is my view that a complete answer is not found in Teilhard's scientific theory of cosmogenesis. Despite his efforts at a precise analysis of facts and a coherent 'systematization' of this analysis, Teilhard's theory, of his own admission, remains introductory and tentative. However, Teilhard did not seek to engage in conjecture. His view, he thinks, is coherent and thus valuable for giving to man an advanced understanding of himself and the universe. But if the value of his position is not entirely substantiated according to its scientific content, then on what basis is its value to be judged? Clearly, Teilhard's appeal to science comprises only a part of his total view, so that, his ideas gleaned from science look for the added contributions of philosophy and theology in order to give his system added comprehensiveness. Therefore, while one discovers in Teilhard hints of "agnosticism" regarding causality at the scientific level of understanding, it is clear that such agnosticism is short-lived in light of his metaphysical and religious confidence.

My attention now turns to a consideration of Whitehead's metaphysical/cosmology. In the following chapter it should become clear that Teilhard and Whitehead are in agreement on several central cosmological issues. However, it should also become clear that they share

rather distinct views regarding both the constitution of the "cosmic stuff" and the probabilities concerning its future advance. The points of distinction raised in the following chapter provide a partial basis for the more developed comparison which I intend to offer in the final chapter of this dissertation.

REFERENCE NOTES TO CHAPTER 1

1. Rideau, pp. 92-95
2. Ibid. p. 42 f.
3. Gaston Isaye, "The Method of Teilhard de Chardin: A Critical Study," The New Scholasticism 41 (Winter 1965): pp. 41-42.
4. Rideau, p. 42.
5. Isaye, pp. 32-33.
6. Ibid. p. 32.
7. Hans Jonas, The Phenomenon of Life (New York: Delta Books, 1966), p.21.

CHAPTER 2

A COMPARISON OF TEILHARD'S "COSMOGENESIS" WITH WHITEHEAD'S CREATIVE ADVANCE OF THE COSMOS

FOUNDATIONS

Both Teilhard and Whitehead seek to understand reality as a whole by first identifying the most basic unit of cosmic being and each thinker finds the "cell" an appropriate model for the most elementary unit of completeness. While for Teilhard "life begins with the cell" (P.M. 79), according to Whitehead, "Each ultimate unity is a cell-complex not analyzable into components with equivalent completeness of actuality" (P.R. 256). Whitehead specifically identifies his metaphysical-cosmology as a "cell theory of actuality," however, this phrase also applies to Teilhard's "Hyper-physics," insofar as he is concerned with systematically explaining the emergence of life and unity. "Life begins with the cell," and the characteristics of life are found in their irreducible and paradigmatic form, at the cellular level of actuality (P.M. 166).

For Teilhard, as we have seen, the basic fabric of cosmic actualities, from the elementary cellular level to the complexities of higher species, is defined as the "Stuff of the Universe." According to Whitehead, the basic fabric is defined as "actual entity" (or cosmologically, "actual occasion.") The Teilhardian "stuff of the

universe" describes what he thinks is a necessary correction and elaboration of the standard view of matter maintained by physics. Whitehead shares Teilhard's concern for correcting the traditional scientific account of the universe. In Science and the Modern World he proposes an organic model of cosmic reality as a corrective to the prevailing one of an essentially defined mechanism (S.M.W. 107ff). Thus, both Teilhard and Whitehead agree that the prevailing scientific model for understanding in the world is in need of revision. However, Whitehead's attention to science is part of his overall attempt to develop a speculative account of reality which has philosophical importance. That is, Whitehead seeks to "frame a coherent, logical, necessary system of general ideas in terms of which every element of our experience can be interpreted" (P.R. 5). Further, Whitehead considers philosophy "explanatory of abstraction and not concreteness" (P.R. 24), so that the true philosophical question is "how can concrete fact exhibit entities abstract from itself and yet participated in by its own nature?" (P.R. 24). In Modes of Thought, Whitehead maintains, "Philosophy is . . . a free examination of some ultimate notions as they occur in daily life" (M.T. 1). Following this, Whitehead's examination moves from a reflection on the extended experience of oneself and the world to framing (by means of "philosophical description" or "imaginative generalization"), some "ultimate notions" (or categories), to finally, testing the adequacy or applicability of these "notions" to the experiences generating them in human thought (P.R. 8).

Teilhard, however, chooses "to see and not to explain" (P.M. 35). In this sense, he intends to confine his investigation and explanations

to the common method of science, not engaging in the systematization of abstract ideas, but addressing himself to the concreteness of phenomena. While, as I have indicated, imagination and intuition are involved in Teilhard's enterprise and, while both he and Whitehead initiate their schema on the basis of human experience, nevertheless, Teilhard does not seek to discover "some ultimate notions," but merely to discover an "experimental law of recurrence" (P.M. 29). Accordingly, Teilhard's identification of the "stuff of the universe" is confined to his cosmological theory, so that this "Foundational Idea" has application only to cosmic substance. However, Whitehead's "actual entity" has metaphysical application, so that while cosmologically "actual entities are the final real things of which the world is made up," nevertheless, this "notion" adequately applies also to the divine nature (P.R. 23). In Whitehead's view, "God is not to be treated as an exception to all metaphysical principles . . . ," but is their principal exemplar (P.R. 492). As we will see further on, Teilhard maintains a distinction between the "foundational ideas" of cosmogenesis and "foundational ideas" applicable to God.

Teilhard identifies the Weltstoff as "concrete being itself" (W.T.W. 29), in which matter and spirit are concomitant variables of a "single" constitutive energetic form. Therefore, in Teilhard's view, macroorganic units are complex arrangements of the single "cosmic stuff." While, on the one hand, Whitehead recognizes the "concreteness" of actual entities (they are the final real things of the cosmos), on the other hand, his explanation of actual entities is not limited to physical specifications. Rather, Whitehead's explanation of actual entities includes several non-empirical "conditions" for specifying

actuality. Two conditions are of central importance here. (1) The first condition is "self identity," i.e., an entity has a consistent "self function" (internal constitution) which is more or less complex (P.R. 72). Therefore, an entity has its "definiteness" specified by its particular "role" or function (P.R. 30). The self-functioning of an "actual entity" is both "subjective" and "superjective," that is: (a) As a subject an entity undergoes a transformation from "incoherence to coherence," or from diversity to "definiteness" (P.R. 30; 25-26). How an entity engages in this transformation identifies what that entity is. (b) As a "superject" an entity, according to its "definiteness," is a potential for the becoming of other entities, that is, it performs a transcendent function insofar as it qualifies (becomes "objective" in) the self-identity of other subjects (P.R. 30). (2) The second condition is self-creativity (P.R. 30), so that, an entity functions in respect to its own determination, i.e., it is causa sui (P.R. 260). According to Whitehead, ". . . how an entity becomes constitutes what that entity is. . . " (P.R. 28), so that, the manner of becoming (the entity's self-function) determines its "definiteness" as a subject, and the manner of becoming is identified with the subject's "internal constitution" (P.R. 270). Therefore, the subject according to its internal constitution and function, causes itself to be what it is.

Now, while Whitehead identifies an "actual entity" by its self-causing function or "definiteness," Teilhard identifies the Weltstoff, even at its elemental level, according to the embryonic presence of psychic characteristics which eventually mature into reflective thought. Consequently, Whitehead and Teilhard define complexified being by a

principle of self-identity which is interior to the subject itself. Whitehead, however, identifies this principle of self-identity with self-function, leaving to the individuality of self-function the specification of self-identification. Teilhard, on the other hand, "foundationally," specifies this principle of self-identity as "consciousness" (at least as embryonic), so that the specification of self-identity is the relative manifestation of "radial energy" ("consciousness.") It should be noted that Whitehead describes an actual entity as having a mental and physical pole. Further, insofar as consciousness is a "high grade feeling" at the side of the mental pole (P.R. 18) consciousness can be said to be a seminal characteristic of actuality. Thus the potential for consciousness is found in feelings at lower stages of organization. Whitehead, however, does not regard consciousness as the presupposed basis for becoming, but consciousness presupposes feelings. (P.R. 67). The issue is reversed with Teilhard's scheme where the maturation of entities (their increased complexification) presupposes consciousness.

TRANSFORMATION

Whitehead and Teilhard both maintain that the cosmic substance is essentially processive so that both are attentive to patterns of "transformation."

In the previous chapter I noted that Teilhard identifies energy as the essential form of the "cosmic stuff" and in doing so maintains some alliance with the "scientific" understanding of energy. He completes this scientific view, however, by proposing that the essential form of "the cosmic stuff" is not material, but psychic energy.

Consequently, the "transformation" of energy is not interpreted by Teilhard merely in terms of structuralization and entropy, but rather as the complexification of matter with the accompanying manifestations of vital/psychic activity (specifically, "consciousness.") Therefore, the "force" for complexification (structuralization) is not material, but psychic in nature and, as such, not subject to entropic behavior.

When seen in globo the cosmic process, according to Teilhard, is the passage from disjunction (multiplicity) to conjunction (unified multiple). While Whitehead maintains that "transformation" is the passage from "incoherence to coherence" (P.R. 30). On the one hand, these descriptions of transformation are not in opposition, but indicate that according to each thinker the process of "transformation" is a movement towards increased synthesis. On the other hand, however, these positions differ as to their range of application. Teilhard's theory is intended to cover the cosmic process as a "whole" (P.R. 35), so that, (again appealing to Figure 2) he seeks to account for the "transformation" (the complexification) of the "cosmic stuff" along the axis of "orthogenesis," arriving at a predication of teleological completion. Whitehead remains aloof from such predictions on the basis that the 'internal constitution' (the self-functioning) of an entity is individually, not universally, defined (P.R. 28, 30). Therefore, while Teilhard proposes a universal factor for self-identity, which expresses itself with increasing insistence and individuality, Whitehead maintains the subjectivity of self-identification, which is expressed according to the particularities of self-functioning.

The process of "transformation" according to both Teilhard and Whitehead gives rise to novel subjects, which exhibit particular "structures," "stability," and "socialization" (P.R. 119f). In Teilhard's view, the emergence of new subjects is provided by a process of "concatenation" or "additive complexification," whereby individualized units fuse at the level of their "peripheral egos" forming a subject with increased complexity and psychic activity. While the components in "concatenation" do not lose their individuality (their self-identity) nevertheless, the emergent subject is of principal interest, since it is the increasingly complexified subject with its increasing expression of consciousness which Teilhard considers the key to understanding the cosmic process as a "whole." It is "radial energy" in Teilhard's view, (the "within of things," its constitutive "teleonomic" orientation toward unity,) which accounts for increasingly complex subjects. Both Whitehead and Teilhard attribute a mental quality to the cosmic substance and in this regard each can be considered a "panpsychist."

According to Whitehead each "actual entity" possesses both a "physical" and "mental pole" (P.R. 31,38) which, on the surface, appears similar to Teilhard's "variables" of matter and mind. Further, in Whitehead's view, the "mental pole" introduces the ideas of "response" or "self-determination" of the "subjective ideal" and, again on the surface, this parallels Teilhard's idea of an entity's "centering upon itself" for the purpose of establishing its identity. In Whitehead's scheme, however, unlike in Teilhard's, the "mental pole" is not defined as "consciousness" nor as a "specified mental activity" (P.R. 282-284).

According to Whitehead " . . . there is always mentality in the form of 'vision', but not always mentality in the form of conscious 'intellectual'" (P.R. 247). While Teilhard does not claim that "conscious intellectuality" is present at each level of complexification, he does propose that "consciousness" (understood as the force of "radial energy") is present not only as a "form of vision," but most importantly, as the radical causal force for the advancing organization of the cosmic stuff. In this sense Teilhard identifies the level of consciousness as its defining characteristic of species and individuals.

The terms Whitehead employs for his "psychism" are: "experience," "prehension" or "feeling." He seldom uses "experience" as the formal description of self-qualification, however, his occasional use of "experience" illumines his particular kind of "psychism":

the way in which an actual entity is qualified by other actual entities is the experience of the actual world enjoyed by that entity as subject (P.R. 193).

Therefore, the mental (or psychic) activity with which Whitehead is concerned is a subject's "appropriation" of elements from within its actual world (P.R. 270). Such appropriation, as seen presently, provides for the self-qualification of the subject.

Whitehead's precise discussion of appropriation and self-qualification is influenced by his definition of "prehension." As Professor W. A. Christian remarks, "Prehension" is "an operation in which an actual entity 'grasps' some other entity (actual or non-actual) and makes that entity an object of its experience."¹ "Feeling" is defined by Whitehead as ". . . the appropriation of some elements in

the universe to be components in the real internal constitution of the subject" (P.R. 270).

With Teilhard we have seen that the process of "transformation," when traced to its root cause is determined by the character of the "within of things" which has a singleness of purpose. In Whitehead's scheme "appropriation" and "qualification" are radically attributed to the self-identity of the "prehensing" or "feeling" subject and specified according to the "subjective aim" of that subject (P.R. 261, 263). Consequently, the subject feels as it does, because it is the subject that it is, and that it may be the subject it strives to become (P.R. 261).

In Whitehead's words:

The world is self-creative. . . in its self-creation the actual entity is guided by its ideal of itself as individual satisfaction and as transcendent creator. The enjoyment of this ideal is the 'subjective aim' by which the actual entity is a determinate process (P.R. 103).

Now as Whitehead asserts, "the subjective aim is the subject itself determining its own creation as one creature" (P.R. 86). It is in this sense that reality is purposive for Whitehead, that is, at the level of subjectivity there is the process aimed at satisfaction or definiteness: "when we analyze the novel thing we find nothing but concrescence" (P.R. 243). According to Whitehead we find nothing but the "growing together" (by prehension) of the many (values in the actual world) into the unity of the one (self-identity). This self-identifying function (prehending according to "subjective aim") is the subject itself seeking its ideal satisfaction, so that, "feeling" and "subjective aim" are terms identifying the novel subject and are specified according to novel self-identity. Therefore, while reality is purposive, and while the final cause of actuality is attributed to "subjective aim"

(as "lure for feeling"), nevertheless, the novelty of self-identity (its satisfaction) cannot be specified with metaphysical certainty. Further any predications regarding "cosmic satisfaction" are unjustified. According to Whitehead every actual entity reaches, in some fashion or other, its subjective aim, satisfaction and objective immortality. This might also be said of the universe itself, taken as the totality of actual occasions. The exact character of completion, however, is logically arbitrary and contingent in that the satisfaction and objective immortality of an actual occasion is not necessary nor prescribed as certain. The completion of each entity's creative advance, while initially provided by God's provision of individual subjective aim, is accomplished through the self-creating activity of the individual (contingent) entity itself. Whereas, for Teilhard the cosmos is purposive according to the "definiteness" of its "within," for Whitehead "definiteness" is determined by a self-identifying process. Consequently, Whitehead's scheme cannot accept a description such as Figure 2, since this diagram specifies a line of decided probability on the basis of the causal influence of a specific "within." In Whitehead's scheme there is "inexorable aim at value" but aim and value receive "definiteness" according to the self-identifying function of the subject and are not expressions of a universal and specific principle of interiority.

PRINCIPLES OF INVARIANCE AND INTERIORITY

Both Whitehead and Teilhard propose a radical "invariance" at the center of cosmic activity which they schematize as an "ultimate

principle" or "Law." For Whitehead this is the principle of "creativity," the "universal of universals," while for Teilhard, as I have noted this is the "Law of Complexity/Consciousness."

In the previous section it was noted that while Teilhard and Whitehead identify "cosmic being" according to an interior quality (a principle of self-identity), their analyses of "interiority" seem to provide a clear distinction between their understandings of cosmic reality. In this section I again note that Whitehead and Teilhard are similar at the point of seeking a comprehensive and precise statement concerning the 'teleonomic' process of cosmic being. In each instance the "teleonomic" statement (principle or law) systematizes their understandings of process and self-identity. Therefore, the fundamental differences between Whitehead and Teilhard are again brought to light in their statements concerning the invariant character of the cosmic process.

The "Law of Complexity/Consciousness," in Teilhard's system, accounts for the "persistent relation" between material structuralization and the expression of consciousness. This "law" has universal applicability, i.e., it is attributed to the "cosmic stuff" at all levels of actuality. For Teilhard an energy is at the center of the "cosmic stuff" which is "psychic" (or spiritual) in nature and which in tending toward fuller expression provides for the increased complexification (or organization) of matter. As noted previously, the "Law of Complexity/Consciousness" is at the basis of Teilhard's Figure 2. The line a-b-d along the axis o.y. becomes the decided line of probability, since the energetic force of "cosmogenesis" is not subject to entropy,

but as a spiritual force, it irreversibly tends toward spiritual union or synthesis. Consequently, while the Weltstoff in its primordial condition is described as disjunctive (a multitude), its destined satisfaction, is described as "mega-synthesis" or unity. Considered in its totality, the cosmic process is one whereby the 'many become one.'

Whitehead's position concerning the invariant character of 'becoming' is summarized by his principle of "creativity," that is, ". . . the advance from disjunction to conjunction, creating a novel entity other than the entities given in disjunction" (P.R. 26). In the "philosophy of organism" this principle is the "universal of universals;" the "ultimate principle" which is "presupposed" in Whitehead's account of "self-identity" (P.R. 25). In effect, the principle of "creativity" summarizes the fundamental proposals of Whitehead's philosophy. Like Teilhard, Whitehead is attentive to multiplicity, that is, "the term 'many' conveys the notion of disjunctive diversity," which presupposes and is presupposed by, the term "one" (P.R. 25). Therefore, Whitehead's analysis is concerned with an account of the process from disjunction (many) to conjunction (one.) The principle of "creativity" directs our attention to Whitehead's understanding of "self-identity" or 'self-function.' Each entity exhibits "a subjective unity" (P.R. 31) which presupposes the entity is a composite or synthesis of many elements. Although diverse and multiple, these elements assume a unified function according to ". . . a definite pattern of structured inter-relations" (P.R. 215). Therefore, the "definiteness" (satisfaction) of an entity is constituted by a "process of transition from indeterminacy to terminal determination" (P.R. 59), in which diverse elements terminate in a

complete unity of operation, achieving "actual" and "novel togetherness" (P.R. 26, 28). "The many become one and are increased by one" (P.R. 26).

This account helps clarify an important distinction between Whitehead and Teilhard. For Whitehead, the process of "becoming" is a transition from disjunction to conjunction, that is, a process from the "many" to the "one." However, with the emergence of a "novel" subject another definite element is provided for the actual world. Accordingly, with each novel entity, not only is there a specific instance of realized unity, but an addition is made to the multitude, so that, novel togetherness, although expressive of unity, since it is "novel," becomes an element of "disjunction and diversity" within the society of the actual world. For Teilhard, the process from disjunction to conjunction is the process whereby the spiritual force within the cosmos overcomes individuality in order to realize its destiny of complete unity. Further, while Whitehead maintains a real "novelty" or "originality" according to the uniqueness of self-identity (unique "definiteness"), Teilhard's predication of novelty is restricted to the variety of structural forms. While the world is "never the same twice" according to Teilhard, the expressed uniqueness is due to the emergence of increasingly complex units. When considered at the level of that which provides for the complexification of the "cosmic stuff" (i.e., the cause of individuation, namely, "radial energy"), however, "novelty" does not apply. That is, in Teilhard's scheme there can be no predication of novel self-identity or self-function since the specific causal factor for self-identification is categorically maintained for the totality of cosmic subjects.

ORDER

Both Teilhard and Whitehead maintain that "order" emerges as the cosmic substance proceeds towards its appropriate aim (or aims.)

Teilhard's account of "cosmic order" is again based on his understanding of the "within of things." It is the character of the single spiritual energy to seek an ever increasing and intense realization of unity. The order of the cosmic structure is, in Teilhard's thought, the emergent consequence of the internal constitution of the cosmic stuff. Order and "Consciousness/Complexity" are associated in Teilhard's scheme, since the perceived organization of the cosmos is concomitant with the intensity of consciousness. At the levels of 'less' complexification order is provided by the emergence of physio-biological laws (determinisms) which reflect the radical organizing tendency of the "within." However, the organization which most occupies Teilhard is that of the unity of consciousness or the order concomitant with this unity, so that, at 'higher' levels of complexification, the law of "Consciousness" (the law of "inner unity") provides for developed 'organization.' Order and unity, therefore, arise from the arrangement of the cosmic stuff as it proceeds toward its constituent teleology.

In several ways Whitehead's account of order resembles Teilhard's. Whitehead remarks: "the notion of order is bound up with the notion of an actual entity as involving an attainment which is specific satisfaction" (P.R. 102). This description places Whitehead and Teilhard in alliance, in that for both "order" emerges in relation to the attainment of specific satisfaction. While, as I have noted, each provides a particular and distinct idea of "specific satisfaction," nevertheless, each maintains

that order is the product of the processive emergence of "self-identity." Along with his idea of "order" which is related to his definition of "actual entity," Whitehead also considers order at the 'macro-organic' level: order means society permissive of actualities with patterned intensity of feeling arising from adjusted contrasts (P.R. 286). Also, according to Whitehead:

. . . each exterior thing is either one actual entity or (more frequently) is a nexus of actual entities with immediacies mutually contemporary. . . either one actual entity or a "society" with a "defining characteristic" (P.R. 70).

These references contain several important statements for understanding Whitehead's account of order: (a) his idea of order is rooted in the orderly process of "actual entities;" (b) the most frequent experience of order is that of social order, or the order expressive of the "togetherness among actual entities;" (c) the coherence of a society is attributed to its "defining characteristic," which arises in Whitehead's scheme from the patterned adjustment of contrasting identities. By taking a more complete look at Whitehead's understanding of "society," (emphasizing, particularly the themes of emerging and increasing order and novelty) we will detect rather significant grounds for distinguishing the positions of Whitehead and Teilhard, since on this point Whitehead denies any claim for a single completion of the cosmic advance which would mark the end of that advance or the complete actualization of the potentialities available to the cosmos.

The question of order is discussed by Whitehead on two levels. At the level of 'actual entity' order has reference to the attainment of specific satisfaction. At the level of society, "order" refers to

the relation of actual entities forming a more or less complex organism (P.R. 107). In the case of "actual entities" the emergence of order is guided by the "subjective aim," while in a "society" order is indicative of the "defining characteristic" of "particular togetherness."

Now in a "society," which is a community of "actual entities," each of the constituent entities fulfills (in itself) the categories of "explanation" (P.R. 27f), so that within a particular society the structural relations gather intensity from the intensity of individual experiences (P.R. 119). For Whitehead, the idea of "actual entity" presupposes an essential socialization, so that an "actual entity" cannot be abstracted from the environment in which it is located, since it is both nourished by and nourishes the actual world which is its context. An "actual entity" is social by nature.

A "society" is a "nexus" (i.e., the togetherness of actual entities) with social order, so that the defining characteristic of a society is its specific social order. First, a "society" possesses a common element of form, expressed in the definiteness of each of its constituent "actual entities." Second, this common form arises in each member of the "nexus" by reason of the condition imposed on it by the prehensions of some other members of the "nexus." Third, these prehensions impose a condition of reproduction by reason of their inclusion as positive feelings of the common form (P.R. 40). Therefore, a constitutive element in the satisfaction of each entity in a society is its participation in that particular society. Further, the commonness of form arises from the "environmental principle," i.e., prehensions are conditioned by the available relevant data of the environment (P.R. 285).

In the case of a "society," the environment is identified as the other members of the "nexus," i.e., the society itself. The attainment of specific satisfaction of "actual entities" (the initial context for the discussion of order) is directed toward satisfaction as a contributing member of a society; whether that society be of the widest generality (viz., a cosmic epoch) (P.R. 101, 109ff), or more specific societies (viz., trees, men, etc.) (P.R. 108, 117). Therefore, "satisfaction" presupposes that an entity is a member of some society. It follows from this that nature is "ordered" since "actual entities," having overcome a condition of disjunction and separation, have aimed at and attained "satisfaction," i.e., they share a "common character" or "likeness" constituting a "society" (P.R. 107).

Whitehead enumerates "four grounds" which systematize his understanding of "order":

- (1) That order in the actual world is differentiated from mere givenness (i.e., imposed environmental order) by the introduction of adoption for the attainment of an end (i.e., individual satisfaction and community.)
- (2) That this end is concerned with gradation of intensity in the satisfaction of actual entities (members of a nexus) in whose formal constitution the nexus (i.e., antecedent members of the nexus) in question is objectified.
- (3) That the heightening of intensity arises from order such that the multiplicity of components in the nexus can enter explicit feeling or contrasts, and not dismissed into negative prehensions as incompatible.
- (4) That "intensity" in the formal constitution of a subject-superject involves appetite in its objective functioning as a superject (P.R. 101).

We find in these "four grounds" Whitehead's position that identity emerges according to an entity's appetite for satisfaction. The environment in which an entity is situated is in an important sense a "given," in that it provides the context of nourishing elements for the satisfaction of an entity. However, environmental "order" (the "order" of the "actual world") is not imposed on an entity as a determinism. The attainment of an end (the satisfaction of an entity) is "novel," thus presupposing freedom from determined identity. "Order" as understood by Whitehead means "order" permissive of originality. Further, the originality of an entity (as a member of a society) comes through an entity uniquely objectifying (appropriating to itself) values made available by entities within its society or "nexus." As this appropriation intensifies for the members of the society, that society achieves its proper "definiteness." This is to say, the members of a society are 'alike' in that they share a "common character" which is mutually imposed on the members of the society, thus providing the "definiteness" of the society and the ground for dismissing incompatibilities. Whitehead, unlike Teilhard, merely specifies "common character" or "element of form" according to a general pattern of activity. In Whitehead's scheme, "common character" is identified according to the degree or definiteness realized by a particular society (P.R. 107-108). That is, "common character" arises according to the self-functioning of the subjects. Whereas, as noted continually throughout previous sections of this dissertation, Teilhard specifies the element of form as the universally present, but relatively manifest property of "psychic energy." Therefore, in Whitehead the defining characteristic ("substantial form") (P.R. 40) of a society, arises from the contributions of its component entities. In turn, the defining

characteristic functions as contributing to the satisfaction of the constituent elements. The "common character" provides for the structure and stability of a society and the laws governing it:

Thus in a society, the members can only exist by reason of the laws which dominate the society, and the laws only come into being by reason of the analogous character of the members of the society (P.R. 109).

By "law" Whitehead means the "systematization of individual differences" (P.R. 117). Disorder arises when laws are not perfectly obeyed, and where the "reproduction" is mingled with instances of failure (P.R. 109). Disorder is, therefore, a kind of enfeeblement (P.R. 102), i.e., the individual differences as they pass through the concrescing phase to satisfaction do not attain sufficient intensity. "Chaos," on the other hand, is more aptly termed "frustration" (P.R. 111), i.e., there is a lack of dominant definition of compatible contrasts relative to the satisfaction of a subject. In disorder the individual differences have a relative lack of systematization, while "chaos" indicates the lack of "subjective aim" (common form), or as Whitehead states: a non-social nexus is equivalent to chaos (P.R. 89).

Teilhard's theory of "cosmogenesis" is principally concerned with the persistent relation between structuralization and the emergence of consciousness. He accounts for material structures by maintaining the irreversible drive of spiritual energy which organizes matter for the purpose of its own more intense expression (A.E. 332ff). Therefore, structure is a variable of the single cosmic energy, which permits this energy to express itself more fully. The problem for "nature" then, is the production of more complex organisms which are increasingly more permissive of "psychic" expressions. For Whitehead

. . . the problem for nature is the production of societies which are structured with a high "complexity" and which at the same time are unspecialized. In this way intensity is mated with survival (P.R. 120).

Now, by "structured society" Whitehead means "a society which includes subordinate societies and nexus with a definite pattern of structured inter-relations" (P.R. 118). The structured society, like experience itself, is a reflection of the general state of nature, "thus the growth of a complex structured society exemplifies the general purpose pervading nature" (P.R. 119).

Now a structured society with high grade complexity (a structured society can be more or less complex) tends to be "specialized" and consequently, deficient in "survival value" (P.R. 120). That is, a high degree of structure and specialization threatens the "stability" of a society by making it unsuited to withstand the various contrasts within its "actual world" (P.R. 119-120). What "nature" seeks then, according to Whitehead, is the development of societies (organisms) having "persistent character" (i.e., stability), but sufficiently "unspecialized" so as to have a flexibility of pattern or adaptibility (P.R. 120).

Whitehead's account of society (order and unity) does not, in general, contrast with Teilhard's view. Both seek to account for order emerging as the consequence of increasingly structured organisms (societies) which are sufficiently stable and "unspecialized" so as to endure. However, the specific difference between these two accounts is illustrated by what they consider the principle of "common form," or that which gives to a society its definiteness. For Teilhard this common form is generically specified, although variable in intensity. While in Whitehead's

account the "common form" arises from the arrangement of disjunctive elements, which both contribute and receive their completion from participation in a particular society, so that the structure and stability of a society is grounded in the mutual objectification (mutual prehension) of the components. This "mutual prehension" is what gives a society its special character, its "definiteness" as a society.

This consideration of order and society has been intended to focus on two issues of central importance to the cosmologies of both Whitehead and Teilhard. Both authors maintain that cosmic order emerges and stabilizes as cosmic actualities processively realize their appropriate satisfaction or "definiteness." The processive emergence of definiteness, in view of each author, presupposes a social context in which subjects mutually influence one another. It is also the case with each author that the processive "cosmic stuff" constructs societies with greater degrees of "definiteness." In Whitehead's view, the emerging "definiteness" of societies is grounded in the mutual objectification (appropriation) of values made available by the constituent actualities of any society. In this sense, emerging definiteness is specified by the manner in which constituent actualities function. In Teilhard's view, the emerging definiteness (or identity) of societies is grounded in the intensification of "psychic energy," which specifies the boundaries within which constituent elements may organize or complexify. The distinctiveness of these two views is not found in the issue of emerging order or definiteness, but in the issue of that which specifies the functional capabilities of the constitutive actualities in a society.

The significance of these considerations concerns how each author interprets the procession of the "cosmic stuff." Indeed, the issues raised by comparing the Whiteheadian and Teilhardian interpretations have to do with the issue of causation. At this stage, it appears that Whitehead's cosmology reflects a decided emphasis on the novel self-causation of cosmic entities. While Teilhard's view reflects an emphasis upon the specified causal influence of "psychic energy" proceeding toward increasing stabilized and self-conscious realization. In Teilhard's scheme, then, any considerations of novel self-causation are subservient to considerations of the energetic force of psychic energy which is a constitutive characteristic of the Weltstoff.

An examination of Whitehead's cosmology (on issues with which he and Teilhard share respective concerns) now proceeds by considering his interpretations of "life," "consciousness," and "cosmic advance."

LIFE, SOCIETIES AND PERSONS

Like Teilhard, Whitehead considers no gap between living and non-living societies (P.R. 121). Relative to particular purposes life may or may not be important and in this sense "life" cannot be the defining characteristic of a society (P.R. 118-119). All entities (including societies possess the character of feeling or prehension and, thus, are influenced by factors made available by other entities, according to Whitehead. However, the character of being influenced and influential is not, in the "philosophy of organism" a defining property of life. If this were the case, then "life" would be decided by prehending merely the past. Whitehead, however, is not concerned with discovering the

effects of the past alone, but he seeks to understand the character of "appetition" (P.R. 121) and the place of "final" causality (P.R. 86, 103f, 124). Consequently "life" understood according to transformation (that is, the present influence of the past--or tradition) does not specify "definiteness." It is Whitehead's contention that life is present where novelty of definiteness is not found in inherited data (P.R. 124). In this sense "life" is the origination of "conceptual novelty;" the "novelty of appetition" (P.R. 121). Therefore, life cannot be understood in abstraction from an entity or society, since the "novelty of appetition" is introduced by the "subjective aim," which is the entity itself seeking the satisfaction of its aim or ideal. As regards "transformation," all entities are alive, but regarding the "novelty of appetition" only some are "alive" and the defining characteristic of their subjectivity is their originality of satisfaction (P.R. 124).

Each living society (organism) includes both "living occasions" and inorganic constituents (P.R. 122), i.e., each living subject, in this sense presupposes the support of inorganic "apparatus" (P.R. 112). According to Whitehead even the "cell" (the simplest of organisms) includes as supports to its life inorganic elements such as molecules and electrons (P.R. 123). In the case of the "cell", as with higher organisms, one finds both "subservient nexus" and "regnant nexus." Therefore, while the 'regnant nexus' requires the subservient apparatus of inorganic societies, in which the "appetition for novelty" is unimportant, nevertheless, it might be said that the defining characteristic of living societies is their patterned appetition for realizing novel values (P.R. 121f). The stability and structure of "living societies"

is provided by the dominant influence (the "regnant nexus"), which functions for the elimination of diversities and the determination of the "novelty seeking process" (P.R. 121-123).

This view of Whitehead's is significantly different from Teilhard's. Whitehead, although not maintaining an absolute distinction between living and non-living entities also maintains that the absence of such a distinction pertains only insofar as "life" is seen as "reaction." However, regarding "appetition," Whitehead does distinguish between living and non-living subjects according to the seeking of originality, so that, in "living societies" the defining characteristic is the dominant aim at the elimination of diversities and the appetite for originality. The 'self-ideal' of the subject, its "subjective aim" functions as the final cause of satisfaction (P.R. 86, 103f). In Teilhard's view, no absolute distinction is made between living and non-living subjects, since a single vital energy is the defining characteristic of the Weltstoff at every level of structure or organization. The "definiteness" of an entity, therefore, is the relative intensity of its principle of interiority which it shares in common with every other entity. Therefore, in Teilhard's scheme one finds a specific generic property which expresses itself with increasing insistence, thus providing to the "cosmic stuff" its increasing definiteness.

Both Whitehead and Teilhard appear to agree that self-consciousness is (as Whitehead maintains) the "direct awareness of ourselves as persons" (P.R. 127). Further, both concur that "thinking" has to do with self-direction; "the self-adjustment through reflection in diverse experiences" (P.R. 121). Teilhard is concerned with man's perception

of his own interiority and the formation of his own destiny. Whitehead thinks that to be a "person" is to be characterized by a central direction; a central seeking of the alteration of values (P.R. 124), and not merely an effort at "self-preservation" (P.R. 124-125). For Whitehead, the essence of "life" is not a specific tendency toward personalization, but the tendency toward novelty or originality (P.R. 121, 124). For Teilhard, life clearly tends toward personalization. It is the character of cosmic energy to reach summits of increasing complexification and personalization. It is the summit of "Hominization" at which the Weltstoff becomes conscious of itself as unique and incommunicable, i.e., achieving direct awareness of being a person (P.M. 220; A.E. 333).

In Teilhard's scheme man emerges as the result of the synthesizing power of cosmic energy. In man the "cosmic stuff" reaches self-reflection. In Whitehead's scheme, human thought is also allied with bodily structure. For him human mentality is:

- (a) "partly the outcome of the body"
- (b) "partly the single directive agency of the body"
- (c) "partly a system of cognitions which have a certain irrelevance to the physical relationships of the body" (P.R. 128).

As noted earlier, every "actual entity" possesses both a "physical" and "mental" pole and, as with Teilhard's idea of "complexification," one or the other dominates in particular organisms. It is the function of the "mental pole" to respond to what is given--"the mental pole introduces the subject as a determinate of its own concrescence." According to its mental pole an entity performs its function of "self-determination." However, this does not imply consciousness, "which is the product of

intricate integration" (P.R. 71, 103). In Whitehead's view, "consciousness" (viz., direct awareness of ourselves as living persons) is the "crown of experience, only occasionally attained, not its necessary base" (P.R. 312). The consciousness of "central direction" (which identifies the meaning of personhood) requires, in this scheme, "experience" (being qualified by other subjects.) However, experience does not require consciousness. On the contrary, it is Whitehead's view that "consciousness presupposes experience" (P.R. 67). Here Whitehead and Teilhard differ. For Teilhard, it appears, self-qualification ("transformation") depends upon the radical presence of an energy or force which provides for the direction of "transformation," so that experience (being qualified or influenced by other subjects) presupposes this energy in an experiencing subject. It is the level of intensity which this energy achieves in a subject, which identifies that subject in relation to others. This same energy, as its peak of intensity accounts for self-consciousness, which is the distinctive property of human species. In Whitehead's case, consciousness illumines self-qualification, but is not its presupposed 'ground' (P.R. 67). Both Teilhard and Whitehead agree that self-consciousness, within the totality of cosmic subjects occurs only occasionally. However, whereas Whitehead considers consciousness as the product of "high grade feelings" at the side of the mental pole, Teilhard considers consciousness as the vivifying energy present in the Weltstoff at all levels.

Whitehead's "mental pole" and Teilhard's "radial energy" are quite similar on one issue. According to both thinkers the mental character of actuality provides (particularly in higher organisms) for the self-directing

activity of a subject seeking its appropriate satisfaction. Therefore, it is the "mental" characteristic of cosmic becoming which primarily accounts for self-identity. In Whitehead's scheme, consciousness (and other "intellectual feelings") is an intense expression of the "mental pole," which is characteristic of "actuality" even at elementary levels. For Teilhard, self-consciousness is the advanced manifestation of "radial energy" which is an all-pervading and identifiable quality of the "stuff of the universe." Therefore, according to both Whitehead and Teilhard, the advance toward higher "definiteness," is grounded in the mental character of cosmic being which functions to achieve greater self-qualification. Again, however, Whitehead and Teilhard offer differing interpretations. Here the difference concerns the teleology of the "cosmic advance."

In Whitehead's view, an "actual entity" according to its "mental pole" is related to eternal objects (as appropriate valuations), so that the teleological character of an entity is conditioned by its capacity to realize relevant values from the multiplicity of eternal objects (P.R. 36f). However, the realization of a self-ideal (the satisfaction of an entity) is a unique appropriation according to Whitehead. Therefore, while allowing for final causality, Whitehead maintains it is the unique character of each entity to achieve a novel realization of values fulfilling its self-ideal. Further, Whitehead's analysis of telos appears centered on what his categoreal scheme indicates regarding the "becoming" of an actual entity. There is, however, no developed application of his categories to the widest of social contexts, namely, the cosmos as a whole. Now, while Whitehead's system asserts a

necessary relation of actual entities with eternal objects and the self-causation of an entity in realizing its self-ideal, his system makes no necessary assertions regarding the teleological character of the cosmos considered as an organism. Teilhard, on the other hand, is led to assign a defined telos to the "cosmic stuff," since each emergent species is an advanced realization of the force of "radial energy," proceeding toward a more developed state of complexification/consciousness. In Teilhard's system, cosmic development is the process toward a completed cosmic organism dominated by the unifying power of "mind."

With regard to this present discussion, Teilhard appears to claim that when taken in its totality the process of the "cosmic stuff" reveals an irreversible tendency through which the 'many become one.' That is, while Teilhard maintains that the primordial condition of the Weltstoff is one of disjunction and multiplicity, by reason of the force of its own constitution, the Weltstoff proceeds toward conditions of increased unity until, according to the power of its own constitution, it achieves a state of complete unity defined in terms of conscious/mental/spiritual qualities.

Whitehead's position differs from Teilhard's on this point. While the process of "becoming" is toward unity (the unity of mutual prehension,) nevertheless, achieved "definiteness," through which the many in disjunction become the "one conjunctively" (P.R. 25-26), adds by reason of the novelty of the 'one conjunctively,' to the "many" which are potentials for further objectification. The "cosmic epoch" (P.R. 41, 101) (the widest of societies) is not under the domination of a single force or telos. The increase of novelty, of harmony, of unity and intensity does

not, in Whitehead's scheme, narrow the possibilities for cosmic life to the expectation of a single unified condition for the cosmic stuff. Rather, since the cosmos as a whole is not completely subject or controlled by a single decision, the "creative advance" is toward "novel togetherness" which continually exposes an "infinitude of possibility." This is not to say that the universe proceeds haphazardly. On the contrary, Whitehead describes God as providing for each temporal entity ". . . its basic conceptual aim, relevant to its actual world" (P.R. 262). Whitehead, however, also allows for the freedom of each entity's self-creativity by claiming that this divine provision of subjective aim does not eliminate the "indeterminations" awaiting the decisions of the self-creating entity. Therefore, on the one hand, the creature is given its ideal in terms of conditioned alternatives, on the other hand, it is the entity's function, through successive decisions, to achieve a coherent realization of its ideal (P.R. 262). In this sense, the order, harmony and beauty manifested in the world is partially the product of God's providence and partially the product of self-creativity by temporal entities.

This comparison of Whitehead's cosmology with that of Teilhard hopefully illustrates their respective findings on issues with which they share a common concern. Despite their differences of emphasis and interpretation each thinker maintains that the cosmic stuff is active not randomly nor arbitrarily, but that its activity is directed. Cosmologically, the force for activity is assigned by each thinker, to the cosmic stuff itself, so that each develops an interpretation of self-causation--both regarding efficient causation and final causation. But this interpretation of and emphasis on self-causation needs completion.

Neither Whitehead nor Teilhard isolates his interpretation of the cosmos from his interpretation of God. Noting this, my intention is to focus in the two following chapters on what Teilhard and Whitehead tells us concerning the existence and nature of God and their interpretations of God's influence upon the cosmos.

REFERENCE NOTES TO CHAPTER 2

1. William A. Christian, An Interpretation of Whitehead's Metaphysics (New Haven: Yale University Press, 1967), p. 12.

CHAPTER 3

TEILHARD'S THEISM AND THEOLOGY

INTRODUCTION

In Chapter One my intention was to identify the key ideas supporting Teilhard's "cosmogenetic" theory. By enumerating and discussing what I call Teilhard's "Foundational Ideas" I sought to provide a concise and accurate basis for understanding Teilhard's view of "nature" and a framework for comparing his cosmology with that of Whitehead. Noting Teilhard's concern with comprehensiveness and coherence I claimed that he completes his "cosmogenetic" theory by appeal to his "Law of Consciousness/Complexity." In Chapter Two I engaged in a comparison of Teilhard and Whitehead on the basis of their central cosmological ideas. I claimed, despite some remarkable similarities, that they have differing and distinct understandings of "nature," i.e., their differing cosmological views are grounded in their distinctive proposals with regard to the fundamental character and activity of cosmic reality. Teilhard maintains, according to his "Law of Complexity/Consciousness" that "nature" proceeds according to the force of a "super-determinism" which moves the Weltstoff irreversibly toward its teleological completion, namely, the complete realization of its potentiality for psychic unity. In Whitehead's case, according to his principle of "creativity," the cosmos moves toward increased structure, socialization and unity. However, emergent subjects are

novel or original realizations of values and as novel expressions of value they become elements within the multitude of values which are available for the "becoming" of other novel subjects. Therefore, according to Whitehead, the process of "becoming" does not conclude with the dissolution of multiplicity, nor the complete realization of the potentialities of cosmic being. Rather, "the many become one and are increased by one."

As noted at the conclusion of the previous chapter, both Teilhard and Whitehead seek to hold to a relation between their analyses of "nature" and religious issues, in particular, the existence of God and predications applicable to the divine nature. In this chapter I intend to examine Teilhard's suggested "proof" for God's existence and his description of God's nature and activity. This examination should also bring us closer to a more thorough comparison of Teilhard and Whitehead regarding their respective views of the character and activity of the cosmos and its relation to the character and activity of God.

PROOF BY COMPLEXITY

Teilhard's "proof by complexity" is found in his essay "Life and the Planets" (F.M. 101-128). While this proof is a rather undeveloped element within Teilhard's scheme, it has importance for understanding the manner in which Teilhard incorporates the idea of God within his "hyper-physics."

The theory of "cosmogenesis" maintains that according to its essential character the "cosmic stuff" increasingly complexifies, thus manifesting with greater insistence its psychic interiority. With the emergence

of man the Weltstoff achieves its most important summit and its subsequent development is entirely related to the activities of the human species (P.M. 189, 231). Teilhard maintains, in part, that the coming together of the Weltstoff into a condition of unity in which it fully manifests its psychic qualities, is a tentative proposal (P.M. 35). However, Teilhard maintains (as noted previously) that sufficient evidence can be gathered to support his contention that "cosmogogenesis" is characterized by a gradual structuralization and unity of the "cosmic stuff" as well as a manifestation of increasingly more obvious mental activities. So that, at point b, mental activity dominates "cosmogogenesis." This dominance has the effect, according to Teilhard, of reducing disjunction or separateness and gradually prepares the way for the total triumph of communality or "love" (P.M. 264-267). Further, this process presupposes, in Teilhard's view, the organization of matter by means of a radical force seeking its fullest expression. Now, Teilhard proposes that if this historical process of organization and psychic expression is to attain completion, yet "another factor" must be "presupposed" (F.M. 124). For Teilhard, this "other factor" is discerned at the level of man's consciousness of being spirit. On this point Teilhard's "mysticism" becomes evident.¹ He seems to suggest that the self-realization of being spirit--of expressing spiritual characteristics--is an experience common to men. It is an integral part of Teilhard's proposal that he calls man to an increasing attentiveness to his own spirituality, and it is this discernment of human "spirit" which provides for Teilhard's tentative proposal that "spirit" (mind, consciousness or thought) is a universal property of "cosmic stuff." Teilhard also maintains that coupled with this

awareness of being spirit is the realization of being drawn toward (attracted toward) a more profound and satisfied realization of this spiritual quality.² In this sense Teilhard describes man as "lured" toward union both with other men and, ultimately with the source of his own spirit (A.E. 146).

Teilhard also applies his ideas of 'spirit lured toward union' to man's understanding of the cosmic process. Refined knowledge of nature, in this view, reveals nature proceeding through successive levels of organization, progressively manifesting spiritual properties. The "Law of Complexity/Consciousness" summarizes this process. Knowledge of this "Law" leads, as Teilhard maintains, to the awareness that at the center of the cosmic process is a spiritual presence "luring" it toward greater organization and ultimate fulfillment. Just as man, subjectively, experiences the 'lure' of greater union, so the cosmos, "as a whole" is being pulled toward its term of ultimate union. This complexifying-unifying process, summarized by the "Law of Complexity/Consciousness," provides for Teilhard both a "way of envisaging the end of the world" (F.M. 25) and a way of discerning God.³ Therefore, the "Law of Complexity/Consciousness" summarized Teilhard's understanding of the historical process of the "cosmic stuff," the final completion of this process, and a basis for discerning the presence of God within this process.

Teilhard's development of the "Law of Complexity/Consciousness" becomes a "sort of proof of the existence of God" (F.M. 125n). As noted earlier (and following the interpretation of de Lubac,) Teilhard did not attempt to construct a strictly metaphysical system of ideas. Therefore, this so-called "proof" needs to be understood within the context of

Teilhard's intention.⁴ Teilhard's "physical proof" (as de Lubac terms it) is not presented on the basis of a categorical scheme for which claims of "certainty" or "necessity" are made. The "proof by complexity" is a "sort of proof" and thus, Teilhard appears to make no firm claim for its logical persuasiveness. However, despite the rather modest claim Teilhard makes for this "proof," it is not merely incidental to his system. According to Teilhard:

today the whole of human activity is called on to face the problem of God; it is a problem that can be approached only by the total effort of human research and experience (V.P. 226).

Teilhard detects in human life concern with the "problem of God" and there is little doubt that his system is intended as suggesting an answer to this problem. He intends, as I have noted, to speak encouragingly to both the religious and scientific communities. To religious believers he counsels greater attention to the value of the world. To believers in science, he counsels greater attention to the implications of scientific discoveries. In general, Teilhard's scheme is developed according to his confidence that both the man of religious faith and the man of science achieve increasingly profound truths for human self-understanding and the advancement of coherent self-understanding will be attained only insofar as these two communities of belief are attentive to the concerns and claims of the other (P.M. 284-285). Teilhard's "hyper-physics" is his "introduction" to harmonizing these sometimes disputing communities.

Teilhard's "physical proof" appears to be developed in response to his assessment that man experiences within himself a spiritual quality; that man experiences himself to be lured toward a greater unity of communality; that man finds himself concerned with the "problem of God."

THE THEOLOGY OF HYPER-PHYSICS

Earlier I attempted to organize the major ideas providing the foundation for Teilhard's theory of nature. While it has been suggested that the principle impetus to his system is his theological (especially, Christological) concern, this concern is not an obvious component in his cosmogenetic theory.⁶ Rather, particularly in the Phenomenon of Man, he engages in cosmological analyses and descriptions without calling for the support of a specific philosophical or religious tradition. I have assumed, therefore, that Teilhard intends his "cosmogenetic theory" to stand on the evidence of phenomena and his reasoned interpretation of them. Clearly, his cosmogenesis represents his rethinking of the more traditional cosmological categories. Rather than considering "matter" and "spirit" as fused only in man, Teilhard maintains that "matter" and "spirit" are concomitant--essentially variables of the "cosmic stuff." According to this concomitance and his decision in favor of the primacy of the "spiritual energetic force," Teilhard maintains that man is led to discern a divine presence in the cosmos, making no exact claims for this, except that man arrives at a vague awareness of divinity. At this level, Teilhard makes no appeal to the support of theological reason. His cosmogenetic theory remains "tentative," as does his proof for God's existence. However, by calling upon the support of theology, Teilhard's theory appears to gain decisiveness. He thinks his analysis of nature and his acceptance of theological themes are compatible and together advance the coherence and comprehensiveness of self-understanding and the understanding of nature as a "whole."

Throughout this discussion I am not concerned with evaluating Teilhard's fidelity to Scripture nor his doctrinal orthodoxy. Rather, my concern is to investigate Teilhard's interpretations of nature, man and God in light of the criteria of rationality, coherence and applicability he sets before himself. The move toward investigating what Teilhard incorporates from his theological tradition does not include an evaluation of that tradition's reasonableness or validity. Rather, this move seeks to identify an important element of Teilhard's total scheme, with the anticipation of grasping: (1) what this element adds to his scientific cosmology and (2) whether the fusion of the theological and scientific elements complies with his standards of coherence, reasonableness and applicability. In the sections which follow, consideration is given to Teilhard's version of "pantheism" and his statements regarding the nature of God. In each of these considerations Teilhard finds some evidence for his conclusions within his cosmological scheme and in each case he completes these ideas with what he accepts from his theological tradition.

The Question of Pantheism

Teilhard's scheme appears eminently suited to adopt a version of "pantheism." Within his theologically orientated reflections, the "cosmic spiritual center" comes to be identified as divine (D.M. 67, 114), seemingly providing a re-definition of what he calls in his cosmology, "radial energy" and "Omega." Consequently, the activating, organizing and teleological impulse of "cosmogenesis," under the influence of theological reflection, becomes the all-pervading presence of God

(A.E. 149; D.M. 114).⁷ Further, Teilhard frequently employs the phrase, "God is all in all" (D.M. 116; A.E. 223; P.M. 294), illustrating his vision of the divine at the center of things. Finally, Teilhard admits to a disposition toward "pantheism" reflecting his belief in the total oneness of all being (D.M. 116). However, despite his conviction regarding the unity of all being, Teilhard disavows all forms of "pantheism" except what he calls, "true pantheism" (P.M. 294). It is a major premise of de Lubac and Rideau that Teilhard's "pantheism" and his theology are orthodox according to the Roman Catholic tradition.⁸ According to Rideau "Teilhard cannot be fairly accused of pantheism. . .," at least not the kind which maintains history is "creative of God."⁹ The pantheism Teilhard espouses seeks to call attention to the theme of divine omnipresence, re-affirming the importance of God's vivification and sanctification of the universe. Henri de Lubac maintains that Teilhard carefully avoids any form of "pantheism" which professes the "dissolution" of nature into some super-organism or super-person to which the name God is predicated.¹⁰ Further, Teilhard avoids a "monism" by refusing to envision any loss of individuality or absorption into the "one."¹¹ Rather, he continually maintains the distinction (the individuality) of "conscious centers" and their distinction from the divine being (A.E. 29; P.M. 308).

According to Teilhard:

God cannot in any way be intermixed with or lost in the participated being which he sustains and animates and holds together, but He is at the birth, and the growth and the final term of all things. (F.M. 318)

Therefore, while he sometimes speaks of the "divine center" as well as individualized centers, Teilhard does not identify these in such a way as to collapse their individuality or distinctiveness. God and the world are distinct and individualized realities.

According to de Lubac, the "Christian Pantheism" which Teilhard professes is that of a perfect mutual possession--such is the only pantheistic fusion that is locigally conceivable--"the divine ambience."¹² Teilhard's vision, expressed in Le Milieu Divin, is that God's universal presence establishes the setting in which cosmic life is "lured" toward its destiny. He maintains, ". . . God is as pervasive and perceptible as the atmosphere in which we are bathed (D.M. 46). This environment is characterized by "mutual possession" (F.M. 318) in which the subjects mutually possessing one another do not relinquish their individualities. The model Teilhard is employing here is that of "love." God, inexorably loyal to the world, gives it life, nourishes it with his presence and leads it to its consummate union with him at "Omega." Therefore, Teilhard envisions God taking possession of the cosmos, gathering up all things to himself (P.M. 298). It is the divine presence which constitutes the "milieu" in which "all things live and move and have their being." While there can be no doubt that Teilhard's "pantheism" arises from his particular "vision," grounded in the depth of his religious disposition, it is also the case that he thinks this "vision" is consistent with the vision of reality described by "hyper-physics" (P.M. 298). While his "cosmogenetic" theory maintains the universal presence of spiritual characteristics, this theory does not require a pantheism of identification, in which the cosmic spirit and Divine Spirit are indistinguishable. Further, while his "cosmogenetic" theory indicates the processive emergence of more spiritual beings, this theory does not, in Teilhard's view, require the conclusion that such an emergence is productive of

God. The "cosmogenetic" theory, according to its "Foundational" ideas, merely makes possible an increased discernment of God, without specifying necessary predications. Specific predications regarding the divine nature are not, therefore, required by the logic of his cosmology, but by the requirements of the theological reasoning he incorporates into his scheme. Teilhard's "pantheism" is, then, attentive to the theme of God's omnipresence. Teilhard not only calls attention to the importance of this theme, but interprets it (in light of his own scheme) to mean that God is the defining milieu in which the cosmos proceeds toward its fulfillment at "Omega."

Finally, Teilhard does not 'envision' a loss of individuality either for nature or God. Indeed, in keeping with classical philosophical-theology, he carefully preserves the distinction of cosmic and divine orders. As will be shown later in this chapter, Teilhard maintains the intensification of union does not dissolve individuality, but more clearly identifies or differentiates individuals.

The Nature of God: God and Omega

The "proof by complexity" indicates Teilhard's conviction that the logic of "cosmogenesis" leads to the "problem of God." The "physical proof", as de Lubac notes, is not intended by Teilhard as a substitute for classical metaphysics. According to Teilhard, this proof leads to "establishing that God must have 'a personality higher than that which he stimulates'."¹³ However, with regard to a more precise description of divine attributes, de Lubac quotes Teilhard as envisioning "the day when 'a more profound analysis' of the conditions of the evolving Universe

would lead to 'recognizing in the God of Evolution an exact equivalent of the attributes accorded by medieval philosophy to Ens a se'.¹⁴

Therefore, the "physical proof" does not itself provide a developed range of specific predications, but his pantheistic position indicates what Teilhard holds to be God's principal function regarding the cosmos, namely, the source of cosmic life and the ground of its ultimate unification. However, Teilhard's appeal to theology takes him beyond these particular considerations. His scheme is intended to provide a comprehensive system for self-understanding and his scheme, when examined in its totality reveals Teilhard's conviction that self-understanding calls for attention to both man's situation as a product of "cosmogenesis" and his destiny of union with God. Teilhard devotes a portion of his writings to considering the nature of the God in whom man achieves his destiny. In order to gain an understanding of Teilhard's use of theology, my investigation continues with an examination of several key phrases and themes which have a philosophical/theological character. (1) Consideration is given to Teilhard's claim, "God is complete in Himself, but for us he becomes." (2) Next, attention is given to Teilhard's claim, "God is the prime mover ahead of creation." (3) In order to find a principle of integration for his cosmogenetic and theological positions, an examination is made of Teilhard's phrase, "fuller being is fuller union." My contention regarding this last statement is that in order to bring his scientific and theological positions into harmony, Teilhard appeals to a metaphysical principle. (4) Finally, an attempt is made to discover what Teilhard's position, as a "whole," provides for a comprehensive and coherent understanding of nature, man and God.

God is Complete in Himself, but for us He Becomes. . .

This represents Teilhard's central theistic statements and I seek to clarify it by considering each of its clauses.

(A) God is complete in himself. . . Here Teilhard aligns with a traditional understanding of the Divine Nature, insofar as he predicates completeness to God, thus distinguishing the Divine being from cosmic being. In the minds of de Lubac and Rideau, Teilhard's allegiance to the doctrinal tradition of Roman Catholicism makes him sensitive to the issue of theological orthodoxy.¹⁵ While his fidelity to this tradition is not so obvious in his "scientific" reflections, his religious faith is at the center of his theological reflections (D.M. 37-46). The designation "completeness of God" illustrates Teilhard's adherence to the philosophical/theological tradition which affirms God's a-seity. In his Human Energy Teilhard indicates that the cosmogenetic theory he introduces (particularly according to the "Laws of Union") might lead someday "to recognize in the God of evolution an exact equivalent of the attributes accorded to the 'Ens a se' by Medieval philosophy" (H.E. 70). This expectation, along with Teilhard's professed fidelity to the tradition of medieval theology, indicates his position concerning the appropriate applications of predication to the nature of God. Siding with this tradition he holds to the inappropriateness of strictly applying cosmic characteristics to the Divine nature. Consequently, Teilhard holds with his tradition an absolute distinction between divine and cosmic being (P.M. 308; F.M. 318). Teilhard appears to reflect the classical designation Actus Purus, when in Le Milieu Divin he maintains that

God exists in a ". . . Pure State (that is to say in a state of being distinct from all the constituents of the world)" (D.M. 66). In Human Energy Teilhard explicitly refers to God as Ens a se (H.E. 70). Therefore, while he maintains cosmic being is characterized by an advance toward increased complexification/consciousness, he maintains (without providing a detailed discussion) that the ultimate 'ground' of "cosmogensis" is God characterized according to the traditional predications of Actus Purus and Ens a se.

(1) Teilhard holds that the theological predications of orthodox theology are the "necessary presuppositions" for theological discourse (D.M. 44). Consequently, he gives no impression of engaging in theological reasoning outside the defined boundaries of orthodox theism, nor does he attempt to re-formulate a rational defense of their adequacy. Teilhard's acceptance of orthodox formulations reflects his intention to remain within the defined theological boundaries of his religious tradition.

(2) Attention is now directed toward what appears to be Teilhard's insistence on Divine "immutability." As indicated earlier, Teilhard develops his "pantheism" according to a theme of "mutual possession." However, it must be noted that Teilhard does not involve God in this "mutual possession" in such a way as to claim God is influenced by the activity of the world. In Le Milieu Divin, Teilhard speaks of "our journey into God" (D.M. 88), but as he develops this thought it is clear the envisioned human-divine unification centers around the Divine "hallowing us out and emptying us," the breaking "the molecules of our being so as to re-cast and re-model us" (D.M. 89). Further, Teilhard maintains that God is "the self-subsistent and absolutely ultimate principle" of

cosmogogenesis (C.J.V. 18). These statements when joined with his affirmation of God's Omnipresence and Omnipotence (F.M. 82), along with his fidelity to the predications of Actus Purus and Ens a se strongly suggest that Teilhard, although offering a revision of traditional cosmology, did not move toward offering a revised theism. The conclusion being drawn here is that Teilhard gives the impression of seeking to wed his revised cosmology to the fundamental idea of God argued for by "medieval" philosophical/theology. "God is complete in Himself . . ."

(B) . . . but for us He becomes. The phrase I am considering, "God is complete in Himself, but for us He becomes" might, at first glance, appear related to Whitehead's distinction between God's "primordial" and "consequent" natures. Also, this phrase could indicate what Rahner suggests, "God Himself, He who is unchangeable in Himself, can Himself become subject to change in something else."¹⁶ It is worth noting that Ian Barbour asks if Teilhard might have found Whitehead's "formulation" acceptable,¹⁷ while Joseph Doncell asks if Teilhard might have found Rahner's formulation acceptable.¹⁸

In Human Energy, Teilhard maintains, ". . . from universal evolution God emerges" (H.E. 43). Now according to what was said in the previous section regarding God's "completeness," Teilhard is not identifying himself with a Hegelian idea of the gradual emergence of the absolute. Indeed, the "becoming of God" would appear to refer not to God's nature or being, but to the human comprehension of God. As he remarks, "the birth and progress of the idea of God on earth are intimately bound up with the phenomena of hominization. . . . God seems gradually to loom larger in the world" (H.E. 43f). Similarly, Teilhard remarks, "Man finds

himself capable of experiencing and discovering his God in the whole length, breadth and depth of the world in movement" (P.R. 297). My conclusion, therefore, is that the statement, ". . . but for us He becomes" refers not to the divine nature, but to man's discernment of God, so that, it is not meant to describe how an "immutable" God is somehow "mutable," but how it is that the cosmic process increasingly reveals to human understanding its ultimate 'ground.' Therefore, the first part of this statement ("God is complete in Himself. . .") refers to the divine nature in se, while the second part (" . . .but for us He becomes") refers to man's recognition of God.

As indicated above, Teilhard's "proof by complexity" maintains a relation of knowledge about the structure and pattern of cosmic being with an increased discernment of God, so that, as human reason more adequately understands the nature of cosmic being, the more it recognizes the divine presence. The "becoming" of God (H.E. 54); His "continually being born"¹⁹ for us does not seem to imply that Teilhard is hinting at an idea such as Whitehead's "consequent nature" of God in which he develops his idea of God influenced by cosmic actuality. (This theme is given fuller treatment in the following chapter.) Rather, Teilhard's idea of God's "becoming" refers to a progressively more refined human appreciation for the magnificence of cosmogenesis: "The perception of the Divine Omnipresence is essentially a seeing, a taste, that is today a part of intuition bearing upon certain superior qualities of things" (D.M. 131). Consequently, in Teilhard's view, as the "cosmic stuff" achieves increased "complexification," it manifests its psychic center and with this increased manifestation the "center of centers" is more clearly discerned (H.E. 68).

Summary Teilhard's "theism" is less a product of reasoned argument than of a desire to speak to the human thirst for stability, unity and meaning. The "problem of God," as Teilhard reflects on it, is less a speculative question than a problem of man's being in this world. However, Teilhard is also prepared to make some rational appeal for the existence of God. His so-called "proof by complexity" reflects his rethinking of the classical arguments for God's existence. At the same time, he appeals to his theological tradition as the source of precise statements about the divine nature: "God is complete in Himself. . . ." However, Teilhard completes this phrase by maintaining that "God is continually being born for us." Clearly, Teilhard seeks to incorporate traditional theism into his scheme. While affirming the classical understanding of God, he emphasizes a correspondence between man's understanding of the universe and his awareness of his tending toward increased union. "God awaits us in His own person at the top of the tower that, held up by Him, it can build if we unite--then, indeed, we find the impulse to live the essential joy of living" (A.E. 50). Here, as throughout Teilhard's writings, he counsels hope, love, the desire to live and confidence in God's abiding presence and concern. Accordingly, Teilhard's work reflects his pastoral intention to lead his readers through a scientific and theological investigation which gives a basis to human life and a sense of purpose. Therefore, although he re-evaluates traditional cosmology, he identifies the ultimate ground of cosmic actuality in traditional terms.

God is the Prime Mover 'Ahead' of Creation

This statement represents Teilhard's emphasis upon describing God's continual activity with regard to the universe. Again, Teilhard makes no attempt to provide a re-constructed "theism," however, here we discover Teilhard's idea of the "God of evolution" (H.E. 70).

In Teilhard's view, the Weltstoff is given its definition through God's causality, so that, while "chance" or randomness" seem present in the cosmos, the constitution and telos of cosmic being are grounded in the decisive creative of God. As he remarks:

. . . is it necessary to record that far from being incompatible with the existence of a primal cause, the transformist views, as set out here, present its influx in the noblest and most heartening manner possible? For the Christian transformist, God's creative action is no longer conceived as an intrusive thrusting of his works into the midst of pre-existent beings, but as bringing to birth of the successive stages of his work in the heart of things. It is no less essential, no less universal, or less intimate either on that account. (V.P. 102n)

Within his "scientific" reflections Teilhard does not examine the theme of "creation" according to the formula, creatio ex nihilo sui et subjecti.²⁰ As we have seen, the elementary condition of the Weltstoff is disjunctive multiplicity and the "scientific" theory of "cosmogenesis" does not address the problem of the 'coming into existence' of the disjunctive-multiple "stuff." Energy, as defined by Teilhard (and physics) is neither created nor destroyed. The energy available for "transformation" remains constant, with no clear account available as to its beginning. The theme of "creation" is not, then, a matter for Teilhard's "scientific" concern. However, he does provide

within his theological reflections his views on the meaning of creation.

As Rideau comments:

. . . Teilhard limits himself to asserting the preliminary conditions (if one may so put it) of nothingness, gratuitousness of the creative act and the total dependence of finite being, in its existence and becoming, in relation to God.²¹

For Teilhard, "nothingness" is the "complete disunity of the stuff of the cosmos" (V.P. N27a), that is, the cosmic stuff "infinitely removed" from "Omega." Therefore, according to Figure 2, the "condition of nothingness" describes the state of the Weltstoff prior to its elemental organization at point a. But this does not imply "absolute nothingness," rather, the Weltstoff 'exists,' but without definite structure or unity, which appears to mean (as we will see in section three of this chapter) that the Weltstoff is without "being." In its condition of "nothingness" the Weltstoff is in a condition of "pure potency" (C.J.V. 26-29), having no tendency toward unity except that given by God's gratuitous creative act (F.M. 308). The act of creation is then, for Teilhard and his tradition, an act of God's "grace."²² Thus Teilhard maintains the absolute dependence of the cosmos on God's creative action. It is by God's creativity that the "condition of nothingness" (pure potentiality) is given elementary organization and telos. Consequently, creatio ex nihilo sui et subjecti means for Teilhard, as it does for Augustine and the tradition following him, that God and the cosmos are heterogenous orders; that God creates 'freely;' that the cosmos is absolutely dependent on God's creative action.

Teilhard, however, thinks his metaphysics of unire is a corrective to the traditional metaphysics of esse.²³ In other words, his

concern is not to account for the 'beginning' of participated being, but to maintain that divine creativity is the drawing together (the organization) of pure potentiality. "To create is to unite" (C.J.V. 323). The initial act of divine creativity is God's eliciting from the disjunctive "cosmic stuff" an elemental organization, divine creativity, however, continues to be manifest in the cosmos and, in this sense, evolution is the continual manifestation of God's creative activity (C.J.V. 323-324). God is "Prime Mover," exercising his power of bringing the cosmos to greater--more intense--unity. Teilhard does not hold that creation is a once-and-for-all event, but that God's creative activity grounds the cosmic process throughout its entire history.

At this point attention should be given to Teilhard's vision of God 'ahead' of creation, luring it toward its divinely willed destiny. Teilhard does not envision the cosmos as moved a retro, but as being 'lured,' as by a magnetic pole, to its yet unrealized completion (A.E. 242).

It is in this sense that God is 'ahead' of creation; the fullest of being drawing the cosmos toward its fulfillment, by eliciting to actuality the potentialities of its psychic center. Teilhard's interpretation of God's creative activity also provides the theological dimension of the "Law of Complexity/Consciousness." The general organization of the 'cosmic stuff' and the concomitant manifestation of its psychic center are in response to God's creative activity. The "tentative" "super-determinism" of "cosmogenesis," now becomes the decided "super-determinism" under the influence of Teilhard's theological position. The "immutable" God, draws the Weltstoff to "Omega" according to His invariant will. That is, Teilhard envisions God eliciting from the cosmic stuff its divinely constituted potentiality for greater union.

In his scientific theory, knowledge of the cosmic structure and pattern leads to questions concerning the ultimate cause of "cosmogogenesis." According to his "Christian Pantheism," Teilhard indicates his belief in the encompassing and saturating presence of God. Teilhard's phrase, "in Himself God is complete, but for us He becomes," reflects both Teilhard's fidelity to his theological heritage (emphasizing the heterogeneity of cosmic and divine life) and his conviction that increasing knowledge reveals the presence of God in the cosmos. Finally, Teilhard's statement, "God is the prime mover 'ahead' of creation," illustrates his interpretation of Divine creativity, particularly God's role of 'luring' the cosmos toward its condition of ultimate unification. This analysis of Teilhard's theism leads me to conclude that an important 'model' for understanding the divine-cosmic relation is that of a magnetic force, i.e., (God) drawing the "cosmic stuff" into greater unity (within itself) and ultimately, to a final condition of complete unity with the source of its existence. God is the supreme pole of consciousness (F.M. 124-125).

Fuller Being is Closer Union (P.M. 31).

The integration of Teilhard's "scientific" theory of "cosmogogenesis" and his theology forms the basic structure of his "hyper-physics." As he indicates his intention is to have this "hyper-physical" scheme provide a comprehensive and coherent account of the totality of things. Unlike Whitehead, who retains a single "categoreal" scheme for his considerations of nature and God, Teilhard employs two schemes, one

"scientific" and the other theological. A particular mark of Teilhard's work is his effort to demonstrate that these schemes are compatible, and in conjunction, provide man with increased self-understanding. However, if these two schemes are compatible for integration, on what grounds does this union take place? That is, what is the "linch pin" uniting the 'doctrines' held by science and those of religious reasoning? The following discussion seeks to demonstrate that Teilhard unites the scientific and theological ideas by appeal to a metaphysical principle, namely, "fuller being is closer union." It is Teilhard's intention in The Phenomenon of Man to treat "fuller being is closer union" as the basic principle for his "cosmogenetic" theory. However, I hope to show that this principle is also fundamental to his theological reflections. In order to understand the importance of this principle for Teilhard's system, I now engage in an analysis of its function within his (A) cosmological and (B) theological schemes.

(A) Cosmologically, Teilhard detects a hierarchy of beings, that is, subjects with progressively greater structure, stability and unity. Some entities are quite simple or elementary in structure, while others are enormously complex. There are then, according to Teilhard, 'lesser' beings and greater beings. The determination of 'being,' according to this observation, is related to the level of organization realized by each subject and the level of organization is determined by the degree of self-unity or "self-centration." That is, the level or degree of psychic unity and activity. According to the thrust of psychic energy, self-unity reaches a peak with 'self-consciousness,' so that, the relative 'fullness of being' is decided by the relative 'fullness'-completeness of "unity" or "centration."

In the light of these proposals man is the highest of cosmic beings. Further, this principle in Teilhard's view, has application to the issue of cosmic reality as a "whole." According to the "Law of Complexity/Consciousness," a portion of the Weltstoff is freed from entropy and is organized into self-conscious subjects. These in turn, although retaining their individualized egos, engage in a process of increased "concatenation," thereby forming the cosmic society governed by "thought," "mind," "love." It is this gradual socialization or cosmic organization (the 'cosmic advance' toward communality) by which the "fullness" of cosmic being (as a whole) is attained.

Teilhard offers repeated warnings that his work is not to be treated as metaphysics. A clear example of such a warning comes in his "Preface" to The Phenomenon of Man (P.M. 25-30). Such warnings have special importance for the theme of 'being' I am currently considering. It should be noted, on the one hand, that Teilhard appears to limit his consideration of 'being' to entities observed in the cosmos. He discovers various degrees of complexification and finds a corresponding degree of psychic activity. Higher 'beings' are those exhibiting a concomitance of advanced complexification/consciousness--an intensity of subjective unity--a centering on psychic energy. In this sense his consideration of 'being' is limited to observed entities. On the other hand, however, his total interest leads him to describe the past condition of cosmic being and to speculate concerning its future state of affairs. His speculations, regarding both the past and future reach a level, seemingly removed from phenomena before him. Thus, his principle "Fuller being is closer union," not only serves to describe and explain the

contemporary condition of the cosmic stuff, but also describe and explain stages of cosmic actuality outside the scope of "scientific" experience or observation. The reader should note that I am not claiming that this principle is without merit or tradition, but that while telling us he is not doing metaphysics, Teilhard cements his cosmology together with the stuff from which metaphysics is made.

(B) According to the principle under consideration, Teilhard maintains that 'being' means to be in a process of unification--to become united--so that 'fuller being is closer union.' The character of cosmic being is described as a progressive achievement of greater individual or self-unity as well as greater communal unity. The unity of cosmic being, therefore, "becomes." At the level of cosmic being, the sign of finitude is its struggle to realize more insistently its potentiality for greater union and the particular manifestations of its failure to do so. The "Law of Complexity/Consciousness," the cosmogenetic expression of Teilhard's "ontological" principle, provides only tentative suggestion that "fuller being" is to be realized--particularly the "full being" of cosmic communality. However, in Teilhard's scheme the 'ontological principle' applies also to the Divine nature, so that the center of emergent, contingent being is the fullness of being itself. According to this account Teilhard affirms the heterogeneity of divine and cosmic being: God is the realized completeness of being (devoid of passivity), whereas, cosmic being achieves its appropriate completeness through its process of continual organization.

The properties of 'fuller union' characterizing 'fuller being' in this view are: (1) self-perception (or self-consciousness); (2) knowledge; (3) "love" (mutuality of possession); (4) power for action (P.M. 248ff). With cosmic being these characteristics emerge from the force of psychic

energy seeking its fulfillment. In God, these characteristics are unqualified, so that, characteristics which "become" in and through "cosmogenesis," are completely realized in God. Therefore, while Teilhard's "proof by complexity" (in "proof from complexity") does not offer a developed proposal concerning divine attributes (as noted previously), his principle "fuller being is fuller union" does provide for a discussion of the attributes of being in its most complete condition and, in this regard, Teilhard applies the predications of complete being to the divine nature. Finally, here is seen Teilhard's idea of divine "immutability" (the impassivity of God); God is Actus Purus, Ens a Se. We also find here his understanding of participated being.

According to Teilhard's scheme, as I interpret it, the principle "fuller being is closer unity" has application at every level of existence. It is predicated of cosmic being, insofar as cosmic being is subject to a process of organization. It is predicated of God, who is the unconditioned actualization of self-unity. God, then, is 'being itself.' Cosmic being is what it is by reason of its particular processive and conditional realization of the defining characteristics of 'being itself.' That is, cosmic being realizes the characteristic unity of 'being itself' the closer it approaches (or approximates) Divine being. In Teilhard's view, "cosmogenesis" (the process of realizing fuller being) is the process of progressive approximation to the characteristics of being itself. This process is envisioned by Teilhard as one of cosmic reality being 'lured' toward the "fullness of being" by 'being itself.' Therefore, God, the 'fullness of being' (being itself the "supreme pole of

consciousness") draws the cosmos toward a union appropriate to its constitution, providing it with ultimate-complete union in Himself, in which however, the absolute distinction between the divine and cosmic orders is retained.

The Ontological Principle as "Linch-Pin" The integration of Teilhard's scientific scheme and his "theology" is provided, in my judgment, by his 'ontological' principle. His observations of the world and his attentiveness to science lead him to account for the cosmic structure according to a pattern of progressive organization in which "thought" emerges. His theological heritage makes him attentive to the causal (purposeful) activity of God. For the purpose of coherently synthesizing what he understands from science and what he believes and understands from his theological tradition, Teilhard appeals to a principle which describes the essence of 'being.' Thus, this principle describes the nature of both cosmic and Divine being, as well as allowing for a discussion of their heterogeneity in which emphasis is given to the dependence and processiveness of cosmic being and the completeness-immutability (in the sense of impassivity) of divine being. In both orders of being, the cosmic and divine, the degree of self-possession (self-unity) defines the degree of completeness.

God and Cosmogenesis

My purpose in this chapter is to achieve some understanding of the integration of the scientific, theological and ontological components within Teilhard's scheme. With special regard to the theological components, I am led to suggest (on the basis of Teilhard's brief suggestion

as the interpretation of de Lubac).that Teilhard accepts, as necessary pre-suppositions, the classical designation (e.g. Actus Purus, Ens a Se, omniscience, omnipotence, immutability) without providing a developed rationale for doing so. At most, he expresses confidence that his cosmological ideas will lead to re-affirming these predications. Teilhard's "physical proof" for the existence of God reflects many of the characteristics of the scholastic proofs for God's existence, particularly the arguments from "motion" and "finality." However, rather than offering his "proof" as a strictly logical demonstration, Teilhard merely indicates that his "cosmogenetic" scheme provides for a "discernment" of divine being, allowing that this discernment is vague and un-defined. Teilhard's "pantheism" is not, it seems, a developed position. Of his own admission his attachment to "true pantheism" arises more from his religious disposition than from reasoned argument. Despite this, the so-called "true pantheism" illustrates both his emphasis on God's omnipresence and providence and his rejection of any position which depreciates the value of the world (themes clearly significant for his pastoral reflections.) The substance of Teilhard's theism, however, is found in his ideas of God's "completeness;" his being 'ahead' of cosmogenesis (the 'fullness of being') luring cosmic being to its appropriate fulfillment. These themes when integrated with Teilhard's scientific scheme provide the structure for Teilhard's system as a "whole."

Teilhard's "cosmogenetic" hypothesis interprets the progressive "concatenation" of particles as effects of a "super-determinism" which irreversibly 'pulls' the cosmic stuff to its completion. At the cosmogenetic level, the path a-b-d along the axis o.y. represents a

tentative suggestion regarding the path and destiny of cosmic history. With the introduction of his theism, however, the grounds for predicating this path appear to assume greater certainty, since this path now manifests God's decided will for cosmic being. The "decided line of probability", under the influence of theological speculation, becomes the determined line of cosmic advance. The ultimate source of cosmic being, regarding its initial and elementary organization, as well as its telos, is the person of God; complete in Himself; not influenced (intrinsically) by cosmic events; who, in His nature, has no need of the cosmos; whose "magnetic" influence is inexorably powerful. The line a-b-d which Teilhard describes according to the "Law of Complexity/Consciousness," depicts the divine creative (unifying) act. Therefore, all species of cosmic being are the outcome of a law of progressive "concatenation" which reflects the decided will of God. I am led to conclude, therefore, that Teilhard interprets cosmic being (the cosmic stuff) to be irreversibly organized through a divinely decided process which draws it to a state of completion, in which the cosmic stuff fully achieves its capacity for spiritual unification.

Prior to moving to a more thorough consideration of the coherence of Teilhard's scheme, I intend to pause in order to consider Whitehead's "theism" and its bearing upon his cosmology.

REFERENCE NOTES TO CHAPTER 3

1. Rideau, p. 142.
2. Philip Hefner, The Promise of Teilhard (New York: J.B. Lippincott Co., 1970), p. 109 f.
3. de Lubac, pp. 202 - 203.
4. Ibid.
5. Ibid.
6. Consideration is given to Teilhard's Christology in the Appendix.
7. Rideau, p. 194.
8. Ibid., p. 220. See also: de Lubac, p. 17 f.
9. Rideau, pp. 479 and 500.
10. de Lubac, p. 180 f.
11. Ibid., 227 f. and 386 (n. 56).
12. Ibid., p. 181 f.
13. Ibid., p. 203.
14. Ibid.
15. Ibid., p. 69. See also: Rideau, p. 188 ff.
16. Joseph Doncell, "Second Thoughts on the Nature of God," Thought 46 (Autumn 1971): p. 351.
17. Ian Barbour, "Teilhard's Process Metaphysics," Journal of Religion 49 (Summer 1969): p. 150.
18. Doncell, p. 359 ff.
19. Rideau, p. 149.
20. See de Lubac, pp. 229 - 230. See also: Rideau, p. 157.

REFERENCE NOTES TO CHAPTER 3 (continued)

21. Rideau, p. 152.
22. Ibid., p. 509.
23. Ibid., p. 511.

CHAPTER 4

WHITEHEAD'S THEISM

This Chapter is devoted to a consideration of Whitehead's theism for the following reasons: (a) to illustrate how Whitehead relates his ideas of God with his cosmology; (b) to establish some grounds on which Whitehead and Teilhard might be compared; (c) to establish some grounds for a Whiteheadian assessment of Teilhard's thought. It might be helpful for the reader to know in advance that this last issue (c) is the principal matter to be considered in Chapter Five.

The procedure for considering Whitehead's theism somewhat parallels my examination of Teilhard's theism. (1) An attempt is made to examine Whitehead's analysis leading to his affirmation of God. (2) Next, attention is given to what Whitehead says regarding the divine nature. (3) As with Teilhard's theism, I seek to discover what Whitehead postulates regarding divine activity. (4) Further, I will consider Whitehead's "ontological principle" and how it is applied to cosmic and divine being. (5) Finally, as at the conclusion of the previous Chapter, consideration is given to the integration of Whitehead's cosmological and theistic ideas.

GOD AS INFERRED

Whitehead affirms that his demonstration for the existence of God is not in the nature of a "proof" (P.R. 405). As I noted in Chapter Three, his "metaphysical cosmology," while originating from experience moves to the level of speculative ideas according to both imagination and the dictates of rationality. The resultant systematic formulations, while tentative,

are judged as to their truth according to their internal or formal coherence and, according to the adequacy of their applicability to human experience. The process of formulating speculative ideas in Whitehead's scheme, is then a process of inductive inference, which, if valid, clarifies man's understanding of his extended experience. In considerations of Whitehead's cosmology, it also became evident that he considers the central cosmological issues to be the order of cosmos, and the structure and processive pattern of cosmic actuality. Further, it is evident that in Whitehead's view, extended consideration of the central cosmological ideas leads to a consideration of God. As he remarks in Process and Reality, "God is the last chapter of cosmology" (402), and likewise in Religion in the Making, "science suggests a cosmology; and whatever suggests a cosmology suggests a religion" (136). Now, if as Whitehead remarks, "rationalism never shakes off its status of an experimental adventure--an adventure in the clarification of thought, progressive and never final" (P.R. 12), it is to be expected that his rational affirmation of God and predicates assigned to Him will share in the tentative results of this "experimental adventure." Therefore, Whitehead's affirmation of God and the predicates he assigns to the divine nature are not presented as final rational proofs for God's being, but applications of his "categoreal scheme" to the problem of divinity, which emerges, as indicated above, the more thoroughly one engages in a comprehensive examination of the nature of the world. Succinctly, God, too, must be explained.

The explanation of God undertaken by Whitehead does not rely upon the norms of doctrinal orthodoxy identified with a particular religious tradition. For Whitehead, the "ultimate test is always widespread, recurrent experience; and the more general the rationalistic

scheme, the more important is this final appeal" (P.R. 21). Clearly, he allows for the insightful contributions of religious doctrines, but his scheme attempts to understand the totality of things according to the categorical ideas drawn from "widespread, recurrent" experiences. I view this as Whitehead's attempt to demonstrate (R.M. 61f) the applicability of his categoreal scheme to the nature of God.

These preceding statements have been intended to introduce Whitehead's theism by calling attention to the inferential character of his discussion of God and his independence from the requirements of particular doctrinal traditions. In addition, both Teilhard and Whitehead agree as to the importance of "direct intuition" or "direct insight" for the development of their particular systems. It has been noted previously that Teilhard appeals to "vision" as an important quality for understanding the structure of the universe and its relations to God. With regard to the latter issue, he appeals to an experience of the "direct intuition" of God (D.M. 36; 46). Whitehead offers something of a similar view. He remarks: "If you like to phrase it so, philosophy is mystical. For mysticism is direct insight into depths as yet unspoken" (M.T. 174). Further, both thinkers seek a rational account of what is 'seen' through intuition or insight. In the case of Teilhard, he does not leave the understanding of the cosmos and God only to those with mystical powers. He is convinced (as seen earlier) that with an increased understanding of the structure and activity of cosmic being, there emerges a horizon at which reason needs to consider the reality of God. It is also the case that he is confident that with the increased knowledge of the cosmos there are grounds providing for an increased recognition

of God. Whitehead's position is similar to this. For him, ". . . the purpose of philosophy is to rationalize mysticism: not by explaining it away, but by the introduction of novel verbal characterization, . . . rationally coordinated" (M.T. 174).

Whitehead and Teilhard, however, offer differing considerations on another issue. For Teilhard, logical inference ("the proof by complexity") merely provides for the postulation of God's existence without providing for the predications assigned to the divine nature. Such predications, borrowed from theological reasoning, are introduced in order to make precise the vagueness of inference or discernment. These predications are, for Teilhard, "normative presuppositions" for theological considerations. Whitehead, on the other hand, although attentive to the doctrines of various religious traditions, does not find in any of these a basis for resolving the theistic problems raised by cosmology.

Up to this point Teilhard and Whitehead show an agreement concerning the need to related 'God-talk' with 'cosmological-talk.' However, while Teilhard makes final appeal to the "necessary presuppositions" of theological 'God-talk,' Whitehead tests the coherence and adequacy of his metaphysical categories without such an appeal. Consequently, both are convinced that knowledge of the structure and pattern of cosmic reality induces questions regarding the possible existence of Divine reality. Their shared confidence regarding the possibility of affirming God's existence is coupled with their convictions that such a postulation (God's existence) is required for an extended interpretation of the cosmos. However, on the issue of Divine attributes, Teilhard makes an expressed appeal to the predications proposed by scholastic philosophical-theology

as he interprets it. Whitehead, for his part, while allowing religious teachings to supplement philosophical deliberations, assigns attributes to God according to the requirement of his "categoreal scheme."

WHITEHEAD'S IDEA OF GOD

Undoubtedly, the most striking feature of Whiteheadian theism is its distinction between God's "primordial" and "consequent" natures. Whitehead's consideration of God is guided by his conviction that God is not an exception to the metaphysical principles, rather, He is their chief exemplification (P.R. 405). Here is found a clear indication that Whitehead seeks to remain within the boundaries of his categoreal scheme which he considers the product of reasoned generalization. Consequently, his consideration of God centers around the possibility of an adequate application of this scheme to the divine nature. Therefore, one is led to expect that his distinction between God's "primordial" and "consequent" natures is required by the dictates of his categoreal scheme. As treated in section four of this chapter, Whitehead's concept of God does not function to save the collapse of his categoreal scheme, but as Hartshorne maintains, this categoreal scheme "must require God."¹ Our intention at this point is to indicate what Whitehead thinks of God, leaving to later his reasons for doing so.

Whitehead's predications of God's "primordial" and "consequent" natures does not mean that he is claiming a real bi-furcation regarding the divine person.² God is a single actuality containing within Himself all that is necessary for there to be societies of actualities. Considered according to his "primordial" nature, God, in Whitehead's view,

is the "unlimited conceptual realization of the absolute wealth of potentiality" (P.R. 405). It is this characteristic of divine individuality to which Whitehead ascribes the fullness of potentiality--anticipating actualization in the novel becoming of cosmic beings. As discussed in Chapter Three the novel becoming of "actual occasions" is a process whereby an entity actualizes appropriate potentialities provided by the "wealth of potentiality" within its real world. This appropriation defines the novelty of an "actual occasion." In Whitehead's view, while each "actual occasion" is itself the potentiality for other novel subjects, the ultimate source of potentiality is not found in the world of contingent and emergent possibility, but in the nature of God. Therefore, in this view, the "wealth of potentiality," while in one sense the universe itself, in a more ultimate sense, is "absolutely" (P.R. 405) contained within the divine subjectivity. It is by reason of His "primordial nature" that God is "infinite" according to Whitehead, i.e., this aspect of God's nature is devoid of all negative prehensions; there is not actual incompatibility or inappropriateness at this side of God's nature. It is this aspect of God's being which is free, according to Whitehead, since as merely 'real' potentiality, it is not specified by the limitations of actuality. But it is also the case, in this view, that this side of God's individuality is "complete" insofar as it is the "absolute wealth of potentiality," having dependence on no other absolute or eternal source of potentiality (P.R. 405). Finally, Whitehead ascribes deficiency to God. This side of his nature is "deficiently actual" (P.R. 405). There is no issue here of God's "imperfection," rather in His "primordial" nature God is complete or perfect. What is

at issue here, however, is Whitehead's contention that the deficiency of God's "primordial" nature is based on its status as "the wealth of potentiality," so that, the predicates of "actuality" are not made of God's "primordial" nature. As primordial, God's feelings "are only conceptual and so lack the fullness of actuality" (P.R. 405). That is, primordially, God lacks physical feelings. Further, as Whitehead remarks, ". . . conceptual feelings, apart from complex integration with physical feelings, are devoid of consciousness in their subjective forms" (P.R. 405). In this sense, when God is abstractly distinguished as to his primordial and consequent natures, in primordial nature God possesses "neither fullness of feeling, nor consciousness" (P.R. 405). The deficiency mentioned here, is the deficiency of actuality, that is, the potentiality 'located' in God's primordial nature lacks the definiteness provided by its objectification in emergent novel subjects. It is the character of 'being' according to Whitehead, to both influence and be influenced by the 'being' of others. This mutuality is also proper to God's being, so that it is a requirement for divine being, just as for cosmic being, that it be in society with other subjects. Accordingly, God's influence upon other subjects is fundamentally attributed by Whitehead to God's being the irreducible principle of potentiality for the novel concretion specifying such beings.

The requirement of mutuality of influence, essential to Whitehead's understanding of "actuality," leads him to predicate of God a "consequent nature." It is in this aspect of His being that God is 'influenced' by the universe. According to Whitehead, God's "consequent" nature "originates with physical experiences derived from the temporal

world. . ." (P.R. 407). Here Whitehead preserves both the "metaphysical" necessity of mutual influence regarding God and the genuine novelty of emergent cosmic being. With the predication of God's "consequent nature" Whitehead maintains that while divine and cosmic being are distinct according to their specified identities, there is no heterogeneity according to the categoreal requirement of passivity, i.e., insofar as God is spoken of as "actual" or as "entity," it must be decided in what ways he is influenced by cosmic being. In Whitehead's scheme, to deny such passivity would require a revised categoreal scheme which applies only to the divine nature. Whitehead's decision regarding divine passivity is that God prehends the emergent novelty of the physical universe according to its value or importance, insofar as it is compatible for synthesis within the divine identity, that is, God saves what is worth saving. Whereas divine subjectivity is indeterminate by reason of the indeterminacy of potentiality ascribed to his "primordial nature," God's "consequent nature" is "determined" by the definiteness of novel actuality prehended by Him (P.R. 407). Further, while, primordially, God is complete, (the completeness of potentiality,) in His consequent nature God is "incomplete" by reason of the yet unrealized actualization of the infinitude of possibility described as His "primordial nature." Finally, whereas God's "primordial nature" is "actually deficient," His consequent nature is "fully actual" (P.R. 407). Again, this distinction is based on what Whitehead understands by "potentiality" and "actuality." Insofar as God is understood as the source of potentiality He is incomplete, i.e., insofar as potentiality is not actualized. Insofar as He prehends the actualization of potentiality, thus ultimately objectifying such

actuality in Himself, God is complete. He is, through the event of prehending emergent novelty, the fullness of being.

According to Whitehead's explanation of God, he is "eternal" and "everlasting" as to his "primordial" and "consequent natures" (P.R. 407). God is eternal, in this scheme, since His condition as to the "absolute wealth of potentiality" contains no determination of the actuality of any specific or particular entity. God's "primordial nature" is the 'eternality' of 'pure potentiality,' whereas, with regard to God's "consequent nature," Whitehead employs the term "everlasting" (P.R. 407). As mentioned in Chapter Three, while novel-emergent actuality attains individual satisfaction in the unification of self-identity through prehending appropriate data (objectifying appropriate factors from the wealth of potentiality,) nevertheless, each emergent actuality becomes one among the many--it increases the many. The very nature of emergent novelty that the many are increased so that while "unity," "harmony" are progressively realized, there is no metaphysical foundation for predicating a total cosmic unity in which the process of unification and multiplication is dissolved. On this basis Whitehead denies any "utopian" condition which is a static state or end of process (P.R. 287). Accordingly, God's "consequent nature" as "passive" and as dependent upon the metaphysically required perpetuity of 'processive becoming,' has the same character of "everlastingness" as the process of becoming itself.

God's self-unity (the specification of divine individuality) is provided in Whitehead's scheme by the integration of what God prehends from within the emergent actuality of the physical world (according to His "consequent nature") with "his primordial concepts" of infinite

possibility, or as Whitehead asserts: "The consequent nature is the weaving of God's physical feelings upon his primordial concepts" (P.R. 407). Attention is now given to a consideration of this "integration" or "weaving," since according to his explanation of this process Whitehead applies to God what is required by his metaphysical scheme, as well as furthering his interpretation of the mutuality of influence between divine and "cosmic" actuality.

My interpretation of Whitehead on this issue of the integration of God's "primordial" and "consequent natures" is that it is illumined by what he says are the first and third "characters" of an actual entity (P.R. 105), namely, the prehension of data from the past and the character of "satisfaction." If, as Whitehead maintains, God is to be explained according to the requirements of his categoreal scheme, so that the predication "actual entity" is appropriately applied to God, it must be understood how the characteristics of "actual entities" are adequate to the divine nature. The second character, that of "subjective aim" becomes my concern in the following section where I consider God's activity or function regarding the cosmos.

Prehending the Past

An entity prehends data which is suitable for objectification, which, in Whitehead's scheme, presupposes that the data in question is appropriate for objectification prior to its novel integration in another subject. This indicates that a subject prehends data which comes from the past. Likewise, in this explanation, God prehends completed novel actuality appropriate to His nature (i.e., the actuality manifests an intensity of value or importance appropriate to God) "after" it has been

objectified as a novel cosmic subject. As Whitehead remarks, "God is conceived as originated by conceptual experience with his process of completion motivated by consequent physical experiences initially derived from the temporal world" (P.R. 407). It is this divine prehension which gives value its everlastingness as well as preserving the genuine novelty regarding cosmic subjects, in that the emergence of novelty is not fore-known or fore-caused by the divine will. In this account God's "omniscience" is of completed actuality and, as indicated above, completed actuality does not arise until subjects appropriate data relevant to their own identity and provide relevant data for the identity of other individuals.

Now, self-identity, although initially grounded in God's creative act (as discussed below) arises according to the process of becoming which is advanced by the subjects' objectification of appropriate factors from its world. God's prehension of completed actuality according to Whitehead's view, indicates how it is that God and the cosmos are mutually dependent upon one another (P.R. 411). For, if mutual influence requires both passivity and activity, and if God is said to be 'actual,' His being is necessarily influenced by the societies of beings outside Himself. For Whitehead, it appears, the predication of "immutability" is inappropriate to any "actual entity," since to be "actual" is to be both influenced by and to influence one's actual world.

My concern here has been with the issue of the world's influence on the divine nature. I have sought to emphasize Whitehead's position that at the side of God's "consequent nature" His self-identity "becomes" by His prehension of relevant data from the totality of things. "It

is as true to say that God creates the world, as that the world creates God" (P.R. 410). The completed account of the divine nature, however, requires some understanding as to the integration of God's primordial and consequent natures, since as a unified entity, it must be understood how God's two aspects (or polarities) are synthesized in self-identity. However, the third characteristic of "actuality," namely, "superjective character" (P.R. 105), may hold the key for gaining some understanding with regard to the "weaving" of God's physical feelings upon his primordial concepts" (P.R. 407).

SUPERJECTIVE CHARACTER

That God is the "absolute wealth of potentiality," from the side of His "primordial nature," indicates Whitehead's position that God does not "derive" His conceptual feelings, since "eternal objects," "the pure potentials for the specific determination of fact," are, in their fullness, constitutive of the divine nature (P.R. 410). In Whitehead's interpretation of God, He is initially identified as the source of potentiality, in that, the metaphysical-cosmological categories require an account of the locus or the ground of potential determination. Therefore, these categories require, at least, according to Whitehead, God's "primordial" nature. However, the complete account of God is provided by the predication of His "consequent" nature. At the side of His "primordial" nature God is "complete," i.e., the completeness of "absolute potentiality." However, at His "consequent side" God is "incomplete," i.e., this nature is subject to the ever more definite realization or expression of the "forms of definiteness" (P.R. 26). Therefore, divine

self-identity and the divine function are described by Whitehead according to four phases (P.R. 413). (1) The first phase relates to God's primordial nature which is the ground of conceptual origination "deficient in actuality; but infinite in its adjustment of valuation" (P.R. 413). (2) The second phase concerns the physical origination in which there arises a multiplicity of physical entities. The determination of these entities is conditioned by the first phase. (3) The third phase concerns the "everlastingness" of these entities insofar as they are prehended by God. (4) The final phase concerns the completion of the creative action itself. The divinely prehended actuality "passes back into the temporal world" (P.R. 314) becoming available to each temporal actuality "as an immediate fact of relevant experience" (P.R. 413). In summary Whitehead holds that the divine reality (God as primordial origination of potentiality) is transformed into physical actuality. Further, "what is done in the world is (then) transformed into a reality in heaven. . . ." (P.R. 413). Finally, ". . . the reality in heaven (then) passes back into the world" (P.R. 413). Therefore, the integration of God's "primordial" and "consequent natures" is the passage from the (1) wealth of potentiality; (2) through "ingression" into actuality of these indefinite forms of definiteness; (3) to the everlasting objectification of actuality in God (P.R. 413). Finally, the "pragmatic value of his (God's) specific satisfaction" (P.R. 106), i.e., the "completion of God's nature. . . ." (P.R. 406), is dependent upon God's prehension of completed physical actualities and his influence upon the individuality of various temporal entities (P.R. 106). In this sense God's being finds its completion through the mediatorship of the physical world

insofar as the primordial forms ("eternal objects") are actualized in the cosmos. In this sense, the passage from potency to act is not an intra-divine process but requires the world as the locus for physical actualization.

THE DIVINE ACTIVITY

In the previous sections I have concentrated on Whitehead's consideration of divine mutability or passivity. I have referred to his suggestion that the predication of completeness applies only to God's "primordial nature" which contains the fullness of potentiality. Finally, the predication of "immutability" does not apply in this view, to the divine nature as a whole, since God as "actual" is influenced by the emergent actuality of novel physical entities.

Whitehead's discussion of the divine nature proceeds by way of inference according to the requirements of his metaphysical-cosmological categories, at the same time claiming this inference is sufficient to provide a basis for several fundamental predications about the divine self-identity. While Teilhard also holds to an inductive inference of the existence of God (likewise required by the categories of cosmogenesis) it is his view that such inference (the "proof by complexity") achieves a limited range of applicability. The limitations of the "proof by complexity" do not appear grounded in any lack of confidence in human reason, but in the limitations of knowledge about the nature of the cosmos. In this regard, Teilhard considers the matter of predication to be the work of theological reasoning. It also seems clear at this point (with more said of this in a later part) that, whereas Teilhard is confident that a more advanced understanding of cosmic being will confirm and clarify the classical

understanding of God, Whitehead contends that his reconstructed cosmology requires a reconstructed understanding of the nature of God.

My attention now turns to what Whitehead says of God's activity with regard to the universe. In Teilhard's theism I discussed his interpretation of God as "creator" and "lure" of cosmic being. Similarly, these two themes are central in Whitehead's theism.

God as Creator

In neither Teilhard nor Whitehead is there a concern with basing their understandings of creation entirely on the classical phrase creatio ex nihilo sui et subjecti, nor does either thinker confine his thoughts to a single creative event. In Teilhard's view, "to create is to unite," and divine creativity is not a 'once and for all event or act,' but a perpetual influence on cosmic being to the ultimate concatenation of the universe and God at Omega. However, "creation" is an act proper to God, and strictly speaking, the term "creator" does not apply to any being except God.³

Whitehead's view is distinct from that of Teilhard. The category of "creativity" is applicable to each actuality whether divine or cosmic (P.R. 25). Accordingly, both God and cosmic being have specialized creative functions and both are creatively influential on the other. This application is required by Whitehead's understanding of actuality which, in order to account for self-causation and "novelty," demands an appropriate self-determining activity for all actuality. In effect this application denies any designations of a single creative act which exclusively determines or defines self-identity. In the Whiteheadian

scheme of things, it is as true to say that God creates the world as it is to say that the world creates God (P.R. 410). I have noted previously that the world "creates" God, insofar as it is in a process of self-causation aimed at novel self-identity which is objectified through God's prehension of it. God's creation of the world is primarily, in Whitehead's system, His provision of "initial subjective aim" for each entity.

Whitehead remarks that: ". . . the initial stage of its aim is an endowment which the subject inherits from the inevitable ordering of things, conceptually realized in the nature of God" (P.R. 285).

"Subjective aim" is the principle of self-identity, in that it conditions "feeling" and, in Whitehead's view, there is an identity of how a subject "feels" with what it is. In this sense, "subjective aim" is both the principle of limitation and the principle of emergent originality. Accordingly, a subject receives its fundamental identity as transferred from the primordial nature of God, so that initially, an "actual occasion" represents an actualization or realization of pure potentiality which is God's primordial nature. The creative process, however, is not confined to the inheritance of an elementary ordering or self-identity (P.R. 288). As Whitehead indicates, the "completion" or "satisfaction" of "self-identity" depends on the self-causation of the subject-superject (P.R. 59). Therefore, "for God to create" means that God provides initial and elementary self-identity from his "wealth of potentiality," while the activity of completing self-identity is proper to the individual subject (as self-creating,) allowing it to attain satisfaction according to its prehension of appropriate elements from within its actual world. Divine creativity here, as in Teilhard's scheme, is a perpetual activity indicative of

God's primacy, since in both Teilhard and Whitehead God is the ultimate principle for both ordered subjectivity and the elements necessary for processive complexity and novelty. However, Whitehead unlike Teilhard does not envision divine creativity as including and determining a specified telos (see below). In Whitehead's scheme, telos (finality or satisfaction) while initially grounded in divine "vision" is, individually, the responsibility of the self-causing subject. Further, the "infinite of possibility" is only theoretical in Teilhard's system since, as his scheme develops, it is clear he discovers a defined route of cosmic emergence which, he argues, indicates a final and defined future state of affairs according to divine specification. In Whitehead, the "fullness of potentiality" is absolute and real, so that, while the divine "vision" is of orderliness, unity and value, nevertheless there is no basis for predicating either a specified final state of affairs or an actual divine decision defining a single specified term of cosmic completion. If such a limiting definition is predicated by Whitehead, it would alter the property of self-causation and novel actualization, since the emergence of subjects would be in response to a transcendent divine decision defining self-identity. It appears, in Whitehead's view, that the divine decision is relative and partial. That is, while it provides the initial ground for self-identity, the actual completion of self-identity is proper to the prehending subject.

At this point an important contrast between the views of Teilhard and Whitehead comes to light. Teilhard's view specifies the telos of cosmogenesis to be to the unity of the Weltstoff, specifically the realized unity of the Weltstoff's psychic character. In effect, Teilhard clearly

limits the potentiality for telos to the ultimate unity of "thought." He specifies this limitation both according to the aspects of "radial energy" and the creative activity of God. The cosmic advance is forward and upward, that is, as advance toward greater complexity and the higher unity of consciousness.

Whitehead, on the other hand, claims: (1) everything which is not logically self-contradictory is possible; (2) some potentialities have become and are becoming actual; (3) nothing actual ever ceases to be actual. In this sense, the "infinite of potentiality" is constitutively more vast than actualization and is never exhausted by the finitude of physical actualization. This being the case, (along with Whitehead's claim for God's respect for the self-causation and freedom of cosmic subjects) no specified telos for the cosmic stuff is discerned nor pre-dicated. Rather, each actualization, while an instance of individual unity, also adds to the multiplicity of possibilities before the world for its continual process.

The specification of future possibilities (limiting these to one state of affairs) is what I find Teilhard claiming at the levels of both his cosmology and theism. Whereas, I find Whitehead claiming a continual process in which individual satisfaction (unity or self-identity) is itself an addition to the multiplicity of occasions available for objectification in other subjects. Whitehead, also, seeks to justify this claim at the levels of both his cosmology and theism.

My intention in this chapter is to consider Whitehead's theism according to the pattern of my earlier consideration of Teilhard's theism. The issues centered in my comparison of Teilhard and Whitehead

(just concluded) will appear again in the final chapter. My attention now turns to Whitehead's description of God as 'lure' for feeling, an issue on which Teilhard and Whitehead offer reflections.

God as 'Lure' for Feeling

God as creator is the "principle of concretion" i.e., He accounts for the movement from indeterminacy to the initial determination of actuality. According to Whitehead, however, merely making available initial determination does not complete the divine function regarding cosmic being. In the Whiteheadian scheme there is an identity of activity and being, so that, to be actual is to be processive. Accordingly, the provision of initial "subjective aim" does not exhaust God's function or His process. He is processive insofar as He prehends the novel value emerging among actual occasions, but he is also active as the "source of ideals" for cosmic becoming. Thus, His presence is "immanent" in the experience of each entity.

"Actuality," as noted, is participatory in character, so that the emergence of novel self-identity is not an isolated event. Such emergence requires "society," since the becoming of individuality requires the prehension of appropriate data available with an environment. In Whitehead's theory there is no "simple location," but every subject is a potential for the becoming of other actualities (P.R. 160). This social relation applies also to God. His actuality participates in (is related to) other actualities. Further, Whitehead recognizes "appetition" in actual entities, described according to his idea of "subjective aim" (the vision or expectation of increased synthesis or self-identity.)

It is the character of actuality to seek greater novelty. These ideas of participation and appetition call for further consideration of God's action regarding the cosmos. God participates in the life of cosmic being (1) according to His "primordial nature" God is the ground of order in the cosmos, i.e., He provides for the compatibility and incompatibility for actualizing "eternal objects" (P.R. 288); and (2) by prehending the completed actuality of cosmic subjects according to His "consequent" nature. Therefore, the realization of value or ideals by cosmic actuality is the actualization and initial objectification of the possible values and ideals said to constitute God's "primordial" nature. Thus, the divine nature makes process possible and together with the "selective activity" of subjects provides the theoretical framework for processive advance.

Attention needs to be given to what Whitehead says regarding "subjective aim" and his application of this characteristic to God. Again, "subjective aim" is the "subject or entity itself determining its own self-creation as one creature" (P.R. 86). I have discussed previously in what sense God is a "creature," i.e., "as prehending, for his satisfaction," the emergent actuality of cosmic subjects. As actual, and therefore as participatory, God's subjectivity is related to the cosmic society of entities, insofar as His "subjective aim" (His self-identity) "completed" by the actualities He "transcends" (P.R. 410). God's "subjective aim," His appetite for "completion," is directed toward the actualization of the "absolute wealth of potentiality" which is "his primordial nature." Such actualization takes place through the

'mediatorship' of the concrete world in which potentialities are actualized. Therefore, God's completion is the processive elimination of the deficiency of His primordial nature, by making available to the world of concrete being the fullness of potentiality to be actualized. As Whitehead remarks: "The world is the multiplicity of finite actualities seeking a perfected unity" (P.R. 411). Also, "what is inexorable in God is valuation as an aim towards order" (P.R. 286). The seeking of "perfected unity," therefore, is grounded in (and in response to) the divine aim toward order and value. Therefore, the "completion" of divine subjectivity, requires that God make available for concrete actualization, the fullness of potentiality. The predication of God as "lure for feeling" is required then, both for the processive advance of concrete beings and the "completion" of divine being. Without the intervention of God "the course of creation would be a dead end of ineffectiveness with all balance on intensity progressively excluded by the cross currents of incompleteness" (P.R. 288). Or again, "apart from the intervention of God there could be nothing new in the world, and no order in the world" (P.R. 288).

The divine "loyalty" or "fidelity" to the universe also appears to be required by the principles by which Whitehead explains the totality of things. In this sense it is necessary that God be loyal for the sake of His own identity, which depends upon the emergent novelty of concrete beings. To disregard the cosmos would, according to the metaphysical ideas involved here, effectively render God's selfhood incomplete.

At this point another issue arises which distinguishes Teilhard and Whitehead. For both thinkers, God is "ahead" of creation as the lure for more complete actuality. Their respective "theisms" consider

God less as a "prime mover" than as the principle of finality drawing cosmic being toward its appropriate satisfaction. But Teilhard's model, as I have indicated, is that of a 'magnet,' powerfully drawing the Weltstoff to its terminal satisfaction at Omega. The process of 'being drawn' has many phases, each characterized by a more intense expression of psychic or sentient properties. The important issue here is not the idea of 'magnetism,' which could even apply to Whitehead's account, but that the term of cosmic existence is defined and irreversible. For Whitehead, God is 'ahead' as "lure for feeling;" as "lure" for greater being. The appropriate model here might be that of 'planter' and 'harvester' implied throughout Process and Reality, especially in his chapter "God and the World" (P.R. 403-413). This model (reflecting a New Testament metaphor), is metaphysically explained by Whitehead's ideas of God's "primordial" and "consequent" natures. The potentialities for the growth of values is made available to the cosmos, but the maturation (satisfaction) of these potentialities is not determined. As self-causing subjects, "actual occasions" can reject the divine vision of value. The world recognizes the "obstruction" of evil (P.R. 401). Teilhard also recognizes an 'obstruction.' However, for Whitehead, the divine vision is relative to emergent subjects as individuals which join, according to mutual influence, to provide a more intense organic cosmic society. But, Whitehead is prevented from envisioning a single term of satisfaction, since each novel entity, according to its self-determination, contributes to the "multiplicity" of cosmic beings. For Teilhard, the lure of God fosters a single epoch of complete unification for that portion of the Weltstoff which has escaped entropy because of the dominance of psychic characteristics. It must also be noted that for Whitehead, the "absolute wealth of potentiality" is indeterminate

in the "primordial" nature of God. Whereas for Teilhard, the 'wealth of potentiality' is specified in the radical constitution of the Weltstoff, so that the potentiality for "cosmogenesis" is not indeterminate, that is, left to the free self-determination of individuals, but this potentiality is specified, at least according to the Weltstoff's telos, namely, the consummate unification of its essential psychic character. The actualization of all other potentialities (increasingly advanced or complex subjects) is in response to the gradual actualization of the single and central potentiality, namely Omega. Therefore, for Teilhard, the cosmic process is limited by the eventual actualization of this primordial potentiality, so that the history of the cosmos is completed with the actualization of the potentiality for intensified unity. In Whitehead's scheme, the absolute wealth of indeterminate potentiality means that concrete beings achieve their appropriate completions (satisfactions) within a context of a variety of possibilities (P.R. 103). Again, it should be noted that these appropriate satisfactions, while responsive to the divine aim at order, are varied or novel according to the self-causation of the self-determining subject.

God as Savior

The variety of cosmic "satisfactions" are "everlasting" by their "objective immortality in God" (P.R. 409). God saves the novel actualizations capable of objectification in His "consequent" nature (P.R. 408). The act of salvation, in this regard, is described according to God's "memory," so that the "good" done in the universe (the beauty and harmony of cosmic being) is objectified (or, in this case, divinized) by God's

appropriation of it (P.R. 411). The good done in the world, the emergence of true value, does not pass away into insignificance or "triviality" (only evil does this P.R. 401), but is "gathered up" into the divine being, nourishing divine life and made available as the source of future novel actualization (P.R. 411).

In both Teilhard and Whitehead there is a fundamental grounding of confidence in God as 'savior.' In Whitehead, this ground is found in the requirements of his metaphysical categories as applied to God. Since, if God's life is related to and dependent upon the emergence of value in the universe, and if His life is nourished by His prehension of such value, then an assurance is provided that whatever is of value in the cosmos is divinized (objectified) in God's subjectivity. For Whitehead, the understanding of salvation is linked to an understanding that God's life is nourished by our contributions of value which return to nourish the continuing life of the cosmos.

Teilhard's view is not altogether distinct from that of Whitehead. The ultimate salvation which Teilhard envisions is found at Omega. At this "point" the cosmos is divinized by its consummate union with God. The realization that the path of cosmic history is moving toward this "point" according to God's will, should provide confidence to man that his deeds (his contribution to cosmic life) are not of ambiguous merit or importance, but that human contributions to further unity correspond to the fundamental divine will for the universe. In both thinkers, salvation has to do with the divine acceptance of human activity and, in neither thinker, is there a pre-occupation with personal-conscious

eternal beatitude. For Whitehead the aim is increasingly intense order, harmony and beauty. By our actions we become models for the novelty and value of others, as well as contributors to the divine life. For Teilhard, our human actions (particularly those fostering the rise of communality) contribute to the divine plan for consummate-cosmic salvation. Consequently, Whitehead and Teilhard consider human salvation as the ultimate relinquishing of self-pre-occupation in favor of contributing to the more intense union of the totality of things.

The difference between Whitehead and Teilhard on this question of salvation is that Teilhard discovers an irreversible path toward cosmic unification, which under the clarifying influences of faith and theological reflection provide the ground for confidence in God's saving action. Unlike Teilhard, Whitehead does not appeal to the confidence of theology. In the universe there is no clearly defined path of cosmogenesis, only the ambivalent emergence of harmony and suffering. The self-causality of actuality with its ambiguity of values and relentless suffering emerge along with the self-caused beauty and harmony in the universe. Neither Whitehead nor Teilhard refuses to recognize the presence of disorder and suffering within cosmic life. However, whereas Teilhard stresses successes over failures, Whitehead appears to stress their delicate balance.

THE ONTOLOGICAL PRINCIPLE

As noted in the previous chapter in Teilhard's system, the integration of science and theology is provided by his understanding of 'being,' systematized by what I call his "ontological principle," namely, "fuller

being is fuller union." In Whitehead's system, which is explicitly a metaphysical one, there is also an effort to integrate his cosmological and theistic ideas. As with Teilhard's scheme, Whitehead, in the name of comprehensiveness and coherence, seeks to relate predications about the world with predications regarding the God of this world. In Whitehead's system his "ontological principle" serves as the linch-pin between his systematic cosmological ideas and his systematic ideas regarding God, just as it is my contention that Teilhard's 'ontological principle' bridges the gap between his view of the cosmic and divine orders. In Whitehead's scheme, however, the case for his "ontological principle" is developed according to the note of "necessity," i.e., this principle, if it is comprehensive and coherent, requires both the cosmic and divine orders insofar as the world as experienced and known is the composite of actual occasions whose activity requires a source of potentiality. While not offering a "proof" for God's existence, it certainly appears that Whitehead's "ontological principle" requires, at least, a "primordial actuality" for cosmic being (P.R. 405f).

The question at the heart of Whitehead's metaphysical-cosmology is: "How is there originality" (P.R. 123), which is a cosmological question insofar as it asks about the transformation from "conceptual appetition" (i.e., the vision or expectation of ideals) to "physical realization" (i.e., the actualization of primordial ideals in the universe.) Therefore, Whitehead's scheme is largely concerned with the transition (the "ingression") of conceptual fact into physical facts; the transition from indeterminacy to determinacy; or, the objectification of potentiality. As noted previously, Whitehead's pursuit of these questions and issues

begins from reflection on human experience, so that,

The elucidation of immediate experience is the sole justification of thought; and the starting point for thought is the analytic observation of components of this experience. (P.R. 7)

As noted previously, the irreducible components of experience (these "drops of experience") are defined by Whitehead as "actual entities." These are the "final real things of which the world is made up." Without these "final real things" as "drops of experience" there is "no reason" according to Whitehead, i.e., there are no "facts," no order, no intelligibility (P.R. 29). Further, Whitehead asserts that "everything must be somewhere" (P.R. 60), whether actually or potentially. As he views it, the emergence of "fact from non-entity" is a contradiction (P.R. 60). Therefore, to be a "thing" is to be "somewhere." To be an actual thing is to be "positively" somewhere, i.e., to be determinate, or definite; whereas, to be a potential thing is to be potentially everywhere, i.e., indeterminate or undefined except as a potential for the becoming of another entity. Whitehead's "ontological principle" seeks to account for this transition from potency to actuality, from the conceptual to the physical order. It indicates that both potentialities and actualities must be "somewhere."

The "ontological principle," is not to be understood in isolation from his "principle of process," or his "principle of relativity." As indicated previously, "how an actual entity becomes constitutes what that entity is." This is the principle of process (P.R. 28). Further, Whitehead denies any idea of "simple location," so that "somewhere" is not considered as a locus isolated from the actual world. The actual world is the nexus of things, with each thing "housing" its actual world

and being the potential for other becomings. This is the "principle of relativity" (P.R. 27, 62, 65, 171). According to Whitehead the "ontological principle" helps define "cosmological being" in that it is the "principle of efficient and final causation" (P.R. 29), so that the determination of particular actualities (their being somewhere) is provided either by other actualities within a particular actual world, or by the "subjective aim" of the particular subject. To be somewhere is to be caused by the character of another or by the particular character of self-identity. To "search for a reason is to search for one or more actual entities" (P.R. 29), i.e., to search for the efficient and final causation conditioning the self-identity and locus of an actual entity. This also means to search for the causation of the transformation from conceptuality to physical realization or, the transition from potentiality to actuality.

The "ontological principle," requiring that everything be somewhere and requiring the search for the efficient and final causation of definiteness, requires an identification of the source of potentiality. If nothing floats into the universe from nowhere (P.R. 60), then it is necessary to identify the ultimate source of indefinite conceptualization required for physical realization. The identity of this ultimate source is the "primordial nature" of God. According to Whitehead's "ontological principle," it appears that God's "primordial" nature (the "absolute wealth of pure potentiality" and the source of potentiality for every becoming) is everywhere. It is the ultimate source for the "ingression" of every potential in the becoming of every entity.

The search for the ultimate efficient and final causation concludes with the predication of God's "primordial" nature as the source of potentiality, and as the source of "vision" luring cosmic being toward appropriate satisfaction. In this sense God is the ultimate cause of the universe. It should be remarked here, that the God identified or inferred by this reasoning process is not the personal God of religious experiences. This reasoning process merely leads to the (necessary) predication of an ultimate source of potentiality. At this point, no consciousness or definiteness is predicated of God. We are confronted only with an indeterminate source of possible determination, which is an abstraction from the full being of the one God.

The "ontological principle" is applied to God by Whitehead, insofar as God is not an exception to the metaphysical categories, but their chief exemplar (P.R. 405). God is an actual entity among other actual entities. Accordingly, one must seek to understand how Whitehead understands the efficient and final causation of God's identity or definiteness. As noted, Whitehead makes a claim for the reciprocal causation of God and the cosmos. God is the efficient and final cause of cosmic actuality insofar as he is the ultimate source of potentiality (conceptuality) and vision for the world of actual entities. But as an "actual entity," God is in relation to the actual world and thus His identity is partially determined by what He grasps of the physical realization of His contribution to the world. In this case, the world by its emergent actuality, i.e., the physical realization of the wealth of God's primordial conceptualization, contributes to the divine satisfaction. In this sense the world is the efficient causation of God's "consequent" nature.

The final causation of divine life must be considered according to an application of the second characteristic of an actual entity, namely, "subjective aim." This is the principle of self-identity (what an entity is according to how it becomes), i.e., the self-determination of its own self-creation. The self-determination of God, i.e., the fulfillment of his experience by his reception of the multiple freedom of actuality into the harmony of his own actualization" (P.R. 411) is the process "completing the deficiency of his mere conceptual actuality" (P.R. 411). So that, the elimination of the deficiencies of His "primordial" nature is accomplished by God's prehension of those physical realizations in which He recognizes values compatible with His nature, thus divinizing the values emerging from the self-creation of the universe (P.R. 411).

SUMMARY

By identifying God as an "actual entity" Whitehead is led to consider how the characteristics of actuality apply to Him. Further, by developing his system according to a question concerning the transition from "conceptual appetition" to "physical realization" Whitehead is led to identify the "absolute wealth of potentiality" as the "primordial" nature of God. Thus Whitehead's initial predication of God is made according to what he considers is required for a solution to the question concerning the transition from potency to act. That everything must be somewhere is central to Whitehead's analysis, and the "somewhere" of potentiality is ultimately the "primordial" nature of God. But if God is an "actual entity," and if an "actual entity" is identified by its "feeling" of its actual world, then in what sense does God "feel?"

According to Whitehead, God prehends the emergent, determinate novelty of physical actualities. In this sense God "becomes," insofar as He objectifies (divinizes) the actuality of the cosmos. The full actuality of God is emergent, in that, by His prehension (appropriation) of cosmic actuality, the "actual deficiency" of His "primordial" nature is gradually eliminated as the wealth of potentiality achieves "physical realization."

Whitehead's explanation of God has important consequences for his cosmology. Most importantly, with regard to this study, no specified single teleological point can be predicated. The cosmic process which is ultimately the physical realization of God's "conceptual" pole displays a general pattern of original or novel definition or identity. But it does not display according to Whitehead, a single specified teleological pattern which imposes itself on the cosmic process. Unity, harmony, beauty, like the actualities of which they are predicated, are novel expressions and not "accidental" manifestations of a single determinate ideal.

REFERENCE NOTES TO CHAPTER 4

1. Charles Hartshorne and William Reese (editors), Philosophers Speak of God (Chicago: University of Chicago Press, 1953), p. 273.
2. Ibid., p. 279.
3. de Lubac, p. 227 f.

CHAPTER 5

A COMPARISON OF TEILHARD'S AND WHITEHEAD'S

VIEW OF REALITY

Throughout this dissertation I have discussed both Teilhard and Whitehead individually and at appropriate places I have offered a comparison of their ideas. I have sought to indicate on what points they appear to agree and on what points they differ. It is now my intention to concentrate on the central issues which I think indicate the particularity of each system thus illustrating the grounds distinguishing these two systems.

I will first raise a question about the coherence of Teilhard's scheme. Second, I will seek to discover why Teilhard and Whitehead offer differing cosmic/theistic views. Third, I will seek to develop a Whiteheadian critique of Teilhard's position. Fourth, I will offer a concluding summary and some observations regarding the issues to which these two thinkers address themselves.

Summary of Teilhard's Theory

It has been mentioned at several places in this dissertation that Teilhard seeks to provide a comprehensive and coherent account of the pattern and structure of cosmic being. It has also been noted that his account includes, as an integral issue, the "problem of God." I have stated that Teilhard's scheme of "hyper-physics," as a whole, is

intended as a coherent integration of both his systematic description of the cosmos and his understanding of the divine nature. In interpreting Teilhard I have sought to identify the issues involved in this integration and have proposed that Teilhard's system includes the themes of cosmogenesis, theology and ontology. My contention has been that the integration of these themes is primarily provided by Teilhard's view that "fuller being is closer union." The themes of cosmogenesis indicate what Teilhard discovers about the cosmos, principally its emergence from a condition of disjunction to a condition (gradually realized) of conjunction. The process of conjunction is described as the emergence of the constituent psychic interiority of the "stuff" out of which the universe is organized. According to Teilhard's view, the cosmos (at least that portion of the Weltstoff escaping entropy) proceeds toward a greater realization of unity according to its psychic centers. The cosmic process is systematically explained according to what Teilhard calls the "Law of Complexity/Consciousness."

The emergence of unity according to the cohesion of increased psychic characteristics, reveals to Teilhard a source of this cosmic pattern--a source which is the efficient and final cause of cosmic organization. For Teilhard increased knowledge of cosmic development reveals the "problem of God." Such a realization does not, however, provide precise knowledge of the attributes of God. (Although his position does allow for a preliminary suggestion that God is the personal center and the ultimate cause of the psychic and unifying character of the cosmic stuff.) The precise understanding of God's nature requires attentiveness to the wisdom of theology. In addition, theological considerations require

attentiveness to the "necessary presuppositions" of theological understanding. Consequently, Teilhard's apparent 'reconstructed cosmology' seeks increased precision by appeal to theological statements, particularly those affirming divine transcendence and immutability. Thus, Teilhard appears to incorporate into his system the predication of God as Actus Purus. At the levels of scientific and theological reasonings it is found that Teilhard seeks to effect an integration of an apparently 'reconstructed' cosmology and an apparently 'unreconstructed' theology.

In attempting to understand how Teilhard provides such an integration I have offered the conclusion that he appeals to a principle which appears metaphysical in character, namely, a comprehensive principle regarding being: "fuller being is closer union." Teilhard applies this principle in such a way that cosmic being proceeds toward its appropriate completion of unity and this process is dependent upon the causal influence of divine being who, as theology tells him, is essentially the fullest of being, the fullest unity of self-possession and power. Teilhard considers divine "power" primarily as the creative 'luring' of cosmic being to its designated completion. Knowledge of the cosmos merely indicates or reveals the ground for logically affirming God, while theological considerations clarify and make precise the appropriate predication regarding His nature and activity. Now, Teilhard gives less consideration to the issue of God's "efficient" causality, than His activity regarding "final" causality. Creation is not a 'once and for all event,' but a divine act which is continual and signified in cosmic evolution. By emphasizing God as final cause, Teilhard describes God as creatively drawing the cosmos to its particular telos. Teilhard does not challenge

classical predications about God, but emphasizes God as complete being, irreversibly and 'magnetically' drawing the universe to its fulfillment.

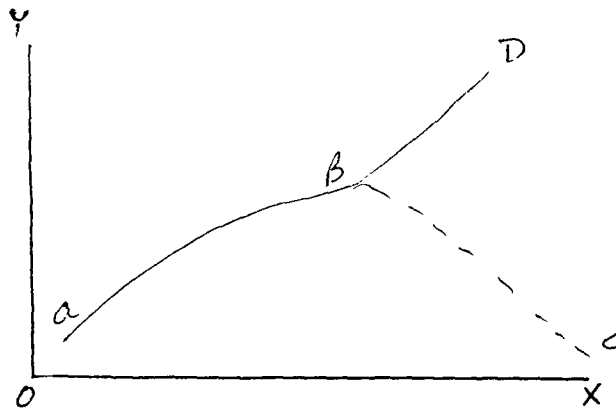
Therefore, cosmologically, Teilhard discovers a gradual trend toward increased complexification and sentience. He explains this observation of complexification/consciousness by claiming that the "cosmic stuff" possesses an energy which is psychic in character and whose activity is directed toward a greater manifestation of consciousness and union. From the cosmological point of view, then, the destiny of the Weltstoff (its final cause) is its increased sentience and unification. Theologically, Teilhard proposes that while the discovery and understanding of the Weltstoff's structure and activity raises the question or "problem" of God, nevertheless, in order to resolve adequately this problem, scientific understanding requires the contributions of theological understanding. It is at the level of theological understanding that Teilhard explains God as the ultimate final cause of the Weltstoff's "concatenation" toward completed unity.

The process toward unity, in Teilhard's view, presupposes a principle of unity. The function of this principle of unity (namely, God) is to gather up the disjunctive cosmic stuff and give it greater organization. The gradual historical process by which sentient characteristics come to dominate the cosmic process, therefore, presupposes an essentially complete psychic or spiritual force which provides for the progressive "concatenation" of the cosmic stuff. The gradual realization of fuller union (i.e., fuller being) presupposes the fullest of union (i.e., the fullest of being).

The Question of Coherence

My attempt at interpreting Teilhard calls for a consideration of the coherence of his scheme. I will proceed by examining what his cosmological theory requires regarding God and what his theism requires of his cosmogenesis.

Let me again refer to Figure Two:



This figure (the line a-b-d along the axis o.y.) provides Teilhard's description of the cosmic process as a 'whole.' The line a-b-d represents his alternative to the view of physics (a-b-c). While at one point the line a-b-d is considered tentative by Teilhard, nevertheless, it is also his position that on the merits of his analysis of cosmic development, the path of "orthogenesis" becomes the "decided line of probability" for the cosmic process. That is, he claims to discover and systematize the central energy of cosmic being; the power toward increased synthesis in which psychic characteristics eventually dominate. As his account develops, Teilhard ceases to consider the path of cosmogenesis as merely "probable," but he affirms its irreversibility, since he affirms the constitution of the Weltstoff to be such that its

process is essentially directed toward realizing greater organization and unity according to the power and orientation of its psychic center (A.E. 124ff). The future of cosmic advance is predicated according to the continuance of Weltstoff's historical process, so that, insofar as its development to the present epoch is directed by its interiority, its future is predictably directed according to the same principle (A.E. 125).

Now, Teilhard maintains that his cosmogenetic theory provides an important basis for considering God. The recognition of an irreversible path of complexification leads to a consideration of both its ground and goal. If the cosmic process is one of gradual complexification and sentience, and thus a gradual manifestation of increased unity, both individually and totally, then this process presupposes a principle of unity on which the cosmos is dependent, so that by pursuing the issue of the ultimate ground of cosmogenesis, Teilhard considers that which is discovered in correlation with the law of complexity (A.M. 153).

Three issues are vital to Teilhard's "hyper-physics." First, he proposes the "Law of Complexity/Consciousness." Second, he holds to a theological position reflecting the classical understanding of God as Actus Purus. Third, he appeals to an ontological principle. The first issue, the universal cosmic law, proposes and initially explains an irreversible path for the totality of the Weltstoff, since it is a principle which systematizes the nature of the cosmic stuff, emphasizing its psychic interiority as dominant force. The second issue, God as "complete" (Actus Purus), identifies the ultimate ground of cosmic being and its process, leading to the conclusion that the irreversible

path of cosmogenesis is essentially dependent upon divine creativity. The structure and path of cosmogenesis 'as a whole' is, therefore, determined (as to its constitution and single telos) by divine choice. The third issue, namely that of the "ontological principle," adds support to the theory of defined and irreversible telos. "Fuller being is closer union," as applied to cosmic being, states that according to its essential character, cosmic being proceeds toward greater union, drawn forward and upward by the "fullness of being." Therefore, these three principles summarize what Teilhard detects concerning the developmental pattern of the "cosmic stuff." He discovers this pattern according to an increased knowledge of cosmic structure and its historical development. He discovers and describes the ultimate ground of this pattern within his theological tradition. He finds support for this pattern in his 'ontological principle.' Consequently, it can be said that as a particular system and according to its particular categories, Teilhard's "hyper-physics" is a consistent theory, i.e., it is a position which proposes and seeks to defend a fundamentally established character of the cosmic stuff and its orientation toward a defined telos. Teilhard finds support for this determinate pattern both in his account of the fundamental constitution of the Weltstoff, his account of the divine nature, and his ontology. Since the nature of the cosmic stuff is determined by divine creativity, as to both its constitution, process and term; and since the divine will (in this account) is not subject to physical influences, the telos of cosmogenesis is guaranteed by God's decisiveness.

My consideration of the coherence of Teilhard's scheme centers around his position concerning the irreversibility of the cosmic process.

I have sought to show that his scheme as a whole provides consistent conclusions, although several questions might be raised concerning his methodology. Therefore, the point I am emphasizing is that Teilhard consistently explains his observation of an irreversible path of cosmic organization.

Before moving to an examination of the differences between Teilhard and Whitehead one more issue holds my attention, namely, whether Teilhard's system allows a predication of divine passivity. I take my lead for this consideration from Joseph Doncell's previously mentioned article. My concern here is not with a critique of Doncell's reflections (although he clearly decides in favour of Hegel over Whitehead,,) but with his inclusion of Teilhard within the circle of those recent thinkers raising the issue of God's being influenced by cosmic life, particularly human life.

Such a predication might appear appropriate in Teilhard's scheme, particularly insofar as he discusses mutual possession as characteristic of the union of love. I find, however, this discussion to be less than central in Teilhard's scheme. Insofar as Teilhard's scheme is viewed as a whole, his cosmogenetic theory does not seem to require divine mutability or passivity. God loves the world without being affected by it, since the completeness of his being seems to preclude contributions from the world. The divine function of creating by luring, requires no divine passivity. The beneficiary of this creativity is the cosmos insofar as it progressively realizes the union proper to its own divinely created constitution. The irreversibility of the cosmic advance requires the decisiveness and determination of the divine choice, and if anything,

such irreversibility provides the key to making particular predications of God.

Teilhard's system might be enriched and made more applicable by an idea of divine passivity, but such a predication would alter the major thrust of his system; namely, the irreversible and constant trend of the cosmic stuff toward Omega, which is the distinctive characteristic of Teilhard's system. If Omega is not the defined telos of this irreversible trend, then the Teilhardian scheme must re-evaluate the constitutive character of the cosmic stuff, since this character is consistently related to both his cosmogenetic theory and his idea of God. I will raise this point again shortly. However, the issue I am attentive to here is that the consistency of Teilhard's scheme is such that any possible incorporation of divine passivity cannot eliminate or reduce the defined and irreversible telos of cosmogenesis. The decided influence and emergence of Omega must remain intact in order for Teilhard's scheme to retain its identity, and in his scheme, it appears, the decided influence and emergence of Omega is preserved by the traditional predication of God's immutability.

CENTRAL DIFFERENCES BETWEEN THE WHITEHEADIAN AND TEILHARDIAN SYSTEMS

Throughout this project I have considered points on which Teilhard and Whitehead share similar views and where they differ. It is now my intention to speak of those issues which most clearly distinguish each system. I have made an effort to analyze both the systems of Teilhard and Whitehead at three levels: the cosmological, the theological or

theistic and, the ontological. Each level has its particular emphasis, but more importantly, the completeness of each system depends upon the coherent integration of these three levels. While the similarities between each system are of interest, nevertheless, I am convinced that the differences between each system are of greater significance. Both Teilhard and Whitehead seek to construct a coherent integration of several elements of human experience and understanding in order to provide man with a more adequate system for understanding of the world, God and himself. According to my investigations the Teilhardian and Whiteheadian frameworks provide distinctive ideas at each of the previously mentioned three levels (the cosmological, theistic and ontological) and thus provide distinctive frameworks for a coherent and adequate understanding of the 'totality of things.' In the following sections I will concentrate on the distinctive differences of each system at two consistent levels of systematization, the cosmological and theological.

Cosmological Differences

Teilhard's system is clearly intended to account for a process of cosmic 'becoming' and, in particular, provide some understanding of man as a product of this process and in particular, his destiny as the dominant influence in that process. What stands out most clearly in Teilhard's scheme is the force of the cosmic process ("cosmogenesis"- "orthogenesis"); its constant power---irrevocably directed toward a term of consummate unification. As I understand Teilhard's system, "psychic energy," Omega, the "Law of Complexity/Consciousness" are particular designations of that single drive of cosmic development toward its completion. Clearly, this drive or force is a dominant determinism

(Teilhard calls it the "super-determinism") of which all other determinisms (e.g., physio-biological laws) are expressions. It is also the case, that emergent species (in particular, man) are consequences of this force as it seeks the appropriate organization or structure for an increased expression of its radical psychic character. The human species, because of its advanced cerebral structure represents a summit of complexification and thus a summit of psychic manifestation. The Weltstoff has become conscious of itself. In this theory, while mental acts and freedom emerge with increasing insistence, the human species itself remains a product of the force of this cosmic drive. It appears that the particular character of the human species (because of its mental capacities) is both to recognize and consciously cooperate with the underlying force of cosmic development. Therefore, from the cosmogenetic viewpoint, the path of cosmic development remains irreversible, but it is given to man to take conscious control of it.

Here I find what might be called the moral imperative in Teilhard's scheme. If the cosmos is to attain the fulfillment indicated by its previous complexification, and if man's function is to supervise and contribute to this satisfaction according to his particular mental properties, then it is thrust on man to accept the responsibility for furthering this union by having his acts correspond to the drive toward unity which is indicated by the previous whole of cosmic history. This imperative is clearly a major concern of Teilhard in his Le Milieu Divin (D.M. 62ff). However, as I have indicated previously, while Teilhard is attentive to the human contribution to the force of cosmic advance, the importance of this contribution (self-donation) is subsumed

under the assurance that the cosmos, according to God's creative activity, is directed toward increased union and, indeed, the termination of this process in unity is irreversibly designated.

In order to make clearer these considerations it is necessary to be attentive to two previously considered issues contained within Teilhard's scheme: (1) the factor providing for self-identity and, (2) the environmental factors. The reader needs to be reminded that my intention in this chapter is to offer a critique of what I understand Teilhard's system to propose. In the previous pages and the several to follow, I am illustrating those aspects of Teilhard's system which most clearly distinguish it from Whitehead's and which are the issues to be criticized from a Whiteheadian point of view.

(1) The assurance of the successful termination of cosmogenesis at the appropriate unity called Omega seems provided by what Teilhard identifies as the "principle of individuation." This principle is "psychic energy" which is constitutive of the Weltstoff at all levels of complexity. Therefore, every species or individual, no matter how elemental or complex, has as its principle factor of identification psychic energy. Indeed, the designation of biological species is fundamentally based, in this view, on the relative manifestation of psychic characteristics. The complexity of species which on the one hand supports psychic characteristics is, on the other hand, a consequence of the force of psychic energy seeking increased individual and cosmic unification. Further, the 'lure' (final causation) for the specification of individualized subjects, as well as the specification of the unity of the cosmos as a whole, is a constituent factor of psychic energy. Thus

the factor for individuation (specification) contains a genetic specification of individualized unity and the terminal unity of the cosmos as a whole. Consequently, the term of cosmogenesis (its unity at Omega) does not emerge (theoretically) as one possibility among an infinitude of possibilities. Rather, the term of "cosmogenesis" is contained within the constitution of the "cosmic stuff" itself. Therefore, while the cosmic stuff "tries everything" (P.M. 171), its efforts at selectivity are subservient to the force of "radial energy," which (cosmologically) gives the "cosmic stuff" its particularization and telos.

Systematically, the psychic principle of self-identity and finality provides both the determinate path of cosmogenesis and the organic character of cosmic being. Insofar as the principle of interiority (identity and finality) is the essential identifying factor for the Weltstoff, it exerts a constant influence on cosmic actuality and, in particular, directs the path of becoming (or emergent specification) which characterizes the Weltstoff. Further, the principle of interiority grounds the organic character of the cosmos as a 'whole,' in that, while cosmic being is particularized according to its level of complexification and consciousness, it is also held in organic unity or fusion by the same universal source of identity, process and finality.

(2) The second point which seems to guarantee the continuance of the teleological process and the realization of its term is that Teilhard does not appear to discover any environmental influences capable of decisively frustrating the path of cosmogenesis. Human freedom, chance and evil, while present within and influential upon cosmic being do not have sufficient power to divert cosmogenesis from its

destiny. Human freedom is the product of the developmental process itself and corresponds to a level of completion attained by the interiority of the Weltstoff. The power of human freedom seems confined to the decision of cooperation and non-cooperation with the force of cosmogenesis (F.M. 188ff). However, of itself, human freedom is not capable of frustrating the constitutive teleology of the cosmic stuff, in that this teleology is ontologically prior to, productive of and dominant over, the capacity of human free decisions. The element of "chance" is not capable of frustrating the teleological process, since it exercises no lasting influence. For the same reasons, evil events, whether of human decision or natural occurrences are not decisive against cosmogenesis, since they are the outcome of the cosmogenetic process itself. While momentarily frustrating, evil has no lasting influence, since it is subservient to a process destined to successful completion.

I find that in Teilhard's system nothing is capable of decisively frustrating or altering the decided path of cosmogenesis. The primary internal cause of cosmic being remains constant, with all other causes subservient to this principal cause--as expressions of it and as supports to its final accomplishment.

(3) Whitehead's cosmology differs from Teilhard's precisely on the issue of a decided direction of cosmic development aimed at an epoch or point of consummate union. For Whitehead, the creative advance of actuality is toward "satisfaction." The accomplishment of satisfaction, however, is provided, not by a single and universally defined cause, but by the self-causing activity of each subject. Therefore, the principle of selectivity and limitation is the processive subject itself and not a

single underlying force whose activity gives definition to the subject. As mentioned previously, the rejection of a single determinate path is justified by Whitehead insofar as he provides each subject with its own self-determination. Each subject is causa sui. The novelty or originality of each subject indicates that it is a particular and novel realization of value, beauty, harmony, etc. It is also the case, in Whitehead's system, that emergent novelty, while expressing intensified union, value, etc., by reason of its emergence becomes another element within the multiple of subjects which provide further data for the continuous process of emergent novel subjectivity. "The many become one and are increased by one."

The organic character of cosmic actuality, in this account, is not due to a single cohesive force, but is due to the character of "feeling" appropriate to each subject and its inclusion in an environment in which the actuality of other subjects provides the potentiality for further satisfaction. Therefore, the cosmos is organic according to the capacity of subjects to experience the values of other subjects. Thus the "monads" in Whitehead's system, unlike those of Leibnitz, are "open" to the influence of subjects with their environment (P.R. 63, 97).

The issues of evil, suffering, frustration are considered in Teilhard's scheme under the norm of a single, decided line of cosmic development. The force of energy at the center of cosmic becoming means that systematically, nothing can ultimately frustrate the realization of the decided telos of cosmogenesis. In Whitehead's account, the question of evil, suffering, frustration are considered in a somewhat different light. For Whitehead there is no question of a single specific

cosmic telos being frustrated, since his system discovers no such term. Therefore, if the question of frustration has any importance, it must be considered at the level of individuality, i.e., the failure of particular subjects to accomplish their individual aims. There is no assurance in Whitehead's account that a particular vision of satisfaction or completeness must be realized. The multiplicity of factors in concrescence (particularly the self-causation of a subject and the multiplicity of available appropriate data) make such assurances systematically inappropriate. Further, Whitehead's system makes frustration, suffering, evil and ambiguity virtually normative elements in the becoming of an actuality (P.R. 398). The experiences of suffering and frustration are constitutive of the process toward realized order and value. Systematically, Whitehead intends to account for the transition from the ideal order to that of physical realization and there is nothing in his system to suggest an equality between conceptual ideals and their ingression into physical actuality. The emergence of novelty is not the objectification of the fullness of any potentiality, but an actualization of potentiality conditioned by the identity of the prehending subject. In Whitehead's system, however, the ingression of value (order, harmony, etc.) into the physical world is inexorable, so that while frustration and suffering are partially constitutive of actuality, these elements do not come to dominate cosmic being as a whole (P.R. 401). Order and coherence remain at the heart of things. Further, evil (frustration-sorrow) does not have the strength or character to persist as a dominating influence. When Whitehead says that evil is "trivial," he is not being indifferent to this matter. However, he is reducing the influence of evil to that of

isolated events, thus reducing its potentiality for ingression into other novel actualities. That is, the solidarity of value dominates self-identity, so that evil events lose their strength by passing into insignificance through dismissal by negative prehension. In this case (within the context of the totality of things), evil is rejected within a cosmos dominated by value.

While Teilhard and Whitehead agree that at the fundamental level of actuality, evil or frustration are of no lasting account, nevertheless, their reasons for doing so are distinct. The vision of the cosmos provided by Teilhard leads to a position in which cosmic being, as a whole, is dominated by a single force. This force accounts for the emergence of diverse species as it proceeds to a terminal condition of unifying that portion of the cosmic stuff which has become self-conscious and thus free from the dictates of entropy or de-composition. In Teilhard's view the path of cosmogenesis, despite occasional diversions, is irreversibly drawn toward an assured fulfillment. The apparent evil and frustration in the universe are not of sufficient force to re-direct this irreversible path. The assurance we receive from this account is that as human beings we comprise the highest expression of evolution. We are the products of a force tending toward greater (more intensive) union. It is our function to recognize the power of this cosmic force and to commit ourselves to it by fostering through our actions, the progressive realization of more intense communion with others of our species. Through such an activity of self-donation (working for greater communality,) the deficiencies of ego-centricity and multiplicity are gradually dissipated in favor of greater freedom and unity. The ground

for confidence that such self-donation is the fundamental imperative incumbent on man arises with the understanding of the phenomenon of cosmic history revealing its gradual but decided process toward greater sentience and unity.

For Whitehead man finds himself in a world of multiple beings and values. He finds himself in union with the cosmos, since his own being is influenced by his experience of the world. His experience is novel, since that experience is uniquely defined by the uniqueness of his own identity. Man does not find himself caught up in any single defined path, but he is confronted with a multiplicity of paths and values. He seeks unity, not only in himself, but with his surroundings. He is alone in his uniqueness, but he is in communion with others through his experience. He has a vision, an anticipation of greater or more intense value and harmony, but he is frustrated; he is surprised; he is, at times, successful in the realization of his vision. The imperative incumbent upon man, as upon all actuality, is that he experience; that he be influenced by his universe which expands with ever increasing novelty. The norm for the selection of values is, largely, himself, i.e., the self-appropriation of values he discovers around him.

The radical singleness of purpose which Teilhard finds is unseen by Whitehead. The 'creative advance,' the process toward novelty envisioned by Whitehead, while an inexorable process defining actuality, has the same multiplicity of definitions as the multiplicity of actualities. But Whitehead finds assurances and, in particular, he finds a fundamental assurance for the value and importance of the universe in the actuality of God (P.R. 56). In this, he and Teilhard are quite alike. The distinctive

cosmologies and anthropologies of Teilhard and Whitehead are based on their differing accounts of the principles of process and their particular principles of self-identity. Further, their interpretations of reality are distinguished by their respective interpretation of God.

Differing Descriptions of God

There are some marked similarities between the theisms of Teilhard and Whitehead. As noted in the Introduction to this dissertation, several similarities can be found between the theisms of Teilhard and Whitehead. For the purpose of the following discussion, I call the readers attention to those similarities which have been given consideration within previous sections of my study. Both begin their theistic reflections from the basis of man's experience of himself and the cosmos, moving from their systematic descriptions of nature and man to a consideration of God as the source of cosmic and human life. In this sense they infer God from the facts of cosmic and human actuality. Further, both cosmological views are developed according to their respective emphasis on "process" (the emergence of subjectivity and its defining qualities) and the God of their systems must account in a way appropriate to Him, for this constitutive process. In both cases God's nature and function will be interpreted according to the requirements of "process" as experienced. In this light, both Teilhard and Whitehead consider the divine function primarily as "lure," i.e., drawing the cosmos toward a more intense realization of the divine vision (P.R. 39). God is "ahead" of creation. The metaphor employed here describes God's vision as the source of increased specificity to which the cosmos responds, so

that, according to both systems, the "cosmic advance" is toward a more complete realization of the divine idea of world. On the issues of theology, the kind of actuality for which God is intended to account (viz., cosmic being in process), and the divine function (viz., evoking greater value and unity), Whitehead and Teilhard share quite similar views.

(1) The distinctiveness of their systems primarily occupies me, however, since I am seeking to come to a greater understanding of the particular contributions each thinker makes. The distinctiveness of each theism is grounded by what is required by their respective cosmologies. A large portion of this dissertation has been concerned with demonstrating that Teilhard intends to describe cosmic actuality as a process irreversibly directed to its fulfillment, its telos. Consequently, it can be asked of Teilhard's system: What needs to be said of God in the light of your cosmogenetic theory?

Now, the "proof by complexity" does not settle, as indicated previously, the "nature of God." This "proof" indicates that Teilhard finds that his cosmogenetic theory opens onto a horizon at which a discussion of God seems required. However, the development of this discussion is assigned to the particular competence of theological reasoning. Consequently, on the issue of divine predicates Teilhard appeals to the theological system within that tradition to which he is dedicated. That tradition places strongly reasoned emphasis on divine transcendence and immutability. The predication that God is Actus Purus indicates that no transition from potency to act is proper to the divine nature. He is eternally complete and perfect so that no influence outside Him bears upon His knowledge or will. In this context the important issue is

God's impassivity. Teilhard, it seems to me, accepts this predication as it is developed in his tradition, but his acceptance of divine immutability is suited to the requirements of his cosmological system. If cosmogenesis as I understand it from Teilhard's system, is systematically and irreversibly directed, then the ultimate (divine) source must ultimately account for the irreversibility of the process of cosmic development and the assured realization of its telos. The telos in Teilhard's view is in the future with assurance. The general path leading to that term is outlined according to his 'foundational ideas.' The idiosyncracies within this process are not attended to by way of systematization, so that, the path and term remain irreversible. The identifying principle of process and term is causally present at every level of organization. Accordingly, the cosmogenetic theory seems not to require that Teilhard revise classical theism as he understands it. The ideas of omniscience, omnipotence, immutability seem required by the very irreversible determination which provides for the line of cosmogenesis. The decided direction of this line is not ultimately defended on the basis of decisions proper to cosmic beings, but on the basis of God's will. Ultimately, the cosmogenetic theory identifies in God the power to provide for cosmic being the principle of irreversible process and term.

The issue currently before me is whether Teilhard's cosmology and theism are coherently related. That is, does his reconstructed cosmology require a reconstructed theism? Now, Teilhard describes the cosmogenetic process (evolution) to be, ultimately, not one of selectivity proper to the developing subjects, but as a response to the force of a single energy which accounts for both the process and its total completion.

Further, Teilhard does not intend to remove God from this process, as if after providing the efficient and final causality of cosmic actuality, God is no longer involved with it. For Teilhard, God's presence to the cosmos provides the milieu in which its development takes place, and by His perpetual creativity He brings the world to the condition of union He envisions for it (D.M. 129). However, such divine involvement does not formally require that God be influenced by cosmogenesis. Whatever is proper to the cosmos is ultimately grounded in God's decision. The cosmos is dependent, i.e., it does not have its essential character from its own self-causation, and in this sense, the cosmos is the physical realization of the determinate vision and will of God. On the issue of divine nature, I think Teilhard's system is consistent. His cosmogenesis has the character of an "infallibilized" process (P.M. 307), which develops in response to an infallible Divine decision.

It should be noted here that the issue of rational coherence is not significantly different with regard to Teilhard than with other 'classical' theists. That is, the problem of reconciling a 'classically' conceived God with a contingent world of free creatures is, obviously, not a problem unique to Teilhard. Further, it is not evident that his revised view of the world has alleviated this well-known problem. In this regard, it should be noted, that Teilhard gives relatively little attention to the issue of human freedom. A case in point is his consideration of freedom toward the end of The Phenomenon of Man. On the one hand he claims, ". . . my contention is that it in no way follows from the position taken up here that the final success of hominization is necessary, inevitable and certain" (P.M. 306). On the other hand, however,

Teilhard notes that the "forces" under which the Weltstoff is "organized" and "interiorized" do not "relax their pressure" (P.M. 306). Therefore, according to the constitutive character of cosmic energy, Teilhard notes "the possibility of foreseeing with certainty (if all goes well) certain precise directions of the future" (P.M. 306). Now, insofar as these reflections raise the issue of freedom, Teilhard observes two factors: ". . . chance at the bottom and freedom at the top" (P.M. 307). However, Teilhard notes that with "very large numbers (such, for instance, as the human population). . . " (P.M. 307), "the process tends to 'infallibilize' itself," since success overcomes chance and error is rejected at the level of freedom (P.M. 307). Therefore, while considering freedom, Teilhard suggests that this factor will not deter the cosmogenetic process from realizing its destiny of union. Further, I am suggesting here that Teilhard's idea of God adds an additional factor for claiming the irreversibility of this cosmogenetic path.

(2) The distinctiveness of Whitehead's theism is, in this context, due largely to his particular systematic understanding of the cosmos. As in Teilhard's case, I find here that Whitehead's explanation of God is made according to what is required by his metaphysical-cosmology. The radical character of actuality is "creativity" according to Whitehead and, if this creativity is an activity of self-causation, and if the process of creativity is characterized by the appropriation of qualities from an infinitude of possibilities, then in order to preserve this description Whitehead is prevented from appealing to an understanding of God which makes Him the exclusive ultimate definer of self-identity, the exclusive ultimate 'giver' of essences or, the exclusive ultimate cause of actuality.

Whitehead's scheme requires a mutual status of causality between God and the self-defining subject. Accordingly, at one side of his theism, Whitehead speaks of God as the location of the infinitude of possibilities for ingression into the physical universe. At the other side, insofar as God is 'actual' (i.e., insofar as the categories of actuality are adequate to the divine being), it is required of Whitehead to describe in what sense God has the character of passivity proper to actuality. This predication is one of inference, but what is said is required by what it means for God to be actual, so that as actual, God must be capable of experiencing (of being influenced by His world). In Teilhard, the inferential move is incapable of assigning precise predicates to the divine nature. Whereas in Whitehead, it is his 'experiment' to discover if his categories are comprehensive and homogeneous and therefore, adequate to divinity.

Whitehead's cosmos is different from that of Teilhard's in several key respects. His universe has no 'point' ahead of it at which cosmic actuality achieves the complete realization of potentialities available to it. Cosmic history reveals to Whitehead no definite pattern of organization which indicates its growth toward total fulfillment. The cosmos, as described by Whitehead, is a process of selectivity in which novelty emerges, manifesting a particular mode of unity, harmony, etc. But it is also the case that emergent novelty adds to the multiplicity of possibilities physically present in the universe. Therefore, if the cosmic process develops as a self-causing activity, giving rise to novel self-identity, then the causality of self-identity is attributable not only to the exclusive causation of divinity, but such causality is

shared by both the self-causing subject and the "initial" ground of its identity, viz., God.

The emergence of genuinely novel subjects means that within the cosmos there arise individuals which are original physical realizations of the divine infinitude of possibilities. By reason of their novel realization--or objectification of potentiality--such subjects are novel for the physical world and for God, otherwise, their novel determination is relative only to the physical world and not the consequence of self-causation. Now, it is the character of actuality that subjects achieve the satisfaction of self-identity according to their appropriation of data from within their world. This is to say, novel subjectivity is the novel appropriation or objectification of qualities suitable for self-identity. Therefore, insofar as God is said to be "actual" He prehends, for the purpose of His self-identity, factors from His environment which are appropriate to His subjectivity or actuality. Therefore, it is systematically required in Whitehead's thought that God experience and that this experience has an influence on His being. Consequently, a critical rejection of Whitehead's theism would require, in my judgement, a critical re-evaluation of his cosmology. It also seems the case that a critical rejection of his cosmology requires a critical re-evaluation of his theism. Whether such a two-edged critique of Teilhard's scheme would be required now becomes the focus of my attention. Clearly, the 'classical' interpretation of God can be made to apply to a 'fixed' universe. Yet, Teilhard's universe is not 'fixed,' but 'becoming.' Teilhard's universe 'becomes,' however, according to a defined path and its completion seems predictable with some certainty. Therefore, does Teilhard's cosmogenetic

scheme require a critical re-interpretation of the 'classical' idea of God? My method for pursuing this question is to ask whether Teilhard's system can adequately accept an idea of God such as that proposed by Whitehead.

My opinion is that Teilhard's system is prevented from accepting the Whiteheadian idea of God, insofar as Whitehead's theism does not provide for a singleness of determination for the cosmos as a whole. I mentioned previously that the issue of divine mutability (passivity) is not a consideration within Teilhard's theism. His cosmogenetic categories do not require consideration of this issue. That is, the cosmological issues supported by these categories and their illumination of God's existence (clarified by theological reasoning) seem to prevent Teilhard's system from accepting any interpretation of God which disallows the irreversible and defined direction of the cosmos as a 'whole.' Teilhard's thinking, based as it is on both science and theology, expresses his belief in a single telos for the cosmic stuff which is its final (complete) state of affairs.

That Teilhard considers the cosmic process as irreversibly directed toward a future point defined in terms of mind and unity is not entirely forced upon him by theological apologetics. He finds evidence for this position within his observation and understanding of the cosmos. He also appears to discover a formula for precisely describing and explaining this directed process (at least in globo), namely, the "Law of Complexity/Consciousness." Therefore, Teilhard does not have irreversibility thrust upon him unwillingly, nor is he defensive in this regard. He chooses, systematically, to describe a determined process, since it is his experience and statement that this is how the cosmos functions.

Clearly, Whitehead's theism would undercut the major supports of Teilhard's system, since the issue of defined irreversibility and the predication of a cosmic telos are not applicable within Whitehead's scheme. Quite simply, Whitehead's theism rejects any single specific path of processiveness and any defined cosmic telos.

To this point, I have concluded that Teilhard's "hyper-physics" is a consistent position. His alliance with the classical idea of God as the immutable and ultimate cause or cosmic being is not inconsistent with his idea of cosmic process. Both Teilhard's cosmology and theology imply that he observes a fundamental determinism in the universe (this "machine-in-motion" F.M. 189), so that, rather than seeking to avoid a systematic account of a determined process, he intends to convince us that, indeed, the cosmos functions according to an energy which organizes and interiorizes itself along a decided path toward a decided future.

A WHITEHEADIAN EVALUATION OF TEILHARD'S THEORY

I come now to the issue of a Whiteheadian evaluation of Teilhard's "hyper-physics," particularly the central criticism which the Whiteheadian system brings to bear upon Teilhard's. Let me lead up to that central issue by again referring to several issues in which Teilhard and Whitehead are similar, mentioning at the same time their distinctiveness. The issues to be included here are as follows: (1) their ideas of process, (2) their ideas of organism, (3) the primacy each gives to the mental pole and, (4) their ideas of the divine vision as the ground for the cosmic advance. After referring to each of these issues, I will turn my attention to those aspects of Teilhard's scheme which are centrally criticizable from a Whiteheadian point of view.

Philosophies of Process

Both systems can be included under the general title "philosophies of process," in that they seek a systematic account of emergent subjectivity. The metaphysical-cosmology of Whitehead and Teilhard's "hyperphysics" describe the cosmos as 'open,' so that, for each thinker the world as experienced and understood is a process whereby subjects emerge as successors to subjects with prior actuality. Accordingly, emergent subjects are dependent upon prior actualities for their own completion. In this sense there is a causal link between present and antecedent individuals. The past is a causal influence on the present by providing elements for novel organization.

While agreeing that "to be" is "to be in process," Teilhard and Whitehead differ on the 'principle of process.' For Teilhard the force (energy) for processive becoming is psychic energy seeking more intense expression by organizing tangential energy (matter) into more complex structures, thus allowing for the increasing manifestation of "thought." This "psychic energy" is the fundamental principle of self-identity for the entirety of the cosmic stuff. Individuals are particularized organizations and expressions of this one single force. In Whitehead's case the principle of process is 'creativity' which is the subject itself appropriating data found within its actual world. The principle of identity is the subject itself, considered according to its "subjective aim" which conditions "feeling," and thus, the appropriate data available for novel objectification. Therefore, while Whitehead maintains a single principle (activity) which accounts for particular self-identity, Teilhard maintains a single actual cosmic energy, present at every level

of complexification, which provides the basis for self-identity according to its relative intensity of expression.

The distinction between Teilhard and Whitehead on this point might be considered merely a verbal distinction. That is, while they give distinct names to the 'principle of process,' nevertheless they agree that the stuff of the universe is engaged in a process of increasing complexification and novelty. While it is the case, however, that both Teilhard and Whitehead agree that the cosmos is in process, they appear to disagree regarding the character of their principles of process. For Whitehead, while 'creativity' is a single categoreal idea, in reality it is particularized or specified according to the "subjective aim" of each actuality. In Teilhard's case, the 'principle of process' is "radial energy." Although this energy reaches levels of increased complexity/ consciousness (thus specifying individualized subjects), it remains a single force which not only qualitatively influences the organization of the cosmic stuff, but is itself quantitatively present in the cosmos (P.M. 54).

Philosophies of Organism

Each thinker describes the cosmos as a 'whole,' that is, as a composite of many factors which exist not in isolation but as elements whose complete meaning is found according to their relation to the 'whole.' Teilhard and Whitehead tell us that 'to be' is 'to be in process' and, 'to be in process' is 'to be influenced' by others. Therefore, 'to be' means 'to be in relation' with all else that is real. This factor of 'relation' means for both thinkers a fundamental reciprocity, so

that a subject not only receives elements for novel objectification, but each subject is itself a contribution to the life of the 'whole.' The cosmos then, is the organization of shared experiences, both physical and mental and the cosmos is what it is because shared values have been both preserved and uniquely intensified.

Here, as in the case of their "philosophies of process," Teilhard and Whitehead differ. For Teilhard, the factor providing "organic relation" is the universal presence of psychic energy, serving as the cohesive force for organic unity. The cosmos is maintained as an organism by the presence of 'psychic energy,' and the intensification of organic unity is provided by the increased expression of this same energy. As indicated previously, Teilhard's cosmos, as organism or society, is under the dominant force of a single energy, which provides for both its process as a whole and the emergence of particular subjects. Whitehead's view is distinct in this regard. According to him, the cosmic organism is structured according to the particularities of novel "feelings" and contributions. Teilhard proposes a genetic factor giving cohesion to the cosmos as organism, while Whitehead proposes a relation established by the mutuality presupposed in experience.

The Primacy of the Mental Pole

For Teilhard and Whitehead, process, organic relation and self-identity are attributed to the essential mental component of actuality. In neither theory is there a return to a Cartesian dualism of matter and mind. As seen previously, what is "physical" and what is "mental," do not, according to Teilhard or Whitehead, exist nor function in separation,

so that, they cannot be defined in separation. Wherever there is mental activity there is a relation to the physical and the physical is a pre-supposed context for mental activity. Moreover, process and self-identity are systematized by attentiveness to the pre-eminence of mental activity. In general, then, the self-identifying property of actuality is, fundamentally, a capacity for mental activity. However, the meaning of "mental" is not the same for Teilhard and Whitehead.

Teilhard's understanding of "mental" is closely allied with its classical definition, insofar as he identifies mental activity with consciousness, thought, reason, intellect. Primarily, Teilhard is concerned with the experience of self-consciousness; the awareness of oneself and awareness of one's relation with others. The products of consciousness or thought are: art, philosophy, science and those expressions of human life traditionally understood as products of human intelligence or reason. Teilhard differs from the classical understanding of 'mind,' however, by maintaining that consciousness is not a property unique to the human species, but that human "reflective thought" is the advanced expression of a property which is common to all levels of cosmic stuff.

Whitehead's 'mental pole' provides for the "subject determining its own concrescence." According to the mental pole a subject determines its ideal, which is conditioned by its "subjective aim." This "mental activity" does not necessarily include "consciousness" as we have seen, but consciousness (the intensification of high grade "feelings") is proper to man. While Teilhard and Whitehead agree that the mental is of greater importance than the physical (though the two are inseparable), Teilhard holds to an essential identity (but with a relatively greater

manifestation) between the consciousness proper to human mentality and the vital sentient acts of lower species. Whitehead on the other hand, although describing human consciousness as "high-grade feeling," establishes no genetic identity between this kind of "feeling" and that of non-conscious subjects. For Whitehead, consciousness is not an essential constituent of experience. While for Teilhard, "consciousness" is that which makes experience and thought possible.

Divine Vision as the Source of Cosmic Advance

Again our two thinkers agree that the "cosmic advance" is in response to the divine vision of unity for the world. Further, both maintain that the necessity for divine vision is inferred from a systematic analysis and description of cosmic activity as experienced. Therefore, the cosmos is the physical realization of the unity, harmony, value and importance provided for it by the divine 'imagination' or vision. Again, however, these two accounts of divine vision differ significantly and further demonstrate the distinctiveness of these two systems.

For Teilhard, the divine vision is described in terms of unity for the cosmos, namely, a unity, provided by psychic energy for that portion of the Weltstoff, in which consciousness dominates materiality, thus removing this portion of cosmic stuff from the pull of entropy. Teilhard maintains that the irreversibility of the cosmic process is ultimately grounded in God's will for the universe, and, it appears, Teilhard describes God in terms of classical philosophical theology. Therefore, the irreversible direction of cosmogenesis and the

accomplishment of its single telos is dependent upon the decisiveness of God's will. His 'ontological principle,' ("fuller being means closer unity") further illustrates Teilhard's conviction that the cosmos is lured toward the fullness of being and unity by the fullest of being and unity, namely God. The cosmogenetic path is characterized by ample experiment, trial and error, victory and defeat, but in its fundamental and consistent orientation it is directed toward ('lured' toward) more intense unity.

For Whitehead, God is the "lure for feeling," i.e., the lure for greater value, unity, harmony, beauty. The actualization or realization of these values is provided by their novel objectification as defining a self-causing subject. The expressions of these values is as novel as the subjects giving them identity. There is no determined inexorability about the divine vision, since, for Whitehead, self-identity is the product of self-causation. Whitehead's God is the "lure for feeling;" the initial provider of self-identity ("subjective aim"), but the novelty of appropriation and objectification is the proper responsibility of the feeling subject. Whitehead's metaphysics, then, cannot serve as the basis for making specific predictions about future contingent occurrences, nor does his philosophical consideration of God provide a basis for predications of a single divinely decided destiny for the whole of cosmic actuality.

BASIS FOR A CENTRAL WHITEHEADIAN CRITIQUE OF TEILHARD'S THEORY

These four issues of comparison and contrast have been meant to serve as an immediate introduction to the central issues separating

Teilhard and Whitehead. On the issues of "process," "cosmic organism," "mental pole" and "God," Teilhard and Whitehead share somewhat similar views. They also provide, however, distinctive interpretations of these themes. It is the distinctiveness of their interpretations which now occupies me.

Teilhard moves through each theme by reliance upon his understanding of a single radical cosmic energy which is "psychic" (or mental) in character and which operates according to a decided enterprise of seeking fuller expression exhibiting, concomitantly, a fuller degree of unity. Fundamentally, his idea of God serves to support the decided orientation of cosmic consciousness toward a decided telos of unity. Whitehead on the other hand, moves through these issues by reliance upon his understanding of "feeling" as a decidedly multiple and varied activity, so that, the novelty of "feeling" decides the novelty of particular beings. Whereas Teilhard constructs his system on the basis of what he considers an identifiable-determinant flux; Whitehead constructs his metaphysical cosmology on the basis of what he considers an identifiable-indeterminant flux. In Whitehead's philosophy: ". . . no reason, internal to history, can be assigned why that flux of forms, rather than another flux, should have been illustrated. . . ." (P.R. 61).

I have isolated the issue of determinant-indeterminant flux, since I think it consistently appears in both thinkers, and emerges as they develop their ideas of self-identity, the nature of the cosmos as a whole and God. I have offered the conclusions that both systems are consistent according to the application of their categorical ideas to the themes I have been considering, so that, any critique of one or the

other, must settle the issue of flux, since on such a settlement hinge the issues of self-identity, human purpose and God.

The point on which Teilhard and Whitehead appear to separate, clearly, is on the issue of determinate or indeterminate flux. I find the basis for a Whiteheadian critique of Teilhard's theory in Process and Reality, in the chapter entitled "Fact and Form." Whitehead remarks: "the evolution of history can be rationalized by the consideration of the determination of successors by antecedents" (P.R. 61). I should note that, in one sense, I find Teilhard and Whitehead in agreement regarding this statement, since both consider the evolutionary model helpful for describing the "cosmic advance." For Teilhard, the "determination of successors by antecedents," is fundamentally, one of "concatenation" whereby subjects join to form a society with increased complexity with the emergent society (novel subject) manifesting increased sentient characteristics. In this view the emergent subject is limited by the contributions of its constituent members. In Whitehead's view, the "determination of successors by antecedents" is provided by "prehension" (feeling), so that the emergence of novel subjectivity is conditioned by the data available for objectification. Accordingly, both theories consider the "cosmic advance" (evolution), in general, as a process whereby emergent subjects are conditioned by the contributions of prior actualities.

Whitehead, however, remarks: "But on the other hand, the evolution of history is incapable of rationalization because it exhibits a selected flux of participating forms" (P.R. 61). On this point Whitehead and Teilhard differ. The inability to "rationalize" the evolution of history occurs to Whitehead since he considers, as primarily important,

the novelty of emergent subjects according to the particularities of their "feelings." Therefore, while Whitehead affirms a "determination of successors by antecedents," nevertheless, the particularities of selection, conditioned further by "self-causation" and "subjective aim" present an infinitude of processes aimed at concrescence, making improbable an identification of a single principle of selection. In the same light, Whitehead provides a categorical scheme which, he thinks, has universal applicability to the process of emergent actuality. This scheme recognizes the novelty involved in the multitude of particular expressions of the categoreal ideas. The Whiteheadian view, regarding the particularities of selection, stands in contrast to Teilhard's position that the multiplicity of particular selective acts reveals, on analysis, a single fundamental principle of selection as the source of varied selectivity. In Teilhard's system the universal factor for selectivity is the energy of consciousness seeking its essential teleology, thus giving to the Weltstoff its determinate path and ground of selective acts.

Clearly, these two interpretations are distinguished by their fundamental emphases. In Teilhard's case, the emphasis is on unity as emerging, i.e., a unity identified as the product of consciousness. In Whitehead's case the emphasis is on the variety of novel subjects as they emerge according to the particularities of "feeling." For Teilhard, there is a single principle of form, namely, the power of psychic energy. For Whitehead there is the "infinitude" of forms. A Whiteheadian critique of Teilhard's position can then be directed at Teilhard's identification of a single principle of form and flux. Therefore, it must be asked of

Teilhard's position whether the recognition of consciousness in the human species sufficiently warrants its predication as the universal source for cosmic advance as the universal principle of form. The Whiteheadian system affirms that "any flux must exhibit the character of internal determination" (P.R. 61), but the variety of forms--the multiplicity of things and values within the horizon of human experience--would more clearly indicate the multiplicity of forms, rather than the identity of a single principle of form. The "cosmic advance" does not appear limited or conditioned by a single factor or force, but the advance appears to display with increasing insistence a variety of expressions. If emergent actuality "exhibits the character of internal determination" and if emergent actuality exhibits a variety of expressions, then it is incumbent on any attempt at a systematic explanation of cosmic advance to consider and coherently provide for emergent variety according to the variety of "internal determinations."

The variety of "internal determinations" is also reflected in the variety of values. For Whitehead the values of unity, beauty, harmony, etc., are expressed with the same multiplicity as the subjects objectifying them (P.R. 28-29). The similarity of definition is of less significance than the multiplicity of expression. Teilhard's view affirms another position. The multiplicity of expression is of less significance than the singleness of force for increased unity. Again, Teilhard's system reveals its insistence on the primacy of singleness of force and purpose. Teilhard's system tells us about perfection. It tells us about the established unity of the cosmos, about the historical advance of increasing unity and the destiny of perfection 'ahead' for the cosmos.

It can tend, therefore, to distract our gaze from imperfection, from discordance, from failure. Teilhard's view implies that we are to look to the 'fullness of being' in order to find the destiny and assurance of cosmic perfection (F.M. 189f). Whitehead, initially directs our gaze to the ". . . welter of characterizations which infest the world" (M.T. 172), the commingling of harmony and discordance, success and failure, value and triviality. It is this blend of multiple experiences which is the cosmos, not the partiality of perfection. Suffering is forced upon life with as much insistence as joy. Estrangement and isolation are as insistent as communion. The guide for selectivity (for decision) does not emerge with singleness and clarity. The history of evolution and of human relations--while characterized by an anticipating and seeking fuller union, stability and socialization--does not reveal one single force or norm for realizing that anticipation.

The emphasis in my interpretation of Whitehead, thus far, has been on the multiplicity of things and the absence of any single determining factor for the life of the cosmos. In this sense, I have emphasized 'phase two' of Whitehead's account of the "four creative phases in which the universe accomplishes its actuality" (P.R. 411). My emphasis should not be mistaken as an interpretation in which I consider Whitehead accounting for a world haphazardly thrown together. The aim of God is at order (P.R. 286) and God is the "creator" of the temporal world, according to Whitehead (P.R. 263). Further, Whitehead claims, "the world is the multiplicity of finites, actualities seeking a perfected unity" (P.R. 411). The world then, in Whitehead's account, is purposeful and it initially receives its purpose from God. In order to help clarify

my interpretation of Whitehead and, possibly, further clarify the contrast I find between Whitehead and Teilhard, the following quote from Process and Reality seems appropriate.

In God's nature, permanence is primordial and flux is derivative from the World: in the World's nature, flux is primordial and permanence is derivative from God. Also the World's nature is a primordial datum for God; and God's nature is a primordial datum for the World. Creation achieves the reconciliation of permanence and flux when it has reached its final term which is everlastingness--the Apotheosis of the World (P.R. 411).

In Whitehead's account, the totality of things is constituted of permanence and flux. These are contributions as well. The divine constitution is given to the World; the Worldly constitution is given to God. There is the commingling of permanence and flux, of a vision of unity and multiplicity (P.R. 411). "Perfected actuality," initially proposed by God and actively sought by the World, reaches "everlastingness" when it is absorbed (P.R. 411) into the life of God. This accomplishment of "perfected actuality" (as a product of creativity) "completes itself," when it "passes back into the temporal world and qualifies this world, so that, each temporal activity includes it as an immediate fact of relevant experience" (P.R. 413). The totality of things, then, is constitutively permanent and fluctuating and various: "The many become one and are increased by one" (P.R. 26).

God's vision, then, (this contribution) is of permanence, unity and love (P.R. 413). This contribution, however, respects the "primordial" constitution of the world, namely flux and multiplicity. This means for Whitehead that:

God and the World stand over against each other, expressing the final metaphysical truth that appetitive vision and physical enjoyment have equal claim to priority in creation (P.R. 410).

In Teilhard's scheme, God establishes the constitution of the cosmic stuff and in this sense the world receives its structure from God. Further, according to this structure, the world (the cosmic stuff) is presented with its purpose and goal. While the activity of the world takes place within a wide range of possibilities, nevertheless, these possibilities are eventually limited according to the established goal of the cosmic stuff. It can be said of Teilhard's position that while particular occurrences are not open to precise rationalization, the basic direction of the cosmic stuff is established by divine choice, so that, the single direction of the world is irreversible. Therefore, this single direction is subject to rationalization according to Teilhard.

The function of God, in Teilhard's account, is to elicit from the cosmic stuff its divinely constituted character of psychic qualities and, ultimately, a union of thought and love (P.M. 264f). The many become one (without loss of individuality), but they are not increased by one, in the sense that by such concatenation the multiplicity of things is perpetuated, as in Whitehead's account. Further, the accomplishments of the world are not absorbed into the divine life. In this sense, Teilhard holds to the permanence of God, without providing for an influence of the world upon the divine nature. God is Ens a se. He is also "self-subsistent."¹

Attention should be given to Teilhard's affinity to the Pauline phrase, "God shall be all in all" (P.M. 294). In this phrase Teilhard finds what he calls "a superior form of pantheism" (P.M. 294). According to Teilhard, this phrase "God shall become all in all," summarizes the moment of completion for the cosmic stuff: "The universe fulfilling itself

in a synthesis of centres in perfect conformity with the laws of union. God the Centre of centres" (P.M. 294). Teilhard's interpretation of "God shall be all in all" is somewhat parallel to Whitehead's statement: "But no two actualities can be torn apart: each is all in all" (P.R. 410). Further, Teilhard and Whitehead would agree, it seems to me, that ". . . each temporal occasion embodies God . . ." (P.R. 410). Teilhard's phrase "God the Centre of centres" (P.M. 294) tends to confirm this, along with his understanding of God "becoming element" (P.M. 293). However, Teilhard's system does not maintain, as does Whitehead's, that ". . . each temporal occasion. . . . is embodied in God" (P.R. 410). Here then, we find a clear distinction between the 'theisms' of Whitehead and Teilhard and, as I've sought to demonstrate previously, their distinctive interpretations of the divine nature and its relation to the world have significant consequences for their account of cosmic beings.

SUMMARY

The systematic differences between Teilhard and Whitehead become most clear on the question of whether the cosmic advance is of a determinate or indeterminate pattern. The answer to this question decides the solution to various other issues arising within their schema. The answer to the question of "flux" requires a decision about the constitution of the elements from which the cosmos is structured. In Teilhard's case, the Weltstoff (the irreducible element of cosmic composition) is identified as possessing a single principle of interiority or identification which is psychic in character. The line of cosmic advance (the line a-b-d along the axis of o.y.) is decided by the increasing expression of this

psychic principle of identity. The term of "cosmic advance" is decided by the ultimate realization of unity (communality, inter-relation) which is the radical potentiality of this cosmic force. The discovery and systematic account of the cosmic energy provides the ground for inferring the existence of God as the source of the unifying energy in the cosmos. This inference, however, looks to theology for precision and clarity, and theology tells Teilhard that God is transcendent and immutable. "Hyper-physics: maintains, therefore, that the "cosmic advance," displaying a consistently more developed complexification of matter and a concomitant development of sentient characteristics, is being lured toward a condition of consummate unity by the inexorable unifying creativity of God. The "fullness of being" (the fullness of self-unity) creatively lures the cosmic stuff toward its appropriate fullness of being (its fullness of union.)

For Whitehead "actual entities" (the "building blocks of the universe") express--in common--their creative character, particularizing themselves as subjects according to their self-caused and self-identifying process of objectifying--through experience--appropriate data contained in their real world. The multiplicity of original subjects and their contribution as potentials for the multiplicity of other subjects, reveals no identifiable single processive pattern for the whole of cosmic actuality. Rather, this process illumines the paradox of realized unity and increased multiplicity. The process of "concrecence" provides the ground for inferring a source for cosmic actuality, by requiring a source for the potentialities which achieve physical realization in the world. The source of potentiality is God according to Whitehead, so that, God is the "primordial" source for every becoming. But if God is actual, and if to be actual

means to experience, then it must be demonstrated how God experiences. In Whitehead's view, God experiences by grasping, prehending, feeling, the novel physical realizations of the potentialities he provides to the cosmos. In this sense the world creates God. To be actual is to be self-causing, and to be limited by the appropriate available data in one's world and to be limited by one's identity. The limitation (the definition of self-identity) is, therefore, proper to the processing subject and not imposed, exclusively, by divine decree. The pattern of cosmic development is as multiple as the multiplicity of novel subjects, so that no single determinate pattern is imposed on the totality of things.

The systematic differences between Teilhard and Whitehead are illumined, so it seems to me, by what they finally consider the fundamental pattern for cosmic actuality as a 'whole.' Each system appears to reflect that which prompts its construction, namely, the way things initially appear to each thinker. Their systems, then, are rationalizations of the concepts which condition their experience and, each maintains that his concepts (theories) arise from the basic ground of experience. The key to understanding each of these systems is to discover those initial ideas and experiences which are the foundations of their theories. Teilhard is impressed by the unity he "sees" in the cosmos, the inter-relation of living things. He is impressed by the density, the durability of things, i.e., stability of things, their permanence (D.M. 17-18). One also detects in Teilhard an attachment to precise and economic formulation as exhibited by scientific models and formulae. Further, one cannot disregard Teilhard's religious faith and loyalty. The confluence of these factors provide the experiential and conceptual context at the heart of Teilhard's enterprise.

Teilhard and Whitehead agree, so it seems to me, that our initial perception of reality includes a recognition that the world is structured organically. That is, each recognizes a harmonious relation of the parts which constitute the world as a society. They both raise questions of this initial experience. Whitehead asks for an ". . . answer to the problem which life presents. That problem is, How can there be originality?" (P.R. 123). Teilhard, for his part, is impressed by stability and permanence (D.M. 17-18), but he also seems aware of the fragility of human life and man's doubts about the future (P.M. 229f; A.E. 13f). In turn he asks about a "guarantee" for the future (P.M. 232).

Whitehead answers his question by developing a position which affirms the free self-causation of actualities, the organic relations of actualities and their mutual influence. God, according to Whitehead is an actuality (indeed, the principal exemplification of actuality) and while God provides for permanence, aim and order, He is also influenced by the emergence of physical actualities. It is this relation between God and the world which exhibits, according to Whitehead, the manifold of permanence and flux, order and multiplicity, perfection and imperfection.

Teilhard answers his question by tracing a stable historical development of emerging consciousness. He proposes that the cosmic stuff contains, constitutively, an energy which is psychic in character. The historical development of the Weltstoff is expressive of this psychic energy progressively manifesting its irreversible tendency toward increased self-consciousness and unity. In Teilhard's view:

"Evolution = Rise of Consciousness,

Rise of Consciousness = Effect of Union." (P.M. 243).

Teilhard's assurance of a guarantee is partially represented by his claim, "in the last analysis the best guarantee that a thing should happen is that it appears vitally necessary" (P.M. 232). This contention looks for added strength, however, and Teilhard seeks to add several supports to it. (1) He sees that the cosmic process

tends to 'infallibilize' itself, inasmuch as the likelihood of success grows on the lower side (chance) while that of rejection and error diminishes on the other side (freedom) with the multiplication of the elements engaged (P.M. 307).

(2) Further, the guarantee of the future (primarily, a successful future) is provided by God. As noted on several previous occasions, Teilhard finds that the structure, process and goal of cosmogenesis is ultimately dependent upon the creative activity and "providence" of God:

In the centre, so glaring as to be disconcerting, is the uncompromising affirmation of a personal God: God as providence, directing the universe with loving, watchful care. . . . (P.M. 292).

My contention throughout this dissertation has been that, Teilhard's cosmogenetic theory, proposing a constitution for the "cosmic stuff" which includes the energy for its development and completion, along with his affirmation of God as Actus Purus, Ens a se, leads Teilhard to the conclusion that the direction of cosmogenesis is irreversible.

Finally, Teilhard finds a guarantee in Christian faith:

For a Christian believer it is interesting to note that the final success of hominization (and thus cosmic involution) is positively guaranteed by the 'redeeming virtue' of God incarnate in his creation. But this takes us beyond the plane of phenomenology (P.M. 307).

Teilhard's understanding of Christ is the focus for the "Appendix" which follows.

In the Introduction I mentioned that Whitehead's system considers metaphysics judgmental at three levels, namely, (a) what a metaphysical system requires to be said of reality according to its general and invariant structure; (b) what such a system does not require to be said of reality per se, but allows to be said according to the findings of special disciplines; and finally, (c) what a metaphysical system neither requires to be said of reality, nor allows to be said. During the development of this dissertation, I have noted the similarities and distinctions contained in the systems of Teilhard and Whitehead with reference to their general schema, their cosmological schema and their schema dealing with the existence and nature of God. Throughout this study, I have centered my attention on their cosmologies and theisms, attempting to understand the relations they find between the nature of the cosmos and the nature of God. In doing so I have called attention to their respective 'ontologies,' noting that in both cases, their 'ontological principles' are applied to both the nature of the cosmos and the nature of God. While noting, where I judged appropriate, the similarities between these two systems, I have sought, nevertheless, gradually to expose the basic differences between them.

In the light of three levels mentioned above (a.b.c.) and in the light of my investigations, I am led to conclude that, despite some noteworthy similarities, these two systems are distinctive according to several fundamental issues. (1). Teilhard understands the cosmos to be in process according to a radically single-minded and determinate pattern of development. Whitehead understands the cosmos to be in process according to a

pattern in which order, harmony, beauty, etc., materialize, but in his account there is no discovery and thus no rationalization claiming that this pattern is directed according to a single-minded and determinate force.

(2). On the basis of his contention that cosmic development proceeds according to a single radical thrust, Teilhard concludes that the completion (telos) of the cosmic advance ought to be envisioned in terms of the completion (full expression) of its underlying energy. This energy, as noted previously, is psychic in character, according to Teilhard, and thus, he envisions the final state of cosmic affairs in terms of the union contained, potentially, in this energy, i.e., a union centered on thought and love. Whitehead, to the contrary, maintains that the novel emergence of actualities not only provides for increased expressions of values (order variously expressed), but such emergence adds to the multiplicity of possibilities available for further actualization within the world. In this regard, Whitehead categorically dismisses attempts to predict a future state of cosmic completion which envisions union as the elimination of further possibilities.

(3). Finally, Teilhard sides with a philosophical-theological tradition which holds to divine immutability. Indeed, he maintains that with a more advanced understanding of the nature (structure and pattern) of the physical world, such a tradition is provided with new-found coherence. Whitehead, however, proposes, on the basis of his definition and treatment of 'actuality,' that insofar as God can be said to be actual, it is necessary to conclude that He shares with all other actualities both the

necessity of influencing others and the necessity of Himself being influenced. While God, according to Whitehead, makes available the potentialities for self-creativity to physical beings, and while He provides the initial subjective aim for this self-creativity, He also (it must be said in this account) prehends the novel, self-caused satisfaction of physical actualities and, thus, His being is influenced by entities external to Himself.

Consequently, Teilhard and Whitehead disagree on several(at least) basic issues. That is, their disagreements are not merely at the level of 'special' interpretations (i.e., disagreements confined to level 'b'), but their disagreements are fundamental, (i.e., their disagreements concern the nature of reality itself.) My investigations lead me to conclude that their positions are unreconcilable, since their differences occur at level 'c.' That is, each maintains a selection of positions which the other cannot allow in the name of a coherent and adequate account of the nature of being itself, the nature of physical being and the nature of God.

REFERENCE NOTES TO CHAPTER 5

1. de Lubac, p. 202.

APPENDIX

CHRIST - OMEGA

In the Introduction, I informed the reader that throughout the first five chapters of my study virtually no reference would be made to Teilhard's treatment of Christ. My decision not to consider Teilhard's "Christology" was based on (1) the inappropriateness (within the scope of this dissertation) of pursuing decidedly theological issues, insofar as these issues require reference to methods and assumptions other than those of science (in Teilhard's sense) and philosophy. (2) Further, insofar as I sought to focus my investigation on a comparison of Whitehead and Teilhard, I hesitated to include issues (found within Teilhard's scheme) which would have distracted from the concentration I judged appropriate to my concerns. Therefore, while Teilhard's 'table' (noted in the Introduction) includes issues of theological concern, I chose to consider, primarily, "phases 1 and 2." In "phase 2," (number "4") Teilhard refers to 'God the revealer,' which has importance for both his 'phenomenological' and 'theological' investigations. My emphasis concerning 'God the revealer,' has been on the knowledge of God available to human understanding through a more thorough comprehension of the structure and pattern of cosmic actuality. In this sense, I have concentrated on those portions of Teilhard's writings in which man arrives at a horizon where consideration of God is elicited, rather than considering divine

"revelation" as a theological theme. By turning my attention to the issue of the human cognition of God, I sought to find a basis for comparing Teilhard and Whitehead.

It might be helpful if I again draw the reader's attention to my interpretation of Teilhard's affirmation of God's existence. Briefly, Teilhard maintains that evolution is a manifestation of God's creativity. Further, insofar as the 'cosmic stuff' becomes increasingly complexified, demonstrating with greater clarity its psychic interiority, the Weltstoff also reveals with increasing clarity its divine ground. According to Teilhard, then, the affirmation of God's existence is not based on a strictly philosophical 'proof,' but based on a recognition of God through the complexification/consciousness of the cosmos. In addition to an examination of Teilhard's, so-called, "proof by complexity," my attention was also directed toward Teilhard's inclusion of classical philosophical/theological interpretations of God's nature. In this regard, I maintained that Teilhard appears to accept the ideas of a transcendent, immutable God, identified according to the classical designation, Actus Purus and Ens a se. Admittedly, while Teilhard does not pause to give these predications extended consideration, they seem clearly implied throughout his discussions of the divine nature. Consequently, while Teilhard describes the cosmos as in an evolutionary process toward increased unification (completed at Omega), he also describes God as "complete in Himself. . . ," so that the divine nature includes no processiveness and, in the light of Teilhard's acceptance of classical predications, it would appear that God is not intrinsically influenced by cosmic affairs.

The reader will have noticed that I have maintained that Teilhard describes the structure and pattern of the cosmic process in a manner strongly emphasizing its determined character. Further, this determined character seems supported by Teilhard's description of God in classical terms. Finally, according to Teilhard's 'ontological principle,' namely, "fuller being is closer union," he appears to link his description of the cosmos with his description of God. The cosmos tends to proceed (according to the "Law of Complexity/Consciousness") toward increased union and, therefore, increased being. God, however, is the completeness of unity and being, giving to the cosmos its existence, its process and its term of completion. Therefore, while Teilhard's account of the "whole which unfolds" contains, partially, elements of cosmology, theism (theology) and ontology, when taken together, these elements (in my judgment) tend to support the interpretation that Teilhard describes a cosmos in process, whose term is irreversibly and infallibly established according to its essential constitution which is provided by God's creativity.

However, as indicated earlier, Teilhard's scheme includes clearly theological themes, e.g., "the Christian phenomenon, the living Church, God incarnate and Christ-Omega." The question now arises whether, in the light of these themes, my judgment that Teilhard is describing a determined cosmic process and an immutable God needs reconsideration. Specifically, I am asking, does Teilhard's interpretation of Christ, provide a dimension altering his description of a determined cosmic process (in which man, as a species, is destined to arrive at Omega) and his indication that this determination is grounded in the will of a God who is Actus Purus - Ens a se? In effect, does Teilhard's "Christology" "provide a basis" for revising

his contention that God is "immutable" and that Omega cannot (in his scheme) be considered an option, but an inexorable conclusion?

CHRIST AND IRREVERSIBLE COMPLEXITY/CONSCIOUSNESS

Clearly, among Teilhard's basic concerns is his pastoral attentiveness to providing a ground of hope in the midst of contemporary anxiety and dis-orientation. As noted earlier, he suggests a relation between contemporary anxiety and "the problem of God." In this regard he asks, "who can guarantee us a tomorrow?"¹ Within his "Christological" reflections, Teilhard maintains that the stability of the cosmos and its process toward Omega is guaranteed by Christ (A.E. 263-264,) the revelation, historically, of man's destiny of union with God.

Now, Teilhard maintains that his description of Christ takes him beyond the realm of phenomena (F.M. 97). "Christ-Omega," is the least known of the issues Teilhard tabulates in his "The Outline of a Dialectic of Spirit" (A.E. 150). However, within his scheme 'as a whole,' Teilhard's understanding of Christ is of central importance, since it provides for human understanding the solid basis for confidence in, and knowledge of, the destiny of human life. The success of cosmogenesis for a Christian, then, is a matter of faith (in a supra-phenomenal realm) which is supported by scientific observation (the phenomenal realm). Therefore, while the recognition of Christ and acceptance of him is dependent upon faith, according to Teilhard, far from diminishing the irreversibility and infallibilization of the cosmic process (partially supported by the themes of cosmology, theism and ontology), Christ provides the final guarantee that man is being irreversibly lured toward the complete and final victory of Omega.

CHRIST AND THE IMMUTABILITY OF GOD

The second issue to be considered here is whether Teilhard's interpretation of Christ provides a way of considering that God is influenced by the cosmos? Teilhard at one point claims:

In conformity with the spirit of St. Paul I am led now to see (in the world) a mysterious production which completes and fulfills Absolute Being himself. . .²

If the cosmos provides for God the completion of what is incomplete in Him, then not only is Teilhard re-interpreting classical descriptions of God, but he is then much closer to Whitehead's theism.

The question, therefore, is whether Teilhard's "Christ-Omega" leads him to re-interpret the classical idea of God and, in particular, whether his idea of "Christ-Omega" requires a re-interpretation of his phrase "God is complete in Himself, but for us He becomes."

While Teilhard (as noted above) speaks of a completion of Absolute Being, he also claims, for example:

. . . it is the mysterious Pleroma in which the substantial one and the created many fuse without confusion in a whole which, without adding anything essential to God, will nevertheless be a sort of triumph and generalization of being (D.M. 122).

Consequently, while "God has undertaken in uniting himself intimately to created beings. . . ." (D.M. 85), the beneficiary of this union and its concomitant "transformation" is the world, and in particular, the human species (D.M. 86). The world, then, reaches its destiny assigned by God and indicated by Christ (P.M. 294), without an essential influence upon the divine nature in itself. This does not mean that the world (particularly man) is insignificant. On the contrary Teilhard strongly

emphasizes his conviction concerning the value of the cosmos and man. However, such an emphasis on the value of the cosmos does not include, apparently, a necessary predication that God is influenced by the cosmic state of affairs. In this sense, God's sovereignty and independence are preserved. At the same time, Teilhard refuses to consider the cosmos or man superfluous or arbitrary.

It appears that Teilhard's scientific (phenomenological) theme of cosmogenesis, under the influence of his Christology, comes to be a process of Pleromization (D.M. 62). He implies, in this regard, that the fullness of completion of the Pleroma has reference to the divine nature. Further, Teilhard appears to justify the inclusion of the divine nature in Pleromization by claiming that "by his own sovereignly free decision. . . . God is no longer 'absolutely' and 'radically' self-sufficient."³ It needs to be asked, then, whether this statement calls for a re-examination of Teilhard's phrase, "God is complete in Himself. . . .?" It might be suggested that in order to clarify and strengthen his conviction that the cosmos (man, in particular) has value and importance, as well as emphasizing the cosmic significance of Christ, Teilhard re-interprets the Scholastic understanding of God, by de-emphasizing the claim for divine independence from the world. Whatever his reason for implying a de-emphasis of divine self-sufficiency, Teilhard does not go so far as to claim, that intrinsically, God has any dependence upon the cosmic order of being. Teilhard tells us:

. . . that reality which is to be found in Christo Jesu, namely 'God plus the many' seems both in Christian practice and Pauline spirituality to represent a perfection which, however wholly extrinsic to God (emphasis is mine) it may be, involves a real completion in the symmetry of the universal being.⁴

In the light of this statement, Teilhard seems to be suggesting that, while Cosmogogenesis-Pleromization involves a completion of the arrangement of "being" in general (cosmic and divine), such a completion is "extrinsic to God." Thus Pleromization (as a theme associated with Teilhard's Christology) does not include (in Teilhard's scheme) any reconsideration of the independence of the divine nature in se.

A further consideration might be added here. Teilhard's description of cosmic unification involves his analysis of the Weltstoff according to the "peripheral" and "nuclear" egos. The "peripheral-ego" is divisible whereas the "nuclear ego" is indivisible (as noted in Chapter One). In the process of fusion, however, the "incompletely individualized" units have the capacity to join in producing a new nucleus of an incommunicable ego (A.E. 108). This is one illustration of what Teilhard means by "union differentiates" (A.E. 116). The distinction between "peripheral" and "nuclear" egos also illustrates Teilhard's suggestion regarding both the activity and passivity of the "cosmic stuff." The cosmos tends toward a condition of a super-personal state (Omega) in which the portion of the Weltstoff escaping entropy realizes a condition of unification of egos forming a cosmic society or community (A.E. 46). It is at this point that the cosmic stuff and God are united--not in a condition of dissolution, but in a union which preserves and clarifies the differentiation of these two orders of being.

It should be noted that Teilhard's phrase "union differentiates" means that in the process of unification (progressively realized) the cosmic and divine order are not synthesized in such a way as to dissolve their respective characters or identities. In the process of union, the subjects

involved are more clearly identified as to their distinctive character, so that, that which is communicable is communicated and that which is incommunicable (their individual natures) are increasingly personalized (A.E. 116). In the process of union, then, the subjects (whether cosmic or cosmic and divine) both merge and are differentiated. The fusion of egos is not, therefore, a loss of identity, but a process of both union and differentiation. The subjects engaged in "creative differentiation", according to Teilhard, "do not become blurred or confused together: on the contrary, their own nature is reinforced" (A.E. 116). It is also the case that the differentiating union of egos find their form of union (centration) in Omega, so that, subjects "become progressively more super-centered as they come closer to one another in their convergence on Omega" (A.E. 117). The union of subjects envisioned by Teilhard is a union of ". . . centre to centre, that is love. . ." (A.E. 117n). It is in this sense, therefore, that the fragmented Weltstoff converges according to the union of its psychic center producing the state of Omega. The order of being which this process constitutes is that of fullness of union (a union of centration) which "reinforces" personalization (A.E. 117).

Finally, if Teilhard were to describe God in terms related (even analogously) to the "peripheral" and "nuclear" egos, he would, in my judgment, then be suggesting a way in which to consider divine passivity. If this distinction was applied (in Teilhard's scheme), then God could be considered both complete (in His nuclear ego) and incomplete (in His peripheral ego). Clearly, it would then be necessary to demonstrate in what ways the "completion" of God by cosmic actualities (the union or concatenation of cosmic and divine elements), is an intrinsic completion of the divine

nature. While it is intriguing to consider the possibilities of interpreting God in terms analogous to Teilhard's cosmogenetic ideas of "peripheral" and "nuclear" egos (i.e., according to the ideas of incompleteness and completeness), I am not aware that Teilhard ventured in this direction. He does not, systematically, provide for any intrinsic completion of God analogous to the intrinsic completion (unification) of the cosmic stuff. Whatever the completion of the symmetry of "being" in general, such completion does not touch God intrinsically. Therefore, whatever may be contained in Teilhard's Christology for hinting at fulfillment of God's nature, he appears extremely concerned not to infer that such Pleromization has reference to the intrinsic nature of God.

SUMMARY

While it may appear that Teilhard's Christology opens up a possible reinterpretation of the deterministic elements found in his cosmology, theism and ontology, it is also clear that: (1) according to Teilhard, Christ is the ultimate historical support for guaranteeing the irreversibility and infallibility of the cosmic advance toward Omega; (2) Further, while Christ initiates and reveals the process of Pleromization (according to Teilhard), possibly inferring that Cosmogogenesis-Christogenesis adds to God's nature, nevertheless, it is clear that the "Pleromization" of the cosmos and the "Pleromization" of the symmetry of "universal being" is extrinsic to the divine nature; (3) The process of Cosmogogenesis-Pleromization is destined toward a unification of the cosmos (Omega) centered around the nuclear ego of what becomes a super-cosmic person (A.E. 46), thus making the personified cosmic stuff available for final unification with the divine persons. This union does not dissolve the cosmic or divine natures

but clearly differentiates them; (4) Finally, while it might be possible (within Teilhard's scheme) to develop a theory of divine passivity insofar as an effort is made to apply (analogously) the ideas of "peripheral" and "nuclear" egos to God, Teilhard does not appear to move in this direction. He retains the completeness of God (His immutability,) while allowing for the "concatenation" of being in general. The process of fusion, then, is intrinsic to the "cosmic stuff," but "extrinsic" to God.

REFERENCE NOTES TO THE APPENDIX

1. Mooney, p. 57
2. Quoted from: Le Coeur de la Matiere, in Mooney, p. 253
3. Mooney, p. 175.
4. Quoted from: La Route de l'Ouest, in Mooney, p. 174.

(Note: Since the original text (in French) was not available to me, I needed to employ the translation by Christopher Mooney in Teilhard de Chardin and the Mystery of Christ.)

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