

## 6 Monotheism, western science, and the theory of everything

For I am not so much in love with my conclusions as not to weigh what others will think about them, and although I know that the meditations of a philosopher are far removed from the judgment of the laity, because his endeavor is to seek out the truth in all things, so far as this is permitted by God to the human reason, I still believe that one must avoid theories altogether foreign to orthodoxy.

Nicholas Copernicus<sup>1</sup>

they had to misapprehend the nature of the knower; they had to deny the role of the impulses in knowledge; and quite generally they had to conceive of reason as a completely free and spontaneous activity. They shut their eyes to the fact they, too, had arrived at their propositions through opposition to common sense, or owing to a desire for tranquility, for sole possession, or for dominion.

Friedrich Nietzsche<sup>2</sup>

The logic of the One is dualistic, demanding a process of reasoning that absolutely and certainly separates truth from falsehood, just as it demands that God be clearly and absolutely distinguished from not-God. It should be no surprise therefore that scientific reasoning, pulled like a brilliant thread from the fabric of monotheistic teaching and learning, makes this same demand, although its orthodoxies lie more in method than in conclusions. The very point of early modern scientific reasoning was to pursue the “truth” by separating fact from fiction, an estrangement that relied on the prior assumption that the two are separable. While the logic of the One abides the notion of inclusive truth, meaning that different *perceptions* of truth can be accommodated, truth “itself”—that to which the perceptions presumably point—primarily draws its veil of isolation and purity when brazen fiction or falsehood saunter by. The problem with this binary structure of exclusion is that it serves the orthodoxy to which Copernicus was willing to bow more than the common sense which Nietzsche lamented. So-called true things are after all always promiscuously involved with the so-called false, just as “good prose is written only face to face with poetry: all of its attractions depend on the way in which poetry is continually avoided and contradicted.”<sup>3</sup>

The science that evolved in Europe late in the seventeenth and eighteenth centuries and that gave birth to the modern technological and scientific world grew out of Christian political and ecclesial struggles for dominance in the new worlds over which they fought and from which they sought to gain imperial advantage. How the complex of economic interests, religious interests, scientific innovations, and ideologies of dominance converged to set up the colonialism that would later dominate Christian expansion is more than this study can explain, although those forces also supported the growth and consolidation of the logic of the One in the passage of Christian theology from the early medieval context of Europe to the early modern context of European expansion across the globe. What is vital for this deconstruction of the logic of the One in pursuit of a postcolonial constructive theology of multiplicity is examination of the power of that logic to break its bounds within the Roman and Eastern churches and to shape the emergent “secular” endeavors of modern science, endeavors that largely shape academic discourses and investigations today.

Of course, any analysis of the European “scientific revolution” that exposes its conceptual ties to monotheism sins against the received wisdom of that revolution as a “pure” revolt against theology and its intellectual constraints. However, the logic of the One does frame the horizons of science that came to fruition out of the European scientific movements of the seventeenth and eighteenth centuries. It is significant that some experimental scientists, along with some experimental theologians, are now beginning to resist the constraining logic of the One in their attempts to overcome its biases toward simplicity and binary thought. In so doing, the lines between fact and fiction, truth and falsehood, proof and faith blur and allow for cross-pollination. They also grant brief glimpses into other realms ungoverned by reduction to true/false binaries. For theologians who seek pathways toward multiplicity, some reckoning with the scientific power of the logic of the One is necessary lest it be mistaken only for an ecclesial constraint.

### **Pilgrim’s progress: the monotheistic basis of modern science**

The logic of the One, cemented in Constantinian Christian theological reasoning, gradually became the foundation for knowledge in the empires governed by the Holy Roman and Eastern Orthodox churches. Over the centuries of medieval church rule, truth claims kept slipping in blood and the excesses of papal designs on power, but although the empires of Christendom stumbled and frayed, the logic that had grounded their orthodoxies took on a life of its own, eventually erupting in Europe in the seventeenth and eighteenth centuries in the “scientific revolution.” The theological claim of a single ruling deity had not only provided Constantine with a rationale for the consolidation of shared Roman governance into an absolute and solitary ruler over an empire that was symbolically envisioned as

universal, but it outlasted the Roman empire to take root and flourish in the post-imperial emergent European imagination. This is in part because the Roman church had assumed the shape, scope, and governance of the Roman empire even as the latter dissolved, carrying on its essentially monotheistic idea through consolidation of church doctrines and ecclesial power under an ideology of oneness.

Although the impact of the logic of the One may have taken its most subtle and effective turn when it shaped the ground rules for what would become modern science, it is important to remember that this metaphysical theme of monotheism (or “monotonotheism,” as Nietzsche wittily dubbed it)<sup>4</sup> which links the idea of a universal, unchanging God to a single creation ruled by universal, unchanging laws and the dream of a single all-powerful temporal government, did not travel a smooth and unbroken course in Christian (or Jewish or Muslim) history. As we have already seen, the complexity, contradiction, and openness of the Bible on the topic of monotheism helped to ensure all along a persistence of minority theological and devotional traditions throughout Christianity’s long development, diversification, and expansion. There have always been themes that run counter to a metaphysics of divine oneness at play among Christians, however marginal or temporary they may have become in relation to the emergent modern Church, particularly in Europe. The hagiography of eastern Christian communities, the perennial and resilient infusion of African and other ancient indigenous philosophies, ontologies, and possibilities for divine multiplicity into Christian worship and theology (wherever Christian missionaries or soldiers have gone in Africa, Europe, the Americas, or Asia), as well as persistent Christian musings on the trinity and incarnation, mean that the career of monotheism in Christian theology has never been assured, despite its ability to dominate the received theological texts of Christian tradition.

Nevertheless, as the various early Christianities grew and spread, adapting themselves into ever more distant cultural frames, the theme of a single, unchanging divinity continued to dominate church theology, especially in its evangelical and missiological emphases. What is more, the scholastic projects of the medieval church largely succeeded in joining the ideological analogy of the One ruling patriarchal deity in heaven with an idea of eschatological unity for creation—an ideological union resulting in an equally ideological concept of a single reality, a monocosmos, if you will. Thomas Aquinas argued, as one of the principle points of his massive *Summa Theologica*, that the goal and purpose of *all* of creation is its destiny of unification under God.<sup>5</sup> The idea of a unified creation under one God was not new to Scholastics like Thomas, of course—we have already discussed its ancient resonances in Israel, Greece, Persia, and Egypt. What is important for the story of monotheism as an ideology of reality in the emergent European church is that its greatest scholars effectively melded the idea of a solitary divine reality with the idea of a single physical universe *in the form of church doctrine* and set this idea against falsehood or heresy.

True existence, or the eternal reality of God, became for the theologians an abstract unity of all things in which there can be no division or disagreement. Even the dialectical style of Thomas Aquinas' constructions, carried forward through his own reading of the Greeks, reinforced the assumption that disagreement is ultimately the result of error in fact or argumentation: error that he believed reason and faith can eliminate.

A serious challenge to this scholarly reduction of "truth" to the "One" was that the world—ancient, medieval, and early modern—was never experienced by its inhabitants "on the ground" as essentially one, or unified. The gap between day-to-day life in an empire (be it *Pax Romana* or *Ecclesia Romana*), made up of so many different peoples, languages, and cultures, and the idea of that same empire as a divinely ordered unity was enormous. It was precisely that gap that made the cultivation and maintenance of an ideology of oneness so important to its rulers: daily experiences of difference could easily fracture the political and religious order unless a strong vaccination or antidote of an ideological vision of unity could prevail. But Thomas Aquinas argued strongly for a new theological attention to the world and its manyess: he was confident that such attention and study would reveal what the ancient Greek philosopher Aristotle had said it would reveal: a single Prime Mover both behind and before the ever-changing world. For Thomas, this meant that the world itself could serve as revelatory text of the one, unchanging God of all Creation.

By the time of the Reformations and the resultant weakening of Rome's religious authority, more than a millennium of Christian theo-political rule had made the religious and ontological claim of a single, unchanging divine order a basic cultural assumption throughout the upper classes across Europe, Asia Minor, and North Africa. And though one might expect the division of the church to result in a parallel dilution of the monotheistic underpinnings of the old order, the opposite was the case. Out of the battle fatigue wrought by centuries of church corruption, plague, and years of bitter bloodshed over Christian fanaticism and factionalism, Christian monotheism indirectly received a huge shot in the arm, culturally speaking, thanks to several aspects of the Protestant critique of Roman authority.

Led by Martin Luther, Jean Calvin, and Ulrich Zwingli, European Protestantism not only spawned a new vitality in religious fervor but the Protestants' emphasis on the authority of Bible over Church also encouraged a new literacy so that common folk could actually consult the Bible in support of their individualistic piety. Over time, this emergent emphasis on direct access to the divine source opened the door among both Protestants and post-Reformation Catholics to skepticism about ecclesially received truths. This meant that the splintering of the churches only reinforced the oneness of truth because it essentially lay outside of the all-too-human church, rather than the other way around. Modern science was born in the minds of priests and theological scholars drunk on the possibilities of "going to the evidence" for God's truth—about everything.

Their avowals of skepticism about received truth did not, however, prevent the early modern “scientists,” most of whom were theologically trained, from employing what we have already seen was the equally received truth of metaphysical oneness as a guide in their quest for knowledge. Nearly two millennia of Jewish, Christian, and Muslim cultural saturation in the idea of metaphysical Oneness did not simply go away when Francis Bacon, René Descartes, Isaac Newton, and others sought a means for attaining knowledge that was not dependent on church authority. The early modern European philosophers made their forays into a new science based on empirical observation and mathematical logic, a method that grew directly out of the neo-Pythagorean and Aristotelian framework that itself had informed the very church doctrine the early scientists were hoping to evade.

The first bold “princes of Reason” expected to find a unifying order in their explorations of nature, and so, naturally, they did find it. From Ibn Sinna, Bacon, and Descartes to Galileo and Newton, it is quite clear that no other alternative to a monocosmic idea was seriously considered. Even Descartes’ *Meditations on First Philosophy*, in which he posited the famous line “cogito ergo sum” (I think, therefore I am), explored the possibility of a different kind of universe under the rule of an evil genius as a rhetorical device only.<sup>6</sup> And Bacon railed against the power of preconception to rule the mind, but even he did not imagine the extent to which logical frameworks are themselves produced within imaginative horizons shaped by culture and religion.

The work of the dominant culture on the horizons of human imagining—in this case late Roman and Reformed Christianity—is readily apparent in the early modern philosophers’ search for a “new science” that they believed would free humanity from the control of knowledge by a relatively few (easily corrupted) clerics. Today, from our post-Freud and Foucault perspectives, it is difficult to miss the underground workings of the theological assertion of the One on the very structure of inquiry in the wholly “secular” endeavor of science. Sir Isaac Newton’s mathematically derived *universal* laws, for example, were not solely the result of unbiased observation. They fit well into his own preconceived acceptance of a “single” creation and answered questions that the “discovery” of the New World and another hemisphere recently had raised about the unity of creation. For Newton and the other early modern innovators of western science, the eternity and essential stasis of the universal physical laws provided intellectual breathing room and respite from the constraining trappings of Christian theism but enabled them to stay snugly within the fold of what they could affirm to be an essentially Christian monocosmos.

In some cases the early modern scientists may have held back their inquiries because, as the experience of Galileo Galilei showed, they had reason to fear the very real power of suspicious clerics. Or they may have quite honestly not thought to question the basic theological assumption of cosmic unification. But their motives are more or less irrelevant—the fact is

that they did not fundamentally question the metaphysical assertion of Oneness, derived from the religion that saturated their culture from cradle to grave. Quite the opposite, they adopted this faith as a basic principle of “post-religion” science. The fact that the search for a single, unifying theory of everything still dominates the imagination of some of the greatest minds in theoretical physics is an indication that the theological assumption of oneness is alive and well even in contemporary science. This is so despite a common popular acceptance that Newton and his colleagues mark the break of modernity (in the form of scientific reasoning) with religious reasoning and faith, at least as far as explanations for the observable universe are concerned.

### **The intellectual dilemma of the logic of the One: truth in a false opposition**

From the seventeenth century onward, the European marriage of religious-political claims of metaphysical oneness to an emergent empirical science founded on mechanical assumptions of universal laws further deepened the western cultural assumption that all of reality is encompassed in and reducible to an as-yet not fully revealed unified system—an intrinsic One. At the same time, however, this powerfully imagined metaphysical unity and oneness at the heart of western cultural and scientific imagination has also resulted in a deep conceptual split, requiring a division of all of existence into the “real” and the “not real.” The proposition of metaphysical oneness as a basis for truth brooks no contradiction. In a monocosmic system, that which is true (meaning that which has passed sufficient tests of universality and sameness to qualify as “true”) constructs by implication a vast realm of falsehood against which it stands and whose claims to truth it rejects.

In theology, the more radical and exclusive forms of monotheism make this logic very plain and easy to spot. Exclusive monotheism *demand*s the denial of all but the One God. There is no other God but the One God, in other words, and so all other appearances of or claims about divinity are deemed false. Any logical or perceived contradiction to the existence and supremacy of the One eternal God implies the presence of a falsehood (a heresy) or an error in perception. This either/or reality structure is brittle and absolute. It requires a great deal of apology, defense, and reinforcement to survive.

The dualistic logic of true against false is not restricted to the rigid forms of exclusive monotheism, however. Even a more adaptive, inclusive monotheism that accepts and subsumes all differences within itself depends on the conceptual split that oneness creates. Inclusive monotheism requires a kind of denial of “real” differences between things in its assertion that all differences are ultimately insubstantial; the perception of differences may be valid perhaps, but each perceived difference (in religion or in reality

claims in general) are nevertheless bits and pieces of a larger unity, a larger whole that may or may not be accessible to human comprehension. When combined with monotheism's typical corollary of unchanging eternity, inclusive oneness, like exclusive oneness, is a denial of difference in ultimate terms; rather than rejecting differences by expulsion, it rejects them by dissolving all differences in a mystical, overarching One.<sup>7</sup>

The reality claim of oneness that undergirds monotheistic religion and culture therefore serves to reduce, by virtue of the imperatives of the number one, the messy complexity and manyness that everyday experience implies. Everyday experience requires some kind of frame precisely because it is messy and complex. There is no known culture and language that does not, on some level, provide a limiting and rationalizing frame for otherwise random experience.<sup>8</sup> For all of reality to be "One," or subsumed in a One, however, means that *all* discontinuities, aberrations, and complexity must at some point disappear.

Oneness as an exclusive or inclusive reality claim therefore induces a certain kind of anxiety (though assuredly more for the exclusive than the inclusive sorts): How do the manyness, ambiguity, and changeability of everyday experience actually fit into an ultimate frame of One? If *all* of reality must fit the laws of the One God and/or the laws of the One Nature, then those things that confound either or both present problems for faith. And, indeed, they do, over and over again. "True" and "false" in Christian monotheism and in western science become terribly important distinctions in all aspects of life because the true and the real cannot contradict each other. As Socrates argues through Plato's pen, the true and the real are the same.<sup>9</sup> What a burden this places on the ambiguities of sensory existence! The ideology of oneness demands, in both systems of thought (scientific and monotheistic), that what is true, conflated with what is real, and what is false, conflated with what is unreal, cannot ultimately coexist, even though distinguishing true from false and real from unreal is sometimes next to impossible.

The funny thing is, ambiguity between true and false doggedly persists in modern scientific methodology despite its larger cultural context of a pre-supposed logic of One. In the world of empirical exploration where "laws" are hypotheses, "facts" are provisional. They can be overturned by new experiences hitherto unexpected. This was Francis Bacon's point in the early seventeenth century about proofs; he argued that they only apply to the past.<sup>10</sup> Stephen Hawking puts it this way: "No matter how many times the results of experiments agree with some theory, you can never be sure that the next time the result will not contradict the theory."<sup>11</sup> Modern science as a *methodology* is therefore much more flexible and open to multiplicity than it is as a defense of *truth*. It is only in the realm of ideology that boundaries between true and false cannot be permeable, regardless of the offense such ambiguity might give to some scientific believers in a monocosmos or to some religious believers in monotheism. In fact, the

persistence of ambiguity in empirical approaches to knowledge has inspired a number of thematic responses, all of which attempt to accommodate recurring ambiguity between “true” and “false” within the logic of the One.

For example, the logic of the One can tolerate ambiguity between true and false through a kind of scientific eschatology of ignorance. “We don’t know *yet*” is a response that is sometimes applied to factual uncertainty or apparent contradiction. The *truth* of the matter may not be fully formed for the present or even accessible through current instruments of observation. What *is* known of the matter is distorted by ignorance, but through diligence and study, and perhaps improved capacities for close observation, the truth will be revealed eventually. This deferral of truth to the future makes a place for ambiguity or outright contradiction in the present. Not surprisingly, it also mirrors a typical Christian conception of sin and eschatological hope, wherein the taint of “wrong” and “false” within the “right” and “true” is a sign of corruption that will be undone—eventually—in the work of redemption.

In order to maintain strong lines between “true” and “false,” the logic of the One in both science and theology also relegates ambiguity to the realm of myth and art, where the blurred boundaries between true and false in experience are domesticated under the condition of “fiction.” These relegations defer ambiguity away from the present: to an eschatological future of full knowledge on the one hand and to a mythical past of memory or a fictional “never was” on the other. “The earth is flat,” for example, falls into the latter category. It was presumed true, but upon better observation became a fiction that was then presumed never to have been true, regardless of the lives and exploits its adherents had once pursued on the assumption of its truth. Both claims—flat earth and round earth—cannot be “true” or “real” in a logic of the One (understood scientifically *or* theologically) and so any ambiguity that persists (if any persists at all) between a flat and a round earth falls into the realm of myth, fiction, and error. In other words, my own experience of the world as generally flat is an error in perception rather than an ambiguity in truth, according to a strict logic of the One. And this is why the logic of the One is a problem for science, because it functions as an ideology that in fact disallows the actual ambiguities of experience to occasionally contradict oneness. The present, on which the empirical method relies, cannot be present when truth is assumed to be One, precisely because the present is rife with regular ambiguities: flat surfaces that are also round, truths that are also false, rights that are also wrong, visions that are also bodies, particles that are also waves, minutes that are also lifetimes, and so on. The logic of the One states that, from a distance, all contradictions fall away—the earth becomes obviously round. But *privileging* the perspective of distance—near or far—is precisely what the empirical method attempts not to do, lest what Bacon famously called the “idols of the mind” take hold.<sup>12</sup>

A deceptively simple example is dreaming (and, interestingly enough, it is the example of dreaming that confounded Descartes). Dreams can seem so “real” that they cause the dreamer’s legs to twitch in the motion of running, or they can cause the dreamer to speak or even to scream words aloud, to physically respond to a dream lover, or to break out in sweat from dreamed exertion or fear. Are these physical effects “real” and the dream “just” imagined? Many native North and South American cultures claim that dreams carry all the reality of the physical world: they are experiences of worlds that exist in reality alongside or in some other place than the world we experience in waking (accessible through dream passage). For a traditional Iroquois, for example, discounting the reality of that other world or those worlds is about as intelligent as discounting the reality of a truck hurtling down the highway in your lane (which is not to say that, even in those cultures that take dreaming this seriously, dreams do not still need to be interpreted).<sup>13</sup> But then, traditional Iroquois and Algonquin cultures never made monocosmic or monotheistic claims and so were never forced to relegate the multiple truths they experienced, waking and sleeping, entirely to fiction or ignorance. A more supple posture toward the world is possible when the world does not—always—have to behave.

The long-term effects of the monocosmic and monotheistic models in European imaginings have been profound. The logic of One in science translates into the methodological rules of simplicity and non-contradiction, both of which function as faith claims, and both of which have been crucial to the huge successes in modern scientific research. These rules function as faith claims not only because they reflect the deep cultural roots of Christian monotheism out of which the modern scientific methodology grew, but also because of their many successes in providing meaningful explanation and successful experimentation. Faith in science is no different than faith elsewhere: it lasts as long as it works and as long as it is useful.

### **Simplicity**

The principle of parsimony, popularly known as Occam’s razor, insists that, in a situation of more than one plausible explanation for any phenomenon, the simpler one is better. “It is vain,” William of Occam wrote, “to do with more what can be done with less.”<sup>14</sup> As a working principle for scientific exploration, this has meant that unless the evidence absolutely requires it, simpler explanations are preferred to complex ones. In the very first of his “Rules of Reasoning in Philosophy,” published as part of a larger work entitled *Principia*, Isaac Newton declares that scientists should “admit no more causes of natural things than such as are both true and sufficient to explain their appearances.”<sup>15</sup> Stephen Hawking, a contemporary physicist who has made famous the search for a single Theory of Everything (TOE), repeats this rule in his discussion of the emergence of quantum physics in the twentieth century:

We could still imagine that there is a set of laws that determines events completely for some supernatural being, who could observe the present state of the universe without disturbing it. However, such models of the universe are not of much interest to us mortals. It seems better to employ the principle known as Occam's razor and cut out all the features of the theory that cannot be observed.<sup>16</sup>

Modern science has been able to advance at awe-inspiring rates in no small part because of the economy that the principle of simplicity affords. Occam's razor is, however, a tool and not a truth.<sup>17</sup> And the question grows, as the mechanical model of Newtonian science begins to falter in the face of relativity and quantum possibilities, whether the razor cuts more than it should, *sine necessitate*. But that question is, if the pun can be pardoned, currently at the cutting edge in science and not in its received doctrines. Particles and waves are the building blocks of atoms which in turn make up more complex matter. The principle of simplicity is a bedrock article of faith in a reality that can be described by the simplifying concept of a single, cosmic text: a "uni-verse." As such, it is therefore also "true."

The equation here between science and religion is not a dismissal of science's real material and ideological contributions to human life on the planet. All systems of belief must "pay their way" with discernible benefits and "real" answers to pressing questions of life. Until (and if) the reductive razor of simplicity fails enough times to raise suspicion among its adherents, or until enough edges of the real and the supposedly unreal refuse to stay separated, or until (and if) enough scientists begin to see dreams, desire, allegory, and vision in their facts, the followers of Europe's scientific revolution will continue to put their faith in simplicity that is based on an ontological whole, a functional One that binds and grants coherence to the many and the complex. As long as it works.

### **Non-contradiction**

Even more integral to the scientific method than Occam's razor is the principle of non-contradiction. Put simply, this is the deep faith, grounded in Newtonian universalism, that truth is solid and ultimately unassailable. That which is true cannot also be false. The problem is, of course, that contradiction persists in human experiences. A short route takes longer than a long route. Ugly is beautiful. Death is birth, and vice versa. A shaman becomes a beaver for a while. A recently deceased person shows up and speaks to the living. A particle is a wave. And so on, and so on. What is contradicted here is the singularity and inelasticity of truth. In the face of such a requirement, the occurrence of contradiction is rampant.

There are several strategies that modern people tend to deploy for coping with recalcitrant contradiction or betrayal of simplicity. The most explicit and stiff strategy is the accusation of outright falsehood, lying, or

other forms of denial. The map-maker erred. The mirror lied. The watch stopped. The kindness was a ruse. The shaman lied. The living dreamed. The instrument failed. In other words, there is no contradiction, just lies and falsehoods. Two other, related strategies focus more specifically on contradiction as a problem in the perceiver. They are: error in knowledge and error in judgment.

### Error in knowledge

The first strategy for coping with apparent elasticity in truth—error in knowledge—asserts that in a situation of contradiction some piece of knowledge is unavailable or incorrect, resulting in a situation of contradictory conclusions. Better research, leading to improved information or knowledge, should expose the error, eliminate the contradiction, and so restore an unfractured conclusion. For example, one could say that the reason that highly intelligent people assert that God exists and other equally intelligent people assert that God does not exist represents a contradiction founded on error in knowledge. Neither side *knows* enough to convince the other side. The evidence for divine existence that convinces some can be explained otherwise, and so is not persuasive to all. And evidence against divine existence does not disprove divine existence altogether and so is also unconvincing. As an error, or gap, in knowledge, then we can presume that once science, or philosophy (or even God!) provides the missing *information* that is persuasive to all, then the contradiction will be resolved and (here is the assumption at work) *one* side will be proven “right.”

This strategy that focuses on explaining apparent contradictions as an error or gap in knowledge has been extremely helpful in the evolution of modern rationality and its science, providing a powerful method for experimentation that, for the most part, really works. If I compute the balance column in my checkbook twice and I get two different sums, it is a fair bet that I have made an error in addition or subtraction somewhere along that dreary path. Or, if I bake a birthday cake in Boston and do it again with the same recipe and ingredients in Denver but get two dramatically different results, I may not have *known* that the difference in altitude can affect baking. Filling that gap in my knowledge can make all the difference in the result, resolve the apparent contradiction between two otherwise identical processes, and show that, as Star Trek’s Dr. Spock would say, “There is a logical explanation.” No contradiction here, just a gap in knowledge.

### Error in judgment

The second strategy in dealing with contradiction—error in judgment—asserts that, again, there is no actual contradiction in truth or reality but

rather mistakes in perspective. From the proper vantage point, contradictions cease to be contradictory as the apparently opposing elements or conclusions resolve into complementary parts of a larger coherence, a larger non-contradictory One. This option is often invoked, for example, to explain what appear to be hopelessly contradictory claims between religions. Are Allah, Krishna, Ahura Mazda, Esaugeta Emissee, the Virgin of Guadalupe, Ogun, and Yahweh the same? It all depends on perspective. From the vantage point of devotion, the differences may seem important enough to take up arms.

From the proper distance, at least according to the “error in judgment” strategy, all different religions represent paths *to the same*, and the differences ultimately resolve into sameness, at the proper distance. To be converted to the One in this inclusive sense is not to deny the validity of the many, it is simply to deny their manyness in any absolute sense (regardless of what believers may themselves actually think or believe). There is a spatial implication to inclusive Oneness: step back far enough, and you can see the coherent whole. But there can also be a temporal implication: hang around long enough, and over time you will understand the sameness that is the true nature of all difference.<sup>18</sup>

In physics, this strategy has been put to use with some success to explain apparently contradictory behavior at the heart of atoms. Earlier research had neatly sewn up the structure of matter in observable atomic bits called protons, neutrons, and electrons. However, throughout the twentieth century, the evidence was not entirely adding up. There seemed to be even smaller bits at work (some of which came to be known as “quarks”), but under laboratory conditions these smaller bits exhibit a contradiction that excited the eschatological hopes of scientists and their funders whenever faced with an investigable dilemma: these quarks behaved both as particles and as waves, disrupting one of the accepted either/or rules that governed research in physics up to that point.

This contradiction appeared to be the result of an error in perspective: researchers began to find that the *relation* of the observer to the observed makes a difference in the behavior of the observed—the quark appears to behave differently if it is being watched—suggesting to those scientists who seek unified explanations that they had not yet located the proper vantage point from which to determine what really is going on at the heart of matter. In other words, the apparently contradictory results *must* point to some deeper or more encompassing not-yet-revealed truth about atomic structure such that the quarks, behaving strangely according to “known” laws, could be explained (rendering them non-contradictory) by a deeper theory of “true” atomic structure and dynamics.

From the proper vantage point, the particle-wave supposed contradiction must reveal itself to be a necessary non-contradictory aspect of a deeper, coherent and unified structure. The fact that that deeper structure is still elusive both in space and time *and* that quarks seem to multiply and shift

doesn't matter: the logic of oneness requires the existence of a unified deeper structure, and so it will be found, even if the provocatively named quarks located thus far (Up, Down, Strange, Charm, Bottom, and, finally, Top) continue to multiply. That is the teleological faith of modern science, anyway. The contradictory results, which indicate either a falsehood or a different logic that abides contradiction, become instead equally true proximal supports for a more ultimate truth. Their difference, being proximal, is eliminated in the more ultimate oneness that sweeps them up into its resolution.

### The dualism of One

Ontology that is shaped by the logic of the One has a number of important characteristics that are worth reviewing, all of which in becoming imprinted on the Christian imagination also shape the cultural and scientific imaginations of the world dominated by Christianity. First, the logic of the One is dualistic. In order to account for difference, change, and ambiguity that continually recurs, reality within the horizon of the One necessarily falls into the true (real) and false (unreal) in order to support the singularity of reality. This leads as well to a splitting of the empirical from the intuitive. That which is real is confined to the tests of empirical observation and repeatability. The strange, the fleeting, the anomalous, the felt—the unverifiable, in other words—become “real” in their effects only or they are deferred altogether.

For example, A. I. Hallowell, a Euro-American anthropologist living among the Great Lakes Ojibwa in the mid-twentieth century, heard a number of important stories of the people that involved rocks engaged in animate interaction with various ancestors at critical moments in their history. Looking for a principle, or rule regarding the living and non-living, he asked the elder with whom he conversed if the stories about the rock that took initiative and intervened in their affairs meant that all rocks are alive. Hallowell has reported that the old man looked at him with some pity when he answered “No, of course not.” But then the elder added, “But *some* are.”<sup>19</sup>

The implication Hallowell received from this exchange was that his own thinking was not supple enough to understand what to the Ojibwe was self-evident, if unverifiable by western scientific standards. Of course rocks are not alive. But *some* are. The evidence lies in experience unencumbered by too many shutters. Ontology shaped by the logic of the One, in order to derive universal principles, must shutter anomalous experience, or else look for a universal law that will accommodate it. The truth that some rocks are alive fails the test of universality altogether and so must be relegated to the realm of collective imagining or creative story-telling. The aliveness of rocks becomes thereby a fiction and the experience of living rocks adheres to the dualistically understood category of “culture” (relative truth, or fiction) rather than “science” (universal truth, or reality).<sup>20</sup>

If I am depressed by a dream, or change my life on the basis of words delivered by a rock, tree, or cloud, ontology shaped by the logic of One can only accept the “reality” of such things in terms of the verifiable, which in these cases is the effect on my behavior, particularly if that behavior is consistent enough to sustain observation over time. The most that a modern imagination within the logic horizon of the One can do in the face of such things is to suggest that even delusions and hallucinations can have the “effect of truth.”<sup>21</sup> A rock does not actually have to speak, or an actual dream realm exist, for the imagination to construe a trick of light and sound, or a fictional story woven in dream *as* real. There is a lot going for this argument. No one can deny that human beings are very capable of self- and other-delusion, alone or in groups. They can kill themselves or others, or do an endless number of dramatic things as the verifiable effects of unverifiable experiences. But it is also the case that those cultural traditions that do not participate in the logic of oneness and so maintain a more supple posture toward anomaly and flux in experience also have systems for adjudicating delusory or falsifying behavior as well. The modern tests of western science by no means sum up the possibilities for determining and dealing effectively with pathology.

The point here is that inspiration’s attachment to reality is in no way guaranteed in any cultural system, at least if the long records of human history are taken into account. It is, however, a curious simplification of the dualism of true/false indicated by the logic of the One to suggest that that which cannot be verified by empirical observation or by the test of universality therefore exists only either in the realm of ideas (imagination, hallucination, dream, speculation, hypothesis) or in the realm of the “not yet verified.” While indispensable as a standard for empirical science, and notwithstanding the enormous advantage and real successes that this dualism has achieved in modern science, technology, and the “soft” sciences of psychology and sociology, the true/false dichotomy also establishes limits to the social and religious imagination and sense of the queer possibilities for existence. And perhaps it limits access to divinity.

When a true/false dualism is rigidly enforced (rocks are either sentient or they are not, God either exists or does not), existence is normatively reduced to the verifiable. Put most simply, if no one can verify it, it does not exist. Without the possibility of ontological both-and answers, of shape-shifting, time interconnection, and other forms of ontological multiplicity, there is only being within the horizon of the same, of the One. So many non-European cultures like the Ojibwe that are open to many other possibilities for existence make the finality of true-or-false a non sequitur, a bit of nonsense.

### **The failure of One**

A second characteristic of ontology that is shaped by the logic of the One is that it is reductive, meaning that existence itself must conform to a single

explanation, or understanding. The rule of Occam's razor and the related quest for a single theory of everything have a resonance in the deepest heart of Pythagoras' mystical infatuation with the number one and in Christian notions of a singular, unchanging God. It is possible that the imaginative overlap of a single created cosmos knit together by discernibly universal laws under a single divine principle succeeds in science even more effectively than in religion because scientific exploration roots the concept of oneness in the self-referencing rules of simplicity and non-contradiction. The scientific faith in reductive simplicity and non-contradiction, which refers to a dogmatically affirmed cosmos, causes science to appear as if faith has little or nothing to do with the question of reality, especially when the scientist's own religious faith, say, grounded in monotheism, undergirds the oneness of the cosmos. As Gleiser notes, "Platonism echoes strongly in the offices of theoretical physicists, especially those preoccupied with questions of cosmic origin. Stephen Hawking has equated understanding the origin of the universe to knowing 'the mind of God.'"<sup>22</sup>

Simplicity, in theology and in society, is an economy of identity. Sameness becomes the basis for establishing real from unreal. Something is "real" if it is the "same as" (not anomalous or strange to) the known. And, so, the reducibility of reality to simplicity, or oneness, effects a negation of difference as a basic tenet of reality itself. Otherness, especially otherness that cannot be somehow resolved into a recognizable frame of the One, indicates, as we've already discussed, an error in knowledge or in judgment precisely because fundamental *otherness is not real*. Or, we should say, fundamental otherness cannot be real in a uni-verse.

If ontology is built on a reductive basis, then there should be no surprise when philosophers become obsessed with the question of otherness. If to *be* is to *be the same*, then *to be other* is a frightful loss of existence (remember the dualism—if to be the same is to be, then it must follow that to be other is to not-be). It is only within the logic of the One that the category of Other can come to hold such negative power, such fascination, horror, or attraction. Jacques Lacan certainly understood this in his development of the concept of phallogocentrism, in which the One (as Father, as Logos) attempts to blot out all but itself, thereby granting to the Other (as the feminine, the body, or anything that resists the logic of oneness) the status of "lack" or negation. This neo-Freudian reduction of otherness, its feminization and its rendering as the negative space within which the positive substance of reality—the One—can express itself exposes the failure of phallogocentrism to achieve oneness.<sup>23</sup> Luce Irigaray in particular has attempted to move past this logic, actually to *think* the other as other, to imagine a logic not bound to this uni-verse. She suggests we do so by "thinking the body" since, despite everything we try to do to control, repress, deny, or compress them, bodies do prosaically tend to resist oneness.<sup>24</sup>

The dualistic concept of and fascination with the Other that cannot be grasped in thought (this Other often depicted among the philosophers as

Woman) makes sense only within the logic of the One. It is easy to get stuck attempting to articulate this supposed Other *as other*, and forget that within a different logic, a resistant logic of “becoming,” perhaps,<sup>25</sup> or a fluid logic of multiplicity, there is no One against which the Other is projected as grotesque nemesis. The Other is neither projected nor negated by the One in a more shifty ontology of multiplicity. Even more reassuring, the One is not negated by its contradictions. They simply *are*. What is the Other unmoored from its master One? An unruly cacophony of anomalies? A fertile depth? A swamp of unknowing? An unending matrix of possibility and so a multitude of answers? This is the fear, isn’t it?

The horizon of One precludes real difference by virtue either of exclusion through the true/false dichotomy or by virtue of transcendent inclusion in a larger or deeper singularity that unfolds all difference into itself. Inclusive understandings of contradiction that insist on singular truths binding all differences together in some explanatory “end” presuppose a negation of difference or otherness at truth’s own limits. And so, either way, Oneness is by necessity divided in itself between true and false and between real and unreal. If the contradictory realities stand even as an eschatological possibility, then the One is dismantled—and it is this that most deeply challenges the core points of faith in western science and Christian imagining.

What will happen to the horizon of Christian thought if the One—even as an eschatological hope that disciplines the many in the now—is not one? What if we see that the One is, paradoxically, constructed by its own exclusions of external and internal contradiction, and this exclusive move *itself* divides the One? We could say, then, that the One never *really* was one by virtue of its necessary exclusions—the One by itself is in fact the only impossibility, both now *and* then. Indeed, it is this claim that will carry us at last off the deep end (which is where we want to go after all) into the overdue realm of imagining divine multiplicity. But, in the meantime, which is the mean time of imperial Christian metaphysics, the One which is not one nevertheless asserts itself at the cognitive center of modernity, shaping the presuppositions of both theological and scientific hopes. The logic of the One dominates modern thinking about “the real” against the always recurring multiplicity at the heart of what could be and sometimes even has been (and I dare say should be) Christian religious imagining.

The ontological horizon of Christian Oneness funds a deep cultural anxiety about identity, sameness, origins and pedigree/roots. The One that denies its own constitutive multiplicity also denies and suppresses hybridity or contradiction. It is a reductive Theory of Everything, a TOE out of water that is unconnected to any feet; it is not fluid or supple, not mutable, partial, or temporary. It is unchangeable, just as it has made truth unchangeable. The genealogical trace of this reduction runs through the Constantinian doctrinal consolidation, the medieval scholastics’ stratification and legalization of eternity, the early modern scientists’ conflation of nature,

law, and stasis into contemporary scientific strivings after a Theory of Everything. Each move relies entirely on a logic of oneness that betrays the actuality of incommensurate experiences and of bodies in all of their irreducible *thereness*. In other words, the logic of the One betrays the empirical method. It is a fundament *that had to be made* for imperial consolidation and “westward expansion.” It is an ontology of ice, whose fluid dynamics we have forgotten even exist.