

CHAPTER ONE

The Principle of Limitation

I. BACKGROUND

Up until the spring of 1925 Whitehead was very diffident about mentioning God in his published deliberations. Since most of the early writings concerned education or the philosophy of nature, this is quite understandable and appropriate. Yet the absence of any discussion of God in most of "Religion and Science" (April 1925), is more striking.¹ In the Lowell Lectures themselves, delivered earlier in February 1925, he cuts short a discussion of God with this remark: "The delineation of final metaphysical truth is no part of this lecture" (*SMW*, 92).² In the next few months, before he sent these lectures to the publisher (June 1925), Whitehead did an about face. By including a chapter on "God" in *Science and the Modern World*, he was now willing to go on record as a theist.

It is not surprising that Whitehead should have come to embrace the necessity of a principle of limitation. As we shall briefly indicate, it was a natural consequence of his reasoning. Nor is it even surprising that some philosopher should call this principle "God"; philosophers have been known to call all sorts of entities and principles "God." What is surprising is that someone of Whitehead's religious sensibilities, seemingly so confirmed in an agnosticism of a quarter-century's standing, should embrace this strange principle as "God," and that in such a short time.

It is difficult for us to appreciate fully the strangeness of the principle of limitation, since we tend to interpret it in the light of the more refined concepts of *Religion in the Making* and especially of *Process and Reality*. But what would we think of Whitehead's theism if *Science and the Modern World* were all that we had? How does this principle have any commonality with received notions of God? This principle is no Creator, certainly not an individual personal Creator creating the world out of nothing. It is not even the ground of being, nor the final totality including everything. It is not clear how it could redeem. To be sure, more specialized notions such as the Redeemer of Israel or the God and Father of our Lord Jesus Christ, appeal to particular religious

traditions, while Whitehead's presentation moves on a level of abstract generality. Yet how could these two levels be coordinated?

Much of this strangeness can be explained, but the process is complex. First, we need to sketch how Whitehead came to endorse the principle of limitation in order to understand its central role in his thought. Then we need to reconstruct, as far as possible, a coherent account of his religious sensibilities during the years preceding 1925, for these present the clue to the suddenness of his shift. This means a study of Whitehead's criticism of the traditional image of God as found also in later writings, for there is little evidence that he ever modified this criticism once he became a philosophical theist.

As I have argued elsewhere,³ the major shift from Whitehead's early philosophy of nature and his later metaphysical writings occurs *within* the composition of *Science and the Modern World*, between the original Lowell Lectures and the supplemental materials. The metaphysical excursions in the Lowell Lectures really sketch out a philosophical synthesis that is more consonant with the earlier philosophy of nature than with later developments. Its basic categories were "events" and "objects." These events may have been thought as modal differentiations of an underlying substantial activity,⁴ but this was not called God, lest there be Spinozistic determinism. Since an event was understood as any spatiotemporal region, any event includes other events (ad infinitum), and is included within other events. While past, present, and future could be distinguished as spatiotemporal loci relative to the creative advance, there was no ontological difference between such events.

To be sure, the term *eternal object* is introduced in the Lowell Lectures, but in one sense it is simply another name for the sense-object. In his philosophy of nature Whitehead had distinguished several different kinds of objects: sense-objects, perceptual objects, scientific objects, even percipient objects. In the Lowell Lectures he grouped them in two different classes, depending on their relation to time: they were either timeless (as were sense-objects) or they were enduring (the other objects). Basically, eternal objects constituted the external characteristics of events. They had no role assigned to them other than being the determinates of events, apart from which they have no existence.

The atomic theory of occasions, which I take to be the heart of Whitehead's basic shift, changed all that. If the present occasion is understood to be a momentary yet indivisible process of determination, it is ontologically distinct from a past occasion, which is fully determinate. Heretofore eternal objects had been understood as inherent in events; how can they be inherent in the future if there are no future occasions? (That which renders occasions atomic is the present process of determination, so there can be no future occasions, no future ontological units of actuality.) Since eternal objects could no longer be understood to function immanently in future events, they were reconceived to function transcendentally as possibilities, that is, as characteristics that might

be realized in present processes of realization. Eternal objects were not just to be regarded as the eternal characteristics of what was already realized, but as internal possibilities to be realized. Not all would be realized, yet they could influence the process of realization.

Unlike most theories, where possibilities influence only freely acting, conscious beings, primarily humans, Whitehead's possibilities influence all occasions, since allprehend eternal objects, and all undergo a process of determination that is initially undetermined to some degree. Thus, with the expansion of the role of eternal objects as including transcendent possibilities, their scope of influence is enormously increased. Now, the world must be understood not only in terms of the requirements of the actual but also of the possible. Taken just in itself, all sorts of things are possible; not only those things that conform to the general contours of what is already actual. The actual world is already somewhat ordered, but what is the guarantee that future possibilities will conform to that order, rather than introducing a complete counter order, or complete disorder?

The Lowell Lectures had no principle of limitation, nor any need of one. The need first becomes evident when the eternal objects assume the transcendent role of possibilities in a philosophy that envisions all occasions to be internally related to eternal objects. If there are *all sorts* of eternal objects, not just those that characterize actual occasions, or even actualizable occasions, then there threatens the danger of absolute chaos, unless there is some sort of a constraining principle. This constraining principle can limit the entire range of "possibilities" to those that are actualizable. If only those that conform to the general order of the actual world are deemed actualizable, then that order can be maintained. The principle that guarantees that order cannot simply be another eternal object, for then it would be simply another possibility to be limited, rather than the actual limit imposed on all possibilities.

By providing for the general metaphysical order of the world the principle of limitation fulfills the role of cosmic orderer. This role was traditionally assigned to God, as the teleological arguments for God's existence attest. The unsatisfactoriness of traditional formulations of this argument lay in its assumption of an omnipotent creator. As cosmic orderer such a God should create complete order; yet if so, why is there still disorder and evil? The principle of limitation provides a place for a cosmic orderer without that consequence. The world can be partly ordered without being totally ordered. The principle of limitation, by limiting the world to the actualizable, influences the process of actualization but does not determine it.

It is this discovery about *partial* ordering that revolutionizes Whitehead's thinking about God. Many see in his later adoption of temporalistic theism the primary contribution of Whitehead to theism, but equally important if not

more so is his rethinking of the whole nature of creation such that God is not conceived to be the sole creator. While Whitehead's theory of partial divine ordering was considerably refined over the next three or four years, it has its impetus in thinking of God as the principle of limitation.

Since Whitehead avoided any public discussion of God prior to 1925, we must rely upon the testimony of others as to his earlier religious reviews. Here the views are sharply contrasting. Edmund Whittaker wrote in his obituary notice of Whitehead that his early religious convictions "lost their hold on him, and for a time he became an outspoken and even polemical agnostic."⁵ W. R. Matthews, Dean of King's College, London, when Whitehead was professor at the Imperial College of Science and Technology records a very different picture. He finds Lucien Price's *Dialogues*⁶ defective because "they do not convey the religious spirit of Whitehead's thinking." While "sharply critical comments on the apparent contradictions and confusions in Christian teaching are authentic and characteristic," they fail to show that Whitehead "spoke from within the fellowship of the spiritually awakened. He was a worshipper."⁷

These comments by Whittaker and Matthews may be partially reconciled by referring the first to Whitehead's later Cambridge period and those of Matthews to his postwar London period. Bertrand Russell confirms this: "Throughout the time that I knew him well—that is to say, roughly, from 1898 to 1912—he was very definitely and emphatically agnostic."⁸ Yet the death of Whitehead's youngest son Eric, killed in the war in 1918 may well have led him to a different religious attitude: "The pain of this loss had a great deal to do with turning his thoughts to philosophy and with causing him to seek ways of escaping from belief in a merely mechanistic universe."⁹ Yet while the quest for religious peace may well have intensified after 1918, it is another thing whether Whitehead then found any concept of God he could consider satisfactory. Without such a concept it would be more confusing than helpful to espouse belief in God, since he would be bound to be misunderstood. Even when later he was armed with what to his mind was an adequate concept, he was misunderstood by ardent students of his philosophy of nature who thought he was a tough-minded empiricist done with all notions of divinity.

Matthews records that Whitehead was a worshipper, but this does not necessarily say that he was a believer. Whitehead, we may say, worshipped an Unknown God. If, as I believe, the lecture "Religion and Science" was delivered before Whitehead had discovered his initial concept of God,¹⁰ that lecture supplies a very good clue as to what he may have then worshipped:

something which stands beyond, behind, and within, the passing flux of immediate things; something which is real, and yet waiting to be realised; something which is a remote possibility, and yet the greatest of present

facts; something that gives meaning to all that possesses, and yet eludes apprehension; something whose possession is the final good, and yet is beyond all reach; something which is the ultimate ideal, and the hopeless quest. (*SMW*, 191f)

This is what religion seeks, but could it be conceptually articulated?

Whitehead grew up in an Anglican parsonage. His father, the Rev. Alfred Whitehead, was vicar of St. Peter's, Isle of Thanet, and honorary canon of Canterbury. His elder brother Henry ultimately became bishop of Madras.¹¹ He was schooled at Sherborne, originally founded in 741 by Benedictine monks. Among other things, he was reading the Bible in Greek.¹² As an undergraduate he had a lively interest in foreign missions. "We do not know what many of our Lord's sayings mean," he is remembered as saying, "but the commandment to go into all the world and preach the gospel is perfectly clear."

He was nearly converted to Roman Catholicism under the influence of Cardinal Newman about the time of his marriage in 1890. The question of papal infallibility ultimately deterred him, but a sense of the genuinely religious must have attracted him. This he found lacking in the religion of his youth. As Norman Pittenger recognizes, "He criticized Anglicanism, the religion in which he had been brought up, because with all its advantages—the Prayer Book itself, the glory of its cathedrals, the historical splendor of its parish churches—it has (he said) 'everything except religion.'"¹³

From 1884 to 1888 Whitehead was an active member of an intense discussion group of undergraduates and graduates known as the Apostles. Victor Lowe has reported on some of the titles of the papers read, and the way the members voted afterward.¹⁴ On May 2, 1885, the question was put: "Do we believe in God?" Whitehead voted yes, as he did two years later when the question was whether a personal God is a satisfactory explanation of the universe. Once the question was "Shall we transcend our limitations?" "Yes," Whitehead wrote in the book, "I want to see God." One night in 1886 the Apostles divided on the issue, "Should Churchmen go to Rome?" Whitehead wrote: "Yes—or in the other direction."¹⁵

Victor Lowe conjectures that by "the other direction" "he meant, I believe, towards dropping all Christian belief." I support this conjecture, for it makes good sense of the long theological quest Whitehead undertook (from 1890 to 1897), which began with the near conversion to Roman Catholicism and ended in the agnosticism known to Russell and Whittaker.¹⁶

In the preface to *Adventures of Ideas* Whitehead mentions Paul Sarpi's *History of the Council of Trent* as one of six books singled out as having "chiefly influenced my *general way* of looking" at its topic (*AI*, vii). In an earlier book, a vivid example taken from Sarpi's book is discussed (*SMW*, 8f). This book, which made such an impact on Whitehead, was most likely read

early in his period of personal religious quest.¹⁷ What impressed Whitehead most in reading Sarpi was the sharp contrast between the medieval thinkers who were committed to reason, while the various sixteenth-century parties all relied upon authority to settle disputes. These authorities were various: the traditions of the Church in the case of the Catholics, *sola scriptura* in the case of the Protestants, and empirical evidence in the case of the scientists.

Whitehead found himself in sympathy with the medieval rationalists, acutely aware of the limitations of any method that seeks to circumvent reason. This may well have clarified his rationalist commitments, giving him a definite criterion by which to weigh his options besides fidelity to religious tradition, or the deliverances of the scientific community.¹⁸ In the end it was not the religious sensibility that was found wanting. It was the ability of the best theology of the time to make sense of that sensibility in rational terms. As he later said to Dean Matthews, "The older I get, the more certain I am that nearly all the things Catholics do are right, and nearly all the reasons they give are wrong."¹⁹

Later, during his second religious quest after World War I, Whitehead may have been more successful in distinguishing religious insights from the notion of God, and finding a way of nurturing religious concerns in the absence of any satisfactory concept of Divinity. This does not seem to have been so initially during his period of agnosticism. (Pittenger describes this period as "brief," Lowe puts it at "about twenty years.")²⁰ Then something that was previously found precious had been excised. It had been meticulously judged over nearly a decade and been found wanting, therefore rejected.

"Whitehead's son North," Lowe reports, "once said to me that there was something a little odd about his father's agnosticism. The tone was a bit like that of a priest celebrating a Black Mass. It was as if he wanted to be religious, and was being defiantly atheistic. At least, though the conclusion of the long private debate was perfectly definite, it was not altogether welcome. The process had been agonizing, nothing one would go through again or like to see one's children go through. Accordingly, most of the theological library was sold."²¹

In the light of these descriptions of Whitehead's earlier agnosticism, we suspect that Dean Matthews did not come to know him until after the war. Then Whitehead seems to have arrived at a renewed appreciation for the religious vision, all the while recognizing that no concept of God he knew was at all satisfactory. World War I represented a tremendous loss to Whitehead: not only his son Eric but generations of students he had known. The loss evoked the religious question, which he later formulated most generally as "the question whether the process of the temporal world passes into the formation of other actualities bound together in an order in which novelty does

not mean loss" (*PR*, 340). There is material persistence, but it cannot preserve novelty. Is there some cosmic memory that can?

I think that religion for Whitehead then did not mean particular religious traditions and authorities, but rational religion. Religion as the human response to the ultimate might even embrace our quest for existential meaning. If rejecting common concepts of God makes him an unbeliever, then he is an unbeliever with an extraordinarily high estimate of religion:

It is the one element in human experience which persistently shows an upward trend. It fades and then recurs. But when it renews its force, it recurs with an added richness and purity of content. The fact of the religious vision, and its history of persistent expansion, is our one ground for optimism. Apart from it, human life is a flash of occasional enjoyments lighting up a mass of pain and misery, a bagatelle of transient experience. (*SMW*, 192)²²

When he finally discovered an adequate concept of God in the course of his metaphysical reflections on the nature of possibility, he was prepared on very short notice to announce it to the world, even though that principle is quite divergent from nearly all received notions as to God's nature. In the final analysis the principle of limitation is God because it satisfies Whitehead's personal religious sensibilities. It serves as the culmination of a religious quest begun as early as 1890, if not before.

II. CRITICISMS

If only the principle of limitation satisfied him, what was it about traditional conceptions of God that he found so unsatisfactory? Here the biographical evidence already marshalled does not help us. Perhaps if we review the criticisms of traditional theism and religious practice that run through his books, we can obtain some clue. Whitehead's criticisms may explain why he rejected those concepts of God known to him, and how his own concepts were designed to overcome them.

1. First let us consider some of the criticisms with respect to religion generally. Perhaps with respect to his own upbringing, Whitehead could observe that "religion is tending to degenerate into a decent formula wherewith to embellish a comfortable life" (*SMW*, 188), but religion could also be savage; consider the horrors that attend it:

[H]uman sacrifice, an in particular the slaughter of children, cannibalism, sensual orgies, abject superstition, hatred as between races, the

maintenance of degrading customs, hysteria, bigotry, can all be laid at its charge. Religion is the last refuge of human savagery. The uncritical association of religion with goodness is directly negated by plain facts. (*RM*, 37; cf. *AI*, 12)

The idea that religion is necessarily good is "a dangerous delusion" (*RM*, 18). "In your religious experience the God with whom you have made terms may be the God of destruction, the God who leaves in his wake the loss of the greater reality" (*RM*, 17). As long as the only God he knew was so perceived, the earlier Whitehead would feel justified in rejecting God.

In *Adventures of Ideas* Whitehead reflects on the reasons for this persistence of savagery. The basic reason may be found in cultural lag, primarily because religion in our day is resistant to rational criticism.

Profound flashes of insight remain ineffective for centuries, not because they are unknown, but by reason of dominant interests which inhibit reaction to that type of generality. The history of religion is the history of the countless generations required for interest to attach itself to profound ideas. For this reason religions are so often more barbarous than the civilizations in which they flourish. (*AI*, 171)

This criticism is applied to the patristic church and to the Reformation: "The failure consisted in the fact that barbaric elements and defects [left unspecified] in intellectual comprehension had not been discarded, but remained as essential elements in the various formulations of Christian theology, orthodox and heretical alike" (*AI*, 166).

The resistance to rational criticism extends to the mutual criticism of the various religious traditions, and to criticism by science. "The decay of Christianity and Buddhism, as determinative influences in modern thought, is partly due to the fact that each religion has unduly sheltered itself from the other" (*RM*, 146). Religion has been unsettled by scientific advance, but it need not be, if religion could only adopt a spirit of willingness to be transformed by rational criticism. "A clash of doctrines is not a disaster—it is an opportunity" (*SMW*, 186). "The clash is a sign that there are wider truths and finer perspectives within which a reconciliation of a deeper religion and a more subtle science will be found" (*SMW*, 185).

These general reflections on the interaction of science and religion give us a little insight into Whitehead's specific difficulty. They can easily be endorsed by theistic scientists reflecting on their profession with respect to the life of the church. There does not seem to be any particular scientific controversy (such as evolution) which may have occasioned Whitehead's own

stance. The general accent on rationality, however, is important to his general outlook.

2. The particular rationality that Whitehead sought requires general metaphysical principles which God could exemplify (*PR*, 343). Expressed another way, "God's existence is not generically different from that of other actual entities, except that he is 'primordial' in sense to be gradually explained" (*PR*, 75).²³ If this were not the case, reality would be split up into separate realms that need not be connected to one another. We should have incoherence in the special sense Whitehead specified: "the arbitrary disconnection of first principles" (*PR*, 6). For Descartes, the two realms were those of mind and matter. While mind and matter express in some way obvious features of ordinary experience, there is no fundamental reason, within Descartes's philosophy, why it should not be possible for there to be a world consisting solely of minds, or of matter. By the definition of substance adopted, "this system makes a virtue of its incoherence" (*PR*, 6), for the independence of these substances dissolves necessary interconnection. But "there is no entity, not even God, 'which requires nothing but itself in order to exist'" (*RM*, 108).

In his quest for a generic rationality Whitehead opposes all dualisms, not only the Cartesian, but the division into nature and supernature, and the bifurcation between causal nature and apparent nature. Some charge that Whitehead himself bifurcates nature into events and objects, but that is to miss the nature of the fallacy. It lies in the arbitrary disconnection between first principles. Objects and events, however, are necessarily interconnected: events can only be characterized by objects, while objects receive their temporal instantiation from events.

Notice the parallel between causal nature and God as creator. Both operate behind the scenes, so to speak, to bring about the world we experience. Unless there are principles spanning both realms, by which this causation or creation can be understood, the transcendent component is unknown, beyond all criticism. It is just possible that Whitehead's long-standing dissatisfaction with the notion of a Creator God exempt from general metaphysical principles eventually led him to discern the parallel phenomena in the philosophy of nature, and to oppose any reliance upon causal nature. The effort to explain nature within the bounds of experience has its parallel in the enterprise of understanding God within the limits of generic principles.

This insistence that God be conceived within the general characterization of the whole is the one requirement Whitehead specified before he publicly espoused theism. In all probability his rejection of those theistic concepts that do not meet this requirement was a central concern during his agnostic period. Just after Whitehead refused to declare himself on the question of God's existence, he wrote:

My point is that any summary conclusion jumping from our conviction of the existence of such an order of nature to the easy assumption that there is an ultimate reality which, in some unexplained way, is to be appealed to for the removal of perplexity, constitutes the great refusal of rationality to assert its rights. (*SMW*, 92)

We should not infer some ultimate reality behind the scenes that can explain what we directly encounter only by being completely different from it. Whitehead demands rather that whatever ultimacy "from which our formulation starts should disclose the same general principles of reality, which we dimly discern as stretching away into regions beyond our explicit powers of discernment" (*SMW*, 93).

Much later he levelled the same sort of objection against the Trinitarian theologians: they failed to make the needed generalization. He has very high regard for their achievement: "These Christian theologians have the distinction of being the only thinkers who in a fundamental metaphysical doctrine have improved upon Plato" (*AI*, 167).²⁴ In rejecting the Arian concept of Christ as creature, they rejected Platonic imitation in favor of the direct immanence of Christ in God. Suitably generalized, this means that one actuality could be directly immanent in another. Aristotle flatly rejects this possibility,²⁵ but the temporal distinction Whitehead draws between the past and the present renders it plausible, for present subjects canprehend and thereby appropriate past objects.

Unfortunately, the theologians never made this advance into general metaphysics. The reason for this check was another unfortunate presupposition. The nature of God was exempted from all the metaphysical categories which applied to the individual things in this temporal world. The concept of him was a sublimation from its barbaric origin. He stood in the same relation to the whole World as early Egyptian or Mesopotamian kings stood to their subject populations. Also the moral characters were very analogous. In the final metaphysical sublimation, he became the one absolute, omnipotent, omniscient source of all being, for his own existence requiring [required?] no relation to anything beyond himself. He was internally complete. (*AI*, 169)

If the concept of God were exempt from the metaphysical principles, it could escape the refinement of rational criticism. Barbaric vestiges could still remain. This is an apt summary of classical theism, emphasizing those features Whitehead as agnostic may be supposed to have opposed. He also criticizes those of this era who would abandon metaphysics for limited pursuits.

Duller men were content with limited accuracy and constructed special sciences: thicker intellects gloried in the notion that the foundations of the world were laid amid impenetrable fog. They conceived God in their own image, and depicted him with a positive dislike of efforts after understanding beyond assigned methodologies. Satan acquired an intellectual character, and fell by reason of an indecent desire to understand his Creator. (*AI*, 104).

The insistence on metaphysical generality leads to some suspicion of the category of God's will, since that can be appealed to in explaining the inscrutable. "The new, and almost profane, concept of the goodness of God replaces the older emphasis on the will of God. In a communal religion you study the will of God in order that He may preserve you; in a purified religion, rationalized under the influence of the world-concept, you study his goodness in order to be like him" (*RM*, 42). Here the concern is with morality and religious discernment, but metaphysics as well "requires that the relationships of God to the World should lie beyond the accidents of will, and that they be founded on the necessities of the nature of God and the nature of the World" (*AI*, 168).

This also applies to the epistemological device used by Descartes and Leibniz of guaranteeing human knowledge by the appeal to the goodness of God's will. "It is a device very repugnant to a consistent rationality. The very possibility of knowledge should not be an accident of God's goodness; it should depend on the interwoven natures of things. After all, God's knowledge has equally to be explained" (*PR*, 190). In another context, where God's goodness functions to provide, which initiates the new concrescence, he recognizes that God can be said to be the creator of that occasion. But he immediately qualifies himself:

But the phrase is apt to be misleading by its suggestion that the ultimate creativity of the universe is to be ascribed to God's volition. The true metaphysical position is that God is the aboriginal [nontemporal] instance of this creativity, and is therefore the aboriginal condition which qualifies its action. (*PR*, 225)

Creativity ensures the everlasting coexistence of God and world, each requiring the other. The world's coming-into-existence is not dependent upon God's will, as it must be in every theistic attempt to explain its temporal origin.

We may not consider the nonexemplification of generic principles to be a decisive objection to theism, largely because Whitehead has designed his own concepts of God to get around this difficulty. Yet it may be plausible to suppose that all concepts known to him previously were subject to this objection,

particularly if it becomes necessary to modify traditional theism to overcome this problem.

3. One particular form of theism, at least in its usual forms, cannot meet this objection: the doctrine of God as personal transcendent creator. In one passage Whitehead gives summary judgment, speaking of "the doctrine of an aboriginal, eminently real, transcendent creator, at whose fiat the world came into being, and whose imposed will it obeys, [which] is the fallacy which has infused tragedy into the histories of Christianity and of Mahometanism" (*PR*, 342).

In *Religion in the Making* the transcendent creator is introduced as one of the three main simple renderings:

The Semitic concept of a definite personal individual entity, whose existence is the one ultimate metaphysical fact, absolute and underivative, and who decreed and ordered the derivative existence which we call the actual world. This Semitic concept is the rationalization of the tribal gods of the earlier communal religions. It expresses the extreme doctrine of transcendence. (*RM*, 68)

While perhaps not in the same way as in Whitehead's time, many biblical scholars see the monotheistic God of Israel as arising out of an earlier polytheistic context in which exclusive allegiance was demanded: "Thou shalt have not other gods before me" (Ex. XX.3). Whitehead here means to describe this concept simply and unqualifiedly, adopting the strategy (rather unfairly, with respect to the Jews) of reserving qualifications for its Christian appropriation. Yet in the end "the Church gradually returned to the Semitic concept, with the addition of the threefold personality. It is a concept which is clear, terrifying, and unprovable" (*RM*, 74f). It is clear as unqualified, terrifying by placing us totally dependent on divine will, and unprovable because it transcends all our categories.

Although the notion of an individual personal creator is criticized, it is not the question of God's personality that is at stake. That this should be so is rather remarkable given that when Whitehead drafted this passage he most likely still affirmed the impersonal principle of limitation as God, now understood as the principle of rightness. It may even be at this time that Whitehead believed that all attempts to prove the personality of God transcended the metaphysical principles at our disposal. What he objects to is something more general, the doctrine of creation itself, "the Semitic theory of a wholly transcendent God creating out of nothing an accidental universe" (*PR*, 95).²⁶ If God is basically related to the world as its creator, and our rational knowledge is limited to the world, then we are ultimately dependent upon the inscrutability of the divine will.²⁷

In *Religion in the Making* Whitehead specifies two main difficulties. "One of them is that it leaves God completely outside metaphysical rationalization. We know, according to it, that He is such a being as to design and create this universe, and there our knowledge stops. If we mean by his goodness that He is good. But such goodness must not be confused with the ordinary goodness of daily life. He is undeniably useful, because anything baffling can be ascribed to his direct decree" (*RM*, 70).

This argument passes over in silence one alleged source of knowledge about God: revelation. Yet for epistemic purposes, revelation may be exactly parallel to creation. Both are directly initiated by God, and wholly dependent on his will. Both make the distinction between the hidden source and what is made manifest. But instead of criticizing the doctrine of revelation, Whitehead determines to bypass it in his quest for rational religion. This leads to a revised understanding of dogma, which is no longer necessarily tied to that which is revealed. "The dogmas of religion are the attempts to formulate in precise terms the truths disclosed in the religious experience of mankind" (*RM*, 58). The definition enables him to be critically open to all the religious traditions of mankind without having to solve the insuperable problem of determining which revelational claims are true. If we relinquish all claims to revelation, then it is exceedingly difficult to see how knowledge of an absolutely transcendent God could be possible.

"The second difficulty of the concept is to get itself proved. . . . Any proof which commences with the consideration of the character of the actual world cannot rise above the actuality of this world. It can only discover all the factors disclosed in the world as experienced. In other words, it may discover an immanent God, but not a God *wholly* transcendent" (*RM*, 71, my italics).

Some transcendence can be ascribed to God, just not complete transcendence, at least with respect to Whitehead's later understanding of the primordial actuality. "The notion of God . . . is that of an actual entity immanent in the actual world, but transcending any finite cosmic epoch—a being at once actual, eternal, immanent, and transcendent" (*PR*, 93). This sense of transcendence might be thought to be peculiar to God, but Whitehead immediately corrects this misapprehension: "The transcendence of God is not peculiar to him. Every actual entity, in virtue of its novelty, transcends its universe, God included" (*PR*, 93f).

The same difficulty continues to be Whitehead's concern elsewhere, as, for instance, applied to Newton's acceptance of a supernatural origin to the world. This entails a version of "the cosmological argument, now generally abandoned as invalid; because our notion of causation concerns the relation of states of things within the actual world, and can only be illegitimately extended to a transcendent derivation" (*PR*, 93). By a parallel argument, we may insist that our understanding of causes applies only to apparent nature,

and cannot be extended to causal nature, as required by any bifurcation of nature.

Whitehead's opposition to God the creator extends throughout his writings. One way of understanding his enterprise is as a persistent search for an alternative understanding of creation. In *Adventures of Ideas* he sums up the issue thus:

There are two current doctrines as to this process. One is that of the external Creator, eliciting this final togetherness out of nothing. The other doctrine is that it is a metaphysical principle belonging to the nature of things, that there is nothing in the Universe other than instances of this passage and components of these instances. Let this latter doctrine be adopted when the word Creativity expresses the notion that each event is a process issuing in novelty. (*AI*, 236)

Each event is a creation insofar as it is new. It is not a creation out of nothing, insofar as it appropriates past actualities, but something that has been brought into being, and that deserves this name. The traditional creation out of nothing need not have the monopoly on concepts of creation. In the developed theory, creativity provides for subjectivity, freedom, and novelty, themes that may not have been able to flourish in a conceptuality dominated by God the creator.

"The creation of the world—said Plato—is the victory of persuasion over force" (*AI*, 83; cf. 25). Whitehead follows Plato here in favoring persuasion. It becomes the basis for his next basic objection to traditional notions of divine power.

4. If God is conceived to be the hidden cause of the world, and only the world exemplifies metaphysical principles, then we have no means of reflectively refining the traditional understanding of divine power. Whitehead never tires of pointing out the barbaric origins of our notions of divine power, notions that remain unless thoroughly criticized. The Psalms celebrate

joy in the creative energy of a supreme ruler who is also a tribal champion. . . . [But] this worship of glory arising from power is not only dangerous: it arises from barbaric conception of God. . . . The glorification of power has broken more hearts than it has healed. (*RM*, 55f)

This glorification meant that God was conceived to have the unchecked power of oriental despots. "The Church gave into God the attributes which belonged exclusively to Caesar" (*PR*, 342). Interwoven with Christian ideals, "there has survived throughout history the older concept of a Divine Despot and a slavish Universe, each with the morals of its kind" (*AI*, 26). "In the origin of civilized religion, gods are like dictators" (*MT*, 49).

In the origin of theism, this is perhaps to be expected. Whitehead's criticism is that these barbaric notions should persist so long. His point is that they resist any effective criticism because God is conceived as exempt from the ordinary canons of rationality. By being placed outside the universe, God's creative power is unchecked by the competition with other powers.

By *Process and Reality* Whitehead had worked out a notion of divine power that effectively criticized classical notions, but it is first in *Adventures of Ideas* that he introduces the contrast between "persuasive" and "coercive" power in reliance upon Plato.

The alternative doctrine [to creative persuasion], prevalent then and now, sees either in the many gods or in the one God, the final coercive forces wielding the thunder. By a metaphysical sublimation of this doctrine of God as the supreme agency of compulsion, he is transposed into the one supreme reality, omnipotently disposing of a wholly derivative world. (*AI*, 166)

The contrast is perhaps not quite right, for those worshipping the traditional Creator do not perceive him to be coercive. Only that which has a will can be compelled to act against its will, and that which has not yet been created has no will. "Persuasion" and "compulsion" can be seen as contrasting forms of indirect power, whereby the power of the patient must be engaged by the primary agent to bring about the intended end. Traditional theism is based rather upon solitary power, whereby the end sought is brought about solely by the primary agent, independently of any secondary powers. Solitary power is really the notion Whitehead means to oppose, for the creation of the world out of nothing by omnipotent fiat is the supreme instance of solitary power.²⁸

Although the explicit contrast between "persuasion" and "compulsion" first makes its appearance in late writings, Whitehead's criticism of divine power is deep seated, going back to the days before he explicitly espoused theism. Thus in the early lecture on "Religion and Science" he noted: "The presentation of God under the aspect of power awakens every modern instinct of critical reaction" (*SMW*, 191). It certainly awakened his critical instinct.

5. Finally, there is some criticism directed toward the concept of God as unchanging: "The vicious separation of the flux from the permanence leads to the concept of an entirely static God, with eminent reality, in relation to an entirely fluent world, with deficient reality" (*PR*, 346). In part this view came about from the Greek infatuation with mathematics:

The human mind was dazzled by this glimpse of eternity. The result of this revelation was that Greek philosophy—at least in its most influential school—conceived ultimate reality in the guise of static existences with

timeless interrelations. Perfection was unrelated to transition. Creation, with its world in change, was an inferior vocation of a static Absolute. (MT, 81)

This criticism, however, is noticeably absent from earlier writings, such as *Religion in the Making*. It seems to have been evoked by the shift to temporalistic theism in *Process and Reality*. Once Whitehead clearly affirmed divine temporality, it is natural for him to criticize the bested alternative. Beforehand, however, he did not seem to have been troubled by the problem. Characteristically, he termed God *the* nontemporal actual entity, and the original contrast between God and the world was a simple contrast between permanence and flux. I cannot suppose that this later critique of God as timeless goes back to his atheist days.

The other three attributes of God criticized (God as exempt from metaphysical principles, God as transcendent Creator, God as solitary power) are intrinsically connected, and may well form the basis for the early Whitehead's rejection of theism. The rationalist objection is not commonly made but Whitehead alludes to it frequently. For if we exempt the concept of God from the criticism that conformity to metaphysical principles demands, then we have lost a major way of correcting our preconceptions. If unrefined, the barbaric origins of our notion of divine power persist. The trouble with the doctrine of creation, as traditionally conceived, is that it justifies this denial of rationality by placing divine power beyond the reach of the world, and of any interaction with worldly powers.

The traditional notion of divine power early evoked Whitehead's critique, as the essay "Religion and Science" (April 1925) indicates: "The presentation of God under the aspect of power awakens every modern instinct of critical reaction" (SMW, 191). However it affected others, it certainly awakened such instincts in Whitehead, although he does not seem to trust himself to spell them out here. Whitehead's sympathy for religious sensibilities had travelled a long way from the empathic agreement he shared with Bertrand Russell during the first decade of the century; nevertheless, all the alternatives he knew were inextricably bound up with the notion of a transcendent creator, which evoked the wrong sense of divine power. While sympathetic to the aims of theism, Whitehead could not then espouse theism as long as it inevitably contained insuperable difficulties.

It is very difficult to ascertain which of the first four criticisms, if any, were reasons that led Whitehead to give up theism in the first place. Presumably one of the books he read during the seven-year period of theological inquiry was Hume's *Dialogues Concerning Natural Religion*. If so, perhaps judgments formed during that reading may have left their mark. For example,

he notes that classical theism fashions "God in the image of an imperial ruler, God in the image of a personification of moral energy, God in the image of an ultimate philosophical principle. Hume's *Dialogues* criticize unanswerably these modes of explaining the system of the world" (PR, 342f). In Whitehead's opinion, Hume has excluded all the traditional alternatives, so if theism is rationally possible, there must be a fourth alternative. This he claims to have found, at least by the closing pages of *Process and Reality*: "What follows is merely an attempt to add another speaker to that masterpiece, Hume's *Dialogues Concerning Natural Religion*" (PR, 343).

The criticism that classical notions of creator and created generate an impassible gulf is also referred to Hume:

The worst of a gulf is, that it is very difficult to know what is happening on the further side of it. This has been the fate of the God of traditional theology. It is only by drawing the long bow of mysticism that evidence can be collected from our temporal World. Also the worst of unqualified omnipotence is that it is accompanied by responsibility for every detail of every happening. This whole topic is discussed by Hume in his famous *Dialogues*. (AI, 169; cf. PR, 94)

These quotations referring to Hume touch upon all the facets of Whitehead's criticism of traditional theism except with respect to divine immutability, suggesting that they do indeed go back to his reading of Hume, which may well have taken place during the 1890s.

The criticism that traditional omnipotence requires God to be responsible for all details is very fundamental, even if voiced infrequently: "If this conception be adhered to, there can be no alternative except to discern in aim the origin of all evil as well as of all good. He is then the supreme author of the play, and to Him must therefore be ascribed its shortcomings as well as its success" (SMW, 179).

Such theistic determinism may well be challenged by philosophies of substance that sharply distinguish between creative power and inner-worldly powers. A being is first brought into being, who then freely acts. But in the event ontology Whitehead increasingly adopted, this was not possible. To describe an event's being means to analyze the means whereby it comes to be. These means could be described in purely naturalistic terms, as in the first Lowell Lectures, bracketing all questions of ultimacy. But if so, God's relation to the natural order remains unclarified. The problem lies in explaining an event ontology in creationist terms. If the classical model of a transcendent creator is used, determinism results, for the unlimited power of divine creativity excludes all others from the process of bringing an event into being.

III. TYPES OF LIMITATION

The strength of the principle of limitation lies precisely in its combining a traditional divine function (providing for cosmic order) with an event ontology that does not preclude creaturely freedom. There is *some* order in the universe in any case, although there may be many ways of explaining its existence. Whitehead mentions "chance" as one possibility (*SMW*, 179). The rational relationships among the infinite array of possibilities is not enough. He tells us that God's existence is "the ultimate irrationality" (*SMW*, 178), even though some limitation is required for the emergence of actuality. What is irrational is rather the nature of God by which this the particular kind of limitation is made, which can only be empirically discerned. "No reason can be given for the nature of God, because that nature is the ground of rationality" (*SMW*, 178).²⁹

Several types of limitation are listed:

This limitation takes three forms, (i) the special logical relations which all events must conform to, (ii) the selection of relationships to which the events do conform, and (iii) the particularity which infects the course even within those general relationships of logic and causation. (*SMW*, 177)³⁰

We are given no explicit guidance as to how these different types of limitation connect with God's limiting function. Yet *some* cosmic limitation is needed. Moreover, with the third kind of limitation Whitehead is open to the possibility that this may extend to what are usually regarded as contingent features of the universe. His example is the three-dimensionality of the space we live in,³¹ but that does not focus on the features of cosmic order necessary for human survival the way some recent reflections have. Discussions of the so-called "anthropic principle" have isolated a number of pervasive cosmic constants which within very narrow perimeters must be what they are in order for life to emerge anywhere in the universe. Typically these are physical constants that can be measured and that could, from a more abstract perspective, have other values.

The cosmic order is wonderful in its fragility. We are fundamentally dependent upon the basic constants of the universe such as the speed of light, the gravitational constant, Planck's constant, the electric charge of the proton and the electron, and the properties of subatomic particles. Alterations in any of these constants could "cause huge changes in the structure of atoms and atomic nuclei. Even when the changes are only slight, most atomic nuclei are unstable and cannot exist."³² If this were so, carbon, nitrogen, and oxygen would not exist, as well as all life forms dependent upon

them.³³ Moreover, slight changes in the values of these constants can cause large changes in the structure and evolution of stars, even to the extent that luminous stars would not exist at all, or have lifetimes too short to sustain the evolution of life.

Even more strikingly, Stephen Hawking writes:

[A] reduction of the rate of expansion [of the universe] by one part in 10 to the 12 at the time when the temperature of the Universe was 10 to the 10 K would have resulted in the Universe starting to recollapse when its radius was only 1/3000 of the present value and the temperature was still 10,000 degrees. The only "explanation" we can offer . . . is that . . . our existence requires the Universe to have certain properties . . . [including] the existence of gravitationally bound systems such as stars and galaxies and a long enough time-scale for biological evolution to occur. If the Universe were expanding too slowly, it would not have this second property for it would recollapse too soon. If it were expanding too fast, regions which had slightly higher densities than the average or slightly lower rates of expansion would still continue expanding indefinitely and would not form bound systems. Thus it would seem that life is possible only because the Universe is expanding at just the rate to avoid recollapse.³⁴

An appropriate cosmic order is necessary to accomplish this.³⁵

In *Science and the Modern World*, this cosmic order is achieved by an impersonal principle of limitation, not by any agent or activity. This is required by the metaphysics Whitehead then espoused, based on events (later, actual occasions) and its underlying substantial activity. God could not be identified with the underlying activity. Too often, he found, the "unfortunate habit has prevailed of paying to [God] metaphysical compliments." If then God were conceived to be the foundation of the metaphysical situation, there could "be no alternative except to discern in Him the origin of all evil as well as of good" (*SMW*, 179).

On the other hand, if God were then conceived as an actual occasion, then God would just be one more efficient power competing with others. Also, the determination of the divine occasion would either conflict with some actual occasion or occasions, or there would be gaps in the plenum of actual occasions.

Since reality was conceived exclusively in terms of events and objects, if God could not be an event, God must be constituted solely of objects. This entailed that God would be an uncreated principle of limitation that was incapable of participating in the underlying activity. In the later conceptuality (of *RM*), God could not be an instance of creativity, since not an event.

There seems to be a third alternative. Why could God not be conceived as an agency that was not event? Why could God not be "outside" spacetime? Insofar as this expression has any extensional meaning, even in a very extended sense, God could be conceived as "within" this generalized extensive continuum, and then would have the generalized properties of an event. What is most often meant, however, is God is *not* part of the extensional matrix. In that case, Whitehead insists that our account of God, like that of other actualities, "should disclose the same general principles of reality, which we dimly discern as stretching away into regions beyond our explicit powers of discernment" (*SMW*, 93).

Later it becomes possible to conceive of God in temporalistic terms as exercising creativity, but at the outset, God is not an event, either as the totality of events or a part, nor "outside" the spatiotemporal realm. If so, God can only be conceived as a principle constituted solely of eternal objects.

Although by later standards the principle of limitation is a somewhat primitive concept of God, it marked a decisive step for Whitehead. It provided a workable alternative to the notion of a transcendent creator with all of its attendant difficulties, and it could still assign God a cosmic role in nature. It placed God clearly on the side of final (or at least nonefficient) causation. It determined that God's creative role would be among the necessary rather than the sufficient factors. Within these guidelines Whitehead's conception of God could develop in tandem with the development of his metaphysical outlook. But the concepts of God as a nontemporal actuality, subsequently as also temporal, should be looked upon as refinements of this initial concept, not its rejection.