

Dialectical Realism in Theology and Science

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The recent and welcome growth of interest in the religion and science dialogue has created a large literature of books, articles, lectures, conference, and even new positions in major universities. The religion and science dialogue has important issues on its agenda that are constructive and substantial, which are not part of philosophy. But philosophy (along with the disciplines themselves) can help to create an interdisciplinary framework or space in which the dialogue takes places.^{i[1]} Some of the differences between various voices in this discussion are at bottom philosophical differences, rather than religious or scientific ones. I certainly do not think that philosophy should dominate this dialogue, but it can provide some useful clarifications and questions, especially given the current interest in postmodernity from all sectors of the academy. I agree with Wentzel van Huyssteen and Nancey Murphy, who in recent lectures are calling for a post-foundational or postmodern epistemology, which should help create a philosophical space in which there can continue a fruitful dialogue and exchange between theology and the special sciences.^{ii[2]}

In the last few years, I have been developing a proposed collegial metaphor for the relationship between theology and the sciences, in the context of a mutuality model.^{iii[3]} The basic idea is that theology and the special sciences should work together, to help us all develop worldviews that are at once scientific, and meet our deepest religious needs. I seek to go beyond dialogue in a mutuality model, in which it is rational and legitimate (in certain circumstances) for theology to influence the content of science, and vice versa. This is because it is rational in any discipline, when there are two or more equally good theories (given all the evidence, etc.), to accept the theory which best fits with our background knowledge. An example of this from the history of science is Descartes' argument for the stability of the laws of nature from the immutability of God as First Principle of nature. Most of the time our theories are not equally good, of course, and no discipline should allow worldview issues to obscure the evidence or dictate conclusions. Yet however reasonable in principle, this proposal raises serious issues, and to meet some of these questions I have developed a version of scientific realism, which I call "dialectical realism." The

purpose of this essay is to provide an outline of this epistemological framework, in order to evoke discussion, evaluation, and debate. Different models of the proper relationship between religion and science are often based upon different philosophies, including epistemology, philosophy of science and metaphysics. I sketch here part of a philosophical frame (the epistemology part) within which a mutuality model for theology and science can be pursued. Other philosophical frameworks are possible, of course, but this one is a particular proposal for grounding the mutuality of theology and science.

Why Dialectic?

I believe a dialectical approach is the most fruitful epistemology for the current religion-science dialogue. For one thing, a dialectical approach is needed in both religion and science because of the problem of perspective. All our knowing arises from our location, i.e. our point of view and cultural context. Even the natural sciences are located in culture, language and history. None of us has a God's eye view, a "view from nowhere." Any approach that hopes to grasp the object of our studies will need a host of contrasting, alternative points of view on that object. A single flower can be studied from the perspective of every discipline in the natural sciences! Even such an exhaustive analysis will only begin to grasp the full nature of that single bloom of living matter. The world is an amazing and astounding place – we need as much and as many insights as possible. This point was in fact made long ago by Plato, in the Republic, who also called this process "dialectics".^{iv[4]}

Plato is in fact the father of dialectical thinking. The key to dialectics is the notion that important insights can be gained from contrasting perspectives. Voices in conflict may each grasp a partial truth. When Abelard wrote his famous Sic et Non, he used these contrasting opinions to search more fully toward the truth.^{v[5]} In modern times, Kant, Hegel, Marx and even Kierkegaard were all masters of dialectical thinking. The problem with these great masters of dialectic (excepting SK) was their attachment to grand metanarratives. Plato, Hegel and Marx placed dialectics into a grand synthetic system. They had an over-attachment to philosophical speculation, especially their own conclusions and philosophies. Whether under the name of the Realm of Forms, Absolute Spirit, or dialectical materialism, these philosophers were too enamored of speculative systems which tended to obliterate in a synthesis the original tensions between thesis and antithesis. This drowning of difference has come under severe attack by postmodern critics, and I find these criticisms very much on target. In fact, the critique of a System (capital S!) which obliterates

the individual can be found powerfully in Kierkegaard already in the 19th century.^{vi[6]} Therefore, the dialectical realism I am defending is not a complete “system” of thought, but rather a proposed approach to epistemology in science and theology. At this point I will focus on philosophy (later in the paper we will look at the dialectical theology of Greek orthodoxy, which is my preferred approach in theology).

In his brilliant book Negative Dialectics (1966), Theodor Adorno draws upon the work of SK and others to develop a postmodern dialectic that avoids the excesses of Plato, Hegel and Marx.^{vii[7]} Adorno rightly notes that “matters of true philosophical interest at this point in history” are the very ones that Hegel scorned, namely “nonconceptuality, individuality, and particularity” (p.8). We need to pay attention to detail, to the concrete, to difference. Adorno was a philosopher of art, and the artist in any medium pays particular attention to details. Negative dialectics pays attention first of all to the limitations of any philosophical concept. “A matter of urgency to the concept would be what it fails to cover, what its abstractionist mechanism eliminates, what is not already a case of the concept” (p. 8). Reality greatly exceeds any and all philosophical concepts. For this reason, negative dialectics begins with the criticism of current theories, concepts and accepted systems of thought. But for Adorno, unlike some postmodern critics, criticism is not the whole story. “In criticism we do not simply liquidate systems, however” (p.24). The purpose of dialectical thinking, which seeks tensions, contradictions, and differences, is to open philosophy and science up to the reality of particularity. Adorno was a critic of both enlightenment absolutes and the easy relativism of the contemporary culture (pp.35-37).

Attention to detail and to particularity, to the concreteness of reality, leads us to value different voices and perspectives on the object. Dialectics begins with the difference between word and object, with Derrida’s differance. No word, no definition, is fully adequate (working definitions may be adequate for a limited purpose, of course). Therefore a variety of languages and definitions, a variety of attempts to capture experience in words, is more than welcome. This will not doubt lead to contrasting, even conflicting, points of view about the object. Contemporary orchestral music often finds beauty in contrasting tones, even in clashing notes, rather than in the harmonies of classical music. This attitude is one that Adorno brings to philosophy. Synthesis is suspect.

Yet science is synthesis. Many great breakthroughs in science have been a combination of saturation in the details of the subject, and insightful, imaginative new models, laws and theories. Science

has often advanced through a synthesis of older problems and theories. One of the best examples of this is the neo-Darwinian synthesis of genetics and classical evolutionary theory. The point is that science does advance through synthesis, at least in part. A new theory in a particular discipline contains a synthesis of older material and older problems, which the new theory gives better insight into (even while it creates new problems and avenues of research). If synthesis is suspect, then is not also science suspect?

The answer to this important question comes, I believe, both in our attitude toward scientific knowledge, and in Adorno's proposed corrections to dialectical method, viz; attention to the particular, and an "ensemble of analyses" Not all systems of thought, nor all dialectics, are alike. Adorno rightly rejects a "closed system" which is "bound to be finished" (p.27). Such a system pretends to be absolute, and in this pretense, it distorts the particular. The antidote to this is a healthy grasp of the limitations of concepts, systems and philosophical reflection, attached to a new objectivity that pays greater attention to the objects themselves. "What is waiting in the objects themselves needs such intervention [from philosophy] to come to speak, with the perspective that the forces mobilized outside, and ultimately every theory that is brought to bear on the phenomena, should come to rest in the phenomena" (p. 29). A new kind of objectivity is called for. Not a supposedly "neutral" or "value-free" science, which is impossible, but an objectivity that takes the particularity of things seriously. There is nothing here that is contrary to a genuinely scientific attitude, which is always self-critical, always paying attention to the facts. When we invest too much in scientific knowledge, however, we can easily lose this critical scientific attitude. As Adorno rightly argued, a scientific perspective or "objectification" upon things is a powerful but limited abstraction (p. 43). Reason itself should not be reduced to only such mathematical and measurable abstract thinking. We should remember, too, that there is more to truth than scientific truth. But these insights need not inhibit science. On the contrary, they liberate it from false demands and pseudo-religious attitudes, which one sees all too often in the popular mindset and mass media.^{viii[8]}

In addition to a new objectivity, which respects difference and particularity, Adorno recognizes the philosophical needs for something like a "system" of ideas. "The call for binding statements without a system is a call for thought models, and these are not merely monadological in kind. . . . Negative dialectics is an ensemble of analyses of models." (p. 29). This metaphor of an ensemble, or elsewhere a "constellation," suggests the need to see models and concepts in their inter-relatedness. But the metaphor

is also put forward as a way of avoiding the totalizing tendencies of synthesis and conceptual system. A constellation or an ensemble may have tension, even contradiction, within it. There need not be a commitment, such as we find in Hegel, to a “true light” which sees everything in a completed whole, that is, in a finished system.^{ix[9]} But things still are connected and related, around a general theme or subject, in an ensemble. Scientific knowledge is not in fact a great system of ideas, in any case. The actual body of scientific knowledge in any age ends up being closer to an ensemble of models, metaphors and ideas, rather than some tightly connected logical system of propositions.

If we return to our example of a single flower, what the various sciences can tell us about this flower is much closer to an ensemble than a system. In this particular case, there is no tension or paradox – but there might be in more complex phenomena.

Dialectics begins with difference, and with the epistemological fact that all knowing is a kind of interpretation, and takes place from a particular perspective. It likewise begins with the gap between word and thing, and the inherent limitation of all concepts, definitions, and formulae. The resulting epistemology is dialogical, communal, and historical. Like good diplomacy, knowledge takes time, and improves with serious debate and attention to differences.

Why Realism?

The second aspect of epistemology which I commend to those interested in the religion and science dialogue is realism.^{x[10]} Now attention to differences demands that we notice that not all “realism” is alike. There are at least naïve realism, and critical realism. To this list I should like to add dialectical realism. We should also notice that realism is not a global concept. Rather, we are most often realist or non-realist with respect to some domain of inquiry, like numbers, or beauty. Most criticism of realism in philosophy is an attack upon naïve realism, a viewpoint I am not interested in defending here. No one who begins with dialectics is going to support a naïve or direct realism in epistemology. On the other hand, I accept many of the arguments and positions of critical realism, but want to supplement and extend these insights with a dialectical approach.^{xi[11]}

Critical realism in the United States arose as a critique of idealism among a group of American philosophers, starting with Roy Sellars in 1916. These philosophers were responding to the then-dominant school of Anglo-American Idealism, publishing a book of essays which was critical of that movement.^{xii[12]}

Realism historically arose as a rejection of idealist over-emphasis upon human consciousness and experience. Put in terms of Bishop Berkeley's philosophy, realism at its core insists upon a rejection of the notion that esse est percipi (to exist is to be perceived). It is possible to exist, to be real, without being experienced or perceived in any way: or at least this is the bedrock commitment of "realism" as they understood it, and as I wish to defend it in this work. Scientific realism, then, is the view that the subjects which are studied in the special sciences exist independently of the investigator's experience of them. Theological realism, likewise, is committed to the view that the true object of religious experience exists independently of human experience, if it exists at all. Both of these positions are quite controversial in today's philosophical context, yet both are important for the collegial metaphor and mutuality model we are here developing.

If some form of radical empiricism is taken in philosophy, for example, there is no reason to expect coherence between various realms of reality (or we had better say, "experience"), and the various special sciences that study them. This is because, if there is no underlying reality behind our experiences, given the assumption-laden character of all experience and perception, why should we expect any coherence at all? Different domains of our experience, such as nature and religion, need have no coherence between themselves: reason will only demand an internal coherence. As Ernan McMullin notes, "Take, for example, the desideratum that a theory should be consonant with well-established theories elsewhere in science. . . . From the non-realist standpoint, there is no reason why such a requirement should be enforced."^{xiii}[13] This is because, on a non-realist account, a theory is merely a formalism for generating accurate predictions. As long as it does its job as a predictor, since we don't actually believe in the invisible theoretical parts of the theory, we cannot worry about any conflict with the invisible parts of other theories.

Why is (dialectical) realism so important for the mutuality model? The answer has to do with the basis for the mutual influence of different disciplines upon one another, in developing a coherent worldview. If there exists a real world, independent of human experience, then our worldview should be aimed at understanding that world as fully as possible. For this fuller understanding, we need all the disciplines of the university, including the human sciences and theology. We will expect greater coherence in our worldview, because we believe at bottom there is one reality, which is whole and coherent. On the

other hand, given some kind of non-realism, we have no reason to expect coherence between the many and diverse areas of academia. Various disciplines, with their quite distinct methods, aims, and histories, are so different we have no rational basis for expecting some kind of overall coherence among them. The collegial metaphor and mutuality model for religion and science dialogue likewise assumes that truth in one area rightly affects our grasp of truth in another area, because there is one real, independent world we study in the various disciplines. Without some kind of sophisticated realist metaphysics, these epistemological commitments and goals are difficult to justify.

What motivates realism? One answer might be humility. Human experience is not the sole determinant of reality, according to the realist. Non-realism may be rather too epistemologically anthropocentric for a more humble approach to the world, which does not place human beings at the center of value. Another motivation is the underlying intuition that we are dealing with reality, both in our interaction with the world, and in our spiritual life. We may not have a perfect grasp of that reality, but we know it is there. We exist in and with the world, and yet reality also exists independent of us: we neither create nor control it (except in a rather small way). Yet fundamental to my realism, at least, is the conviction that there is a God who is the utmost Real Being. God is the creator of all reality. God has created me and you, and all other things. Thus reality (God and the world) exists independent of me. If theism is true, then there is one God, one world, and one complete system of truth (viz. God's own knowledge). In fact, Kant at one point defines God as the one who alone has perfect intuition of the thing-in-itself (noumena).^{xiv[14]} Of course as humans we don't have God's knowledge. We know phenomena, not noumena. But we would be foolish to deny the existence of the noumenal world just because we humans are limited to phenomena. In Kantian terms, this would be to deny the existence of God.

Most definitions of realism have focused on epistemology. Beginning there is, I would stress, a mistake. It distracts us from the real force of critical or dialectical realism, which is ontological. Human beings do not create reality, nor do they determine what counts as real. It is another matter entirely, however, when we talk about our grasp of reality. In this arena, namely in epistemology, much of the criticism voiced by non-realist philosophy can be granted. We do not have a perfectly clear understanding or experience of either the world, or God. All our perception and description is assumption-laden. There are always, already, gaps between word and object -- and so forth. But on the level of ontological

commitment, there is very little reason to follow non-realism, and excellent reasons not to do so. Most non-realists are attacking a simplified and naïve epistemology which they label “realism” for their own rhetorical purposes. After attacking this simple viewpoint, they announce their own, superior form of non-realism.

Let us take Hilary Putnam as an example. He develops his own brand of non-realism, fetchingly called “internal realism” just to confuse the unwary! His opponent is “metaphysical realism” or “externalism,” which he identifies in this way:^{xv[15]}

[for this view] the world consists of some fixed totality of mind-independent objects. There is exactly one true and complete description of ‘the way the world is.’ Truth involves some sort of correspondence relation between words or thought-signs and external things and sets of things. I shall call this perspective the externalist perspective, because its favorite point of view is a God’s Eye point of view.

Let us examine this Straw Man definition critically. First of all, why is the realist (or externalist) committed to a fixed totality of objects? Yes, reality is mind-independent in its fundamental existence, but why “fixed”? Don’t we believe in the process of becoming? This word is just a rhetorical flourish. Second, a dialectical realism does not affirm that there is exactly one true description of the world. For a description is given in a language. Rather, assuming the existence of God, the realist is committed to there being one true knowledge of the way the world is. But God’s knowledge of the world is direct and internal, as the omnipresent Creator and Sustainer of all that exists. As such, God’s basic knowledge of things is neither linguistic nor propositional nor symbolic: it is direct and ontological. Realists take it as a given that human beings are not God, and the way humans see things does not determine reality! Finally realism is not committed to a picture-theory of meaning, nor a simplistic correspondence theory of truth. By saddling “external realism” with all of these epistemological burdens, Putnam finds it easy to knock down his opponent, and make way for his brand of non-realism (“internal”).^{xvi[16]}

Alas, Putnam is not the only one to resort to such Aunt Sally (or Straw Man) definitions. A recent essay by Evangelical philosopher Brad Kallenberg defines a “realist” as (1) one who holds to a “representational theory of language,” and is therefore (2) committed to “some version of the correspondence theory of truth,” and (3) “who believes that reality divides neatly into subject and objects

(or into language and world; or ideas and things)”.^{xvii[17]} All three of these assertions are false, as far as I can tell, at least among sophisticated realists. The representational or “picture” theory of meaning has been out of fashion among realists since the work of the later Wittgenstein. The correspondence theory of truth is not a very common commitment, although it still has a few defenders. I prefer what William Alston has recently called a “minimal realist” theory of truth for propositions.^{xviii[18]} But realism per se does not imply one specific theory of truth (one could be a pragmatic realist like John Dewey, for example). And why must the realist hold that subject and object divide “neatly”? Is Kallenberg denying the difference between subject and object? That is just another form of idealism, of course. While a realist does believe there is a difference, in philosophical analysis, between subject and object (or word and thing) it does not follow that this is a “division” or “separation” except in thought. What we have here is yet another example of caricature rather than analysis.

What epistemology is “realism” committed to? There is no right answer to this question, because there are many types of realism. I prefer dialectical to critical realism, because of the reasons already given in favor of dialectics. Critical realists usually take an individualistic and synchronic view of epistemology. I believe that knowledge and perception are diachronic, dialogical, communal and traditional. It is this epistemology within which a mutuality model finds its home most naturally.

Realism and Theological Knowledge

Even if we can begin to make a decent argument for realism in science, it seems well nigh impossible to argue for realism in religion, in today’s academic context. I believe there are good arguments for realism even in religion. The first is, this is the viewpoint of most all religious believers. The Ultimate Reality that they worship and live for must be real, to be worshiped and for prayer to make sense. Even religions such as Taoism or some forms of Buddhism that have no gods nevertheless assert some religious truths, and believe them to be true independent of what other people may think or experience. But perhaps religious believers (who after all disagree so much among themselves) may all be deluded about this.

The second reason has to do with knowledge and explanation. For the purposes of religion and science dialogue, the notion of realism in religion can be factored out as theological explanation, and theological knowledge (or better, claims to knowledge). If both of these are allowed as legitimate and possible, then this is all the “realism” in religion that our mutuality model demands. Theological

explanation will only be accepted if God (for theistic religions) is real, and causes things to happen (creates the world, for example, or meets Moses at the burning bush). Other than denying the existence of the true object of religious faith, I can see no reason in principle to deny the possibility of theological explanation. Obviously, an atheist will deny it, but that argument will take place in another area of philosophy. I can find no reason why religious believers should deny theological explanation, unless they think their God is just a symbol for human aspirations. But that is another way of saying that God does not exist.

So we now turn to the question of theological knowledge-claims. Against some philosophers who would question the very idea of theological knowledge I argue that such knowledge is possible for human beings in this world. Many philosophers and theologians could be discussed on this point, but for the sake of brevity I will focus on Martin Heidegger.

What counts, then, as knowledge of God? What then is theological knowledge? It is first of all not knowledge about a religion. Knowledge about religions is certainly possible, for religion is a human institution with history, texts and artifacts. No one should deny that we can have knowledge about religion – otherwise teachers in Religious Studies would be out a job. What I mean by theological knowledge is knowledge of the Object and Subject of religious faith. Theology, as I use the term, is the conceptual, abstract dimension of a religious tradition. In this sense there is Muslim, Hindu, Christian and even Taoist “theology.” In Western religious terms, theological knowledge is knowledge about God, and not about religion, human religious experience, nor religious faith. Theological knowledge may come through a religious tradition, religious experience, or religious faith, but these items are not what theological knowledge is about. Theology, after all, is the study of the God. Theology therefore should not be confused with religious studies, even though it often is. Religious studies is the study of religion; theology is the study of God.

In his recent, excellent volume on Religion and Revelation, Keith Ward sets forth a program of “comparative theology” which is not part of any religious tradition.^{xix[19]} Ward wants to study God from the perspective of any and all religious traditions, scriptures and experiences. He wants to move us away from the older concept of theological knowledge as doctrine, that is, as assured propositional knowledge. “The propositions of theology are concerned to articulate and express, always provisionally and indirectly, such disclosures and forms of commitment [within a religion], rather than to define a set of truths which are

directly and precisely descriptive of suprasensory reality” (p.29f.) Ward rightly insists that the communal and tradition-constituted project of knowing God is best understood as modest, provisional, dialectical and open to revision. His perspective is very much in line with the proposal we are making concerning the mutuality model. Even conceived in such modest terms, however, is theology possible? Can we have conceptual, propositional knowledge of the Great Ultimate (god, the Tao, etc)? My thesis is yes, theological knowledge is possible. I have no quarrel with those who think that theological knowledge is paradoxical, difficult, or can never arrive at the full truth. My complaint here is against those who argue that theology per se is impossible, or who misrepresent the object of theological study.

Martin Heidegger began his academic studies in theology, and tells us that theological studies brought him to an interest in hermeneutics and phenomenology.^{xx[20]} He published two essays on the relationship between theology and philosophy, which have become famous.^{xxi[21]} In this book, Heidegger correctly sees that theology is a “positive science,” that is, an area of knowledge with an object of study. So far we are in agreement. But Heidegger wrongly attributes to theology the study of faith (that is, die Christlichkeit or Christian-ness) rather than the study of God. Heidegger claims that the “given” or basic data of theological science is Christian faith and practise. “Thus we maintain that what is given for theology (its positum) is Christianness. . . What does ‘Christianness’ mean? We call faith Christian. The essence of faith can formally be sketched as a mode of human existence.” (p. 9). Christianness, then, is the life of faith. And this faith is the basis of theology as a positive science.

Heidegger is mistaken in his grasp of the purpose of theology as a positive science. I do believe that theology is a positive science (in the German sense of Wissenschaft), but with a different purpose. The purpose of theology is to understand the gods. In this quest, of course, theology can and should make sense of the way of life within a particular religion. But this is not the only, nor the chief, purpose of theology. Rather, theology is, in part, the rigorous academic study of the Great Ultimate within a particular religious tradition. In making this mistake, of course, Heidegger is in good company! The problem with this common view is, in the end it collapses theology into religious studies (a collapse I am trying to avoid). This is so even when Heidegger allows that theology must also study “that which is revealed in faith” (p. 9). For such a study can also be merely descriptive (for example, “Christians believe that God is so-and-so”). This is clear when, in another essay, Heidegger states: “Above all else one must determine what

theology, as a mode of thinking and speaking, is to place in discussion. That is the Christian faith, and what is believed therein.” (p. 22). On the contrary, if theology is a discipline at all (a “positive science”) it must have the gods as its object of study. What theology “places into discussion” is God, therefore, and not “faith.”

The idea that theology can yield both knowledge and explanation is controversial, yet crucial to the mutuality model. Without these, it would make no sense to modify our science in the light of our theology. This kind of minimal “realism” in theology can be defended against critics, but of course needs much more elaboration than we can here provide.

Dialectical Realism in Theology

I have argued for “theological realism” understood as the affirmation of theological explanation, combined with the acceptance of the possibility of theological knowledge. But this knowledge and realism should not be accepted without qualification. Once again, we can turn for help to dialectics, this time the dialectical theology of Greek Orthodoxy.

Although I greatly admire the German-speaking founders of “dialectical theology” during the 20th Century, for my own model of dialectical realism in theology I am in debt to the Greeks.^{xxii[22]} Pseudo-Dionysius (ca. 500 AD) in particular, developed the language and method of a negative theology (apophatic) and a positive or affirmative theology (cataphatic), both of which are important.^{xxiii[23]} This tradition of dialectical theology has roots in the Cappadocian theologians of the 4th century, and is developed in such great Greek theologians as Maximus the Confessor and Gregory Palamas. In this tradition, God’s own existence is affirmed, but God’s infinite Being is understood to be beyond all thought, and all language. The highest theology, then, is mystical theology, or the life of prayer and worship. Dionysius puts it this way in the beginning of his Mystical Theology.^{xxiv[24]}

Timothy, my friend, my advice to you as you look for a sight of the mysterious [or mystical, mystikos] things, is to leave behind you every thing perceived and understood, everything perceptible and understandable, all that is not and all that is, and, with your understanding laid aside, to strive upward as much as you can toward union with him who is beyond all being and knowledge.

We should understand that this is a realist theology, but it is not a naïve realism. The highest and best sort of theology is mystical union with God. This God is not just a symbol (although Dionysius would agree that the word “God” is a limited human symbol). It is hard to understand how Gordon Kaufman, in his influential An Essay in Theological Method, can characterize traditional theology as holding, “God exists independently of the perceiver or knower and has a definite character which can be described.”^{xxv[25]} Dionysius was quite influential in Latin theology (after being translated into Latin by Robert Grosseteste in the 13th century), and the basic point is common in Platonic-Christian thought as a whole, including the Latin tradition. It is hard to see how “God has a definite character which can be described” is anything like this traditional understanding of theological language. Kaufman goes on to insist that Kant “first [!] pointed out the root difficulties with this view, but his revolutionary insights remain unappreciated in much theological work.” Kant is important because he “saw that ideas like ‘God’ and ‘world’ performed a different kind of function in our thinking than concepts like ‘tree’ or ‘man’.” (p. 29). Such an exposition completely ignores the tradition of dialectical theology I am seeking here to recover.

The practice of Dionysius and other Greek theologians of the past ends up being something like Adorno’s “cluster of metaphors.” His famous book, The Divine Names, is a series of models and metaphors within which positive theology seeks to know something about God.^{xxvi[26]} His book The Mystical Theology then provides a kind of “critique of models” (by means of negative theology) that Adorno was also interested in developing. T. F. Torrance once put this Greek theological position in three points:^{xxvii[27]}

- (i). The unapproachableness of God, which calls forth from us the attitude of worship and reverence.
- (ii). Only by God is God known, and only through God is God revealed.
- (iii). The application of our ordinary language to speech about God involves a fundamental shift in its meaning.

In my own terms, seeking to know the One who loves us, and yet is beyond our comprehension, leads to a theology with two moments. A positive theology, based upon the Word of God (the Second Person of the Trinity) as true revelation, is balanced with a negative theology, which negates the finite and worldly language we are forced to use concerning the One that is beyond all being and all thought and all language.

Maximus the Confessor put the point this way in his Two Hundred Chapters on Knowledge. On the one hand, “Every concept involves those who think and what is thought, as subject and object. But God is neither of those who think nor of what is thought for he is beyond them.” At the same time, there is a positive knowledge of God through his Word, the Son. “In Christ who is God and the Word of the Father there dwells in bodily form the complete fullness of deity by essence.” Being the full Word and Mind of God, he is able to “reveal the Father whom he knows.”^{xxviii[28]} Finally, both the apophatic and the cataphatic theologies are best combined in the life of prayer and spiritual discipline (mystical union), and in the worship of the community of faith (liturgy). This is the kind of dialectical realism in theology which I believe is most fruitful for the religion-science dialogue. For it pays attention both to the need to develop a metaphorical theology grounded in the Word of God and our ecclesial life of the Spirit. At the same time, it continues a critique of any and all language about God, or confident claims to know the truth about God. The Eastern tradition has kept alive the important point that theology is not done fully in academic seminars, but in the life and worship of the Church and the disciples of Jesus in the world today.

This brief essay into philosophy has sought to explain and defend a dialectical realist approach to science and theology.^{xxix[29]} I believe such an approach will prove to be most fruitful as we seek to develop a worldview which is both fully scientific and theologically faithful. Both the realist and the dialectical elements of my proposal assist us in taking seriously the need for theology and science to mutually inform and modify each other. It is equally important that each discipline respects the others, and allows for tensions and disagreements to be rational (however provisional). As such I find a sophisticated, dialectical realism the best philosophical framework for continued dialogue between theology and the sciences.^{xxx[30]}

ENDNOTES

^{i[1]} I stress the inter-disciplinary ground for this discussion simply because no one academic discipline provides the common ground for the religion and science dialogue (including philosophy!). “Turf wars” among specialists are odious, but alas all too common!

^{ii[2]} See Wentzel van Huyssteen, Duet or Duel? (London: SCM, 1998); Nancey Murphy, Reconciling Theology and Science (Kitchener, Ont.: Pandora Pr., 1997). Both books represent lectures given in Canada.

^{iii[3]} See A. G. Padgett, “The Mutuality of Theology and Science,” Christian Scholar’s Review 26 (1996), 12-35; and my forthcoming book, Science and the Study of God: A Mutuality Model for Theology and Science.

^{iv[4]} Republic, book 7, 530d-e. Aristotle’s definition of “dialectical reasoning” in the Topics is quite different, and does not affect current usage.

^{v[5]} See the critical edition of Sic et Non, ed. B. B. Boyer and R. McKeon (Chicago: University of Chicago Pr., 1977). Abelard also wrote a book with the title Dialectica (tr. L. M. de Rijk; Assen: Van Gorcum, 1956) which was an introduction to logic.

^{vi[6]} See among many examples, Søren Kierkegaard, The Sickness unto Death, tr. W. Lowrie (Princeton: Princeton Univ. Pr., 1941).

^{vii[7]} T. W. Adorno, Negative Dialectics, tr. E. B. Ashton (New York: Seabury, 1973). Page numbers in the text are to this work.

^{viii[8]} See further on this point, Mary Midgley, Science as Salvation (London: Routledge, 1992).

^{ix[9]} Hegel’s definition of dialectical reasoning is “the indwelling tendency outwards by which the one-sidedness and limitation of the predicates of understanding is seen in its true light, and shown to be the negation of them. For anything to be finite is just to suppress itself and puts itself aside.” Encyclopedia of the Philosophical Sciences, § 81 (tr. T. F. Geraets, as The Encyclopedia Logic, Indianapolis: Hackett, 1991).

^{x[10]} For some other defenses of realism in theology, see Ian Barbour, Issues in Science and Religion (London: SCM, 1966); T. F. Torrance, Reality and Scientific Theology (Edinburgh: Scottish Academic Pr., 1985); Arthur Peacocke, Intimations of Reality (Notre Dame: Univ. of Notre Dame Pr., 1984); Janet M. Soskice, “Theological Realism,” in The Rationality of Religious Belief, ed. W. J. Abraham and S. W. Holtzer (Oxford: Oxford Univ. Pr., 1987); Polkinghorne, One World (London: SPCK, 1987) and his Belief in an Age of Science (New Haven: Yale Univ. Pr., 1998); Roger Trigg, Rationality and Religion (Oxford: Blackwell, 1998); J. Wentzel van Huyssteen, Essays in Postfoundationalist Theology (Grand Rapids: Eerdmans, 1997); John Cobb, “In Defense of Realism,” in Theology at the End of Modernity, ed. Sheila Davaney (Philadelphia: Trinity Pr., 1991); K. V. Niekerk, “A Critical Realist Perspective,” in Niels Gregersen and J. W. van Huyssteen, eds., Rethinking Theology and Science (Grand Rapids, MI: Eerdmans, 1998); and Sue Patterson, Realist Christian Theology in a Postmodern Age (Cambridge: Cambridge Univ. Pr., 1999).

^{xi[11]} Roy Bhaskar, in his book Dialectics: The Pulse of Freedom (London: Verso, 1993) also sets forth a “dialectical critical realism” for both philosophy of science and social philosophy, sharing some of the goals of my own work. But his approach and general position is quite different from the one adopted here.

^{xii[12]} The origin of the term is a book by Roy Sellars, Critical Realism (Chicago: Rand, McNally, 1916). The collected volume is Durant Drake, et al., Essays in Critical Realism (London: Macmillan, 1920), which includes essays by Sellars, A. O. Lovejoy and George Santayana.

^{xiii[13]} “Epistemic Virtue and Theory Appraisal,” Realism in Science, ed. I. Douven and L. Horsten (Leuven: Leuven Univ. Pr., 1996), 13-34, quoting p.30.

^{xiv[14]} I. Kant, Critique of Pure Reason, B70-72. Eng. tr. by N. K. Smith (London: Macmillan, 1929).

^{xv[15]} Putnam, Reason, Truth and History (Cambridge: Cambridge Univ. Pr., 1981), 49.

^{xvi[16]} We should note in fairness to Putnam that in a recent book, The Threefold Cord: Mind, Body, World (New York: Columbia Univ. Pr., 1999) he has abandoned his earlier non-realism (‘internal realism’) for realism in the tradition of John Dewey and William James.

^{xvii[17]} Brad Kallenberg, “The Gospel Truth of Relativism,” Scottish Journal of Theology 53 (2000), 173-210, quoting p.183 n.12.

^{xviii[18]} W. P. Alston, A Realist Theory of Truth (Ithaca, NY: Cornell Univ. Pr., 1996).

xix^[19] (Oxford: Oxford Univ. Pr., 1994). This is the first book in a four-volume work in comparative theology.

xx^[20] This is disclosed in a dialogue Heidegger had with a Japanese philosopher, published in On the Way to Language, tr. P. D. Hertz (New York: Harper & Row, 1971), 9-10.

xxi^[21] These are collected in his book, Phänomenologie und Theologie (Frankfurt a/M: Klostermann, 1970), and published in English in The Piety of Thinking, tr. J. G. Hart and J. C. Maraldo (Bloomington: Indiana Univ. Pr., 1976). My references in the text above are to the English translation.

xxii^[22] Bernard Lonergan also finds a place for dialectics, as one among several “functional specialties,” in his Method in Theology (London: Darton, Longman & Todd, 1972).

xxiii^[23] See Pseudo-Dionysius: The Complete Works, tr. Colm Luibheid (New York: Paulist Pr., 1988).

xxiv^[24] Complete Works, 135 (Luibheid ed.)

xxv^[25] G. Kaufman, An Essay in Theological Method, 3rd. ed (Atlanta: Scholars Pr., 1995), 26.

xxvi^[26] In Complete Works, 47-132.

xxvii^[27] T. F. Torrance, Theology in Reconstruction (Grand Rapids, MI: Eerdmans, 1965), 30. See also his Divine Meaning: Studies in Patristic Hermeneutics (Edinburgh: T. & T. Clark, 1995).

xxviii^[28] Maximus the Confessor, Selected Writings, tr. G. C. Berthold (New York: Paulist, 1985), Second Century on Knowledge, § 2 (p. 148) and § 21 (p. 152).

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