Comparative Natural Theology

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Introduction

Traditional natural theology (as defined here) aims at direct entailment from the world to God. More precisely, it attempts to infer a partial metaphysics of ultimacy from a partial ontology of nature. Detractors of natural theology assert that no rational knowledge of ultimacy is possible based on any amount of analysis of the natural world. The position defended here is intermediate between these extremes: conceptual traction between ontology of nature and ultimacy metaphysics is neither entirely absent nor strong enough to support direct inference in the manner of traditional natural theology. Rather, this conceptual traction is such as to have the limited effect of shifting the relative plausibility of ultimacy views in various respects. Indeed, this conceptual traction may render a single ultimacy view simultaneously relatively more plausible than a competitor in one respect of comparison and relatively less plausible than the same competitor in a different respect of comparison. Nevertheless, conceptual traction exists to a degree sufficient to advance inquiries in natural theology, when they are properly framed.

If correct, this position implies that traditional natural theology is impossible, that outright skepticism toward natural theology is needlessly defeatist, and that a different approach to navigating the conceptual and logical linkages between ontology of nature and metaphysics of ultimacy is required. This different approach would have to aim not at watertight proof but at evaluating large-scale systems of ideas for their plausibility in relation to every relevant consideration, and thus would necessarily be comparative in character. This is the basis for thinking of the required new approach as comparative natural theology. In addition to being

properly fitted to the evidential and logical situation of natural theology, comparative natural theology has the great virtue of overcoming a lamentable pattern of parochialism in traditional natural theology, a pattern that becomes painfully obvious as soon as the religious philosopher or philosophical theologian reaches beyond a single tradition to consider related styles of argument in other traditions.

In addition to the terms "traditional natural theology" and "comparative natural theology," already defined above with precision sufficient for present purposes, we require several other definitions.

Ontology of nature. For the purposes of this chapter, "ontology of nature" could equally well be called "philosophical cosmology"; in both cases the point is to establish basic philosophical categories for understanding nature and its operations. The former phrase is preferred here to avoid confusing "philosophical cosmology" with "scientific cosmology" or "physical cosmology," which are scientific ventures. Note that treating philosophical interpretations of nature as the starting point for inference frames natural theology as an act of interpretation and thereby rejects the possibility that inference can ever be simply "from nature," without the aid (and the complications) of philosophical interpretation. Most scientific theorizing about nature, *as science*, is too constrained to be the basis for inference relevant to natural theology; philosophical mediation is necessary for inquiry at the junction of nature and ultimacy metaphysics to be theologically significant.

Ultimacy. The term "ultimacy" is here preferred to "ultimate reality" or "God" in deference to the results of the Comparative Religious Ideas Project (see Neville 2001). That project sought to identify through a rigorous process of comparison and analysis which categories work best to describe what is important about the ideas of world religious traditions,

minimizing distortion and arbitrariness. One of the conclusions of the project is that the term "ultimate realities," while more generous and more useful than both the singular term "ultimate reality" and the much-used term "God," is nevertheless biased against religious traditions that focus on the discovery and living out of ultimate ways or paths and on freeing people from an unhealthy obsession with ultimate realities. A vaguer category encompassing both "ultimate realities" and "ultimate paths" is preferable—thus "ultimacy." The interest here is in metaphysical theories of ultimacy, of course, and this leans heavily toward "ultimate realities," yet the term "ultimacy" is a helpful reminder of the complex diversity of religious thought.

<u>Natural theology</u>. For the purposes of this chapter, natural theology (whether traditional or comparative in character) is the rational attempt to derive information about ultimacy (God, in some traditions) from philosophical interpretations of nature. Two comments pertaining to the scope of natural theology are in order. First, some definitions of natural theology contrast it with revealed theology. This works in theological traditions for which informative revelation is conceivable and the distinction of revelation from natural processes is plausible. Some theological traditions reject one of these conditions. Indeed, a number of theological outlooks (including "ground of being" theology within theistic traditions) reject both, and this fact calls into question the advisability of defining natural theology by means of a contrast with revealed theology. Fortunately, neither condition is required to make sense of comparative natural theology. Second, some have included in the domain of natural theology rational arguments for the existence of God that make no explicit reference to nature, such as the ontological arguments of Anselm and Leibniz and others. The basis for this appears to be that such arguments leverage the power of "natural reason" unaided by revelation, a usage indebted to the understanding (just discussed) of natural theology contrasted to revealed theology. For the purposes of this chapter,

the "natural" in "natural theology" refers to the natural world and "natural reason" is synonymous with "reason." It follows that ontological arguments are mostly insignificant for natural theology, though neither because such arguments are impossible nor because reason is in any sense not a part of nature, but just because they lie outside the scope of reflection on the natural world. Of course, in a minor way ontological arguments remain significant for natural theology as phenomena of nature that need to be explained, like political economies and the laws of cricket. As a logical argument, however, it belongs not to natural theology but to metaphysics.

Challenges Facing Natural Theology

Natural theology faces serious challenges. Each of the four discussed in what follows clarifies why comparative natural theology is a better path than traditional natural theology. These challenges do not disappear in the move from traditional to comparative natural theology but they do become optimally tractable within a comparative natural theology approach.

First, an ontology of nature is a complex intellectual creation, synthesizing a great deal of scientific theorizing about nature and crystallizing principles by which to make sense of such rational structures of nature as exist. This is made difficult by the sheer enormity of the task but also by the fact that the natural sciences constitute a kind of uneven and sometimes *ad hoc* patchwork of theories about nature rather than a seamless garment of rational comprehensiveness. Realizing this makes the proofs of traditional natural theology seem oversimplified, if not naïve. For example, the sciences employ several apparently incompatible concepts of causation, and philosophy of science has struggled more or less in vain to clarify the concept. Cosmological proofs relying on unanalyzed concepts of causation, as many do, appear to be building a house on a foundation of sand. Because of its orientation to weighing the

plausibility of large-scale systems of ideas, comparative natural theology is better able to manage the vagaries surrounding ontology of nature.

Second, there are always questions about the completeness of the set of ultimacy hypotheses that might have a claim in any natural theology argument. While we can run a natural theology argument through its paces and notice how some ultimacy theories fare better than others in the process, we are never certain that another ultimacy theory not currently in the mix of competing hypotheses may fare better still. For example, Anselm in his *Monologion* makes a good-faith effort to register different possible explanations for ontological dependence, dividing the question as follows (see Anselm 1998). (1) Something comes from nothing. (2) All things come from one another in a closed system of interdependence. (3) All things come from something else in one of two ways: (3a) either they derive from multiple things that are individually self-subsisting, or (3b) they derive from one thing. It is striking to see that Anselm effortlessly captures (1) varieties of nihilism, (2) the Buddhist doctrine of dependent co-arising (*pratītya-samutpāda*), and (3a) the ontological pluralism widespread in Chinese philosophy. Equally, it is unsurprising that he could not give the alternatives to his theistic preference (3b) their argumentative due, as he was doubtless unfamiliar with any philosopher or philosophical literature that defends them. Shockingly, though we are not so hobbled in knowledge as Anselm was, the history of traditional natural theology right up to the present day has blatantly disregarded the full range of alternative explanations of ontological dependence, rarely even bothering to mention the range of possibilities as Anselm did. Fortunately, identifying and managing competing conceptual frameworks is the lifeblood of comparative natural theology.

Third, comparative weighing of the plausibility of large-scale conceptual frameworks is relatively new as an explicit form of inquiry, though it has ancient antecedents in all literate

cultures. Traditional natural theology had tended to ignore the challenge of large-scale worldview evaluation, in the sense of performing it surreptitiously and often unconsciously through deploying hidden and unanalyzed premises. But evaluating large-scale conceptual frameworks is always difficult, including for comparative natural theology. In particular, the comparative criteria by which we discriminate superior from inferior metaphysical proposals about ultimacy are under-explored. For example, exactly how important are the criteria that "an adequate ultimacy metaphysics should solve the problem of the one and the many" (creation ex nihilo traditions prize this criterion), and "an adequate ultimacy metaphysics should uphold the co-primordiality of principles of law and operations of chance in nature" (dualist Manichaeism and Zoroastrianism prize this criterion)? Is one of them more important than the other? Can they be rendered compatible? Thus, we must allow that a given argument in natural theology could become more (or less) persuasive with time as comparative metaphysics gradually stabilizes and comparative criteria are better understood. This possibility is unwelcome in traditional natural theology but quite at home within comparative natural theology.

Fourth, and perhaps most importantly, ultimacy may be such that there just is not one superior metaphysical theory of it. This *prima facie* likelihood barely registers within traditional natural theology, where it bluntly interferes with the aspiration to construct rational proofs. By contrast, comparative natural theology comfortably recognizes that ultimacy may be replete with category-defying cognitive richness that forces perspectival scattering of metaphysical theories. Surely it makes sense that some aspects of ultimacy should surpass human rational capacities altogether.

These difficulties do not constitute a knock-down argument against the possibility of natural theology, and not even traditional natural theology. They do define the senses in which

natural theology is difficult and indicate the reasons why comparative natural theology is better placed than traditional natural theology to manage the actual evidential and inferential structure of the conceptual relations between nature and ultimacy. Most profoundly, they suggest that traditional natural theology is in fact an intellectually short-circuited and over-ambitious simplification of comparative natural theology, and that only the latter is properly scaled to the actual challenges facing this type of inquiry.

The Prospects of Natural Theology

The challenges just sketched suggest that the prospects for natural theology cannot be definitively evaluated in the abstract, notwithstanding numerous attempts to do so. Rather, whether natural theology is possible has to be established or refuted through attempts to do it. The chances of success turn decisively on how effectively philosophical interpretations of nature constrain theories of ultimacy. This takes us to the deepest and most perplexing question surrounding natural theology: can nature tell us anything about ultimacy?

This is an ancient question, shared across cultures, and handled differently but in structurally similar ways in West Asian, South Asian, and East Asian philosophical traditions. More often than not, the answer has been a qualified yes: the world around us does tell us something about ultimacy, but not as much as we might want to know. For example, the cosmological arguments of medieval Judaism, Christianity, and Islam concurred that there must be an ultimate reality that gives rise to the proximate reality we know, but we cannot infer much about its character—certainly not as much as the sacred texts of these theistic religions affirm. Similarly, many traditions of South Asian philosophy found it necessary to include authority as a valid form of inference (*pramāña*) because observation and logic alone could not yield the Vedic

portrayal of ultimacy. Chinese traditions perhaps have been the most optimistic about reading the character of ultimacy off of the way reality shows up for us in natural processes, but the plural and vague visions of ultimacy that typically result confirm the difficulty of the task.

Within this mixed evaluation of the inferential journey from nature to ultimacy there are specialized subplots, some highly skeptical and others extremely optimistic. On the skeptical side, Buddhist philosophy relies heavily on the possibility of inference from human experience to religious insight, but the fruit of this inference in some of the most rigorously philosophical forms of Buddhism (such as the Mādhyamaka School of Mahāyāna Buddhist philosophy) is primarily a spiritually liberating path and only secondarily and vaguely a metaphysical portrayal of ultimacy. According to this way of thinking, reality as we conventionally experience it is deeply misleading. Careful inference from the suffering and contradictions of experience frees us from its delusions, including the twin delusions that there is an ultimate reality lying behind it all, and that we need to explain conventional reality with reference to some ontologically more basic theory of ultimate reality.

Theistic traditions have produced another form of skepticism in the form of exclusive reliance on God's self-revelation conjoined with the denial that we can infer anything about God from created reality. The utter transcendence of God motivates this skepticism (in twentieth-century Swiss Christian theologian Karl Barth's rejection of natural theology, for example), but the counterintuitive result is that there are no natural or scientific constraints whatsoever on revealed traditions' claims about God. Could the loving God Barth believed in really create a world that was utterly misleading as a source of knowledge of God's character?

The extremely optimistic side is rare by comparison. Some thinkers have claimed that the pattern of inference from apparent design in cosmology and biology to a designer can produce

detailed knowledge of the character and purposes of ultimacy (which may be distinct from the designer) as well as knowledge of the designer's existence and relation to the world. These natural theology enthusiasts sometimes even reject revealed theology altogether as too burdened with myth to make a useful contribution to knowledge of ultimacy. Twentieth-century American philosopher Charles Hartshorne is an example of one type; early nineteenth-century German philosopher Georg W. F. Hegel is an example of another; and Enlightenment Deism, a movement that continues down to the present in transformed ways and under different names, yet another.

In our time, the well populated middle ground is the domain of discussion among most who are interested in science-religion relations. Most accept that nature constrains what we can say about ultimacy. They do this while admitting that nature does not permit clear lines of entailment from science to detailed knowledge of ultimacy, while tolerating a persistent lack of clarity about what precisely are these constraints. Within these boundaries several debated questions mark out the interior territory, and I note two here.

First, are the constraints from science on hypotheses about ultimacy strict enough to allow direct entailment relations from science to God? Controversial intelligent design theorists such as American biochemist Michael Behe and American mathematician-philosopher William Dembski say yes, though they admit (consistently with the medieval design arguments) that the entailment does not yield much more than the sheer existence of a designer—and technically speaking, the designer may be clever aliens rather than any deity (see Behe 1996; Behe, Dembski, and Meyer 2000; Dembski 1998, 2002). Atheists say yes, too, and it is the non-existence of a divine being that science supposedly entails (among the new atheists, see Dawkins 2006; Harris 2006; Hitchens 2007). Numerous contemporary skeptical authors from American

astronomer Carl Sagan to Skeptics Society founder Michael Shermer stop just short of evidence-based atheism when they say that science is steadily removing any need we once might have had to postulate God (see Sagan 1996; Shermer 2002). Most in the science-religion dialogue suspect that science is too vague to determine a single view of ultimacy and that the best we can aim for is consonance relations between scientific and traditional religion-based theological understandings of the world (see the survey of types of logical connection between science and religion in Murphy 1996, which thematizes the contrast between holistic justification versus stronger entailment relations between science and theology). Some, such as American metaphysician Robert Neville, deliberately aim for metaphysical formulations of ultimacy that are perfectly neutral to scientific theories (see Neville 1968). He reasons that if there were any inferential traction between the cosmological pictures of science and the metaphysical pictures of ultimacy, then the latter would be too coarsely formulated, too much in thrall to the actual cosmology of our universe and insufficiently attuned to the ontological conditions for any possible cosmological environment. Overall, it appears that the question of whether scientific constraints on hypotheses about ultimacy are strict enough to support direct entailment relations may be too deeply conflicted to answer.

Second, and now more modestly, can science help us choose among competing views of ultimacy, even if it does not select out a uniquely adequate view? This question is under-explored because most people involved in science-religion discussions have not engaged religions beyond their own, or conflicting views within their own religion, well enough to make serious comparative analysis feasible. It is an emerging issue, however, and thinking about it carefully leads to a clarified understanding of what has really been going on in traditional natural theology all along, but hidden in unanalyzed premises, as we shall see below.

The Logic of Natural Theology

Comparative natural theology seeks to compare numerous compelling accounts of ultimacy in as many different respects as are relevant, thereby assembling the raw materials for inference-to-best-explanation arguments on behalf of particular theories of ultimacy. Judgments of plausibility and theoretical superiority are central in the final stages of this process, and the best comparative natural theology makes completely clear the criteria that function in those judgments. Schematizing the logic of comparative natural theology in a preliminary way can help to crystallize how it differs from traditional natural theology.

An ontology of nature, O, is enormously complex, logically. At the simplest and most idealized level, O is a finite conjunction of (say, n) propositions, $O_1 \wedge O_2 \wedge O_3 \wedge \ldots \wedge O_n$, each establishing philosophically basic concepts for making sense of natural objects and processes. But the complexity arises when we allow for the facts that (1) these propositions collectively may not be mutually consistent, (2) the conjunction in any given formulation does not exhaust everything relevant to an ontology of nature, (3) the collection of propositions is a snapshot of a dynamic process whereby the ontology constantly adjusts to the growing insights of those who articulate it and to changes in scientific theories, (4) some of the propositions are more robust than others because they are most closely tied to well attested scientific theories, and (5) scientific theories themselves are snapshots of dynamic research programs with complex internal structures and relations to data. This realistic picture of the internal structure of an ontology of nature is utterly neglected in traditional natural theology.

Working from the most superficial characterization of an ontology of nature as a finite conjunction of *consistent* propositions, traditional natural theology tries to establish entailment from propositions in O to propositions about ultimacy, say,

U_1="A First Cause exists and we call it God" and

U_2="An Intelligent Designer exists and we call it God."

That is, traditional natural theology seeks arguments that, say, $O_3 \rightarrow U_1$ (O_3 might describe the close causal nexus of nature) or $O_{14} \rightarrow U_2$ (O_{14} might describe instances of specified complexity). Because of the hidden but false assumption of the static perfection and internal consistency of O, this amounts to $O \rightarrow U_1$ and $O \rightarrow U_2$. Moreover, despite the fact that the history of theology displays real problems establishing the consistency of all propositions about ultimacy that are pronounced therein, traditional natural theology typically stipulates the desired consistency, which results in the appealing but manifestly over-simplified conclusion that $O \rightarrow U$. Voila! God exists and we even know something about the divine nature, all on the basis of analyzing implications of our observations about nature. No wonder there has been so much hostility toward traditional natural theology.

Comparative natural theology is painfully sensitive to all of the fallacies in the argumentative procedure of traditional natural theology. Satisfactorily correcting these fallacies probably requires a fully developed theory of inquiry, but there is no space for that here (see Wildman 2010). The following schematization, however, does give an indication of some of the logical steps involved. At root, this schematization turns on the fact that implications run more soundly from ultimacy theories to ontologies of nature, than in the other direction.

Suppose we have three hypotheses about ultimacy, UH_1, UH_2, and UH_3 (these might be, for example, "Ultimacy is a personal supernatural being with intentions, plans, and powers to act"; "Reality is self-caused and ontologically ungrounded"; and "Ultimacy is Being Itself and necessarily surpasses human cognitive grasp"). These examples illustrate how complex an ultimacy hypothesis can be but, for the sake of exposition, let us neglect such details and concentrate on the relation of these ultimacy hypotheses to the ontological theory of nature, O, which is supposed to help us decide among these ultimacy hypotheses. Specifically, and remembering the complexity and possible internal inconsistency of O, suppose that

$UH_1 \rightarrow \{O_1, O_6, O_8, O_{11}\}$,

$UH_2 \rightarrow \{O_1, O_5, O_6\}$, and

$UH_3 \rightarrow \{O_1, O_2, O_4, O_{14}\}$.

It follows from this that the ontological proposition O_1 is of little use in detecting superiority of one ultimacy hypothesis over the other two, because all three entail it. Other ontological propositions would be more useful but comparative criteria (CC) are required to realize this potential. Consider the following examples:

CC_1: "O_6 is especially important" and

CC_2: "O_8 is especially important."

In practice, comparative criteria are often much more complex than this, involving several features of an ontology simultaneously, with intricate interpretative dimensions. But even in these simplified cases, we can conclude that:

CC_1 ("O_6 is important")→UH_1 and UH_2 are superior to UH_3 and

CC_2 ("O_8 is important")→UH_1 is superior to UH_2 and UH_3.

Subsequent debates over the relative weighting of comparative criteria CC_1 and CC_2 determine which of UH_1, UH_2, and UH_3 is finally the best explanation of the ontology of nature, O, given the available information. In this instance, UH_3 is not faring well and UH_1 is looking good. Of course, a final (though always provisional!) decision between UH_1, UH_2, and UH_3 would depend on how all relevant comparative criteria, including CC_1 and CC_2, are weighted.

Quite commonly, operative comparative criteria support one ultimacy hypotheses in one respect while supporting another in another respect, forcing the careful analysis of comparative criteria and leaving open the possibility that reasonable defenses of alternative ultimacy views may coexist without resolving into a single superior viewpoint. At this point, the philosopher is forced to conclude that inquiry lacks sufficient resources, or that sufficient resources exist but the sociality inquiry is not organized to capitalize on them. Or perhaps sufficient resources exist and social organization of inquiry is optimal but the conceptual richness of ultimacy supports and demands multiple metaphysical perspectives; in that case, a non-decisive conclusion might be deemed informative in a way that does better justice to ultimacy than isolating a single best ultimacy metaphysics ever could.

The confidence with which we draw a final (again, always provisional) conclusion from an inference-to-best-explanation style of argument of this sort depends upon how sure we are that (1) we have all of the relevant ultimacy hypotheses in play, (2) we have recognized all of the relevant comparative criteria, (3) we have properly accommodated our reasoning to the complexity of the ontology of nature and of the scientific theories on which it depends, and (4) we are realistic about the perplexities and peculiarities plaguing all arguments concerning ultimacy.

Traditional natural theology flagrantly violates all of these criteria for soundness of reasoning: (1) it usually ignores alternative ultimacy hypotheses; (2) it neglects making explicit comparative criteria, allowing them to function silently, unanalyzed, and unchallenged; (3) it oversimplifies both ontological premises and the scientific theories that inform them; and (4) it often treats ultimacy arguments as strictly analogous to arguments in other domains, failing to register the potentially rationality-defeating nature of inquiry into ultimacy.

The transparency of criteria for metaphysical superiority (corresponding to comparative criteria) in comparative natural theology is a huge advance on the covert operation of such criteria in traditional natural theology. Transparency also stimulates superior conversation across different views because clearly stated criteria can benefit from criticism in a way that covert criteria can not. It is an open question whether an extended period of comparative metaphysics of this sort would induce greater agreement among those who initially value criteria for metaphysical adequacy differently. But there is no question that it would promote greater mutual understanding as well as more meaningful and satisfying debate.

Inference to Best Explanation Revisited

This logical analysis of inference-to-best-explanation argumentation in comparative natural theology stands in tension with existing analyses within so-called confirmation theory, which rely on Bayesian probability. The standard Bayesian account of inference to best explanation depends on evaluating the probability of propositions given certain conditioning factors. The relevant formalism is as follows: let $P(A|BC)$ stand for the probability of proposition A given propositions B and C. Suppose that H is an hypothesis intended to explain evidence E in the context of background facts F. How "good" is H as an hypothesis? To begin with, neglecting the evidence E, hypothesis H might be absurd relative to background facts F, so we need to keep an eye on the *prior probability of H*, which is $P(H|F)$. Prior probability is high when hypothesis H is simple or elegant or possesses other desirable intrinsic features, and also when H fits closely with background facts F. Next, we also need a way to measure the *explanatory power of H*, which is $P(H|EF)$. Explanatory power is high when hypothesis H has high predictive power; that is, $P(E|HF)$ is high, meaning that evidence E is likely on the assumption of the hypothesis H and given background facts F. Explanatory power is high also when evidence E has low prior probability; that is, $P(E|F)$ is low, meaning that evidence E is unlikely to occur just given background facts F and disregarding hypothesis H. Finally, in cases where two hypotheses, H_1 and H_2, have equal explanatory power, i.e., $P(H_1|EF)=P(H_2|EF)$, the hypothesis with the higher prior probability wins; that is, H_1 wins when $P(H_1|F)>P(H_2|F)$.

Bayesian accounts typically neglect the role of comparative adjudication or rest content with simple pair-wise comparison of competing hypotheses. They also assume the meaningfulness of the "prior probability" of any hypothesis, which is its likelihood of being true given background information but disregarding the specific evidence pertaining to the situation

in which the question about the hypothesis actually arises. This involves using unanalyzed concepts of simplicity, elegance, fit with existing knowledge, and other factors involved in judging prior probability. In the case of metaphysical hypotheses, and indeed hypotheses of most kinds, prior probability is a grossly abstracted concept. Even in the classic examples of hypothetical explanations of a crime scene, the idea of prior probability of an hypothesis seems no more than a hand-waving gesture toward actual probability calculations, and thus probability talk functions more as a guiding analogy to keep one's head clear, or an after-the-fact rationalization of vastly complex intuitive judgments.

Many philosophers remain deeply dissatisfied with the Bayesian account of inference to best explanation (see Earman 1992). But this has not prevented some philosophical theologians from making hearty use of this Bayesian way of formalizing inference to best explanation in their arguments for the existence of God. For example, Richard Swinburne makes extensive use of confirmation theory (see the presentation of confirmation theory in Swinburne 1973 and the application of it to the existence of God in Swinburne 1979). Swinburne limits himself to judgments of "more likely" and "most likely" rather than attempting to assign numbers for probabilities, which is prudent. But he does not investigate the virtues of alternative hypotheses despite pointing out that it is important to allow for this (Swinburne 1979, 19), which is a serious error. He also does not address in any sustained way the difficulties facing attempts to determine the prior probability of a metaphysical hypothesis about ultimate reality. More pertinently, the philosophy of science has demonstrated that the logic of confirmation is formidably complex in actual practice, certainly not reducible to the terms of Bayesian probability, and possibly not even fully rational at key decision points. This reflects the debate between Imre Lakatos and Paul Feyerabend over the impossibility of stipulating fully rational criteria for deciding to abandon

apparently degenerating research programs (see Motterlini 1999; the key background works are Lakatos 1978; Lakatos and Musgrave 1970; and Feyerabend 1993). This leaves these theological adventures in confirmation theory looking both innocent and unhelpfully abstract.

Recent philosophical attempts to refine (or to produce) understanding of judgments of similarity and difference, of consonance and dissonance, of elegance and coherence, have turned especially on the integration of cognitive science and philosophy. Cognitive modeling has proved to be an important tool here: such valuational judgments occur in prodigiously complex brains that may have special ways of detecting overall resonance between two sets of biologically coded information. Connectionist models of brain processes are especially useful here because they can represent hypotheses being compared as distributed activation patterns of nodes in a connectionist machine, which allows consonance and dissonance to be represented as pattern similarity and overlap. This in turn makes judgments of similarity are then akin to pattern recognition skills (see Churchland 1989; Thagard 1988).

These consonance-detection methods may be irreducible to simple probability calculations or even logical arguments. Yet they may still be logically pertinent if these biologically-based mechanisms for assessing resonance produce useful results not merely accidentally but on the basis of neural functions refined through evolutionary pressures to be truth-conducive as well as fitness-promoting (a complex issue in its own right; see Plantinga 1991; Wildman 2009). We might abstract from such processes a Bayesian framework for understanding them but, inevitably, such abstractions will not prove very illuminating.

Human beings may have natural consonance-detection abilities, but we are also vulnerable to serious errors of judgment. Our pattern-recognition skills appear to be over-productive of hypotheses to explain the puzzles we come across. This is useful when we are

searching for explanations, and thus highly relevant to evolutionary survival, which probably explains how we got this way. But it can also dangerously mislead us into trusting "feelings" of similarity where in fact this leads to mistakes—sometimes deadly ones. There are many compendiums of errors due to biological limitations on human rationality, including examples of the ways that unscrupulous people exploit such vulnerabilities for their own profit and amusement (see Gilovich 1993; Piatelli-Palmarini 1996; Plous 1993; Randi 1982; Sagan 1996; Shermer 1997). In the context of comparative metaphysics and religion, especially, this propensity to trust feelings of consonance must be handled with extreme care. It takes decades of training both to help people make use of their abilities for inquiry and to train them to overcome their liabilities as inquirers. Even with such protracted training, experts still make errors of reasoning, particularly around questions of similarity and dissimilarity. Such errors in comparative religion have been traced with impressive precision (for example, see Smith 1982). The result is that a new collaborative approach has seemed necessary if we are to compare religious ideas with any degree of confidence (this was the aim of the Comparative Religious Ideas Project; see Neville 2001).

In light of these complexities, and without even touching on the peculiarities of ultimacy metaphysics, it appears that a Bayesian analysis of inference to best explanation is deficient, and perhaps best understood as an abstraction from a more complex process of inquiry. The alternative analysis I have proposed stresses awareness of many relevant hypotheses, transparency of the comparative criteria that guide judgments of similarity and difference, dynamic complexity of both ontologies of nature and ultimacy theories, and the futility of stipulating a reliable recipe for directing the artful process of evaluating competing conceptual systems. This approach still does not come to terms with the way we make judgments of

similarity and difference, of simplicity and fit. But it has been made responsive to the problem by building in the kind of transparency and flexibility that facilitates correction of judgments in an ongoing process of adjustment and improvement.

Conclusion

Natural theology has always depended on a complex kind of comparative argumentation whose logical structure is presented above. Traditional natural theology aims at direct inference from nature to ultimacy only by mistake—a mistake of oversimplification that takes the form of unanalyzed and hidden presuppositions. Natural theology properly described—which is to say comparative natural theology—involves surfacing criteria for judgment that operate silently beneath the misleading surface of traditional natural theology. Comparative natural theology also involves acknowledging that many aspects of the judgments involved—especially those of consonance and dissonance, similarity and difference—are aesthetically complex, entangled in philosophical tastes and formative influences, and resistant to complete clarification.

It is important in concluding to recognize that natural theology is only one aspect of theological reflection. Theology takes shape in traditions, with support from religious or secular scholarly institutions. When theology attempts to address metaphysical questions—a move whose current unpopularity may be a seasonal phenomenon—it is no less dependent on such traditions and institutions for the reception and carrying forward of its plausibility conditions and canons of rationality. The results of comparative natural theology can play an important role in structuring and adjusting these plausibility conditions and canons of rationality, thereby helping to guide metaphysical reflection on theological topics. Yet it remains possible to defend within a robust social context and lively intellectual tradition almost any metaphysical theory of ultimacy,

more or less indefinitely. Such is the wealth of considerations that are relevant to judging the adequacy of any ultimacy metaphysics.

Metaphysics is not completely arbitrary, nor solely a matter of taste and tradition; natural theology has always held that this pessimistic view is mistaken. But we also need to resist the fantasy that ultimacy metaphysics is exhaustively rational in the sense that every question can be decided. Correspondingly, we should thoughtfully embrace the inchoate forces that dispose us to prefer one hypothesis over another, one aesthetic sensibility to another, one way of balancing criteria rather than another—embrace them, that is, in order to control their power and learn to allow for them.

This non-decisive rational landscape appears to be a fact of life for inquiries into ultimacy of all kinds, including those arising within natural theology. *Philosophical theologians can manage this complex situation to an optimal degree by employing the tools of comparative natural theology.* This requires engagement with the sciences of nature and the philosophy of science—an unappetizing prospect for many and certainly not an easy task. Once properly informed, however, philosophical theologians can build ingenious theories around ultimacy hypotheses that artfully balance criteria in a way that honors the struggles and strange currents of their own lives and the traditions that form them. It is a partly rational process, conditioned by unfathomable drives and intriguing instincts and untraceable influences. Yet the process of inquiry does not fall into the irrational chaos of sheer relativism because the process can be made responsive to the network of conceptual and logical linkages that stretches like an intricate web between our ideas of the natural world and our ideas of ultimacy. Traditions and personal predispositions continue to find voice within the inquiries of natural theology and yet the rational constraints on argumentation are genuine and productive.

It would be easier to embrace personal involvement in metaphysical theory building if the Kantian and logical-positivist detractors, the Heideggerian anti-onto-theological and postmodern anti-logocentric accusers of metaphysics were known to be at least partly mistaken, and if rational constraints deriving from nature were known to make a constructive difference in ultimacy queries. After all, no philosophical theologian wants to be the poster child for deluded metaphysical speculation. The scope of this chapter has not permitted consideration of such arguments (see Wildman 2010).

Nevertheless, once the meaningfulness of the network of conceptual and logical linkages between nature and ultimacy is granted—granted to any degree whatsoever—then comparative natural theology offers the ideal response to the questionable rational status of traditional natural theology. By eschewing rational overreaching, by cautiously accepting the complexities of multidisciplinary comparative inquiry, and by acknowledging the misleading consequences of hidden premises in traditional natural theology, comparative natural theology actually produces credible results that simultaneously overcome cultural parochialism and meaningfully constrain ultimacy metaphysics. Modest achievements build confidence precisely because they do not overreach and do not underestimate difficulties. Comparative natural theology creates confidence to venture speculative arguments about ultimacy and nurtures willingness to accept our emotional and spiritual entanglement in metaphysical theory building. This is not the grand achievement of now discredited traditional natural theology, to be sure, but that may prove to be a great advantage.

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Comparison, multidisciplinarity, confirmation theory, relativism, tradition, ontology, metaphysics, ultimacy, ultimate reality, God, comparative natural theology, traditional natural theology, cultural parochialism, cultural pluralism, cosmological proofs, Anselm, Anselm's *Monologion*, dependent co-arising (*pratītya-samutpāda*), Manichaeism, Zoroastrianism, *pramāña* theory, Mādhyamaka school of Mahāyāna Buddhist philosophy, Karl Barth, Robert Cummings Neville, Charles Hartshorne, Georg W. F. Hegel, Gottfried Leibniz, Deism, Michael Behe, William Dembski, Carl Sagan, Michael Shermer, Richard Swinburne, Imre Lakatos, Paul Feyerabend, connectionist models of brain processes, Bayesian probability, the Comparative Religious Ideas Project, cognitive error, Immanuel Kant, Martin Heidegger, Vedas, Chinese philosophy, Hindu philosophy, skepticism, nihilism