

Alfred North Whitehead's Basic Philosophical Problem: The Development of a Relativistic Cosmology

by Michael Welker

Michael Welker is a professor of theology in the Evangelischen Fakultät of the University of Tübingen, Tübingen, West Germany. The following article appeared in *Process Studies*, pp. 1-25, Vol. 16, Number 1, Spring, 1987. *Process Studies* is published quarterly by the Center for Process Studies, 1325 N. College Ave., Claremont, CA 91711. Used by permission. This material was prepared for Religion Online by Ted and Winnie Brock.

Note: this essay was translated by Eric von der Luft and Frank Eberhardt

1. The Theoretical Program: an Essay in Cosmology

Without a doubt, Whitehead offers the best developed solution to his basic philosophical problem in his major work, *Process and Reality*. If we want to determine the direction and goal of Whitehead's theoretical development as well as this development's definitive contributions to systematic philosophy and to the history of philosophy, then we cannot avoid dealing with this text, in spite of its density and the difficulties connected with its reception. However, though it is beyond doubt that the "mature" solution to the problem can only be taken from *Process and Reality*, the persuasive power of this work's introductory formulation of the program is questionable -- at least as concerns the present attitude toward what is expected of a cosmology.

Whitehead himself introduces his project as the third great cosmological conception in the history of philosophy:

The history of philosophy discloses two cosmologies which at different periods have dominated European thought, Plato's *Timaeus*, and the cosmology of the seventeenth century, whose chief authors were Galileo, Descartes, Newton, Locke. In attempting an enterprise of the same kind, it is wise to follow the clue that perhaps the true solution consists in a fusion of the two previous schemes, with modifications demanded by self-consistency and the advance of knowledge. (PR xiv/ix)

It is difficult for this proclamation of the fusion of two theories of the world which are considered "out of date" to awaken the expectation of an important gain in knowledge, and it is difficult to read the indication of required "modifications" as the promise of an appropriate consideration of our century's theoretical development in the natural sciences. The impression of being confronted with a stale program becomes so much the greater for the reader of the present day, who is otherwise open to intellectually demanding projects, when Whitehead designates *Process and Reality* as "an essay in Speculative Philosophy" (PR 3/4) and explains his cosmology as aiming at a "system of general ideas" (ibid.). His own advertisement of his project makes it easy for his critics to insinuate that it is a highfalutin, idle, and moreover, from the standpoint of history, even an avowedly obsolete undertaking.

In view of this reciprocal intensification, provoked by Whitehead himself, of significant negative prejudices which could very easily be further elaborated by means of more quotations, assertions to the contrary in the exposition of *Process and Reality* seem unintelligible. In the case of a "speculative system" which fuses historically obsolete cosmologies, Whitehead's repeated and in fact passionate emphasis that the "elucidation of immediate experience is the sole justification for any thought" (PR 4/6) seems not at all able to be brought into some coherent association, Whitehead's reflection that we could ask ourselves "whether the type of thought involved [in his

cosmology] be not a transformation of some main doctrines of Absolute Idealism onto a realistic basis" (PR xiii/viii) may hit not only upon the widespread skepticism with regard to the "main doctrines of Absolute Idealism" in general, but also, in particular, upon doubts concerning their ability to be transformed "onto a realistic basis." Looking at such a beginning, one wonders how Whitehead can believe that he can consider anything like a "realistic basis" at all.

While an unprepared reading of *Process and Reality* can only with difficulty remove the prejudices which Whitehead himself conditioned with his unfortunate exposition, there is another way to demonstrate very well that Whitehead's cosmology in fact proposes a new determination of the "realistic basis," and even that this new determination has already put behind it a fundamental discussion with culturally well-seasoned "realisms," in whose name the consistency of Whitehead's relativistic cosmology has been called into doubt.

In the first instance, Whitehead himself had thoroughly considered other, more ad hoc plausible starting points for his program. Indeed, he had developed the program in a series of beginnings toward a conception of a theory of the world. Thereby evolved Whitehead's basic philosophical problem -- at first as a dark motor of his intellectual development, then, increasingly and more clearly, as the discernible, formulated center of his theory. We can certainly apply to Whitehead Hegel's ironic remark about Schelling, that he carried on his philosophical development in public. The following mediation of the knowledge of this philosophical development enables us to understand why Whitehead, in a series of theoretical starting points, their rejections, and theoretical improvements, reluctantly abandons both hitherto plausible starting points from commonsensical thought and the dominant conventional forms of thought in philosophy. A knowledge of the aporias in which Whitehead finds himself on the individual levels of the development of his cosmology allows us further to comprehend why many leading philosophers of his time stopped taking an interest in his theory and quit discussing his writings. Thus it can be seen how the respected coauthor of *Principia Mathematica* became until recently an erratic phenomenon in the philosophical community.

The reconstruction of the starting points for the essay in cosmology, which were tested and overhauled by Whitehead, allows its final form to be understood in what is, in the first instance, its alienating association of a speculative synthesis of cosmologies which have become historical with the claim to consistent relatedness to experience under the conditions of the twentieth century.

As Whitehead's formulation of his program becomes plausible, his basic philosophical problem will become clear: Only a *relativistic cosmology*, in Whitehead's view, "brings the aesthetic, moral, and religious interests into relation with those concepts of the world which have their origin in natural science" (PR xii/vi).

2. The Development of Whitehead's Basic Philosophical Problem

2.1 Softening the Claims to Effectiveness of Cosmology

Based on Mathematically Formulated Natural Science

We may infer even from a work as early as "On Mathematical Concepts of the Material World" (written in 1905, published in 1906) that Whitehead's intellectual development tends toward drafting a theory of the world. In this article, whose significance as regards Whitehead's development can scarcely be overestimated (cf. DWP, WTA, PW WRML), he reaches a level in the formulation of the problem which already pushes toward abolishing the unquestioned privilege of "concepts of the material world" formulated in mathematical language, in order to pave the way for a more adequate and at the same time more comprehensive conception of the world.

At first glance, the formulation of the problem from which Whitehead proceeds in MC -- he still clings to the presupposition of the cosmological adequacy and precision of the theoretical language of mathematics -- must seem to be itself an aporia: Whitehead wants to investigate various ways -- in the first instance internal to mathematics (but cf. MC 465, 524) -- of considering the "nature of

the material world"; at the same time, however, he wants to understand this world as a unity which, even though conceived as in motion, consists of only one kind of entity (MC 468, 479, 482, 525).

But, given the presupposition of the unity and simple basic character of the world in general, how can the various mathematically formulated ways of considering the world occur and, beyond that, tolerate each other? Does not the association of this claimed adequacy and precision with the presupposition of the unity and simple basic character of the world demand that we consider the "nature of the material world" in just one way and reject the others as erroneous or force them to be assimilated through insight into their own incompleteness and thus to correct themselves?

But if we want to hold fast to a legitimate plurality of successful intellectual apprehensions of the world, then must not at least either the theory's claims to adequacy, precision, and universality be varied or the presuppositions of the unity and simple basic character of the world be given up?

Whitehead's writings after 1906 present a series of suggestions for resolving the formulated version of the problem. In spite of the acknowledged difficulties, he continues to try for a few years to preserve the claims to effectiveness and the privilege of the theory of the world formulated only in mathematical language. Until 1911 -- in *An Introduction to Mathematics* -- he defends his conviction that only mathematics provides a language which guarantees what may be called a highly exact and, in a strict sense, scientific description of the world (cf. IM 5, 17). Indeed, even as early as this writing, he acknowledges his uncertainty about the answer to the question of whether the events grasped by the theoretical language of mathematics can be sufficient "to 'explain our sensations" (IM 33), or whether the mathematically formulated theory is even in a position to make an adequate reconstruction of other, unrelinquishable references to the world (such as sense perception).

Whitehead does not yet want to call into question the common sense assumption that the world is an actual unity: "we . . . endeavor to imagine the world as one connected set of things which underlies all the perceptions of other, unrelinquishable references to the world (such as sense perception)".

Whitehead does not yet want to call into question the common sense assumption that the world is an actual unity: "we . . . endeavor to imagine the world as one connected set of things which underlies all the perceptions of all people. There is not one world of things for my sensations and another for yours, but one world in which we both exist" (IM 4). Yet, given this option, whether this abstract mathematical world -- which is supposed to explain our particular, individual, personal "feelings, thoughts and emotions," but which is not supposed to be dependent upon such feelings -- whether "such a world [is] merely but one huge fairy tale" (TM 33, cf. 32ff.).

Still without a discernible consciousness of the growing corollary problems, Whitehead now softens the claims to effectiveness of a theory based on mathematically formulated natural science: Such a theory is not capable of either sufficiently explaining or even replacing individual sense perceptions and their relation to the world. But it is quite capable of giving -- and here Whitehead falls back upon a skillfully chosen compromise formula -- a "hypothetical substructure of the universe" (ESP 285). This formula, whose instability is very quickly discernible, unites the claims to privilege -- nothing less than a substructure of the universe is offered -- with a relativization which permits concessions to other conceptions of the world: The substructure of the world is only "hypothetical." Yet, instead of now consolidating this solution adopted as a way out of the dilemma, instead of easing the position of the mathematically formulated theory of the world -- a position which has become precarious -- by introducing conventional conceptions of development and perfection (e.g.: the relation of a cosmology based on mathematics and natural science towards other theories of the world is one of learning, thereby perfecting its substructure of the universe and thus gradually making alternatives superfluous), Whitehead increases the pressure on the privileged position of a mathematically formulated cosmology.

The -- in the first instance meant somewhat disparagingly -- concession that every theory of the world also has to deal with the "imaginings" and conclusions" of the poets, philosophers, and

theologians, gives way to a systematically consistent, matter-of-fact view. Whitehead discerns that any first or second order arrangement in the set of different theoretical grasps of the world needs to be justified -- as long as the adequacy and competence of a specific approach is not denied in principle. The self-privilege of mathematically formulated natural sciences is a vain and void enterprise as long as these sciences are unable to contribute to the solution of this problem. At the same time this problem becomes very difficult to survey, since even the object, the insinuated "world," changes with the relativization of the position of mathematics within cosmology. No longer can the world be regarded and defined only as the "material world" to be comprehended in "mathematical concepts," or even only as the totality of the "properties of the universe" or the "course of events" (cf. TM 5). But what is "the world" which mathematized theories and the imaginations of poets and theologians refer to with, in principle, equal right? The covariation of the theoretical beginning and the object makes more clearly discernible the blurredness of the object and the lack of determinacy, which retroactively make the theoretical beginning so difficult.

Of course, for so-called common sense, Whitehead now seems to have his eye on a highly plausible conception of the world, a conception capable of integration, when in 1912 he asserts that "the idea of the World now means to us the whole round world of human affairs" (ESP 176) and when he defines "world" as the "concrete universe" or as the "course of nature conceived in its widest sense as including human society" (ESP 180). Yet this impression of common sense, which by the way also leads the objections to Whitehead's mature cosmology, is erroneous.

2.2 *The Pluralism of Theories and the Fiction of the One Concrete World*

Whitehead's biographers, as a rule, have distinguished three phases in his intellectual development and, using as their criterion the professor's change of location, have spoken of the mathematician at Cambridge (1884-1910), the philosopher of nature in London (1910-1924), and the metaphysician at Harvard (1924-1947) (cf. DWP). This rubrication is not false in its basic elements, but it diverts us from considering the continuity of Whitehead's theoretical development. Moreover, within the framework of these rubrics, it does not really make sense why Whitehead from 1912 on wrote and published -- in addition to studies in natural philosophy and natural science -- a series of what may be called contributions to popular philosophy, a genre which the secondary literature usually passes by. In our reconstruction of the development of Whitehead's basic philosophical problem the significance of this phase of his activity becomes obvious.

Judging from the outside, we can assert that Whitehead's general cosmological theory in this phase of its development, on the one hand, reaches its lowest qualitative level and exhibits its least degree of consistency, but, on the other hand, arrives at its closest point to common sense and to those correlation theories from the Continental philosophical tradition which center on the observer and consciousness.

In this phase Whitehead proceeds from the fact that, opposed to the "concrete universe," or to the world which embraces -- howsoever -- both nature and the "whole round world of human affairs," there stands a multiplicity of theories of the world, which reciprocally influence each other and the world or are coined in these relations. He now reclaims the privileged position of mathematics in this ensemble simply by appealing to the success of the modern development of technology and natural science. Nevertheless, it remains unclear to what extent mathematics is able to justify its assigned position by means of its ordering or even its orientation in the coordination of other references to the world. Whitehead experiments for a while with deliberations about the various theories of the world with regard to the degree to which they *abstract* from the world, and about adjusting a sequence of more or less abstract perspectives on the world, oriented at the level of abstraction attainable in the mathematized natural sciences. But he still does not have command of any intellectual means of clearly defining processes of abstraction and concretion. Since he is uncertain, he has to admit that, for example, even religious contemplation must be regarded as a type of abstract thought (OT 97f.), and that he does not have at his disposal any systematically cogent reasons why we should train children in the "abstract thought" of mathematics -- which he

recommends -- rather than in the ability "to contemplate directly the beauty of abstract moral ideas, in the hope of making them religious mystics" (OT 98) -- which he obviously still dislikes.

Whitehead not only discerns that it is necessary to specify different types of abstraction over against one another, but also sees that the popular opposition of the "concrete world" and "abstract theory" is unfruitful and, in its forms up to that time, indefensible. He introduces a change of direction in his theoretical development, which distances him from the dualistic modes of thought of the Continental tradition and from the conventional common sense feeling of plausibility. This fundamental change in the basic structure of his theory occurs from 1914 to 1916 and is documented above all in the important essays "Space, Time, and Relativity" (OT 191-228) and "The Organization of Thought" (OT 105-33). Whitehead discerns the fictional character of the one (single) concrete world and the necessity to dissolve the conglomerate of the unity, experiencability, concreteness, and objectivity of the world, and to reexamine these specifications as well as their relationships.

The most important theses for the new beginning are as follows: We do not live in "an infinite given whole", but in a set of fragmentary experiences." Living in this set of fragmentary experiences -- which alone deserve to be called "concrete" -- we form conceptions of unity, order, wholeness, etc. "It is not true that we are directly aware of a smooth running world." Only in our thoughts do we live in a "connected infinite world" (OT 214, 217, 218). This does not mean that the world is a "fairy tale" (OT 213). We are concerned with an intellectual achievement, a construct which integrates our experiences and allows them to be objectified and bindingly communicated.

2.3 The Symbolic World and the Fragmenticity of Real Experience

The regrettable standard manifestations of philosophical designs in the twentieth century are such that they optimize techniques for overcoming problems intellectually, problems which proceed on the basis of no longer convincing assumptions about reality. The generally declining trust in the effectiveness of philosophy is thus not to be traced back to deficient versatility in handling available elements of theory, but to the more or less dull consciousness that philosophy works with insinuations of "actuality," which -- although they are not confronted with a plainly superior, clear alternative -- are no longer able to be convincing.

The type of theory which Whitehead now begins to develop attempts to lead the way out of this situation of stagnation and illusory progress. This undertaking is risky in a twofold regard: It requires the development and introduction of new insinuations about reality, which have not yet to any extent been made plausible by the uneasiness about the obsolete symbolizations of actuality; and unfathomable problems in theoretical technique arise, so that, in addition to the impression that the "foundations" to be reintroduced and the new cognitions to be introduced are misleading, one becomes conscious of dilettantism in the intellectual treatment of such problems.

Whitehead risks this double crisis in scientific study by presuming from this point on that our experience of reality issues concretely in a flow of "perceptions, sensations, and emotions," and that we are induced only by the forms of order in our thought to fancy that we have an immediate experience of a "neat, trim, tidy, exact world" (OT 109, 110). Naturally, Whitehead does not straightforwardly denounce the conception of a "world of perfectly defined objects implicated in perfectly defined events which . . . happen at exact instants of time, in a space formed by exact points . . ." (OT 110). But this world, its texture, and the senses of unity which we ascribe to it, are surely intellectual achievements, and as such they are to be contemplated and examined. On the other hand, natural science -- and the recognition of this fundamental truth would be the first step toward wisdom in the philosophy of nature -- would have to proceed from a "radically untidy, ill-adjusted character of the fields of actual experience" (OT 110; cf. SMW, chapter 1). In this vague field, more precisely, in these fields of experience, a highly organized, but as such scarcely reflected, not to mention questioned, thought mediates for common sense the image of an "exact world" which is certainly a symbolic world. However, the decisive aspect of the field of actual experience is "its disorderly character. It is for each person a continuum, fragmentary, and with

elements not clearly differentiated" (OT 110).

Whitehead's goal is now to elucidate how the vague flow of the feeling of actual experience is connected with the symbolic, exact world. "How does exact thought apply to the fragmentary, vague continua of experience?" (OT 111) reads the question, which is flatly programmatic for this phase of Whitehead's thought.

Nevertheless, we cannot say that Whitehead succeeded immediately in finding an answer to this question. He therefore sets up first of all two extreme positions: on the one hand the level of mathematical constructs which eliminate all intersubjective as well as innersubjective particular experiences which hinder understanding, on the other hand the limiting position of diffuse, radically individual -- not just anthropologically "subjective" -- feeling. Moving back and forth between these two extremes, our ways of making the world accessible would have to develop (cf. OT 213ff). Whitehead experiments further, mostly in vain, with the great conventional concepts of the arts and humanities, in order to characterize those kinds of transition between conceived and perceived reality (life, culture, and activity of the spirit, style; cf. OT 13, 17-24). But above all he seeks to develop a typology for forms of order, a typology which allows a hierarchy between the presumed extremes to be laid out and a differentiated comprehension and presentation of the spectrum of our experiences and presentations of reality to be given.

Even though these attempts at typification do not yet lead to consolidated results -- Whitehead tries above all to define common sense as a "middle" level between the mathematized natural scientific and the individual emotional grasps of reality -- he acquires in this phase several fruitful insights which will also leave their mark on his mature cosmology. He describes the elementary cognitive processes as "abstractive processes of simplification" which, according to the principle of "convergence to simplicity" (OT 146ff.), make the world approachable and communicable. This simplicity is to be thought neither through recourse to unmediated experiences which are as "original" as possible nor in an orientation toward the conventional image of a thing which lacks definition. For, "if science be right, nobody ever perceived a thing, but only an event" (OT 179). The objects of perception from which common sense "proceeds" and which conventional theories assume to be such that we come into contact with them in an utterly elementary way, are results of complicated operations or, in other words, the concretion of complicated constellations which are to be thoroughly studied and explained.

Since Whitehead abandons the artless presupposition of "unmediatedly and elementarily perceived simple things," the thought of simplicity and the conventional use of this thought again become problematic. Generalizing in a rather daring manner over the more recent tendencies in natural science, Whitehead declares: "In physics, as elsewhere, the hopeless endeavor to derive complexity from simplicity has been tacitly abandoned. What is aimed at is not simplicity, but persistence and regularity" (OT 183). If now "regularity" is defined in the sense of the "simplicity of stable mutual relations" (OT 183), then the concept of "simple thought-object of the sciences" can also be grasped more accurately.

We are dealing with an optimized persistence and regularity in the incalculably complex networks of relations in which an experience not behaving according to the principle of "convergence to simplicity" would be lost. This optimized persistence and regularity is not given through individual entities which are somehow fixed and at rest, as unaffected sense perception supposes. Certainly the traveler sits down on the stone, certainly the tip of the steeple "captivates" the eye. But it is precisely not "this stone" which, as a simple event" or a "simple object," makes possible this individual sense certainty and the communication of truth which is built upon this certainty; rather, it is the structure of the world "embodied" by the stone which performs this task. The impression that every human being, the "whole world," could sit on "this stone" and could use the stone to test and confirm the soundness and fundamental character of sense certainty, is therefore not an absolute illusion, because the sensuous contact between traveler and stone, or the traveler's visual contact with the steeple, corresponds to a typical constellation of events which occur in a variety of ways.

While common sense develops only a dull, vague, but solid feeling of the infinite reproducibility of this elementary experience, say, feeling the stone under the butt and the butt on the stone, natural science consciously aims at optimization and at an optimized grasp of the persistence and regularity of constellations of events, which satisfy the requirements for stability that things have. Thus we are not concerned with requirements which have arisen only from contemplation; hence we are not concerned only with "structures of the world" which occur in the experiential contact between consciousness and object. Rather, sense experience participates in the constitution of reality as such. This experience arrives at certainty and at the "perception of the thing" because there is present a typical constellation of the world which "is" the occurrence of things and sense perception. Only because this constellation is present can the stone behave like other stones, e.g., lie on the earth, and only on that account can the traveler judge that this experience of certainty could be reproduced at another time and that others could reproduce it at any convenient time.

But with these reflections Whitehead takes a stand against a great philosophical tradition. Formulated with regard to Hume, but directed against the main currents of modern philosophy, Whitehead criticizes the naive presupposition of a "simple occurrence" of mere data. "I have elsewhere called it the assumption of 'simple location', by way of applying it to space as well as to time. I directly deny this doctrine of 'simple occurrence'. There is nothing which 'simply happens' " (S 38). Formulated positively, this means: "Universality of truth arises from the universality of relativity, whereby every particular actual thing lays upon the universe the obligation of conforming to it" (S 39). Or, as Whitehead will declare more precisely later, each determinate actual thing is this assimilation of the universe, without which it would not be. Therefore Whitehead can assert about the structures of the world, about the centralized networks of relations which maintain a stability sufficient for natural laws, about the "things" to which the rigorous natural sciences direct themselves: "The modern thought-object of science . . . has the complexity of the whole material universe" (OT 183; cf. 185ff.).

Thus the thesis from which we proceeded (cf. 2.1), that the world is to be thought as a unity and as being of a "simple" basic character, is reformulated in such a way that it has become compatible with experiences of complex associations of happenings: The world concretizes itself in events which for their own part are to be thought as a stabilization of a network of relations. At the same time we may not say that thus there is more under consideration than the task and the problems of a cosmology. It is still completely unclear how this world, as a world, is to be comprehended, not only in the event which concretizes it. On this new basis, how can we state anything more than a *unity of the world relative to an event*? How are a transindividual world and the establishing of a stable network of relations in the event to be comprehended so that the comparability and differentiation of the processes of concretion are possible?

2.4 *The Concrete Unity and the Objective Unity of the World*

From about 1920 on, Whitehead tries to distinguish, and to relate to each other, two processes which usually are confused by so-called common sense.

On the one hand, he wants to comprehend the concretion of the world in occasions which create *their* perspective on the world in a unique and transitory way and which -- indeed -- "are" actually this world itself as an interpretable perspective or as a configuration of the world. With regard to such concreteness and individuality of "actual occasions or actual entities" (as Whitehead will call these "events" later on), it seems that no definite statements can be made about the transindividual world, its order, and its unity. A radical pluralism and an intellectually unobtainable concretion make the association of the worlds of actual occasions appear as chaos from the standpoint of external consideration. Whitehead's thesis that the world is "a complex of passing events" in which every occasion is essentially unique and incomparable (cf. CN 166, 125) already appears, on this basis, to be intellectually unobtainable. For how can this external perspective on the world be acquired and defended?

Thus we require the knowledge of another process which makes possible for us comparison,

recognition, and the cultivation of an orientation. Whitehead describes this procedure for disclosing the world as a process of objectification and abstraction. "The discrimination of nature is the recognition of objects amid passing events" (CN 144).

It is important for Whitehead in this connection not to undertake the discrimination between the concretized world and the objective world merely with a recourse to the duality of consciousness and object. In his opinion the concretized and the objective worlds are two ways of configuring reality, which cannot be referred to as two strictly separated realms. As early as 1919 he formulates this position of distance from conventional theories of correlation: ". . . none of our perplexities as to Nature will be solved by having recourse to the consideration that there is a mind knowing it [Nature]. Our theme is the coherence of the known. . ." (PNK vii).

This procedure has often been regarded as epistemologically unreflective, naive, and premodern. Yet, the fact is that Whitehead is concerned with the comprehension of the relatedness to reality and the particular concretizability of the objectification which is achieved in the reflective, abstracting external perspective on events. Therefore he wants to analyze the processes of objectification and concretion on *one and the same* level. The transindividual disclosability of the world is not an illusion. The objective unity of the world, even though the experience of it may be difficult to reconstruct, is not of a character more lacking in evidence than the concretion of the world in actual, perishing occasions. Whitehead's definition of objectification as "abstraction" then seems to contradict this only if we apprehend abstraction merely as a mental activity, a distancing from the concrete which is simply identified with reality.

On the other hand, Whitehead is of the momentous conviction that thought, in the abstraction, directly adapts itself to nature: "Thus 'objectification' itself is abstraction; since no actual thing is 'objectified' in its 'formal' completeness. Abstraction expresses nature's mode of interaction and is not merely mental. When it abstracts, thought is merely conforming to nature -- or rather, it is exhibiting itself as an element in nature" (S 25-26).

Whitehead concedes that this conception is difficult to reconcile with any conventional philosophical tendency of thought or with the usual conceptions of the world cultivated by common sense:

Such a conception is paradoxical if you will persist in thinking of the actual world as a collection of passive actual substances with their private characters or qualities. -.But the conception of the world here adopted is that of functional activity. By this I mean that every actual thing is something by reason of its activity; whereby its nature consists in its relevance to other things, and its individuality consists in its synthesis of other things so far as they are relevant to it. (S 26)

Before we rehearse the development of this beginning in Whitehead's mature cosmology, we must consider a complication which he has worked out in a particularly clear way in connection with his theoretical reflections about religion. At the same time, plausibility can thus be provided for this cosmological theory on the explicitly *anthropological* level of experience.

2.5 *The Individual World, the Problem of the Universal World, and the Function of Religion*

If we consider the state of Whitehead's theoretical development during the first half of the 1920s, the question arises of whether or not a *cosmological* perspective has slipped away from him, whether or not he uses the term 'world' in a way which no longer can be justified. To what extent is the individual, unique, vanishing actual occasion still to be understood as a concretion of an actual *world*, or to what extent is the multiplicity of other occasions, which are concretized in an actual occasion and which exhibit its environment, to be understood as a *world*? Even if it made sense to speak, as Whitehead does, of a "world" as the "relative actual world" of a unique event -- then how do such "worlds" stand in relation to that real level of abstraction (cf. 2.4) on which actual worlds and actual experiences interact and interpenetrate one another, the level which Whitehead sometimes defines as "nature"? Is it not exactly this abstract level which is sooner and more

appropriately to be defined as the "world" -- as does even common sense thinking, which frequently confuses "nature" and "world" in a precarious way? Does not the conception of a relative actual world of actual occasions raise the question of whether or not a transindividual world is a fiction? Moreover, does not the assertion that the transindividual world is a fiction contradict -- in the name of the common "relating to the world" -- our accomplished, thoroughly successful, complex experiences of mutual communication and understanding? If, however, we accept Whitehead's conception of the relative actual world -- then how can we explain even just the genesis of the symbolism of a universal, fully accessible world, and furthermore, how can we presuppose a nonsymbolic transindividual unity of the world?

Whitehead is convinced that it is precisely *religion* which works at the complex problems expressed in these questions.

Religion radicalizes the experience of the individuality of the world, of the incommunicability of the concrete experience of the world. "Religion is what the individual does with his own solitariness" (RM 16, 47, 58). At the same time, religious individuation aims at a more and more adequate, inclusive, and complex relation to the world, and at the formation of world-consciousness: "Religion is world-loyalty" (RM 59; cf. 38ff.). But how can these two features of religion be brought together? Are not these two key propositions of Whitehead's theory of religion -- "Religion is what the individual does with his own solitariness" and "Religion is world-loyalty" -- rather irreconcilable?

Whitehead is indeed convinced that he is able to formulate and interpret, both cosmologically and in a way appropriate to the theory of religion, that which early wisdom has already expressed in paradoxes or in a way which is still intellectually opaque: The enhancement of self-experience and world-experience happens, in a strict sense, at the same time; the path to the self leads to the disclosure of the world; those who really comprehend the world find themselves . . .

According to Whitehead's conviction, the function of religion is not comprehended if religion is defined in principle and primarily as a social fact. Only in its underdeveloped forms and its stages of decay is religion found to be essentially tied into social communication, i.e., as a "tribal religion" or as, in Whitehead's formulation, a phenomenon of "sociability" (RM 20ff.). A careful observation of even the archaic forms of religion clearly discloses the function which Whitehead attributes to them. Even at the level of tribal religious rituals, which Whitehead compares with the co-actions in animal herd behavior, a process of abstraction can be discerned which augments solitariness *and* world-consciousness. In rituals, human beings abstract from the immediate physical needs of the body, and they detach themselves from their immediate physical environment. In the first instance such detachment may ensue for the sake of the social community, its real and symbolic presentation and perception: The ties to the individual body are loosened for the sake of participation in the "social body." Yet the development of higher religiosity discloses a systematics which reaches deeper by dissolving even one's embeddedness in the "immediate social routine" (RM 38, cf. 38ff.). This dissolution issues for the sake of a more inclusive relation to the world; we are dealing with the formation of a world-consciousness which goes beyond the horizons of both the familiar and the more remote human social environment. A dogmatization and rationalization of faith, which in Whitehead's view is essential to cultivated piety, makes possible this development, which increases the ability to connect faith with other experiences, thus protecting the consistency of faith and making it more independent of actual, real communication. This more complex and further disclosure of the world, however, would be lost in a potentially ever more abstract metaphysics if the actual individual had not at the same time brought itself to an ever more nearly complete expression within this disclosure. Precisely because the processes of abstraction and generalization remain at the same time processes of individuation, they do not cultivate a purely intellectual system of reference, but a *world-consciousness*. And precisely because the processes of individuation aim at an augmentation of the ability to integrate and at an extension of the horizons of experience, this process does not drive toward the "peculiar" or the "self-willed" in the sense of the whimsical, the bizarre, or the world-fleeing "noble soul."

This cointensification of world-consciousness and the experience of solitariness, which Whitehead identifies as religiosity and which he sees as consistently pursued by advanced religions, shows the way to the mediation of the individual world and the universal world. Since, prompted by the advanced religions, directed by their selected typical and principal basic experiences and by the metaphysics they nurture (cf. RM 31ff.), many human beings intensify world-consciousness and individuation, their shared possessions and freedoms grow at the same time. The augmentation of world-consciousness discloses more and more regions of what is held in common among more and more human beings, or, more generally, among other occasions and series of occasions. The fiction of the universal, fully accessible world, in this sense common and single, gains in reality and in realism. The prospect of finding individual experiences of the world which are highly similar in intensity and concreteness to one's own disappears at the same time as the domain of world-consciousness increases. The solitariness of the individual, the limitation of the communicability of one's own, full, concrete experience grows.

The knowledge of the improbability of the universal unity of the world and the knowledge of the relativity of the actual world of the individual or, understood more generally, of individual occasions, are the challenges which Whitehead's mature cosmology addresses.

This relativistic cosmology has clarified the claims to effectiveness of cosmology based on mathematically formulated natural science and has allowed a pluralism of perspectives on and theories of the world (cf. 2.1). It is in the position to specify in which respect the single concrete world is a fiction and in which respect it is not fictitious (cf. 2.2). It can systematically reconstruct the process in which world-consciousness emerges but of our real, fragmentary experience, and can distinguish between the symbolic and nonsymbolic communications of the experience of the world, or between real and symbolic participation in the world (cf. 2.3). It can reflect the problems of the concretion and individuation of the world, i.e., the dangers of forming types of world unity, which only shatter understanding and the capacity for association, and the difficulties involved in objectifying world unity without just promoting the fictionalization of the world (cf. 2.4 and 2.5). It can make these partly difficult associations capable of standing against the philosophical tradition's inconsistent suggestions for a solution and against the common sense of the present day (whereby it incidentally makes intelligible why philosophy has given up the effort to develop a cosmology). Whitehead's relativistic cosmology is thus not only in the position to summarize the complex -- and in many respects apparently disparate -- demands made on a consistent cosmology: In the integration of limited, even restricted, beginning-points, which he himself tested (cf. 2.1-2.4); in the acceptance and intellectual penetration of religious disclosures of the world -- which unite solutions capable of being popularized and intensively concerned to be plausible with grand, although often opaque, conceptual effectiveness -- Whitehead not only expounds his basic problem, but he also offers a contribution to its solution.

3. Whitehead's Contribution to the Solution of His Basic Philosophical Problem

3.1 *Speculative Systematics and "Humility Before Fact"*

The major objection to the speculative procedure of Whitehead's cosmology is stated often and in many ways. He himself clearly anticipated and clearly formulated it: "The position taken by this objection is that we ought to describe detailed matter of fact, and elicit the laws with a generality strictly limited to the systematization of these described details" (PR 14/21). His laconic rejection of this objection is: "*Unfortunately for this objection, there are no brute, self-contained matters of fact, capable of being understood apart from interpretation as an element in a system*" (PR 14/21. italics added). Moreover, Whitehead substantiates this rejection as well as his option for a cosmology which works consciously with speculative systematization and metaphysical interpretation:

Whenever we attempt to express the matter of immediate experience, we find that its understanding leads us beyond itself, to its contemporaries, to its past, to its future, and to the universals in terms of which its definiteness is exhibited. But such

universals, by their very character of universality, embody the potentiality of other facts with variant types of definiteness. *Thus the understanding of the immediate brute fact requires its metaphysical interpretation as an item in a world with some systematic relation to it.* (PR 14/21f, italics added)

The selection, the supposedly unmediated "discovery" of "pure" facts is already, in a scarcely obvious way, dependent upon context and determined by context. Cosmology wants to reconstruct this context in general. This, of course, occurs in the constructive scheme of a "speculative system" -- which, however, is subject to perpetual correction by immediate experience. "Speculative boldness must be balanced by complete humility before logic, and before fact" (PR 17/25). Since this "humility before fact" in the framework of a speculative system is distorted and endangered by the selectivity of the system, since that which is regarded as a fact varies with the systematic context, there is to add, in view of the correction of the speculative system: "The ultimate test is always widespread, recurrent experience; and the more general the rationalistic scheme [namely, and thus precisely, not only more effective, but also more forcefully endangered by 'professional blindness'], the more important is this final appeal" (PR 17/25).

Only in humility before the facts as they present themselves in "widespread, recurrent experience" does cosmology control the inevitable risks involved in its systematization and abstraction. Yet, even such a "synoptic view" of facts in diverse associations of experience is inevitably directed by theory and endangered not only by the particular theorist's requirements for concretion -- by that person's perspective on the world -- but also by a lack of coherence within the systematics. With these dangers under consideration, Whitehead's cosmology sees its goal in the elucidation of heterogeneous experiences and in the enabling of a general experience, in the elucidation and understanding in more complex associations of experience. "Our datum is the actual world, including ourselves; and this actual world spreads itself for observation in the guise of the topic of our immediate experience. The elucidation of immediate experience is the sole justification for any thought. . ." (PR 4/6).

The difficulty of the task of making the "actual world" a datum can be judged if we bear in mind that precisely the immediate and deeply reaching experiences are usually dull and nonspecific. Precisely the so-called basic and background experiences are, as a rule, either not grasped at all or only cryptically. The experiences which attain the level of consciousness are, on the other hand, already marked by a high degree of selectivity. Whitehead even considered consciousness as the "last and greatest" of the "elements by which the selective character of the individual obscures the external totality from which it originates and which it embodies" (PR 15/22). In the face of this obscuring activity of the actual consciousness -- with whose help the higher beings achieve "individual depth of being by a selective emphasis" -- in the face of this objectively distorted concreteness and realism Whitehead defines the task of philosophy: It must "recover the totality obscured by the selection" (PR 15/22).

The reconstruction of the context which is screened out in conscious experience, the interpretation of the world in terms of unity, the attention paid to the coherence and solidarity of the world (cf. PR 7/10, 11/17, 15f./22-24, etc.), which at the same time takes into account the infinite variety of concrete perceptions of the world and of facts, is only possible through a speculative systematization which at the same time is empirically controlled in a multiplicity of ways.

This systematization develops an association of "generic notions inevitably presupposed in our reflective experience -- presupposed, but rarely expressed in explicit distinction" (PR 18/27). In spite of this beginning, Whitehead's cosmology is very difficult to approach because of the intellectually circumspect, multiple adjustment or readjustment of these notions, which ensues with reference to the concretion and the perspective in which occurs the experiential background grasped by these notions or in which the foundations of experience articulated by them are actualized. We will now present the main features of this systematization, which has been introduced both in an historical genetic way and in a methodical way, oriented toward systematic problems.

3.2 *Actual Occasions in a Relative Actual World*

Whitehead's cosmology works with simple "ultimate" presuppositions and describes a simple set of changes -- even though from many perspectives and with many possibilities for application. As is well known, it presupposes that the background of experience, the fundamental reality, consists of "actual entities or "actual occasions" (the terms are used synonymously). They are "the final real things of which the world is made up. There is no going behind actual entities to find anything more real. . . . The final facts are, all alike, actual entities. . ." (PR 18/27f., cf. SMW 103: "We must start with the event as the ultimate unit of natural occurrence."). The "actual entities" or "actual occasions" are complexities which "have a grasp on each other," which objectify each other, and which partially integrate and interpenetrate each other. Their "communication" and "interaction," conventionally formulated, are at the center of the cosmology offered in Whitehead's major work. More precisely, this cosmology describes the process of the emergence of new actual occasions through specific syntheses of many separate actual occasions. These separate actual occasions undergo a process in which they combine with each other, or, in other words, in which they are synthesized into a new actual occasion. "The many become one, and are increased by one" (PR 21/32).

This *process* of the synthesis of actual occasions -- Whitehead speaks more appropriately of the "*concrecence*" of many actual occasions into one new occasion -- is the central theme of Whitehead's relativistic cosmology. He is concerned with what is, in principle, a simple set of changes:

The ultimate metaphysical principle is the advance from disjunction to conjunction, creating a novel entity other than the entities given in disjunction. The novel entity is at once the togetherness of the "many" which it finds, and also it is one among the disjunctive "many" which it leaves; it is a novel entity, disjunctively among the many entities which it synthesizes. (PR 21/32)

We understand this process of concrecence best when we start with a multiplicity of actual occasions which are just about to concretize into an actual occasion, or be concretized by it. Both of these perspectives are equally adequate. Actual occasions are to be determined as a product of their environment just as much as this environment is to be understood as constituted by the occasion. *It is important to conceive and present this process not only as a one-on-one relationship in which one occasion objectifies another.* Whitehead sometimes formulates it in this way in order to simplify the presentation. Moreover, the secondary literature has above all held fast to this simplifying presentation, which makes it possible both to bring the linearized "process" under intellectual control relatively easily and to make use of the ordinary model of subject-object correlation. Yet, with such simplification applied in an uncontrolled way, the basic structure of Whitehead's theory is disguised so that nearly all important points of his cosmology are easily missed.

Rather, we must proceed from a process of concrecence in which many occasions become one or are objectified by one occasion and synthesized within it. This occasion, which is this synthesis, itself further enters into many processes of concrecence, processes of other occasions. It becomes objectified for its own part, but as their constituent, their "datum."

The various occasions constituting the environment of an occasion which finds itself in the process of concrecence form with regard to this occasion its *relative actual world*. Expressed in Whitehead's theoretical language: A multiplicity of occasions forms a "nexus" with regard to a process in which this multiplicity is concretized into a new occasion which unifies it. The same state of affairs, formulated from the perspective of the occasion which is in this process of concrecence, is as follows: "Each actual occasion defines its own actual world from which it originates. No two occasions can have identical actual worlds" (PR 210/321).

Although the occasions in the environment of a self-concretizing occasion do not form exclusively

its relative actual world and are not objectified *only* by this occasion -- although every occasion, standing in many different nexus with other occasions, enters as their datum into *many* processes of concrescence -- we must still adhere to this relativity of the actual world. Whitehead repeatedly emphasizes that "no two actual entities originate from an identical universe; though the difference between the two universes only consists in some actual entities, included in one and not in the other . . ." (PR 22f./33f.). The expression 'actual world' is therefore comparable to the expressions 'here', 'yesterday', or 'tomorrow'; such an expression is defined relative to a location, and its meaning changes with the location determined by an actual occasion (cf. PR 65/101f.).

The relativity of the actual world is, however, not comprehended sufficiently with the knowledge of its concreteness and individuality. This knowledge considers a relative world only in regard to the occasion which comes to be in the process of concrescence and which thereby objectifies the other occasions which constitute its world, and comprehends them as the data of its own process of concrescence. This is the comparatively simpler of the two requisite elementary perspectives on an actual occasion and its actual world in the universal process. The other perspective, also required for a sufficient description of the occasion (cf. PR 23/34), comprehends the occasion as an element of other processes of concrescence, as a datum of other relative actual worlds, or as objectified by other actual occasions in their coming to be. In this perspective the actual occasion is analyzed in terms of "its potentiality for 'objectification' in the becoming of other actual entities [or actual occasions]" (PR 22/34; cf. PR 22/33).

The universal process is thus to be considered not only as the transformation of an actual occasion from a potential to a real unity, or as the concretion of a relative actual world within an occasion. The universal process is also to be regarded as a transformation from a potential transindividual unity of the world to a real objective unity of the world, which however is mediated only by the concretion of relative actual worlds in actual occasions. Actuality is, as Whitehead formulates it, incurably atomistic (cf. PR 235/359; also 35ff./52ff, 227ff./347ff.). Only through processes of concrescence are constellations of order maintained, reproduced, and communicated. The occasions which compose the relative actual world of an occasion are -- even though in more or less altered form -- certainly concretized not only in this occasion, but also in others. Thus they compose a great number of structurally similar nexus which indeed are actualized only in ever individual concretions but which at the same time are allied to a high degree through the measures in which these same occasions are objectified in them. Since in this way every occasion is a potential for every occasion which is in process, and since the mutual penetration of relative actual worlds can in principle assume any "density," neither the atomicity of the actual nor the relativity of the actual world preclude a "solidarity of the world" (cf. PR 7/10).

Both aspects of the process of concrescence (cf. PR 23/34) -- the particular becoming of actual occasions and their objectification in other occasions -- are further analyzable in fruitful ways: in a completely new theory of subjectivity and in a beginning, worthy of discussion, of the formation of a polycontextual and multiperspectival (consequently a so-called "post-modern") theory of the construction of a complex dynamic order.

3.3 The Transformation of Indeterminacy into Determinacy: The New Theory of Subjectivity

The analysis of the process of an actual occasion, which constitutes its own becoming, leads into a theory of subjectivity which is among the most important new achievements of Whitehead's cosmology. But to be sure, the reception of Whitehead's theory on the Continent has been particularly disturbed and intimidated by precisely this achievement.

In the first place, we must notice that Whitehead does not equate subjectivity with conscious individuality or even ascribe it only to "human beings." This does not mean that he has no interest in a level of theory which may in the wisest sense be called "anthropologically determined." On the contrary (cf. especially AI). He also does not want to deny that human beings cultivate a richer, more differentiated subjectivity than do other organisms or that -- although many other creatures in their experience cross the threshold into consciousness -- human consciousness is particularly

elaborate and efficient. Nevertheless, he wants to cut off the unquestioned, thoughtless, and naively absolute privilege of the anthropological level in a general cosmology. This can also by all means be regarded as ensuing in the interest of a more inclusive analysis of the human being, as an opportunity for the theoretical comprehension of the so-called "primitive" experiences which even human beings have -- and indeed to a large extent in every case -- experiences which, as a rule, reach the level of consciousness only, for example, in a dull bodily sensation, in the feeling of various degrees of general psychophysical "presence," etc.

Still more incisive than either the abolition of individualistic anthropocentrism or the abolition of the fixation on consciousness-centered and observer-centered theoretical beginnings, and still more offensive to a style of thinking marked by Continental philosophical traditions, is the second alteration of the conception of subjectivity in Whitehead's book.

All theories which place "a subject," as a fixed point of reference and a well determined entity, ahead of the process of experience have, in Whitehead's view, not clearly understood subjectivity. They indulge in the opinion that they have comprehended individual privacy, but in fact presuppose an already "objectified individual" (cf. PR 151/229). On the other hand, in Whitehead's cosmology we must discern the emergence of subjectivity in the first instance amid a multitude of occasions which aim at their synthesis and concretion. Not an entity which is somehow fundamental, but an entity which, rather, is absent from its determinacy and its achieved concretion, stands at the beginning in the center of a process which is analyzed with respect to its "subjective moment." The occasion is present just in the sense of an identified indeterminacy. It has not yet concretized itself, but, precisely through its absence, through its not-yet-being, it is active, it centralizes, it concretizes its relative actual world.

Although we can make this procedure plausible by using a familiar understanding of the future (the occasion is in the first instance only its future and it is present only in the sense of its absence, which is determinable in the mode of anticipation), this conception of subjectivity may seem to be plainly ghostlike for traditional habits of thought. Whitehead himself tried occasionally to take these difficulties of thought into account by designating subjectivity as both the "ground" *and* the "goal" of the process of concrescence. But wherever this auxiliary notion has been received in the sense of conventional theories of correlation. Whitehead's decisive thesis -- that the actual occasion as subjectivity *becomes what it is* in the process of concrescence (cf. PR 40ff./64ff., 219/334f., 222/339, 226ff./345ff.) -- could no longer be clearly understood,

The impression of something odd in Whitehead's conception of subjectivity disappears if we comprehend subjectivity in the first instance in view of its relative actual world, its environment. Subjectivity can thus be defined not only as the goal but also as the power behind the concrescence of a relative actual world which concretizes itself in an occasion or which is concretized by the occasion. Reiner Wiehl gives a helpful explanation:

Whitehead deliberately uses the expression 'concrescence instead of the term 'synthesis'. Thus he speaks of a growing together rather than a piecing together or a joining together. That which in general distinguishes a process of growing together from one of piecing together is above all the fact that all individual moments which may be differentiated within a process and which grow together into a unity come together out of themselves, through their own activity, into this unity. (E 27)

Of course, from this perspective, we do not yet clearly comprehend the power which induces the various occasions and the relative actual world formed by them to "grow together," concretize themselves, exactly in this determinate way. But this power is given with regard to the transition from a relatively indeterminate to a determinate unity of self-concretizing occasions or of the relative actual world. Precisely this transition from selected indeterminacy to determinacy is the *subjectivity* of the process of concrescence. If we have made this procedure clear to ourselves, then the most important fundamental theses of Whitehead's major work -- that "the actual world is a process, and that the process is the becoming of actual entities" (PR 22/33), that in this process "the

potential unity of many entities . . . acquires the *real* unity of the one actual entity" (PR 22/33) -- no longer create any great intellectual difficulties for us.

A reconstruction of the "internal" course of the process of concrescence, however, allows us to understand above all why Whitehead sees the achievement of the real unity of an actual entity (or of an actual occasion), the entity's completed concrescence, and its acquired determinacy coinciding with the *perishing* of the entity. With the final completion of its transition from relative indeterminacy to determinacy, in which the actual occasion has achieved its "subjective aim," it perishes as subjectivity. The supreme concretion of the relative actual world or the consummated formation of an actual occasion signifies at the same time its perishing (cf. PR 25ff./37ff., 87ff./133ff., 244ff./ 373ff.). Also, however, with its achieved concretion, the relative actual world ceases to exist as only its relative world (cf. 3.4).

We can analyze this -- in the first instance with regard to subjectivity -- bearing in mind that the completed occasion has exhausted its room for development, its world; while it has transformed all potentiality and indeterminacy into actuality and determinacy, it has, however, at the same time spent its subjectivity or, as it were, consumed it. It has become that which conventional theories of subjectivity usually put at the beginning of their thought, namely, a determinate entity which, according to Whitehead's theory, now functions as a datum for *other* processes of concrescence.

The "perishing" of the completed actual occasion does not therefore mean that it has vanished without a trace. It perishes -- in other occasions, into whose relative worlds it now enters as an element. To understand this phase of the process requires that we change our perspective on the occasion. In the first instance it was to be apprehended as an increasingly determinate unity of a multiplicity of occasions which were objectified through it and which formed its relative actual world. After its world, its subjectivity, this room for development, has been exhausted, after the achievement of its subjective aim, which is its supreme concretion and unity, it is now to be regarded as occurring in various other processes of concrescence as objectified, as a datum. In this -- plural -- occurrence, in other relative actual worlds it contributes not only its individuality, the concretion of the world achieved within it, *but it also contributes, by means of its multiple occurrence, to the transindividual unity of the world*, without the comprehension of which Whitehead's basic philosophical problem would not be solved.

But to elucidate this "contribution" of actual occasions to the construction of more complex states of order in the world, we need an even more profound presentation of the way in which actual occasions relate to each other.

3.4 *The Theory of Feeling and the Polytextual, Multiperspectivally Adjusted Theory of the World*

"Process," the centerpiece of Whitehead's theory, is described in summary passages (e.g., PR 149ff./227ff.; cf. 40ff./64ff., 83ff./127ff, etc), as well as in the secondary literature, in a straightforward, simplifying presentation, as a succession of four phases or stages. (In the following summary emphasis is laid on the fact that the "process" focuses on *one-to-many* and *many-to-many relations*.)

In the first phase issues the constitution of the relative actual world of an occasion in the act of becoming. Such an occasion finds an association of objective, past occasions, the data which constitute the initial conditions of its process of concrescence. We can also say that with these initial conditions the subject of the process comes forth as a potential subject, insofar as its complete actualization has not yet occurred.

The second phase, which in a narrower sense can be defined as "process," is the phase of the transformation of data by the subject which is in the act of becoming. Again, there are several possible perspectives on this phase of the process "in which the many become one" (cf. 3.2). We can analyze this phase as the subject's becoming what it "is" in its completed concretion, but also as the subject's activity in appropriating -- or "prehending" and "feeling," in Whitehead's terminology -- and combining data into a new unity.

By "*prehension*" and "feeling" Whitehead wants to characterize all instances of contact between actual occasions, and by no means only forms of communication used by living beings or even beings with consciousness. "Actual entities involve each other by reason of their prehensions of each other" (PR 20/29). Whitehead calls the positive prehension "feeling" (PR 23/35, 220ff./337ff.). "With the purpose of obtaining a one-substance cosmology, 'prehensions' are a generalization from Descartes' mental 'cogitations', and from Locke's 'ideas', to express the most concrete mode of analysis applicable to every grade of individual actuality" (PR 19/29). Superficial consideration has taken this terminological decision as the opportunity to accuse Whitehead of "panpsychism." But the fact is that Whitehead wants with this starting point to comprehend the common elements of, for example, the most elementary physical events and instances of contact whose investigation is otherwise reserved for physics alone (cf. PR 238/364f.), simple processes of interchange among living organisms, and operations of human and nonhuman consciousness. With regard to his theory of feeling he has compared his philosophy -- which he also calls "organistic" -- with those of Kant and Hegel. "The philosophy of organism aspires to construct a critique of pure feeling, in the philosophical position in which Kant put his *Critique of Pure Reason*" (PR 113/172f.). "In the place of the Hegelian hierarchy of categories of thought, the philosophy of organism finds a hierarchy of categories of feeling" (PR 166/252).

In feeling, in positive prehension, an actual occasion reproduces its characteristics; it produces itself by its act of feeling -- as a determinate aspect of what it has felt. In negative prehension it prevents data from having an influence on the process of concrescence from which the unity of subjectivity emerges (cf. PR 19/28f., 23ff./35ff., 219ff./334ff., 231ff./353ff.). The basic ideas of this theory may best be explained with regard to the objectified occasions which constitute the data of the feeling occasion in the process of concrescence. Objectified occasions, before they become data in the process of concrescence under consideration, are themselves always functioning as subjectivity in their own process. They bring what is always their own openness and abundance of possibility with them into the process of concretion which makes them data. They bring this abundance of their own actually possible complexity of subjectivity in with them as -- in Whitehead's formulation -- "perspective." Stated more vividly, they invite the occasion in whose process of concrescence they function as data to exhaust their perspectives in feeling and to prehend their subjectivity as adequately as possible. Because of the singularity of actual occasions in the process of concretion, this exhausting of the perspectives of the preceding occasions never becomes a complete reproduction in the sense of a *renewed* occurrence of the subjectivity of these objectified occasions.

Rather, the new subject brings itself in by *not* exhausting the perspectives of the preceding occasions, by bringing the concretion of these preceding occasions to a relative conclusion, i.e., by "negatively prehend[ing]." It dismisses possibilities and -- insofar as processes of decay are not involved, as they are with "simple physical feelings" -- compensates this reduction by the integration of this reductive feeling with other feelings. This synthesis of feelings, the synthesis which augments its complexity, issues when the occasion feels and objectifies its *own* reaction to the preceding occasions, to its relative actual world. Thus it is in the process of concrescence that, strictly speaking, the manifestation of subjectivity occurs -- a reaction, in a still unintegrated sense, to its own reacting. The subject comes to be with this identification of this reacting as "its" reaction. It now makes sense to say that the subject produces a self-referential relation, produces *itself*, its continuity. Thus at the same time it introduces novelty into the world, the condition for its creative coconfiguration of the world.

Whitehead considers this single procedure from different perspectives and in different types of relations, and the difficulty which the reading of his major work entails is -- as already emphasized -- to be traced back to the problems of gaining intellectual control over this shift of perspectives. If we consider the self-referential character of the actual occasion and the fact that it realizes its own abundance of possibility in the feeling integration of other objectified occasions, then we can say that its feeling relates to the "subjective form" which directs the process of feeling. On the other hand, if we abstract from that which feels, if we consider this process in view of the unification of

objectified occasions, then we can confirm that feeling relates to the "concept of the actual world," that is to that nexus which achieves concrete unity in the feeling occasion, etc.

However, according to one of Whitehead's opinions which, to be sure, has aroused quite the greatest commotion in the reception of his work, we can also concentrate on the determination which sustains itself in the feelings of diverse objectified occasions or on the common element which sustains itself in these objectified occasions, and we speak about the act of feeling a more or less complex "eternal object" (cf. PR 233/356 with regard to the shift of perspectives presented here). But precisely, with this talk of "eternal objects," as Whitehead clearly sees, we abstract completely from the process, from the unalterable uniqueness of felt occasions, and from the singularity of the occasion in the act of feeling. We will not here discuss whether or not Whitehead, by introducing "eternal objects" (revised, but not given up, in the wake of SMW), these "pure potentials" (PR 23/34), has unnecessarily burdened his cosmology with a problematic two-worlds theory. Let it suffice to say that the same state of affairs in the case of self-referential feeling can also be analyzed without recourse to eternal objects, namely, in view of the "subjective form" and the "concept of the actual world."

The third phase of the process is described, in the simple consideration which pursues only the concretion of a single actual occasion, as the phase of "satisfaction," with which the process attains its "subjective aim." If we abstract from the course of the process and ask only after the determinacy of the actual occasion, then we can assert that now the actual occasion has become "what it is." As Whitehead formulates it in his theory of feeling, that is:

Each actual entity is conceived as an act of experience arising out of data. It is a process of "feeling" the many data, so as to absorb them into the unity of one individual "satisfaction." Here "feeling" is the term used for the basic generic operation of passing from the objectivity of the data to the subjectivity of the actual entity in question. Feelings are variously specialized operations, effecting a transition into subjectivity. (PR 40f./65)

In the phase of satisfaction occasions perish subjectively, but enter objectively into other processes of concrescence. Subjectively, these occasions have exhausted their relative actual world, their room for development, and thus have attained their subjective aim. This subjective end, or this termination of their subjectivity, however, is neither their final disappearance nor their utter annihilation.

In a fourth phase, the phase of "transition," the completed occasion, which has subjectively perished, enters as a datum into many other processes of concrescence. Whitehead has summarized the rhythm of the "creative process" as follows: ". . . it swings from the publicity of many things to the individual privacy; and it swings back from the private individual to the publicity of the objectified individual" (PR 151/229).

The conception of the "perishing" of the objectified occasion in other processes of concretion has been so important for Whitehead that he declared it to be the key to *Process and Reality* (cf. ESP 117). Without such a key idea the mediation of the relative actual world concretized in actual occasions would be inconceivable. The cosmology would have to seek its imagined aim in an optimized dissociation.

Whitehead is aware of the fact that a cosmology which neglects the subjectivity which is effective precisely in its subjective perishing would not think beyond the real decay of the universe and would be in principle cheerless. On the other hand, he does not want to cultivate any illusions. "What looks like stability is a relatively slow process of atrophied decay. The stable universe is slipping away from under us." But to that he adds: "Our aim is upwards" (FR 82. Cf. RM 153: "The universe shows us two aspects: on one side it is physically wasting, on the other side it is spiritually ascending.").

As opposed to all theories which are not able to overcome conceptually the egoism of finitude,

Whitehead's cosmology -- without calling the concreteness, perspectivity, and transitory character of actual occasions into question -- can disclose a broader horizon. Occasions which have perished subjectively become public, i.e., they acquire *a multiple presence in the relative actual worlds of other occasions*. With their situations varying in every case, objectified in differing ways by other occasions, they enter into a multitude of contexts, and in so doing they pass along to other processes the complexity which they have achieved and formed in their subjectivity as a "lure for feeling."

This ongoing activity of occasions -- which have subjectively perished -- in other occasions is designated by Whitehead as the actual occasions' acquisition of "objective immortality" (PR xiii/ix, 32/47, 347ff./527ff., etc). This expression, which Whitehead uses also as a connecting thought toward integrating religious conceptions into his cosmology (cf. esp. PR, last chapter, 342-51/519-33), may in the first instance seem overdrawn. Focusing on the anthropology of the individual, we might perhaps concede that something like "objective immortality" may possibly be granted to Plato, Caesar, and Shakespeare, but that this is scarcely valid for every human being and even less valid for lower forms of life.

Yet this objection overlooks the significance of the objective integration of the transindividual world, to which *every* occasion contributes. That is to say, each occasion not only concretizes its relative actual world, but also passes the structure of order achieved within it along to the worlds of other occasions which are polycontextually concretizing themselves. In this way the structure of the world concretized by this occasion may be of such a high level that the occasion is felt as a lure for enhanced, more nearly perfect development. Other occasions, in their attempt to exhaust the highly developed subjectivity of this occasion, may, for their part, push forward toward higher development. Whitehead, quite oriented toward development and progress, pays particular attention to these lures for the development of more nearly perfect states of order. Yet, no less important is this essentially plainer but more difficult to understand aspect: Even the occasion which most lacks complexity contributes to the unity and "solidarity" of the world through its polycontextually transmitted presence.

Only when we consider this aspect does the cosmological conception of an "upward development" in the process of the world even become plausible. Because of their higher integration of a more complex world, the more highly developed occasions intensify the lure for feeling them. In other words -- considered from the perspective of the feeling occasion -- in the interest of expanding its own room for development, its relative actual world, and its capacity for feeling, the occasion which is in the process of concretion will give privilege to those occasions in its environment which embody a high integration of the world and thus an order as complex as possible.

The objective unity of the world is mediated by nothing except concrete individual occasions. But these mediate the unity only since, in their perishing as a datum, they pass along to other occasions, as a lure for the development of the latter, the complexity achieved with them (i.e., within the concrete individual occasions) and the integration of their relative actual world. Since they carry the individually achieved concrete unity of the world into many contexts of new concretion, the world "comes to itself" in a variety of ways, even though it does not obtain objectively the concreteness of an actual occasion. Apart from its concretion in individual actual occasions, the world remains polycontextual and thinkable only in this "network" which is to be multiperspectively adjusted. Yet Whitehead's cosmology lets us comprehend the "dynamic effort of the World passing into everlasting unity" (PR 349/530).

We can dispute whether we should follow Whitehead in calling this procedure an aiming at the "apotheosis of the world" and whether we should work at all in cosmology with religious ciphers (cf. WP 249ff.). We can ask why Whitehead did not reformulate his basic philosophical problem in the context of an anthropology which takes into account the processes balancing the concrete individual with its own publicity, which it can only simulate -- (in connection with which Whitehead's theory of propositions would offer a still completely unexhausted source for such a development).

The main points in the reception of Whitehead hitherto have been determined by such inquiries, interests, doubts, and the attempts to dissipate them. On the other hand, it is important to notice that Whitehead's theory, consciously developed as a cosmology, is helpful precisely toward establishing perspectives which until now have been strange -- as well as perspectives on supposedly familiar states of affairs which, however, are now to be made newly "visible." Meanwhile, the style of thought which Whitehead's relativistic cosmology has developed and which "Whiteheadians" call post-modern encounters us, more or less well-formed, even in the works of other renowned thinkers in the arts and humanities (e.g., Talcott Parsons, Niklas Luhmann, Nelson Goodman, Hans Blumenberg, Reinhart Koselleck). Today we can surely say that it proves itself particularly in situations involving transition between anthropology and cosmology. Precisely with regard to these transitional situations which, in view of the present deficits in ecological and social-technological theory, particularly become the center of cultural attention, Whitehead has set new tasks.

The problems of how the public, plural form of objectified subjectivity is to be thought, of how reconciliation occurs between the uniform inner perspective and the outer perspective which is only intelligible in relativistic terms, and of how the connection between the privateness and publicness of the world is to be comprehended, are all to be regarded as such tasks. Yet not only in its setting of tasks, but also in the solutions it suggests to these problems, Whitehead's relativistic cosmology establishes new standards.

References

DWP -- Victor Lowe. "The Development of Whitehead's Philosophy," in PANW 15-124.

E -- Reiner Wiehl. "Einleitung in die Philosophie A. N. Whiteheads," in Alfred North Whitehead, *Abenteuer der Ideen*, translated by E. Bubser. Frankfurt: Suhrkamp, 1971. pp. 7-71.

IM -- Alfred North Whitehead. *An Introduction to Mathematics*. London and New York: Oxford, 1969.

MC -- Alfred North Whitehead. "On Mathematical Concepts of the Material World." *Philosophical Transactions, Royal Society of London, A*, 205 (1906), 465-525.

PANW -- Paul Arthur Schilpp, editor. *The Philosophy of Alfred North Whitehead*. (The Library of Living Philosophers; 3). 2nd edition. LaSalle, Illinois: Open Court, 1971.

PW -- Wolfe Mays. *The Philosophy of Whitehead*. London: George Allen & Unwin, 1959.

UGRW -- Michael Welker. *Universalität Gottes und Relativität der Welt: Theologische Kosmologie im Dialog mit dem amerikanischen Prozessdenken nach Whitehead*. 2nd edition. Neukirchen-Vluyn: Neukirchen Verlag, 1986.

WP -- Harald Holz and Ernest Wolf-Gazo, editors. *Whitehead und der Prozessbegriff Beiträge zur Philosophie Alfred North Whiteheads auf dem Ersten Internationalen Whitehead Symposium, 1981*. Freiburg: Alber, 1984.

WRML -- Willard Van Orman Quine. "Whitehead and the Rise of Modern Logic," in PANW 125-63.

WTA -- Wolfe Mays. "Whitehead's Theory of Abstraction." *Proceedings of the Aristotelian Society* 52 (1951), 95-118.

Note:

* This contribution is identical for the most part with a German version that was published in Josef Speck (ed.), *Grundprobleme der grossen Philosophen* (Philosophie der Gegenwart: I), 3rd ed., (Göttinger: Vandenhoeck & Ruprecht, 1985), pp. 269-312. The expositions in section 2.1 follow in

part the presentation given in UGRW 35-71.

Viewed 7249 times.