

The Fallacy of Misplaced Temporality in Western Philosophy, Natural Science, and Theistic Religion

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Abstract

The whole of Western philosophy and (derivatively) natural science have been haunted by a contradictory conception of time: time has been thought of and articulated as essentially transitory, while at the same time (and in the same sense) assumed to stand still (apart from the world of temporal items and happenings). In the extreme, this bifurcation of time (and/or corresponding bifurcation of knowledge) has led some to commit the fallacy of misplaced temporality, which privileges one aspect of time (i.e., the static or dynamic) over another. In its most damaging form, the fallacy dismisses essential aspects of true time by quietly disposing of constancy (labeling it as timeless) and/or quietly disposing of change (labeling it as lower/subjective or unreal). This problem arises in force when the context is shifted from philosophy to theistic religion. A case in point is the Judeo-Christian tradition that sees God as active within the historical process which, in consequence, represents not only a causal but also a purposive order, but locates God outside of time—entirely external to the *perishable* (or *lower*) realm of change and process. Accordingly, variations of the Fallacy of Misplaced Temporality arise in efforts to derive *creaturely* time from divine eternity—to establish a *rational* relation between God and the world. But, to sustain that God is either in time or out, given that an infinite and immutable God is over and above all created things, strongly suggests that there is no rational relation between the static nature of divine eternity and the dynamic character of the physical universe. As a result, when we factor in the aspects of true time there cannot be a rational relation between God and the world.

Introduction

On the Sistine Chapel ceiling in Rome, Michelangelo (1475–1564) painted his famous *The Creation of Adam*. This is his interpretation of the scene of the Creator, Lord God, giving life to Adam. Focusing on the hands of Adam and God, however, we may note that God's index finger is fixed and firm (a mode or identification of constancy) about to touch Adam's fingers that are bending and unsteady—reaching to the heavens (a mode or identification of change) so that they almost touch God's index finger. As if moving away on purpose from the literal depiction of the scene described in the Bible,¹ Michelangelo suggests both figures reach to the other in different ways. But, can Adam (emblematic of all creation) ever receive God's transcending and immutable touch? Is there a rational relation between God's transcending immutability and the dynamic character of the physical universe? This is one of the most challenging and important questions in the dialogue between Western philosophy (and, derivatively, natural science) and theistic religion. Without a solution to the underlying problem of constancy and change as diametrically opposed aspects of true time, the relation of God to our physical universe remains irrational.

To be sure, the notions of change and constancy alternately have had something of a pivotal position within the logical geography of ancient Greek philosophical thinking about the

¹Genesis 2:7, New King James Version.

nature of time and reality. This pivotal position not only speaks for the different modes or identifications of change and constancy in ancient Greek philosophy, but the two great Greek themes of change and constancy are so basic that they emerge throughout philosophy. Earlier concerns about change and constancy took on their full form as two sharply differing accounts of time within the boundaries of a Heraclitean metaphysic of *becoming* and a Parmenidean metaphysic of *being*. In a key sense, Heraclitus' metaphysics was the exact reverse of Parmenides' metaphysics. In the Heraclitean metaphysic of becoming, Heraclitus held that change (or motion, a type of change) was the only reality. On the other hand, in the Parmenidean metaphysic of being, Parmenides held that the whole of reality consisted of a single unchanging (or unmoving) substance.²

For the metaphysical heirs of Heraclitus and Parmenides philosophy could never be the same, since most major philosophers felt that one had to take into account such antagonistic views of time. Plato, for example, first brought together in a systematic way the ancient distinction between constancy (principally a Parmenidean influence) and change (principally a Heraclitean influence) and defined the work of philosophy ever since. And, in modern times, Alfred North Whitehead generally characterized the whole of Western philosophical tradition as nothing but a series of footnotes to Plato.³ Thus, the bifurcation of time was to leave its mark upon the whole body of ancient Greek philosophy, and through Plato,⁴ upon the whole of Western philosophy.⁵

Accordingly, the whole of Western philosophy and (derivatively) natural science have been haunted by a contradictory conception of time: time has been thought of and articulated as essentially transitory, while at the same time (and in the same sense) assumed to stand still (apart from the world of temporal items and happenings). In the extreme, this bifurcation of time (and/or corresponding bifurcation of knowledge) has led some to commit the fallacy of misplaced temporality, which privileges one aspect of time (the static or dynamic) over another. In its most damaging form, the fallacy dismisses essential aspects of true time by quietly disposing of constancy (labeling it as timeless) and/or quietly disposing of change (labeling it as lower/subjective or unreal).

²Guthrie, *The Greek Philosophers: From Thales to Aristotle*, 47. For English translations of the actual Heraclitean and Parmenidean texts, see, for example, Kirk, Raven, and Schofield, *The Presocratic Philosophers*.

³*Process and Reality*, 39. Although Whitehead is here characterizing the European philosophical tradition, his quote is commonly taken to apply to the wider context of the whole of Western philosophical tradition. Whitehead's *...judgment is sweeping but sound, and it is confirmed by the practice of making the study of Plato central to most college and university courses in the history of ancient philosophy* (Robinson, vi).

⁴Guthrie, 87-88.

⁵For instance, metaphysical heirs of the bifurcation of time may be seen today in the split between Anglo-American analytic philosophy (where flowing time is disputed) and Continental philosophy (where it is taken for granted). Or, closely related to this, one may in contemporary practice continue to categorize philosophers according to whether they take the tensed or tenseless mode of expressing temporal fact to be substantive (Grey, 215-220). For instance, following the British idealist philosopher, John McTaggart Ellis McTaggart (1866-1925), contemporary philosophers would make a parallel distinction in terms of the so-called A-view (dynamic/tensed) and the so-called B-view (static/tenseless) theories of time. In this account, the pastness, presentness, or futurity of an event is referred to as an A-determination; the relations of earlier than, simultaneous with, or later than are referred to as B-relations. McTaggart's argument in a nutshell is that if the A-theory is the correct account of time, then this account leads to a paradox. Moreover, if this account of time leads to a paradox, then time is not real. So, if the A-theory is the correct account of time, then time is not real. But the A-theory is the correct account of time (according to McTaggart and his followers). Hence, time is not real (see McTaggart, 86-97).

This problem arises in force when the context is shifted from philosophy to theistic religion.⁶ A case in point is the Judeo-Christian tradition that sees God as active within the historical process which, in consequence, represents not only a causal but also a purposive order, but locates God outside of time⁷—entirely external to the *perishable* (or *lower*) realm⁸ of change and process. Accordingly, variations of the Fallacy of Misplaced Temporality arise in efforts to derive *creaturely* time from divine eternity—to establish a *rational* relation between God and the world. But, to sustain that God is either in time or out,⁹ given that an infinite and immutable God is over and above all created things, strongly suggests that there is no rational relation between the static nature of divine eternity and the dynamic character of the physical universe.¹⁰ In this essay, I hope to show that when we factor in the aspects of true time there cannot be a rational relation between God and the world.

The Heraclitean Turn

As interpreted by the later Greek philosophical tradition, Heraclitus (ca. 540-480 B.C.) stood on the side of change by claiming that the natural world is in a state of continual flux—in *perpetual struggle and strife*. The universe was some type of a soul caught up in an infinite cycle of death and rebirth. This became known as the doctrine of perpetual flux. And both Plato and Aristotle credited it to Heraclitus himself rendering it as the doctrine that *all things change, and nothing*

⁶To be sure, there have been grand syntheses of theistic religion and philosophic worldviews that embodied the ideal to have a unified interpretation of reality. For instance, Thomas Aquinas' (1224/5-1274) grand synthesis of the Judeo-Christian and Aristotelian worldviews in the 13th century and the Aristotelian Scholasticism that led up to the 17th century both embodied the ideal to have a unified interpretation of reality. But, as I go on to argue throughout, a fundamental divide remained in the understanding that bifurcated reality into the unchanging and the changing. Moreover, as Bertrand Russell (1872–1970) once noted, there is a key sense where theistic religion is not philosophy (and, correspondingly, for example, Aquinas is not quite a philosopher). This is because in the finding of arguments for a theistic conclusion given in advance, the religionist commits a sort of confirmation bias to fit reasoning to personal theistic practices and beliefs. Accordingly, on this account, the follower of theistic religion does not ...*set out to follow wherever the argument may lead. He [or she] is not engaged in an inquiry, the result of which it is impossible to know in advance. Before [the theistic believer] begins to philosophize, he [or she] already knows the truth; it is declared in [his or her faith]. If [the theistic believer] can find apparently rational arguments for some parts of the faith, so much the better; if [the theistic believer] cannot, he [or she] need only fall back on revelation...*, [human prejudice or bias, limitations of upbringing or indoctrination, and/or personal belief or practice that ignores or resists all other alternatives]. *The finding of arguments for a conclusion given in advance is not philosophy, but special pleading* (Russell, B., 463, adapted).

⁷For insightful defenses of the position that God transcends created time see, for example, Torrance (*Space, Time and Incarnation*) and Sansbury (*Beyond Time: Defending God's Transcendence*).

⁸Biblical references for a *perishable* (or *lower*) realm: Isaiah 55:8-9; Isaiah 66:1-2; Acts 7:48-50; Genesis 3:17-19; Romans 8:19-22; 1 Corinthians 15:50; 2 Peter 2:19, 3:7, 3:10, 3:13; Isaiah 65:17; Revelation 21:1. We may also trace the problem to Greek philosophy, as noted in Plato's *Timaeus* (27d-28d), that made the distinction between ...*that which always is and has no becoming, and ...that which is always becoming and never is...* so that the *created* (outside the *unchangeable* pattern) ...*is not fair or perfect*. This Greek bifurcation of time corresponds with a bifurcation of knowledge, since [*t*]hat which is apprehended by intelligence and reason is always in the same state, but that which is conceived by opinion with the help of sensation and without reason is always in a process of becoming and perishing and never really is.

⁹For insightful discussion about whether God is either in time or out, see, for example, Robert John Russell (*Time in Eternity*) and William Lane Craig (*Time and Eternity*).

¹⁰For insightful discussion that appeals to modern theories of cosmology (where reality *had no beginning and was not created*) and argues for the *timeless* character of the physical universe *without* God, see, for example, Stenger, *Timeless Reality: Symmetry, Simplicity, and Multiple Universes*, Chapter 13.

*remains at rest.*¹¹ Philosophical tradition also held that change so represented the fundamental characteristic of the universe for Heraclitus that he picked fire as a symbol of the basic material of which all else in the universe was made, since it was never the same, ever changing.¹²

Against this philosophical tradition, one may take Heraclitus' reputed *flux* doctrine to be subject to the principle (or law): *All things change*. This flips the worldview around to replace the mythological unordered, unformed, and undifferentiated primal state (a *gap* or *emptiness* understood as the pre-philosophic concept of space by Aristotle) from which all else supposedly arose (from the Greek, *chaos*) with a universal principle of reason (from the Greek, *logos*) to lay hold of the ordered universe (from the Greek, *kosmos*). In this sense, constancy is still appealed to—not as some underlying substance, but a universal principle (or law) of reason that does not vary. Here the focus is not on some *stuff* that remains constant, but rather on an unchanging or *stable* principle (or law) that rules change.¹³ So, by emphasizing the doctrine (attributed to Heraclitus) that reason (or *logos*) governs all change, constancy becomes the captain and change the soldier. Accordingly, one may suggest that on the basis of such a principle or law (i.e., a mode or identification of constancy) Heraclitus claimed that one could never step into the same river twice, although the river changes.¹⁴

But Cratylus (5th cent. B.C.), a later follower of Heraclitus, noted that if one really took this philosophy of change seriously, there would be no constancy left to talk about. Since by the time a person steps into a river, for example, it has changed. So, claimed Cratylus, a person could not even step into the same river once.¹⁵ It would be futile, then, to try to make reality stand still long enough to make sense out of it all, since there would be no lasting features one could seek to understand. Moreover, flux could not be captured in words. For if everything were continually changing, we could not even have a constant language with which to describe reality, since the words of the language under consideration and the meanings they possess would be continually changing. Without fixed and underlying meanings (i.e., a mode or identification of constancy) we could not have language or reasoning. On that account even simple conversations would be impossible, since by the time one finished speaking, the speaker, listener, words and corresponding meanings would have all changed. On this view, therefore, even the universal principle that everything changes would not remain constant.

Still, against Cratylus, one may make room for some lasting feature in reality. The constancy attributed to things could be derived in the Heraclitean account from the equipollence of constitutive opposites. That is to say, constant things could be said to depend on the interchange or succession of their constituent parts or on conflicting forces. Hence, one may argue that what gives the river its constancy is the continual flow of successively different water, in which opposite forces cannot exist without each other. This orderly unity of opposites is shown by way of *rational* argument, for it is made obvious to reason (or *logos*) and not sense perception that the river exists as a stable system (i.e., a mode or identification of constancy) in which changes in one direction are always balanced by changes in another. Accordingly, the

¹¹Quoted in Allen, 10.

¹²Guthrie, 45.

¹³Allen, 9-10.

¹⁴Heraclitus, 11-13.

¹⁵Aristotle, *Metaphysics*, Book 4: Chapter 5, 1010a10-15.

picture painted by Heraclitus' doctrine of perpetual flux remains: all things change and *nothing* is constant. For, change may still be made the captain and constancy the soldier in Heraclitus' account.

The Parmenidean Turn

But such an accommodation would not go unchallenged by the founder of the Eleatic school of philosophy, Parmenides of Elea (5th cent. B.C.), who insisted on the constancy of true reality. The Eleatic school of thought sought to show that because the complex world had an undivided and permanent underpinning in the reality of a single kind of being, change is impossible or inconceivable. Accordingly, the Eleatic philosophers stood on the side of constancy so that the ordinary reality of changing things is mere appearance, whereas true reality is unchanging and undivided being. As interpreted by the later Greek philosophical tradition, Parmenides' position may be found in a poem in which a *goddess* supposedly distinguishes the way of appearances from the way of truth, showing how the way of truth leads to real being.¹⁶ The way of appearances leads to the many mere appearances that are part of our changing experience. In contrast, the way of truth leads to what reason and language grasp as unchanging. The unchanging is comprised of one fundamental *thing*, the *One*, which is the common name for real being.

The Eleatics' position, of course, stands in stark contrast to the position that for a thing to change is for it to both have and not have some feature or property. For example, change is noted when a hot drink becomes cold or a cold drink turns hot. In this sense, the drink could be one and the same thing opposite to itself. However, Parmenides reasoned that since all things are what they are respectively and not something else, it is never legitimate to maintain that one and the same thing both has and has not some feature or property. Hence, change is absolutely impossible or inconceivable for Parmenides. Reality, Parmenides reasoned, is constant. Here we may note the influence of the professed Heraclitean doctrine that reason (or *logos*) governs all change, for Parmenides maintained that what one holds as a multiplicity of existing things can be shown to be one and unchanging by *rational* argument. In short, for Parmenides true reality is what reason and language grasp as unchanging. So the one true reality is discernible only by intellect and is characterized by language, which supposedly embodies [a] logic of perfect immutability.

Zeno of Elea (flourished 464 B.C. or later), Parmenides' favorite student, introduces several paradoxes of motion (exemplifying change) to argue that reality must indeed be a single indivisible *thing* that does not change—a constancy. Assuming that changing reality is either discrete or continuous, his strategy is to show by a process of elimination that true reality must be unchanging and undivided being. The first horn of this reasoning is known as the *paradox of the arrow*,¹⁷ where Zeno asks us to assume, for the sake of argument, that changing reality has a discrete (or atomic) structure. And if changing reality has a discrete (or atomic) structure, then an interval of time must be made up of instants. But at each instant of time an arrow in flight, for instance, clearly does not move, since a temporal instant is conceived as a point not itself having duration (not having parts). One is forced to wonder, then, under Zeno's analysis, if the present (an instant; the *now*) is momentary, then how does change occur. For the arrow in flight must be

¹⁶Allen, 43-46; Robinson, Chapter 6.

¹⁷Aristotle, *Physics*, Book 6: Chapter 9, 239b 30.

at rest at every point. Thus, in any interval of time, the arrow (and anything else like it) does not move. Hence, for any interval of time, nothing moves.

The second horn of this reasoning is known as the *paradox of the half-way stage*,¹⁸ where Zeno asks us to assume, for the sake of argument, that changing reality is continuous. And, if changing reality is continuous, then one is forced to wonder whether an interval of time can consist of an infinite sequence of events, since to get anywhere the entity that moves must first get halfway there. But to get to the halfway point, the entity that moves must first get halfway to that point. And to get to the halfway point of the halfway point, the entity that moves must first get halfway to that point. However, there are an infinite amount of halfway points between the halfway points. So to get anywhere, even to *begin* to move, the entity that moves must first take an infinite amount of steps. Hence, for any interval of time, nothing moves. The paradox of the arrow and the paradox of the half-way stage together point to the claim that if changing reality is either discrete or continuous, then one is left with the absurd conclusion that for any interval of time, nothing moves. Thus, changing reality cannot be discrete or continuous. This is to say, by a process of elimination, reality must be a single indivisible thing that does not change. Zeno thus supported Parmenides' doctrine of permanence by reducing to absurdity any assertion that changing reality really does exist.

Zeno's arguments against the reality of motion constitute an implicit attack against the reality of change. But the basic underlying assumption behind his reasoning is that temporal intervals can be reduced to the spatial segments of a geometrical line. Zeno exaggerates the analogy between space and changing reality and, eventually, spatializes changing reality altogether and thus essentially eliminates it. The overall effect, therefore, of Zeno's line of thinking is to reduce time (skewed as change) to space, which has an immutable character—to reduce change to constancy. The overall account presented so far, therefore, does not really take Parmenides and Zeno to ban time altogether. For even if one were to concede that both Parmenides and Zeno construe the constancy of being so widely that change (and non-being) is banned too, the question remains whether time is banned also, since constancy is an aspect of time.

To be sure, some may argue for a reading of Parmenides that takes him to ban time altogether,¹⁹ which amounts to presuming that *eternity* is raised in the sense of *timelessness* in Parmenides' Fragment 8.5-6: *nor was [it] once, nor will [it] be, since [it] is, now, all together, one, continuous; for what coming-to-be of it will you seek?*²⁰ In opposition to this interpretation I would argue (as other researchers do) in favor of the thinking that the verse only expresses that being is always in time.²¹ Accordingly, constancy may be raised in Parmenides' account in the sense of everlasting time such that being is always in time. As a result, to underlay mere appearances that are part of our changing experience, the One itself (as unchanging and undivided being) could still be constant and boundless in time.

¹⁸Ibid, 239b 11.

¹⁹Čapek, 1973, 389.

²⁰Theunissen, 25.

²¹See Grey, Theunissen, and Matthen.

Plato's Bifurcation of Time

Plato (ca. 427/8–347/8 B.C.) held that there was another world beyond the changeable world we see and touch. This transcendent world consists of perfect Forms, the ultimate realities that exist. That is to say, Plato identifies the fully real with this perfect realm of being and characterizes it as fixed, permanent, and unchanging. In contrast, he identifies the less real (or illusory) with the imperfect physical world of becoming. Under this analysis, the items of sense experience are portrayed as the changeable phenomena of the physical world—not fixed, not permanent, but changing. Plato's bifurcation of time, then, has its roots in the difference between his physical world of becoming and his ideal realm of Form, which reveals an underlying conflict between a dynamic versus a static view of reality.

To be sure, changeable phenomena characterize the nature of the items of sense experience. Behind the philosophical concern about the nature of the items of sense experience is change itself. Completely opposed to this, however, is the fixed, permanent, and unchanging nature of Plato's Forms. And, behind the philosophical concern about the nature of Forms is constancy itself. Certainly, the Forms designate that which remains the same throughout all the manifestations of a changing ordinary physical object. One may suggest, therefore, that since for Plato Form is that aspect of reality that never changes, Form functions as a stable model—an enduring constancy that gives the changing physical object whatever reality it has (a *top-down* approach).

The foregoing suggests that the general framework within which Plato worked was set by the bifurcation of time, since a major mark of the Forms is that they remain permanent and unchanging throughout all time and a major mark of the sensible objects is a state of change and flux throughout time. Accordingly, we shall probably understand Plato's philosophy best, then, if we regard him as working in the first place under the influence of two diametrically opposed views of time: constancy and change.

With this in place, one could derive a deeper understanding of Plato's conception of time that informs what emerges from his other writings. For instance, it might seem that in Plato's much quoted *Timaeus* (37e-38c) one may find good evidence that the Forms must be outside time.²² Since it is claimed by some that the Forms, for Plato, occupy an eternal realm. And, it is believed that Plato (probably) held the conception that his transcendent Forms are eternal in the sense of timeless. To be sure, some philosophers have maintained the view that to be eternal is to be timeless. This is the sense of eternity as characterized by no duration. And it is this sense in which the eternal is taken to be *outside of time*—apart from the world of temporal items and happenings.

This line of thought, however, would prove problematic for Plato's definition of *time* as *the moving image of eternity* as it appears in the *Timaeus*. For one thing, the entire dialogue may be interpreted to have a mythical, noncommittal character that simply does not lend support for the eternal taken to be *outside of time*. Yet, if one were to suppose, for the sake of argument, that Plato's *mythical* views on natural science and cosmology permit such an understanding, one

²²...[T]here is no good evidence that Plato believed Forms atemporal, and good evidence that he conceived of Forms as everlasting, not atemporal....(Griswold, *Platonic Writings / Platonic Readings*, 298, Notes to Chapter 14, no.4).

would still not end up lending support for that position anyway, since in the *Timaeus*, when Plato's craftsman god makes *time*, he makes a clock²³—a measure of change, the fixed process (or constancy) by which Plato's notion of change is constructed. It is this clock that images (or models) the constancy of the Platonic Forms. And the Forms, according to Plato, occupy an eternal realm. Hence, if time (skewed as change) is to image the eternity of the Platonic Forms, the Forms must possess a *type* of eternity that possesses endurance, lastingness, or unchanging duration, not entirely outside of the constancy of things of which it is intelligible to predicate dates and durations. This is consistent with the view that to be eternal is to be indefinitely extended both backward and forward in time. And this is the sense of eternity as time everlasting or infinite duration. It is this sense in which the eternal is taken to be *inside of time*—part of the world of temporal items and happenings. Accordingly, we do not grasp *eternity* here in negative terms—*the negation of time*; but as time without beginning or end—everlasting or endless time.²⁴ Hence, the bifurcation of time makes clear the nature of eternity (as enduring constancy) and its difference from its image (time skewed as change). Moreover, the bifurcation of time points to a form of ontological dependence, for time (as a changing image) depends on (the constancy of) eternity.

From the Greeks on some philosophers continued to believe in cyclical, circular time. But as with the clock that images (or models) the constancy of the Platonic Forms, philosophers that postulate this cyclical concept of time nearly always go to constancy for their archetype and model of time (whether or not it is rooted in the old cyclic idea of time as illustrated by the rotation of the heavenly bodies). And when constancy is the repository of time, philosophers may think stable, essential or perfect reality lies *outside* of change: a realm outside the temporal items and happenings where the illusory disappears and true reality appears. But there is in this view constancy outside of change. Philosophers that look upon time as an illusion, therefore, beg the question of constancy as a *time outside of time*. In this sense, for example, *eternity* does not imply an end of time (so we may confidently characterize *eternity* as *unending* or an *endless present*) nor does it imply the existence of timeless time (so we may avoid blatant contradiction). In contrast, some philosophers continued to believe in lineal, consecutive, and unrepeatable time. But philosophers that postulate this lineal concept of time nearly always go to change for their archetype and model of time. And when change is the repository of time, philosophers may think that everything that is constant is timeless and sole temporality is what changes.

Within the context of the most famous and important of all Platonic doctrines, the theory of Forms, we have seen that Plato's ontology developed inside of the framework of the bifurcation of time. But, not only did this ontological distinction between constancy and change help lay the foundation for Platonism, it also focused objections to the dynamic aspects of time by quietly disposing of change by labeling it as lower or unreal. This helped to propel the Platonic doctrine that the world of changing items (experienced by the senses) is inferior to a transcendent world of constant Forms (apprehended by reason). And, such a claim for the priority of constancy over change would sharply alter the course of future philosophy.

²³See Mohr, *Plato on Time and Eternity*.

²⁴See Adler, s.v. *Eternity*.

The Bifurcation of Knowledge

In the Analogy of the Divided Line and the Allegory of the Cave, Plato further distinguished between the two realms set up by his ontology.²⁵ He bifurcated epistemology into opinion (*lower* epistemology) and genuine knowledge (*higher* epistemology). For Plato, opinions are found in the claims about the physical or visible world, including both common sense observations and the claims of science. Knowledge is at a higher level because reason, rather than sense experience, is involved. When reason is properly employed, it results in intellectual insights that are stable and certain. In contrast, since objects of sense experience are changeable phenomena, claims derived from such fleeting or unstable experience would be fallible and not certain. So, a claim that is derived from a fleeting or unstable experience is just an opinion. And opinions do not count as genuine knowledge. Consequently, Plato held that the objects of sense experience are not proper objects of knowledge. This is because that which is certainly and infallibly known can only be the fixed, permanent, and unchanging (a mode or identification of constancy) as opposed to the physical world of becoming (a mode or identification of change).²⁶ Genuine knowledge, in short, belongs to the fixed, permanent, and unchanging world of the intellect, while of the sensible world we have only opinion that is uncertain and fallible. The upshot for Plato's *top-down* approach is that genuine knowledge is *better* (or *higher*) than opinion.

This suggests a bifurcation of knowledge subject to (a mode or identification of) change or constancy. As the polemic in the history of philosophy about the continuing tension and dialogue between two sharply differing accounts of knowledge, change epistemology has been diametrically opposed to constancy epistemology (and vice versa). It is the epistemological version of the bifurcation of time discussed in earlier sections.

As we will see, the tendency of major philosophical trends and/or major thinkers to gravitate to and privilege one aspect of time over another tends to single out aspects of reality from all the others and cut us from one or the other source of knowledge. Accordingly, the problem for such sharply focused accounts of knowledge is that either change-knowledge or constancy-knowledge may be presumed to work against the other from the start such that any ground gained by one undermines (or supplants) the other. In which case, any pole of this epistemological dualism may end up downgrading and giving an inferior status to what usually passes for knowledge. Accordingly, we misunderstand knowledge: we adopt a too narrow vision of what knowledge is and then derive false conclusions. For example, one may hold that sole knowledge is change-knowledge (though characterized in some form or fashion to be relatively true in a way that it may be overly subjective or arbitrary and found in the domain of mere materiality always in a state of flux). Or, one may hold that sole knowledge is constancy-knowledge (though characterized in some form or fashion to be invariantly true and far removed from the changing domain of purely sensory experience altogether). It is this limited focus on change-knowledge or constancy-knowledge that has been used in misdirected attempts aiming to

²⁵See Plato, *The Republic*, Book 6 (509d-513e)—Book 7 (514a-520a). See, also Footnote 8: *Timaeus*, 27d-28d.

²⁶So, ontology and epistemology are not always separable. Consider that under the Judeo-Christian tradition, for instance, one may have (naturally or spiritually based) knowledge about God (Psalm 19:1-2; Romans 1:18-20, 1 Corinthians 2:11-15); yet, God is characterized as enduring constancy (Malachi 3:6; James 1:17), which is an aspect of time. Of course, this is problematic, if God's existence and actions are taken to be timeless and knowledge is taken to be a function of time.

resolve some of the very central and certainly problematic issues in the theory of knowledge (and, derivatively, science).

For instance, the Platonic bifurcation of knowledge influenced Aristotle's thinking and writings, for we may identify Plato's view of immediate knowledge of the intelligible realm with Aristotle's account of intelligible perception (*noesis*) in his *De anima*; and parallelly, we may also identify Plato's view of mediated knowledge of the senses with Aristotle's account of sensible perception (*aisthesis*). Reversing Plato's emphasis on the intelligible realm (a *top-down* approach), however, Aristotle turned his teacher's epistemology on its head and maintained that knowledge arises out of the abstraction of the intelligible from sense perception (a *bottom-up* approach). Looking at natural things from the standpoint of the dynamics of change, Aristotle believed that nothing is isolated and complete in itself in the world and so is involved in some kind of process. Accordingly, for Aristotle, every process is seen as a movement of something towards a particular end. So, for example, an acorn is part of the process that ends in the oak tree. We understand change, then, according to Aristotle, when we understand how things subject to change function. But to perform a definite function is for a thing to have an *internal* tendency to act in a certain way and thus exhibit the reason for its existence. Knowledge in this account constitutes grasping this internal structure (or capacity or potential to become)—to grasp the *formal* cause of a natural object. And grasping this internal structure is achieved by repeating many times the sense experience of a thing so that a *universal* (not seen as separate from the individual thing) eventually is shaped and is recognized by the intellect. So for Aristotle, knowledge of reality seems to be achieved by a process of induction.

The epistemological dualism of *aisthesis* in opposition to *noesis* was to foreshadow the later division in philosophy between empiricism and rationalism. Correspondingly, we shall see in the extreme that representative philosophers adhered by temperament, method, or habit, to either an underlying change or constancy view of knowledge. For example, Francis Bacon (1561-1626) helped lay the foundation for British Empiricism by relying on the method of *induction*²⁷ that goes back to Aristotle (although Bacon rejected much of the prevailing Aristotelian orthodoxy). For Bacon the only knowledge of importance was empirically rooted in the natural world. Accordingly, he leans toward an epistemology that privileges knowledge grounded primarily in the *testimony of the senses* to learn the secrets of nature by organized observation of its regularities (a mode or identification of constancy). Bacon took knowledge of natural phenomena as starting with experience and used induction to draw inferences from examination of particular, concrete facts to make generalizations about these facts. Through the rigorous testing of hypotheses by means of observations and experiments, he hoped to understand the varying complexity of the surface of reality as apprehended through the senses in order to generate *practical* knowledge for the *use and benefit of men* and the relief of human suffering.

In contrast, René Descartes (1596-1650) helped lay the foundation for Continental Rationalism. By claiming to *clearly and distinctly* perceive items without reference to sense experience, Descartes leaned toward an epistemology that privileged knowledge of reason over knowledge of opinion (grounded primarily in the *testimony of the senses*). As he developed his philosophical method in the *Méditations* (first published in 1641), Descartes took knowledge as

²⁷See Bacon, *The New Organon*.

starting with the principle, *I think, therefore I am* (on the warrant of the stability and reliability of God's existence, a mode or identification of constancy). And, he proceeded by deduction to build a system that would, supposedly, secure absolutely certain knowledge about the world. Accordingly, the father of modern philosophy sought a constancy on the basis alone knowledge is possible. He located this constancy primarily in the certainty of his own reason *as an autonomous being* (unlike consciousness, which he conceived in terms of becoming and held to be not a property of the mind or senses). Yet, Descartes in addition operated under the distinct ontological guideline of constancy skewed as duration and change skewed as time. Since duration, for Descartes, is an attribute or mode of the being of things, constancy is invoked when he describes it *...as a mode under which we conceive the thing in so far as it continues to exist*.²⁸ In contrast, since time, for Descartes, serves as a measure of motion, change is invoked, but held to be subjective being *only in our minds*. So, by shifting the emphasis to the question of reason as an autonomous being, reason is substituted for the transcendental object that never changes. And by bifurcating time, Descartes changes the terms of reference in metaphysics, separating mind (and God) and matter (and nature) into two different orders of time. As a result, the problem of the bifurcation of knowledge in Descartes' philosophy takes place within the parameters of the ancient problem of the bifurcation of time. Accordingly, this ontological dualism gave rise to an epistemological version of the bifurcation of time. Correspondingly, Cartesian dualism asked about the nature of minds and bodies, seeking to define and characterize each independently of the other, but dividing the world into two ways of knowing.

But for René Descartes, constancy is *not* always more basic and important than change. To be sure, although Descartes leaned toward a constancy epistemology that gives preference to what survives changes to its sensible qualities over knowledge derived from the senses, change epistemology also plays an important role in *investigating* the extent of knowledge and its basis in reason or experience as in, for example, the matter of the heated piece of wax discussed in the *Second Meditation*. As he notes, knowledge arrived at by means of the senses alters—yet the wax remains.²⁹ On the whole, full human knowledge is really possible in Descartes' account only if it can mark the convergence of all aspects of true time, change and constancy.

Empiricists, for the most part, held that perceptual experience is the source of all one's legitimate concepts (or ideas) and truths of the world. John Locke (1632-1704) is the main representative of concept (or idea) empiricism. Locke in *An Essay Concerning Human Understanding* (first published in 1690) used the Aristotelian analysis of causation to maintain that knowledge (as experiences or ideas in our mind) is derived from (i.e., *caused* by) the objects of external perception, although we do not experience these physical objects directly. He bifurcated these experiences or ideas into something subject to either a mode or identification of constancy or change: (1) primary qualities (e.g., size and shape), which are *caused* by a *body* and are the objective, mathematically measurable, and thus unchanging properties of such a physical object, and (2) secondary qualities (e.g., color), which are *caused* by a *mind* and are the subjective, human nervous system appearances, and thus changing properties of a physical object.³⁰

²⁸*The Philosophical Writings of Descartes*, vol. 1: Principles of Philosophy, 211.

²⁹*Ibid*, vol. 2: Meditations on First Philosophy, 20.

³⁰Locke, Book IV.

To reformat the relation between mind and body (to refute Atheism's and Irreligion's doctrine of Materialism³¹), the radical idealist George Berkeley (1685-1753) refined Locke's argument and shrank empiricism down to a world of only minds and their own sensations or *ideas* (subjective idealism). For Berkeley all ideas exist only in the mind and are caused by the thinking things that perceive them. So, to be is to be perceived³² by a mind (most importantly God's), reducing body (or physical object) to mind. Correspondingly, he reformatted the Lockean split between primary (or, unchanging) and secondary (or, changing) qualities of physical objects by treating primary qualities like secondary qualities. But, as ultimately God mind-dependent, Berkeley's epistemology is therefore found to be actually embracing or upholding some mode or identification of constancy-knowledge and helping to close the door on ever knowing or understanding anything about the supposed *external* (or changing) material reality.

In the spirit of classical academic skepticism, David Hume (1711-1776) carried the supposedly ontological division between objects of perception and reality to its radical epistemological conclusion. Hume's epistemology bifurcated all the perceptions of the human mind into the two distinct categories of *impressions* and *ideas*. An impression is an immediate experience following without a lapse of time (a mode or identification of constancy) caused either by an external object or internal bodily process. An idea is an afterimage or thought we have about our immediate experience. It follows with a lapse of time (a mode or identification of change). By further bifurcating *ideas* into the categories of *simple* and *complex* Hume veers away from constancy to redirect Western philosophy back to a positive stance toward the reality of change.

In his analysis of *simple* ideas, Hume follows John Locke's empiricism, tracing every idea to an original experience. A simple idea, in its first appearance (e.g., the idea of the color red), cannot be broken down further into parts and is correspondent to an immediate experience, which it is derived from and exactly represents. But in his analysis of *complex* ideas (ideas that can be analyzed into simple ones), Hume follows George Berkeley's radical idealism (although not rejecting, as Berkeley did, the conclusion that there are external physical objects).

So Hume began to set limits to empiricist epistemology by arguing that the direct correspondence between a complex idea and an impression may break down. For example, my idea of New York City is associated with an indefinite series of images and memories of my childhood. So, the complex idea of New York City does not directly correspond to my experience. Furthermore, Hume found (as his *greatest discovery*) that some of our complex ideas could be explained only by taking into account the creative and organizing *activity* of the mind (via the imagination). Accordingly, the mind may impose order on simple ideas to structure our experience and create *new* complex ideas out of them. For example, the *centaur* (the Greek mythological creature with the head, trunk, and arms of a human joined to the body and legs of a horse) is a complex idea that is the product of our imagination and is clearly not correspondent to an immediate experience. So knowledge (as complex ideas in our mind) is not always derived from the objects of external perception as Locke had maintained.

³¹Berkeley, see Principles of Human Knowledge in *Essay, Principles, Dialogues*, 176.

³²*Ibid*, 124-127.

Some may read this, however, as ultimately constructing a case that supposedly establishes the notion that it is impossible to know the real world, since knowledge (because of some complex ideas) is an exclusive function of perception that never can secure any evidence outside of itself to confirm anything. This, of course, would be too much to grant, since the conclusion expresses something that goes beyond what is said in the premises. So, it may still be possible to know a good part of the real world. Moreover, time must be in place for Hume to bifurcate ideas into the categories of simple and complex, for a key aspect of the underlying nature of a complex idea relative to a simple idea is change. Consider that a simple idea invokes (a mode or identification of) constancy, since in its first appearance it cannot be broken down further into parts and is correspondent to an immediate experience that it is derived from and exactly represents. In contrast, since a complex idea, through the creative and organizing activity of the mind (via the imagination) creates new ideas out of simple ones, it invokes change. That change is invoked by a complex idea is outstandingly relevant, given the context that Hume contrasted imagination to memory. And memory invokes (a mode or identification of) constancy, since it preserves the same content and structure of our previous experience. Hence, one may argue that complex ideas are always in time, since underlying them is change, which is an aspect of time. But this is the metaphysical picture that emerges from the change conception of time, since the underlying concern behind some complex ideas is change rather than constancy. In this light, Hume is actually embracing, upholding, and privileging some mode or identification of change.

This may be seen in *A Treatise of Human Nature* (first published in 1739), where Hume himself claimed that the idea of time is derived from our impression of the successive appearance of perceptions in our consciousness. Accordingly, in his ontology there is nothing but particulars that are isolated from one another by time (and space). But we may question whether we actually have an impression of succession and whether the idea of succession, rather than being the source of our idea of time, presupposes our possession of that idea. Put in the language of this treatise, I would argue that since change is the condition that makes succession possible, rather than being the source of time, it presupposes time in Hume's account. What's more, I would argue that it is unclear how Hume secures an impression (constancy) out of succession (change). All the same, Hume is found to be ultimately declaring allegiance to the change view of time (and, derivatively, to the change view of reality).

In contrast, the rationalists' *ontological* worldview (in the extreme) denigrated the items of perception as illusory (as in Plato's analogy of the cave³³), while exalting only the unvarying items of conception as real. Accordingly, the rationalists' *epistemological* worldview maintained that important truths about the natural (and supernatural) world are knowable by pure reason alone, independently of perceptual experience. Gottfried Wilhelm Leibniz (1646-1716) is the main representative of this view. To be sure, Leibniz never denied change on the lower or phenomenal level, but abolished it only on the higher level of the ultimate and static reality. This is clear from his relational theory of time and his theory of *preestablished* harmony. Leibniz's relational theory of time maintained that change is not a feature of the world itself, but merely a product of our minds: our minds derive change from events and not vice versa. So that change (skewed as time), as *the order of succession of phenomena*, was inseparable from concrete events.

³³*The Republic*, 514a-520a.

But Leibniz did not solely concentrate on the dynamic aspect of time without explicit reference to its durational aspect and its continuity. To be sure, in his theory of preestablished harmony, the denial of change is seen in the static pluralism of his monadism. This is because the monad's dynamic nature is more apparent than real, since the monad is a substance that contains in itself all of its *variant* states as its own predicates.³⁴ So if given full access to a monad, one would be able to see change *as in a mirror*.³⁵ Correspondingly, Leibniz maintained that a rational framework (as a mode or identification of constancy) should account for the Cartesian relation between mind and body. In order to account for the coordination of the soul and body without invoking the problematic interaction between diametrically opposed poles, Leibniz argued that a rationally determined plan of agreement (the doctrine of preestablished harmony) has been arranged by God before-hand for the body to execute the soul's orders. So, this preestablished harmony is a God ordained logical ordering in which the soul's actions coincide with the body's movements. And, through an appeal to intuitive truths of both fact and reason in his *New Essays on Human Understanding*,³⁶ he attempted to bring together Locke's empiricism and Descartes' rationalism.

The Bifurcation of Natural Science

Opposing Leibniz was the scientific work of the British natural philosopher Isaac Newton (1642-1727) who's portrayal of time was to take its uniformity (a mode or identification of constancy) and separate it from that of concrete physical change to bifurcate time into absolute and relative time. Accordingly, Newton states in his famous *Principia* that *absolute* time flows *uniformly* on without regard to anything external. And, in contrast, *relative* time is some sensible measure of absolute time (duration), estimated by the motions of bodies.³⁷

Newton's principle contribution (as part of the scientific revolution of the 16th and 17th centuries brought about by Galileo Galilei (1564-1642), Pierre Gassendi (1592-1655), René Descartes (1596-1650), and others) was to challenge Aristotle's understanding of the universe, which had been entrenched in Western thinking for almost 2,000 years. For instance, Newton's classical scientific view of the world helped overthrow the Aristotelian position of rest (a mode or identification of constancy) as the natural state of an object. To be sure, Aristotle believed that the philosophical question *why something moves or begins to move* is answered by introducing a chain of external movers, where each mover's push or move is explained by reference to another *prior* mover eventually leading back to a first unmoved (constancy) mover or movers. Cosmologically, Aristotle took the unmoved movers to be the fixed (or constant) stars of the immutable celestial heavens, which is a stone's throw away from the traditional Judeo-Christian religious view of an immutable God as the *cause* of the mutable universe.

In contrast to the Aristotelian position of rest (a form of constancy) as the natural state of an object, Newton believed motion (a form of change) was the natural state of objects and rest was just arrested motion. Accordingly, Newton bifurcated science into dynamics and statics, but

³⁴Leibniz, *Discourse on Metaphysics*, VIII.

³⁵Leibniz, *Selections*, 571.

³⁶Leibniz, 361-367.

³⁷*The Principia: Mathematical Principles of Natural Philosophy (Philosophiae Naturalis Principia Mathematica*, 1687); Čapek, 1987, 595, adapted.

made statics reducible to dynamics by using zero for the value of the acceleration. That is to say, dynamics deals with Newton's second law of motion (i.e., $F = ma$), which is concerned with bodies in motion; statics deals with Newton's first law of motion, which is concerned with bodies at rest (i.e., if no force is exerted on an object, it will continue to stay at rest or continue to move with constant velocity in a straight line). So bodies at rest are, for Newton, bodies that have constant or zero velocity—no translational or rotational acceleration. But Newton did not solely concentrate on the dynamic aspect of time without explicit reference to its durational aspect and its continuity. To be sure, in his theory of absolute time (and space) he revealed a static view of the universe where time (and space) is conceived of as constituting a pre-existing matrix, independent of the world.

Newtonian natural philosophy had a great impact in the 17th and 18th centuries, particularly upon philosophy's function with respect to science to provide a philosophy adequate to the sciences (e.g., Kant's continuing efforts to find a metaphysics that could provide a foundation for the exact sciences).³⁸ But, because Hume and his philosophical predecessors (wittingly or unwittingly) separated time into constancy and change, they saw a separation and a conflict between mind and body, reason and passion, and, ultimately, theoretical and practical philosophy. This bifurcation created an insuperable gap between thought and action that led to skepticism about human knowledge in general that challenged philosophy's function with respect to science.

To be sure, Hume denigrated theoretical reason (a mode or identification of constancy) as a slave of passion (a mode or identification of change), while a corresponding bifurcation of knowledge not only helped push later philosophy as it is commonly divided into the speculative (a mode or identification of constancy) and the practical (a mode or identification of change), but also denigrated theoretical reasoning (and its objects of inquiry). So, although Kant (1724-1804) sought to avoid the dualism of his philosophical predecessors,³⁹ his speculative investigations would go on to be restricted by Hume's practical reorientation of Western philosophy. Particularly, Hume's discovery that some of our complex ideas can be explained only by taking into account the creative and organizing activity (a mode or identification of change) of the mind (via the imagination), focused Kant's philosophy to the human mind's central role of imposing order to structure (a mode or identification of constancy) our experience and to the impossibility of theoretical knowledge.

But, this swung the epistemological pendulum from the notion that what we take from experience is more important than the creative power of the mind we bring to it, to what we take from experience is less important than the creative power of the mind we bring to it. And this last point, taken to the extreme, produced the belief that human knowledge could no longer be considered a mere reflection of some external structure, but is structured by the internal creative power of the mind. For maybe all knowledge, just as knowledge whose source is human theoretical reason, never really can secure any evidence outside of itself to confirm anything. By privileging the creative and organizing activity of the mind, then, many subsequent thinkers read Kant as ultimately constructing a case that supposedly established the notion that it is impossible to know the underlying constancy of reality (i.e., things-in-themselves). This profoundly

³⁸See Friedman, *Kant and the Exact Sciences*.

³⁹See Kant's *Critique of Pure Reason*.

influenced the subsequent thought of all of 19th and 20th century philosophy and led to skepticism about human knowledge in general.⁴⁰

To be sure, traditional science was to be profoundly influenced by this, since science, understood more broadly, comes from the Latin word *scientia*, which means knowledge. This is consistent with science taken as the systematically organized body of knowledge we know about the natural or physical world. Science, then, may be considered a subfield of epistemology. In view of that, everything that we claim to know about the natural or physical world depends on some epistemological view or position. So science (as natural philosophy) may also be taken as an epistemological endeavor, which ultimately is a philosophical endeavor. Accordingly, although traditional science would surface as a response to skepticism about human knowledge in general, the ubiquitous problem of the bifurcation of knowledge was to also reveal flagrantly duplicitous behavior in this best-accredited candidate for knowledge.

For, there is a contrast of *pure* mathematics (as a form of rationalism) as the language of traditional science with *hard* empirical science (as a form of empiricism) in respect to what is fundamental in the order of knowledge that reveals an emphasis on knowledge of constant reality as against an emphasis on knowledge of changing reality. And with such a contrast comes the great pretension of pure mathematics and hard empirical science alike, where each (in the extreme) has the avowed aim at arriving at general, comprehensive, or fundamental knowledge at the expense (or exclusion) of the other. That is because both the pure mathematician and hard empirical scientist alike sense the importance of what each regards as fundamental by claiming that ultimately their narrow field alone is substantive knowledge.

Undeniably, as the language of traditional science and a chief source of the knowledge of reality, mathematics has become the most powerful tool in human history for manipulating, and presumably for understanding, reality. For instance, mathematics has, in the past, furnished systems of coherent information against which scientific speculation has been tested. And, number (or quantity) and geometry (or structure) continue to be the concepts scientists rely on the most when trying to describe reality, since physical objects may take on geometrical shapes, are measured, weighed, or counted with numbers. So, traditional science assumes that one cannot understand the nature of reality without introducing the arithmetic of numbers and the geometries of physical space.

It is to be expected, then, that science should take as paradigmatic for various questions of knowledge the most extensive and coherent body of knowledge available to it. There are those, however, who maintain that pure mathematics (with its supposedly *a priori* nature) is simply something that we have made up and exists only in our minds (somehow *outside* reality). For instance, there are those who maintain that formal scientific laws (plugged into the deductive nature of the analytic sciences, paramount among them pure mathematics in its axiomatic presentation) do not limit physical items, since the ideal items of mathematics (numbers, geometrical objects, etc.) exist only in our minds. Hence, such hard-nosed empirical

⁴⁰This may be expressed in our times, for example, as the form of self-sabotaging epistemology (usually as a postmodernist or pragmatist response) found in interpretism (a form of relativism), social constructivism, and/or antifoundationalism. See Like A Dog Chasing Its Own Tail in *Science and Religion: Drawing the Line* by Talavera.

philosophers would write off the items and deductive truths of mathematics as just ideal knowledge that does not tell us something about the real world.

Of course, features of this line of reasoning can be traced all the way back to Plato. For, the items of mathematics (numbers, geometrical objects, etc.) were regarded by Plato (through a Pythagorean influence) as supreme examples of occupants or elements of an ideal realm of Form. And as I argued, for Plato those aspects of reality that never change are the Platonic Forms. So, for example, when we talk about right triangles (i.e., *individual* triangles that are a part of the changing real world of temporal items and happenings) we may refer to *actual* triangles; but the nature of being an actual triangle, which is *not* an individual triangle, is what enables us to refer to individual triangles or to talk about triangles in general. For, the Form of a right triangle (captured, for instance, within the context of Euclidean geometry by the Pythagorean Theorem: $a^2 + b^2 = c^2$), its essence (a mode or identification of constancy), will never change. However, guided by the ontological view that constancy is reducible to timelessness—confining time to change—some take Plato’s metaphysical perspective as seeking to force the items of mathematics (under constancy’s purview) into the single category of the *atemporal*. So, when the picture of time is radical enough, the distinction between change and constancy is usually drawn between what falls within and what lies outside time (i.e., apart from the real world of temporal items and happenings)—underwriting the fallacy of misplaced temporality.

To be sure, turning to mathematical knowledge seems to amount to plugging into the deductive nature of the analytic sciences. The claimed advantage of this is that the deductive truths of the analytic sciences do seem to have a permanence and stability that empirical truths lack and that there is some underlying constancy that may be grasped by a principle or law of order. Accordingly, scientists seek laws of science that when ensconced in proper mathematical settings exhibit that constancy, so that it may be considered true that a law exemplifies its stated conditions at all times.

Typically, such a formal law of science may be taken as *a statement expressing an exact invariance between two or more readily observable experimental properties under relatively well-defined conditions*.⁴¹ Hence, the search for a formal law of science is actually a search for invariance, an escape from the whimsicality of natural change into the coziness of constancy taken as a fixed standard of reference. The goal of traditional science, then, is to do away with any kind of change and to leave only constancy in its wake. For a task of science, undoubtedly, is to codify phenomena that are not arbitrarily determined and exhibit underlying definitiveness and invariance. So the power of science is exerted to reduce the changing (unpredictable) behavior of nature to a constant (predictable) behavior of nature. In the language of this treatise, a function of science is the reduction of change to constancy.

In such an account, formal scientific laws and their deductive consequences become the primary damping mechanism for introducing constancy into science. For although we may have reached some scientific law by means of observing a variety of particular instances, in establishing this overall inductive pattern we have employed mathematical deductions to aid us in the process. Nevertheless, for some, it is only because we consider the application of known laws to specific situations to be a pure mathematical computation that such situations pass as

⁴¹Ackermann, 33, emphasis mine.

determined and unchanging in the first place. Cases in point are the many laws made by scientists that refer to ideal or idealized situations. Consider, for instance, the classical example of such physical theorizing: the case of ideal gases. Since no gas is ideal, in many instances an ideal gas law (e.g., $PV = nRT$) amounts to only mathematically tractable examples of theoretical ideas and principles purportedly about actual gases.

But, as a series of experiments is performed which approach more and more closely to the tractable law, actual gases have properties approaching those of the ideal gases. So although ideal gases cannot be studied in the laboratory, the actual cases of gases may be intelligible when seen as approximations to the ideal cases. And although the ideal gas law is to some extent related to actual experiment, the idealized situations exemplified by such a law can be reached by extrapolation from actual data. This approach may characterize the nature of science for the most part, since, at the very least, a scientific theory may be taken to be a collection of ideal laws against which scientific speculation is tested to explain a variety of experimental results and observations.

Here we have to be careful though, since there is a bifurcation of the laws of nature corresponding to the bifurcation of time that if appealed to would beg the question by relying on the very thing that is at issue—time. For there are descriptive laws thought as normative for some time and subject to change. These are contingent laws that are merely operative and *...can only give the probability of an event's occurrence, but not rule it out as impossible.*⁴² So *...individual events are never completely determined [or known] by natural law.* In contrast, there are prescriptive laws thought as normative for all time and never subject to change (a mode or identification of constancy). These are based on *...the standard Enlightenment assumption that the laws of nature are static, known, prescriptive, and deterministic.*⁴³ Accordingly, under careful scrutiny one may note that a prescriptive law is taken to be a mode or identification of constancy, whereas a descriptive law is typically not (i.e., it is a mode or identification of change). So if, as I argue, the difference seems at bottom to be temporally based, any sharp boundary between prescriptive and descriptive law is, perhaps, no more than a function of time. The foregoing suggests, therefore, that traditional views on where the prescriptive-descriptive distinction is to be drawn merely reflect the problem of the bifurcation of time, and its limitations. In the extreme, this form of the bifurcation of time (and/or corresponding bifurcation of knowledge) has led some to commit the fallacy of misplaced temporality, which privileges one aspect of time (i.e., the static or dynamic) over another.⁴⁴

In terms of the bifurcation of time, the roles of constancy and change may also be reflected in two main types of logical patterns. On the one hand, the invariant law's structure is itself a product of a mathematical deduction. But when this static structure is identified with changing reality, what we have in terms of the role of time is a constancy that may have been obtained inductively. And through such inductions, scientific laws supposedly enable us to project the future, so the door is always open to the possibility that the law may not work in the future (i.e., change may occur). So, scientific reasoning whose end is the application of known laws to specific situations is best considered inductive. This approach makes induction (and its

⁴²Russell, R. J., 86.

⁴³Ibid, 78, 370.

⁴⁴This is the mistake made by Robert John Russell in *Time in Eternity* (see Footnotes 42-43).

variants) a chief source of knowledge in science, since the goal becomes one of utilizing induction (or something like it) to supply what was not known before.

Nevertheless, that scientific laws supposedly enable us to project the future begs the question. For in terms of the role of time, the projection cannot succeed unless the future resembles the past (and the present). That the future must resemble the past is just another way of saying that (some aspect of) Nature is unchanging (a suppressed premise). Accordingly, that (some aspect of) Nature is unchanging must be an underlying assumption for scientific laws to project the future. In other words, for induction to work, (some aspect of) Nature must be assumed to be uniform. But this amounts to ultimately appealing to the very thing repudiated by hard-nosed empirical philosophers and scientists, namely, constancy.

The roles of change and constancy, as reflected in the two foregoing types of logical patterns, appear to be historically tenacious since reasoning, itself, has been characteristically bifurcated into inductive and deductive reasoning. To be sure, since inductive reasoning in science (for the most part) draws on past observation for justification, many of our beliefs (as interpreted by David Hume) are at least partly about what is not presently being remembered or observed by us. The inference that *the sun will rise tomorrow*, for instance, is beyond the *present* testimony of our memory or senses. Accordingly, Hume notes in *An Enquiry Concerning Human Understanding* that *...past Experience ...can be allowed to give direct and certain information of those precise objects only, and that precise period of time, which fell under its cognizance....*⁴⁵ That such experience is extended to other objects and to future times is taken to be the *scandal of philosophy* by Hume and his followers, since acquiring knowledge of general truths on the basis of induction requires more than what is observed in the past. And since, according to Hume, all our observations are of the past, for inductive inferences to be justified (sight unseen) the past must resemble the future.

So, the notion that induction projects the future from the past begs the question, for the projection cannot succeed (as Hume himself notes) unless the future resembles the past. But, in terms of the role of time, I have argued that saying that the future must resemble the past is just another way of saying that (some aspect of) Nature is unchanging (a suppressed premise). Accordingly, that (some aspect of) Nature is unchanging must, at a deeper level, be *the* underlying assumption for induction to project the future from the past. In other words, for induction to work, (some aspect of) Nature must be assumed to be uniform. But this amounts to ultimately appealing to the very thing repudiated by hard-nosed change theorists, namely, (a mode or identification of) constancy. So Hume cannot discharge regularity as (a mode or identification of) dependable or inadequate constancy, as he most famously argues.

It seemed to Hume also equally indispensable to build his case against the rationalistic philosophers to posit custom, rather than theoretical reason, as justification for inductive reasoning. But, one may argue that for custom to justify induction and enable us to project the future from the past Hume himself must beg the question, for the projection cannot succeed unless (according to Hume) custom is invoked. But in terms of the role of time, that custom is invoked just puts a subset of nature (assumed to be uniform) on the table—an aspect of common human nature that is unchanging (a suppressed premise), although it may be thought as, in

⁴⁵Hume, 1988, 78.

Hume's terminology, experienced history of regularity: a *constant* conjunction. That an aspect of common human nature is unchanging, then, must be the underlying assumption for induction to project the future from the past. In other words, for induction to work, an aspect of common human nature must be assumed to be uniform. But this amounts to ultimately appealing to the very thing granted by hard-nosed rationalists, namely, (a mode or identification of) constancy. Again, Hume cannot discharge uniformity as (a mode or identification of) undependable or inadequate constancy, as he most famously argues. So, Hume hardly meets his goal to discredit the rationalistic philosophers for arguing that human theoretical reason is a source of knowledge.

But more importantly, if the temporal turn that I am introducing in this treatise is correct, to argue here against an experienced history of regularity (i.e., a *constant* conjunction), as a mode or identification of (dependable or adequate) constancy, amounts to arguing that inductive reasoning is exclusively a function of change. However, this is like arguing that a passenger moving on an escalator never really stands still on the escalator's step to get anywhere. For, even if observers in different reference frames may disagree about what changes or what remains constant (that is to say, what changes or what is constant may be found in relation to the observer's arbitrary frame of view), a stable step that seems to us to be moving may in fact be at rest to the passenger who is standing on it—exhibiting a relative constancy. Under careful scrutiny, then, we find that on the continuous loop that moves the tracks of the escalator of reality, inductive reasoning must (as far as one frame of reference is concerned) stand still on an escalator's step to get anywhere. For not only do the steps keep pace with the movement of the escalator (i.e., reality as flux), but serve as the underlying constancy (horizontal and stable steps) that permits the passenger (or inductive reasoning) to stand firm and be carried up or down (or if impatient, walk up or down) the moving staircase to another floor (or conclusion). Hence, even if reality were continually changing, we could still invoke some mode or identification of constancy with which to reason inductively.

Granted, sometimes we are unable to disentangle *deductive* and *inductive* sources. For example, it is doubtful whether the inferred statement, *the softness or firmness is in the mattress, not in the mind*, would be accepted purely on the basis of empirical evidence of an *inductive* inference. It may also be granted that many of the *higher order* inferences we make (and immediate consequences of these inferences) are not directly testable empirically. So, for instance, if we take a pattern to be a formal (logical) matter and not an empirical one, then we may be cut from empirical sources of knowledge in that we do not *see* (i.e., sense) patterns—we *think* (or infer) them. Often such inferences are justified by the simple fact that they are consequences of other, already accepted inferences. So many of the statements we make are simply a consequence of their deductively implying or being implied by other already accepted statements. So whether such a statement implies or is implied by another is determined by strictly deductive procedures.

But we ought not to forget that turning to deduction (as a source of knowledge) claimed the advantage that deductive truths do seem to have a permanence and stability (a mode or identification of constancy) that in most cases inductive truths lack. This is consistent with contemporary formulations that state that such deductive statements will be those held constant. As Lambert and Brittan note, for instance, *[i]n most cases the statements held constant will be*

*the logical and mathematical ones.*⁴⁶ So, the reader need not take me to be subscribing to a nonstandard view of deductive truths when I advocate for their underlying (mode or identification of) constancy. Accordingly, the task of deductive rules and their deductive consequences, undoubtedly, is to codify reasoning that is not arbitrarily determined and exhibits definitiveness and invariance. So the power of deductive inference may be exerted to extract the constant (predictable) behavior of nature.

Still, one may grant that deductive inference does not typically stand in the same close relationship to experience that inductive inference does, and it is to that extent more *necessary* (a mode or identification of constancy) or less *subject to revision* (a mode or identification of change). Accordingly, under careful scrutiny one may note that a valid *deductive* inference is taken to be an *unwaveringly conclusive* argument (i.e., it is a mode or identification of constancy), whereas even a strong *inductive* inference (since one infers that something is so on the basis of mutable experience) is typically not (i.e., it is a mode or identification of change). So if, as I argue, the difference seems at bottom to be temporally based, any sharp boundary between deduction and induction is, perhaps, no more than a function of time. The foregoing suggests, therefore, that traditional views on where the inductive-deductive reasoning distinction is to be drawn merely reflect the problem of the bifurcation of time, and its limitations.

It is not surprising, then, that the scientific enterprise may bifurcate into the division between hard empirical science and pure mathematics, where each supporter adheres by temperament, habit, or method to the first or to the second of these views about knowledge of reality. By hard empirical science (drawing on induction), the scientist tends to change-knowledge; by pure mathematics (drawing on deduction), the scientist tends to constancy-knowledge. We shall probably understand a scientist's epistemology best, then, if we regard him or her as working in the first place under the influence of two diametrically opposed views of time: change and constancy. Correspondingly, there are two readings that interpret a scientist's account of the knowledge of items of reality. A scientist may be read as having identified substantive knowledge as pertaining to a separate world of physical items and referring to such items as *changing*, whereas constancy exists (if at all) as a world of ideal items and is referred to as *abstract* or *timeless*. At the other extreme, a scientist may be read as having identified substantive knowledge as pertaining to a separate world of ideal items and referring to such items as *constant*, whereas change exists (if at all) as a realm of physical items and is referred to as subjective, illusory, or *less real*. As a result, the problem of the difference between (applied) science and (pure) mathematics correlates to the temporal rift between change and constancy such that any prejudice for either change-knowledge or constancy-knowledge amounts to a form of reductionism that may result in either an escape from supposed physical reality or an escape from supposed ideal reality.

One may, therefore, invoke a bifurcation of the scientific enterprise along the lines of our two views of time that shows that traditional science has been leading a double life. On the one side we find science allied with change, wrestling inductive guesses out of nature; on the other we find science allied with constancy, plugged into the deductive nature of the analytic sciences, paramount among them pure mathematics in its axiomatic presentation. In the first of its lives as change epistemology, hard empirical science appears as the gropings of empiricism where access

⁴⁶*An Introduction to the Philosophy of Science*, 148.

to the so-called *a priori* is denied. Here the attempt is to know change as against constancy. This is consistent with the changing character both of the subject matter and the *a posteriori* method of traditional science. For this side of traditional science, neither its results nor methods could be checked by fixed experience. (Here again, I am referring to natural science only in so far as it is founded on empirical principles). All else that passes for fundamental knowledge is usually downgraded and given an inferior status. Accordingly, a side of traditional science argued to conclusions that obviated constancy. This being in accordance with principles which immutable experience did not establish. So, some of the various special sciences each studied what changes as parts or aspects of being.⁴⁷

In the second of its lives as constancy epistemology, traditional science appears as the formalism of rationalism where access to the so-called *a posteriori* is denied. Here the attempt is to know constancy as against change. This is consistent with the invariable character both of the subject matter and the *a priori* method typical of many traditional metaphysical systems, which have had formative influences on the scientific enterprise. For such metaphysical systems, neither their results nor methods could be checked by variable experience. Moreover, for such metaphysical systems fundamental knowledge is nothing but the result of pure reasoning grasping definitiveness and invariance. All else that passes for fundamental knowledge is usually downgraded and given an inferior status. Accordingly, most traditional metaphysical systems argued to conclusions that obviated change. This being in accordance with principles which mutable experience did not establish. So, some of the various unifying sciences each studied constancy as the foundation that sustains (or underlies) the changing aspects of being.⁴⁸

In finding formal laws that will enable us to project the future, we saw how metaphysics (in the mode of *pure* mathematics) is surreptitiously introduced into natural science (founded on *empirical* principles). This is problematic, since scientists (i.e., natural philosophers) at times go beyond their data and draw metaphysical implications from their theories, yet may engage in widespread attacks upon, if not the complete sidestepping or repudiation of, metaphysics. If this seems intellectually dishonest or methodologically suspect, it is because either some scientists refuse to admit that there is a metaphysic imbedded in science (e.g., what caused the Big Bang?), or those subject to received scientific views or scientific practice want to have it both ways. But, without the imbedded metaphysic science cannot know *the bigger picture*—to see whether sense can be made of the knowledge of the totality of experience, supposedly arriving at general, comprehensive, or fundamental knowledge (a mode or identification of constancy).

Here we may turn again to Plato's theory of Forms as the historic bridge that bears direct relevance to the role of pure mathematics in science, for most mathematicians are often characterized as *Platonists*. As I noted earlier, Plato regarded the field of mathematics as a supreme example of an ideal realm of Form, since he regarded the items of mathematics (numbers, geometrical objects, etc.), through a Pythagorean influence, as examples of occupants or elements of an ideal realm of Form. And most mathematicians adopt the same posture by maintaining that mathematical items are real, though abstract (though not necessarily existing in the World of Forms). In spite of that, we find that hard-core empirical science may hold that the only realm of knowledge is the world of physical items. As I have argued, underlying these polarized views about the knowledge of reality are our two fundamentally opposed conceptions

⁴⁷Consider, for instance, Chemistry as the science that studies the chemical changes of matter.

⁴⁸Consider, for instance, Chemistry as the science that studies the static structure of matter.

of time: constancy and change. Moreover, the fallacy of misplaced temporality in science may be noted when rooting it in a mathematical structure/model (a mode or identification of constancy) that is deemed atemporal, but objective; although the world (or, rather, certain aspects of the changing world) is deemed temporal, but subjective.⁴⁹

Consider, for instance, the scandal that hovers over the history of modern physics. To be sure, one of the central philosophical problems confronting the physical sciences today is that there has been no real success in unifying our knowledge of the quantum theory and the theory of relativity, since the discovery of quantum mechanics in the 1920s. Scientists today are still puzzling over the fundamental incompatibilities between relativity and quantum physics, trying to fully unify these two theories into *a theory of everything*⁵⁰—some arguing that the unification of Einstein’s general relativity and quantum mechanics may well spell the *end of time* (conflated as a mode or identification of change)⁵¹ or the *end of physics* (conflated as a mode or identification of constancy).⁵² Unification of relativity and quantum mechanics may well spell the *end of time*, since *...it does not seem to be possible, in any natural and convincing way, to give a common description of them in which anything like time [skewed as change] occurs.*⁵³ This is because *[i]f we could see the universe as it is, we should see that it is static. Nothing moves, nothing changes.*⁵⁴ In contrast, unification of relativity and quantum mechanics may well spell the *end of physics*, since compromises necessary to produce the ultimate theory would move physics into a static realm governed entirely by mathematical and highly speculative theorizing (e.g., String Theory) that deals with entities that are, by their very construction, irreconcilably divorced from the empirical world (a mode or identification of change).

But that science should conform to one of two kinds merely reflects the underlying problem of the bifurcation of time, and its limitations. That this should be the case in modern day physics, then, is directly related to the bifurcation of time and the reduction of change to constancy (because of the fallacy of misplaced temporality). For *[t]he view of physics that is most generally accepted at the moment is that one can divide the discussion of the universe into two parts*⁵⁵: (1) local laws, *...usually expressed in the form of differential equations* (to address a mode or identification of change); and, (2) the global nature of their solutions, which involves thinking about the structure of space-time (to address a mode or identification of constancy). Accordingly, *...from the modern point of view, time must be seen as the temporal aspect of the more fundamental entity, space-time, and modern science countenances space-time structures which, in a precise sense, do not harbor any physical change and whose temporal aspects are, in a precise sense, infinite in both past and future.*⁵⁶

⁴⁹Penrose, 12, 17.

⁵⁰See Falk, 148; Davies and Brown.

⁵¹See e.g., Barbour.

⁵²See e.g., Lindley.

⁵³Barbour, 38.

⁵⁴Ibid, 39; 9.

⁵⁵Hawking and Ellis, 1.

⁵⁶Earman, 110, emphasis mine. See Yourgrau, *A World Without Time: The Forgotten Legacy of Gödel and Einstein*.

I believe that by buying into and privileging the constancy view of time in this sense, the discussion of these matters in the philosophical literature has been misdirected.⁵⁷ For, as I have noted, one may argue that a key characteristic of the ongoing scientific debate is either the attempt to privilege constancy-knowledge as against change-knowledge or the attempt to privilege change-knowledge as against constancy-knowledge. Although this admission does not offer immediate solace to our problem of the bifurcation of knowledge, it is nevertheless a relief to know that such flagrantly duplicitous behavior of epistemology is not the preserve of philosophy alone. Both traditional and modern science (as natural philosophy and epistemology), then, exhibit the same duplicitous behavior of philosophy by bifurcating time and knowledge.

The Condemnation of Constancy

A modern condemnation of the constancy view of time is found in the reception of the ancient debate of the bifurcation of time advanced by Henri Bergson (1859-1941). Bergson worked with the distinction of two fundamentally different concepts of time: clock time (or scientific time)—a constructed homogeneous medium akin to space-like continuity; and lived time (or pure time)—a very different continuity of immediate experience of the ever-changing stream of events. Because the intellect operates with clock time, Bergson opposed the view that regarded clock time as superior. According to Bergson, since the intellect organizes and conceptualizes everything into constancies (it artificially immobilizes and fragments reality), it thus gives a false picture of changing reality. So one is led to philosophical error, Bergson maintained, since reality does not in fact possess constancy. And since what is really taking place is a flux of changing experiences that are always different and temporary (i.e., real time, or *duration*), our words and intellectual classifications can only serve to delude us into believing in *identical situations* or constancies.⁵⁸

As I have already argued, this conception of the nature of time has implications for human knowledge. But it is certain that central to Henri Bergson's philosophy is his efforts to deal with the perplexities of constancy and change, which resulted in a significant impact on subsequent twentieth-century philosophy in the different philosophies of existentialism, pragmatism, and process philosophy. Each bears the imprint of his thought. Nietzsche's existentialist philosophy, for example, as he developed it in his first book, *The Birth of Tragedy*, presents a dualism between dynamist and stablist tendencies. I say this because when Friedrich Wilhelm Nietzsche (1844-1900) contrasts the nature of the Dionysian spirit and the Apollonian spirit, seeking to define and characterize each independently of the other, he divided the world along the lines of our two views of time that shows that Greek philosophy had been leading a double life. In the first of its lives we find the Dionysian spirit (from the Greek god *Dionysis*) allied with change, because it exemplifies unrestraint, shifting and difference. For instance, in

⁵⁷For example, Post, 138-153, 15. The majority of (hard science) natural scientists and Anglo-American analytic philosophers defend a static, *block universe*, view of reality as timeless—where the flow of time is strictly subjective and/or illusory. But, flowing time is, arguably, essential to most forms of science. Consider an example from biology: molecular biology involves thinking about the nature of biological phenomena at the molecular level (the structure of the macromolecules essential to life)—addressing a mode or identification of constancy; evolutionary biology, as dealing with the processes of (genetic) change in populations of organisms over time, may be taken as focused on a mode or identification of change.

⁵⁸See *Bergson: Key Writings*; and, Hoy and Oaklander, *Metaphysics: Classic and Contemporary Readings*, 33-42.

Greek culture the Dionysian spirit is seen in music, which is dynamic art. In the second of its lives we find the Apollonian spirit (from the Greek god *Apollo*) allied with constancy, because it exemplifies restraint, stability and congruity. For instance, in Greek culture the Apollonian spirit is seen in sculpture (or painting), which is static art.

Nietzsche unfavorably contrasts fixed reality with reality as a kind of ineffable flux. And in his essay *On Truth and Lies in a Nonmoral Sense*, he lays the foundation for the key notion in his thought that fixed or constant conventions must really be *invented*. Nietzsche rejects the idea of constancy because whenever flux is trapped within its net, our raw changing experience is supposedly artificially ordered and simplified. And this he believes necessarily *falsifies* the changing empirical world of everyday life. This *change-affirming* worldview is consistent with the basic existentialist beliefs that Forms do not determine existence to be what it is and that existence precedes essence. Hence, Nietzsche may be seen as abandoning constancy itself (denigrated as *concept-mummies*), and privileging change, since he held that dynamic forces reside at the foundation of all reality itself. Correspondingly, constancy is downgraded and given an inferior status. Accordingly, he argued to conclusions that obviated constancy. By so doing, Nietzsche challenged the constancy-theorists that have dominated Western philosophy since Plato and fueled the contemporary outlook that springs from his aspirations of constancy-denying to establish a change-affirming world view.

William James (1842-1910), a founder of the pragmatist tradition, admired Henri Bergson's vision of an undeniable *[d]ive back into the flux itself...* [So,] ... *if you want to know reality, that flux which Platonism, in its strange belief that only the immutable is excellent, has always spurned: turn your face towards sensation, that fleshbound thing which rationalism has always loaded with abuse.*⁵⁹ To be sure, for James this *immediate flux of life* is neither mental nor physical, but a more fundamental stuff called *pure experience*. And he explains that it *furnishes the material to our later reflection with its conceptual categories...a that which is not yet any definite what, tho' ready to be all sorts of whats....*⁶⁰ In other words, although for James the pragmatic temperament is supposed to mediate between the extremes of the *tough-minded* philosopher (with the rationalistic and *scientific loyalty to facts*: a mode or identification of constancy) and *tender-minded* philosopher (with religious or romantic *confidence in human values and the resultant spontaneity*: a mode or identification of change), his claim that *for pragmatism [reality] is still in the making*, but for *rationalism reality is ready-made and complete from all eternity*, privileges a metaphysics of process.⁶¹

For another pragmatist, John Dewey (1859-1952), the abuse of rationalism rested on *[t]he conceptions that had reigned in the philosophy of nature and knowledge for two thousand years, the conceptions that had become the familiar furniture of the mind, [and] rested on the assumption of the superiority of the fixed and final; they rested upon treating change and origin as signs of defect and unreality.*⁶² Accordingly, for Dewey (as a metaphysical heir of Heraclitus and Darwin) pragmatism constituted a protest against *the long dominant idea of the sacred ark of absolute permanency*. So once again, concerns about change and constancy took on their full

⁵⁹Cited in Passmore, 106.

⁶⁰*Essays in Radical Empiricism*, Chapter 3.

⁶¹See his *Pragmatism*, 17, 123.

⁶²Dewey, emphasis mine.

form as two sharply differing accounts of time. But for Dewey, after Darwin philosophy could never be the same, since he and his followers would have to take into account such antagonistic views of time. Pragmatism, then, is a method that proposes a corrective or alternative account of time in light of the change/constancy distinction. This is because in adopting a position concerning the metaphysical notion of change or constancy, a philosopher is ultimately declaring allegiance to a view of time (and, derivatively, a view of reality). And the position that a philosopher takes on the change or constancy views of time has a kind of controlling effect on the general shape and texture of his or her broad philosophical view about how things have come to be (ontology). This suggests that philosophers may be categorized according to whether they take the change or constancy view of time to be substantive.

To be sure, there are *pragmatists* today that define pragmatism's province as against the old opposition between the real and the appearing; or, necessary and the contingent; or, objective and the subjective; or, primary and the secondary; or, quantitative and the qualitative; or, absolute and the relative. But these contemporary strands of pragmatism share (from various sources and under various influences) a common inner split between constancy and change. Moreover, intellectually, such emotions are not conservative but creative. They attach themselves readily to the dynamic view of the world and consecrate it. So although an organic interconnected character of reality is preached, wittingly or unwittingly they still provide the intellectual system of apologetics for an existing philosophic regime that bifurcates time and privileges change over constancy.

So although pragmatists sought to avoid the dualism of their philosophical predecessors, their thinking from the very beginning was restricted by the bifurcation of time. For instance, although for Dewey experience is *double-barreled*, the traditional metaphysical distinctions (of the real and the appearing; or, necessary and the contingent; or, objective and the subjective; or, primary and the secondary; or, quantitative and the qualitative; or, absolute and the relative) are a product of reflection (a mode or identification of constancy). In contrast, the essence of Dewey's pragmatism is action. And by making action primary, our theories (and our logic and our rules) must be derived from our actions (a mode or identification of change). Accordingly, in the pragmatic account of truth, the truth of an idea is not a *stagnant* property. It is an event or process of its validation (of its agreement with reality). But since experience is always in flux, pragmatists could not define truth or the problems of philosophy in advance.

And this may serve to characterize the field of philosophy itself. Since, on the one hand, there are those for whom philosophy is viewed as a *journey* (a mode or identification of change). For these theorists it is *natural* for philosophy to change, it supposedly has no fixed destination. As Ludwig Wittgenstein (1889-1951) once noted in his early period of the *Tractatus Logico-Philosophicus*, [*p*] *hilosophy is not a body of doctrine but an activity*.⁶³ That is to say, philosophy is not a theory but a process. This is certainly consistent with his later thoughts on the matter where he still maintained: [*f*] *or in the flux of life, where all our concepts are elastic, we couldn't reconcile ourselves to a rigid concept*.⁶⁴ On the other hand, there are those for whom philosophy is viewed as an enterprise that supposedly deals with *permanence and unity, underlying identity,*

⁶³Sec. 4.112.

⁶⁴1982, Vol.1, Sec. 246.

and *fundamental simplicity and stability* (modes or identifications of constancy).⁶⁵ For these theorists change makes little or no difference to the field. It is not surprising, then, that the two antagonistic views of time, change and constancy, steer philosophy in opposing directions.

Whitehead's Bifurcation of Time

I have argued that Plato first brought together in a systematic way the ancient distinction between constancy (principally a Parmenidean influence) and change (principally a Heraclitean influence) and defined the work of philosophy (and, derivatively, natural science) ever since. Accordingly, in our modern age, Alfred North Whitehead (1861–1947) also characterized the whole of Western philosophical tradition as nothing but a series of footnotes to Plato. All this suggests that the bifurcation of time was to leave its mark upon the whole body of ancient Greek philosophy, and through Plato, upon the whole of Western philosophy. As a result, one may wonder whether theistic religion has also been haunted by a contradictory conception of time. For, time has been thought of and articulated as essentially transitory, while at the same time and in the same sense assumed to stand still (apart from the world of temporal items and happenings).

Whitehead's contrast between time and endurance highlights this very point in Brennan's *Whitehead on Time and Endurance*. Echoing Plato, Whitehead claims that *[t]here is time as Becoming*, where *[t]he notion of transition dominates* so that *becoming and perishing are at the heart of things*. But in this sense, as Whitehead himself notes, time (skewed as change) may depend on the regular motion of the regular bodies (a mode or identification of constancy). So there is also *endurance*, which is *...the extensiveness of time*⁶⁶ (a mode or identification of constancy) and conforming to *eternity*. So, in a roundabout fashion, Whitehead comes close to suggesting that two antagonistic views of time have dominated Western tradition since ancient Greek philosophy by generally characterizing the whole of Western philosophical tradition as nothing but a series of footnotes to Plato and noting that *[t]he idea of time [as duration] was obscurely present in Plato. Not that he knew there were two points of view, but that he sometimes wrote from one point, and sometimes from another. There are the Forms and there is the flux.*⁶⁷ Put together, all this suggests that Plato's Forms need not be understood as timeless.

To be sure, some philosophers nearly always go to change for their archetype and model of time. And when change is the repository of time, they may think that everything that is constant is timeless and sole temporality is what changes. But this understanding of time is insidious on several accounts. First, consider Whitehead's point that *[y]ou cannot make up your mind about time until you are quite sure what metaphysics you are going to adopt.*⁶⁸ Accordingly, as Whitehead notes, making up one's mind about *time* requires that we ask: *Is the fundamental character of the world process or enduring substance?*⁶⁹

But, does making up one's mind about *time* require that the dynamic horn be illusory or the static horn be timeless? First, consider that Whitehead (having a critique of Descartes at the

⁶⁵Guthrie, 24.

⁶⁶Brennan, 117, emphasis mine.

⁶⁷Ibid, 121, emphasis mine.

⁶⁸Ibid, 119, emphasis mine.

⁶⁹Ibid, 119.

back of his mind) notes that common everyday *[t]hings do reflect eternity* and that the eternal God, in contrast, *is a Substance unaffected by time*.⁷⁰ Yet, as Whitehead emphasizes, *[t]he old beautifully clear-headed notion of substance as an independently existing thing keeping its identity through time is contradicted by every moment of your life*⁷¹ (i.e., as a mode or identification of change). So, although the notion of substance is unaffected by transition (or, *changingness*), it is not timeless (since it keeps *its identity through time* and invokes a mode or identification of constancy).

Second, consider that Whitehead (having Epicurus and the monistic idealists at the back of his mind) notes that *[t]he world we experience is a world which is ever changing. But there is something back of it that does not change*⁷² (i.e., a mode or identification of constancy). However, *[f]or both Epicurus and the idealists, if you make endurance fundamental, then time is illusory. If reality is that which endures, then time can be only appearance*.⁷³ The outcome of this line of thinking is that the really real thing is timeless and that passage is illusion. But such an analysis only works if one conflates *time* with *change*. In general, what some philosophers maintain must be timeless is just changeless, a mode or identification of constancy and an aspect of time.

Whitehead's process philosophy in the 20th century tried to work around such obstacles by according God an active role *within* the natural world's spatio-temporal frame and emphasizing that not only is the universe continuously changing, but also individuals are (or are composed of) processes. To be sure, although there is no foundationalist appeal to sense-experience in Whitehead's metaphysics, his is a speculative theory of experience where things are self-constructing centers of activity. Accordingly, in his *Process and Reality*, Whitehead held that how a thing becomes (or changes), constitutes what the thing is. Moreover, although Whitehead sought to explain the connection between the static realm of objective, scientific and logical descriptions of reality and the dynamic realm of everyday subjective experience, he suggested that (self-constructing) process (of actualizing entities or occasions), rather than substance (a mode or identification of constancy), should be taken as the fundamental metaphysical constituent of the world. So the core doctrines of his process philosophy give ontological priority to becoming over being.

Accordingly, Whitehead looked at time in two ways. First, privileging *becoming* (in the optimistic sense of perpetual flowing to a newness; akin to Bergson's view) over *perishing* (in the pessimistic sense of perpetual decay; akin to Locke's view) at the heart of things. As he notes: *[b]ut if you hold, as I do, that transition, passage, is in the nature of things, this means that time is not just a falling away from reality, a perpetual perishing. When you look at transition, you can see that the past is becoming the basis of the present*.⁷⁴ This temporal process of transition not only suggests that Whitehead's efforts to reject substance (a mode or identification of constancy) remain ineluctably trapped within the confines of the bifurcation of

⁷⁰Ibid, 118.

⁷¹Ibid, 119, emphasis mine.

⁷²Ibid, 119, emphasis mine.

⁷³Ibid, 119-120, emphasis mine.

⁷⁴Ibid, 125, emphasis mine.

time, but also that the central underlying theme in his philosophy is (a mode or identification of) change (in the optimistic sense of perpetual flowing to a newness).

But [a]s is generally recognized, Whitehead has two types of process, and the understanding of the difference between these two types of process and their relationship to time is essential to understanding his conception of God.⁷⁵ So besides the temporal process of transition, there is also the genetic process of becoming. And God, like all finite actual entities, or occasions, participates in both types of process, the genetic process of becoming and the temporal process of transition.⁷⁶ Although God...does not participate in the passage of nature,⁷⁷ for God ...all nature shares in the immediacy of our present duration.⁷⁸ Passage, for Whitehead, is the becoming of a new *here-now* replacing the old *here-now* (turning it into a *there-then*). But a percipient *here-now* (a present) is *spatially and temporally extended with no necessary limit to its extension*.⁷⁹ So the extent of the *here-now* constitutes a key difference between finite percipient events and God, where God's *here-now* is *everlasting*.⁸⁰

Correspondingly, Whitehead looked at time in a second way that combines creative advance with the retention of mutual immediacy (i.e., Whitehead also looked at time as *everlasting*).⁸¹ But unlike finite actual entities, or occasions, *God is not an event in nature; He is the nontemporal actual entity*.⁸² Hence, we may find in Whitehead's thinking that sole temporality is what changes and that the constant is real (though characterized in some form or fashion at the same time to be *nontemporal*). For what becomes in the genetic process is *a segment of the temporal process of transition limited to a here-now, and its process of becoming is nontemporal*.⁸³

Underlying all this, of course, is that in Whitehead's philosophy God and the World stand over against each other expressing an ultimate bifurcation of time. For [i]n God's nature, *permanence is primordial and flux is derivative from the World: in the World's nature, flux is primordial and permanence is derivative from God*.⁸⁴ Moreover, according to Whitehead, the reconciliation of permanence and flux can only be achieved when Creation reaches its final term, which is *everlastingness*.⁸⁵ However, in a fundamental sense, Whitehead's philosophy requires that the dynamic pass into the static and (at the same time, begging the question) the static absorb the dynamic when Creation reaches its final term of *everlastingness*. But, such reconciliation, given that permanence and flux are diametrically opposed notions, can never be achieved. So, in the extreme, this bifurcation of time underwrites the fallacy of misplaced temporality—a mistake in reasoning expressed as an unsound argument that ...*is the basis of all [theistic] religions, ...the story of the dynamic effort of the World passing into everlasting unity, and of the static majesty*

⁷⁵Clarke, 245, emphasis mine.

⁷⁶Ibid, 257.

⁷⁷Ibid.

⁷⁸Ibid, 255.

⁷⁹Ibid, 256, emphasis mine.

⁸⁰Ibid, 256.

⁸¹See Whitehead, 346.

⁸²Clarke, 258, emphasis mine.

⁸³Ibid, 254, emphasis mine.

⁸⁴Whitehead, 348.

⁸⁵Ibid, 346-349.

*of God's vision, accomplishing its purpose of completion by absorption of the World's multiplicity of effort.*⁸⁶

The Fallacy of Misplaced Temporality

So far, I have suggested that we misunderstand time so that it should conform to one of two kinds (change or constancy) and we adopt a too narrow vision of what time is and then derive false conclusions. It is this limited focus on the change or constancy view of time that has been used in misdirected attempts aiming to resolve some of the very central and certainly problematic issues in philosophy (and, derivatively, theistic religion). In its most damaging form, the bifurcation reveals constancy (although an aspect of time) as outside time, but real or objective; change (conflated with time) as in time, but somehow lower, illusory/not real or subjective. So, in the extreme, this bifurcation of time underwrites the fallacy of misplaced temporality.

The fallacy of misplaced temporality arises in, and is shaped specifically by, two distinct but interrelated meanings we attribute to the term timeless: (1) we conflate time with change so that timeless means no-change or static; (2) we conflate time with not-real (or illusory/subjective) so that timeless means real. Either way, this leads us to dismiss an essential part of true time by copout words such as timeless or illusory (or lower/subjective). By this classification, one quietly disposes of constancy (labeling it as timeless), and/or one quietly disposes of change (labeling it as illusory). But what entitles us to play favorites among equally relevant features of time or reality? This suggests that one way the fallacy of misplaced temporality is shaped is when sole temporality is conflated with what changes (though characterized in some form or fashion at the same time, and in the sense, to be lower/subjective or unreal); and, constancy is taken as higher/objective or real (though characterized in some form or fashion at the same time, and in the sense, to be timeless).

This, of course, can be traced all the way back to Plato. The items of mathematics (numbers, geometrical objects, etc.), for example, were regarded by Plato (through a Pythagorean influence) as supreme examples of occupants or elements of an ideal realm of Form. However, guided by the distorted ontological view that constancy is reducible to timelessness (or vice versa)—confining time to change—some take Plato's metaphysical perspective as seeking to force the items of mathematics (under constancy's purview) into the single category of the *timeless*. So, when the picture of time is radical enough, the distinction between change and constancy is usually drawn between what falls *within* and what lies *outside* time (i.e., apart from the world of temporal items and happenings). But, the distinction between change and constancy should not be drawn between what falls *within* and what lies *outside* time, since constancy is also an aspect of time.

Not surprisingly, then, when we directly experience things in the physical world, these may be exactly (a mode or identification of constancy) quantified by numbers. For instance, constants 1, 2, and 3 precisely quantify numerous entities of our direct experience: e.g., 1 chair, 2 apples, and 3 dogs. So, despite what some may think, these natural numbers are not merely entities outside of time mysteriously instantiated in the physical world with some kind of Platonic existence of their own. To be outside of time mysteriously instantiated in the physical world, as I have argued, is problematic. This is because the directly experienced things in the

⁸⁶Ibid, 349, adapted, emphasis mine.

physical world that are exactly (a mode or identification of constancy) quantified by numbers would be caught between *a rock and a hard place*. For, to be an inhabitant of such an idealized world of supposedly timeless forms amounts to taking the real as *not* part of the world of temporality (skewed strictly as change)—quietly disposing of the *lower* world of temporal items and happenings by labeling what changes as unreal/illusory or subjective.

So, for instance, even if we assume for the sake of argument that natural numbers (and/or the geometrical in nature) are entities outside of time mysteriously instantiated in the physical world with some kind of Platonic existence of their own, there must be an underlying perfectly immutable relationship (a mode or identification of constancy) between the world of temporal items and happenings (a mode or identification of change) and mathematics (a mode or identification of constancy). But this is to beg the question by relying on the very thing which is in question—time. Moreover, even if the underlying relationship itself were mutable (a mode or identification of change), this is also to beg the question by relying on the very thing which is in question—time. Either way, then, it cannot be that the nature of mathematics is ultimately dependent on the notion of timeless *number* (and/or timeless *geometric* forms). Nor, it cannot be the case that *timeless* number (and/or *timeless* geometry) must govern the behavior of the *changing* world. On these grounds, therefore, one cannot sustain that the two so-called pillars of science, number and geometry, are outside time.

Nevertheless, for platonic heirs today, old habits die hard. Consider the following invalid argument for the timeless nature of mathematics, reformulated and adapted to reveal the Fallacy of Misplaced Temporality:⁸⁷

- 1] The nature of mathematics (and, therefore, science itself) is firmly founded on mathematical proof.
- 2] Mathematical proof can make significant assertions of an unassailable nature.
- 3] But, an assertion of an unassailable nature is an assertion that is true at any time.
- 4] So, mathematical proof can make assertions that are true at any time.
- 5] Thus, the nature of mathematics is characterized by assertions that are true at any time.
- 6] Hence, the timeless nature of mathematics is revealed.

As a fundamental matter, it is important to look at the temporal underpinning of each of the premises of the argument (premises 1-5) and realize that each premise is a function of time. Obvious temporal underpinning of premises 3-5 aside, the temporal underpinning of premises 1-2 is conveyed by the notion of *mathematical proof*. A *mathematical proof* is a procedure used to determine whether a given mathematical assertion is (or is not) *invariantly* true (a mode or identification of constancy). So, one may also disentangle the constant (i.e., perfectly immutable) assertions from the changing (i.e., mutable) assertions in mathematics through the unassailable nature (a mode or identification of constancy) of a mathematical proof.

Accordingly, as far as justification for the conclusion is concerned, it is important to emphasize that each premise cannot be true in the first place unless each premise were underwritten by time. In a nutshell, what we really have here is an argument of the form: TIME/HENCE, NO-TIME (which corresponds to the invalid argument form: TRUE

⁸⁷Penrose, 10.

STATEMENTS/HENCE, FALSE STATEMENT). So we may argue that there is no logical way to get from the premises to the conclusion. We cannot get *timeless* from *time* because the conclusion describes something that is not contained in the premises. The premises say nothing about timelessness. The reader may note that flipping things around where we exchange premises for conclusion also generates the Fallacy of Misplaced Temporality, since we also cannot get *time* from the *timeless*.

Why There Cannot be a Rational Relation between God and the World

By running the same line of reasoning as above, one may note that there must be a perfectly immutable relationship (a mode or identification of constancy—an aspect of time) between the world of temporal items and happenings (a mode or identification of change) and the perfectly immutable nature (a mode or identification of constancy) of God. But, this amounts to relying on the very thing which is in question—time. Without this relationship between the world and God, when we look into the alleged interaction of God with the world of temporal items and happenings, we will note that it itself cannot be perfectly immutable (opening the door for a mode or identification of change). Either way, then, it cannot be that the nature of God (a mode or identification of constancy) is ultimately dependent on the notion of the *timeless*. Nor, it cannot be the case that a *timeless* God must govern the behavior of the *changing* world. On these grounds, therefore, one cannot sustain that the pillar (i.e., God) of the world of temporal items and happenings is outside time. As a fundamental matter, then, it is important to look at the underpinning of the world and realize that its items and happenings are a function of time. So, again, because of the bifurcation of time one may also disentangle the constant (i.e., perfectly immutable) nature of God from the changing (i.e., mutable) items and happenings of the world.

The foregoing highlights the problem with theistic religion's reception of the ancient debate of the bifurcation of time that was advanced by St. Augustine's (354–430) reflections about the differences between eternity and motion. Owing his mature thought in great part to the influence of Plato and Neo-Platonism, we see the bifurcation of time in Augustine's attempts to describe the fundamental relation between the stable and permanent Creator whose eternity stands still and the unstable change and variation of the created, which passes away and disappears. This is reminiscent of Plato's distinction between *eternity* (eternal time) that *rests in unity* and the time of *...those states which affect moving and sensible things and of which generation is the cause*.⁸⁸ Far more than a treatment of traditional paradoxes about the problem of unity-in-difference, we find the essential element of Augustine's theoretical attempt to mediate constancy and change in Book XI of his *Confessions*. Accordingly, his attempts sought to describe the fundamental relation between constancy and change. But time, understood as temporality (conflated with change) and being *utterly different*, cannot be derived from a higher non-temporal (timeless?) state of eternity, which is co-extensive with God's infinite and eternal now (a mode or identification of constancy—an aspect of time).

Accordingly, variations of the Fallacy of Misplaced Temporality arise in force when the context is shifted from philosophy to theistic religion in efforts to derive *creaturely* time from divine eternity—to establish a *rational* relation between God and the world. Here the concept of timelessness reveals a longstanding problem: it involves the two competing notions of timeless as no-time and timeless as infinite constancy. In contrast, the concept of time involves the two

⁸⁸Plato, *Timaeus*, 37d-38b.

competing notions of time as exclusively change and time as somehow characterized by both constancy and change. As a result, the concept of eternity involves four competing interpretations: (1) eternity as no-time, (2) eternity as infinite constancy, (3) eternity as infinite change, and (4) eternity as both infinite constancy and change.

A case in point for eternity as no-time is the Judeo-Christian tradition that sees eternal God as active within the historical process which, in consequence, represents not only a causal but also a purposive order, but locates God outside of time—entirely external to the *perishable* (or lower) realm of change and process. Here eternity may be interpreted as no-time so that one must reason from NO-TIME to CHANGE (which corresponds to the invalid argument form: TRUE STATEMENT/HENCE, FALSE STATEMENT).⁸⁹ Invalid deductive argument forms are problematic because they allow substitution instances (i.e., examples) with true premises and a false conclusion. And we certainly do not want to be guilty of using our reasoning and the information involved to derive something false from something true. So we may argue that there is no logical way to get from the true premise to the false conclusion. We cannot get *time* (conflated with change) from no-*time* because the conclusion describes something that is not contained in the premises. The premise says nothing about time.

Furthermore, all this begs the question, since it not only makes time theoretically impossible, but on the most basic level, appeals to time while disowning it. For, getting time from no-time logically allows for the notion of time and no-time at the same time (begging the question), which would amount to claiming that there is no difference between being in time and out. So, our thoughts and statements about being in time *would not* be consistently about being in time rather than being out. And such claims would be equally true (false), since the specific content of each statement would not have to be consistently true (false) about being in time rather than being out.

To sustain that God (and, derivatively, what God utters) is outside time (given that an infinite God is over and above all created things) also begs the question on a different and more challenging level, since the foregoing appeal for getting time from no-time (on assumption that time is a *thing*) is one of trying to get something (e.g., God's *Creation*) from nothing (nonexistence) by the word of God.⁹⁰ This *creatio ex nihilo* (suggested by an Old and New Testament understanding)⁹¹ logically allows for the notion of things and no-things at the *same time* and in the same sense (begging the question by using the very thing that is at stake—time). However, if the notion of things and no-things at the *same time* is disallowed, then nothing would have to be taken as coming *before* something (begging the question by using the very thing that is at stake—time). Nevertheless, this obtains only on assumption that nothing is a *thing* (but, by definition, *nothing* is diametrically opposed to *thing*). Either way, these scenarios would amount to claiming that there is no difference between *something* and *nothing*. So, our thoughts and statements about being *something* (in time) *would not* be consistently about being *something* (in time) rather than *nothing* (being out). And such claims would be equally true

⁸⁹In this and the following competing interpretations, the reader may note that flipping things around where we exchange premise for conclusion will also generate variations of the Fallacy of Misplaced Temporality.

⁹⁰See Copan and Craig, *Creation out of Nothing: A Biblical, Philosophical, and Scientific Exploration*, Chapters 1-2.

⁹¹Genesis 1:1 (first stage: raw materials out of nothing); Genesis 1:2-31(second stage: shape raw materials into a cosmos); 2 Peter 3:5; John 1:3, Romans 4:17, Hebrews 11:3, Romans 11:36, Colossians 1:16, and 1 Corinthians 8:6.

(false), since the specific content of each statement would not have to be consistently true (false) about being something rather than being nothing.

Under this analysis, the notion of the eternal God as active *within* (or *without*) the historical process (which, in consequence, represents not only a causal but also a purposive order), but located (or having been located) outside of time (entirely external to the realm of change and process), is just the bifurcation of time in disguise. This bifurcation of time unveils itself as the tension between change and constancy (showing that underlying such accounts is some general conception of time), since the meaning and/or possibility of change and constancy can be established only within a context that already presupposes true time. So, for instance, to maintain that ... [God] *is timeless without creation and temporal subsequent to creation*⁹² is to beg the question. For one is left wondering how to establish the crucial interaction in the first place between the *timeless* nature of a divine eternity (or, a mode or identification of constancy: ...*a state of undifferentiated time [that] looks very much like timelessness*)⁹³ and the *temporal* (skewed as change) character of the physical universe. This only pushes our discussion from the problem of drawing the line between *divine eternity* and *the physical universe* to an underlying dispute of drawing the line between the timeless nature of God and the temporal (skewed as change) character of the physical universe. Consequently, we are forced to ask how can all of *temporal* creation ever receive God's transcending and atemporal touch—at the *same time* and in the same sense (begging the question by using the very thing that is at issue—time)? Accordingly, at the very least, we do not have an intelligible account of how a timeless God can create a changing physical universe and act in it.⁹⁴

Moreover, for the sake of consistency, the creation of the physical universe requires that only things can be created. But, true time is not a thing (although it is a precondition for things).⁹⁵ So, one may wonder whether God can create time (further challenging the uniqueness and sovereignty of God). Neither could time be a relation between things (i.e., first you have things and out of these arise time as a relation),⁹⁶ unless you can justify things before time. Nevertheless, this begs the question by relying on the very thing that is in dispute—time. So, how is it that things come *before* time? And if we ask what came before that, we are invoking an infinite regress. Furthermore, for God to create time puts God *outside* time. This is problematic because space is now invoked (i.e., the *outside*). So, to accept that God is outside time, one must accept that God must be in space (finite or infinite?). But is God in *space*?⁹⁷ Moreover, how is it that space comes *before* time? And what justifies privileging space over time? Nevertheless, if an infinite God created time, then God must come *before* time. But this begs the question: How is it that time is invoked *before* time? And if we ask what came *before* that, we are invoking an infinite regress again.

⁹²Craig, *Time in Eternity*, 236. This is a problematic statement in itself, suggesting that God is a *thing*. For God's alleged temporality (*subsequent* to creation) arises (by necessity) from *time* construed as a *relation* between *physical* things.

⁹³*Ibid.*, 235.

⁹⁴See Lucas, 2002.

⁹⁵See Kant (*The Primacy of Time; The Temporalization of Concepts*).

⁹⁶*Ibid.*

⁹⁷Biblical theists may find this problematic, given 2 Chronicles 6:18; See Kaplan, *The Art of the Infinite*, 259.

To be sure, an underlying issue here concerns what some take to be an irreconcilable difference between an infinite God and whether something infinite can have a beginning. One may raise the underlying problem in the form of the question: Are the notions of *infinity* and *beginning* compatible notions? The incompatibility of these notions is usually derived from taking infinity to mean not finite and then understanding something that is not finite to be something that has no beginning. The central problem, then, is that it seems that the finite must have a beginning (since, supposedly, it was created) and the infinite must not have a beginning (since, supposedly, it was not created).

To resolve this problem, let me challenge the second conjunct and show why it may be the case that the infinite could have a beginning (So we should not conflate *being created* with *having a beginning*). My first point is that there are many types of infinities and not just one to characterize the universe. It is well known that the German mathematician, Georg Cantor (1845-1918), discovered that some infinite sets were larger than other sets. So there are different possible sizes of infinity. This observation makes it feasible for one to compare and discriminate rationally among infinities. Cantor began his reasoning with a finite set as a stepping-stone to define other, larger, finite sets, and so forth, toward infinity. This line of reasoning may find its justification in noting that the finite may in fact serve as a model for some forms of the infinite. Consider, for example, the paradox that a one-inch line segment, finite by most standards, actually contains an infinite number of points. Or, consider a finite number such as 2, expressed as an infinite sequence that converges to a limit (as n becomes infinitely large): $1 + 1/2 + 1/4 + \dots + 1/n = 2$. One may note that this infinite sequence has a beginning: the number 1. Therefore, the finite and infinite are not entirely incompatible realms.

My second point is that there is a bifurcation of infinity corresponding to the bifurcation of time. There is infinity thought as an unending progression, ever expanding without well-defined boundaries, that names an incomplete concept—what I shall call change-infinity. This idea of infinity, used to describe the incomprehensibly large, was dominant for millennia, up until the nineteenth century. For instance, Aristotle taught that the sequence of natural numbers 1, 2, 3, and so on should be treated as an unending process that is never completed. This is an example of potential-infinity and is symbolized as ∞ . In contrast to this focus on ordinality, there is infinity thought as a whole entity, with well-defined boundaries, that names (and can be rationally treated as) a whole and definite concept—what I shall call constancy-infinity. In Cantor's theory, for example, the infinite number of elements (cardinality) of the natural numbers set, {1, 2, 3, and so on}, is treated not as an unending process, but as a whole and definite concept. One may note that this infinite set of whole numbers has a beginning: the number 1. This is an example of actual-infinity and is symbolized as \aleph_0 (Aleph-null). Hence, something infinite can have a beginning.

According to the mathematical physicist, Michael Guillen, there are also significant examples of infinity existing as complete and definite items in nature—the electron and black hole. The embodiment of such mathematical infinity in the electron is seen in its electric force getting infinitely stronger as we move toward it (Coulomb's law). The embodiment of such mathematical infinity in the black hole is seen in the infinite amount of power that it would require an object to pull free from its gravitational force. Both the electron and black hole are indeed constant infinities, since the forces involved are not infinitely expansive, but rather

confined to a single point (singularity). And such natural infinities are subject to the physical world and may be said to have a beginning.⁹⁸

And so, whether we take it as change-infinity (a mode or identification of change—an aspect of time) or constancy-infinity (a mode or identification of constancy—an aspect of time), what is infinite (embodied in nature or not) need not be timeless. Moreover, all this also suggests that there is a bifurcation of Cantor’s theory corresponding to an underlying bifurcation of time that if appealed to would beg the question by relying on the very thing that is at issue—time. For there is infinity thought as a *variable finite* (to use Cantor’s term) and subject to change (a mode or identification of change). In contrast, there is infinity thought as *a single, unified, and determinate totality*⁹⁹ and never subject to change (a mode or identification of constancy). Accordingly, under careful scrutiny one may note that the infinite set of the natural numbers is taken to be a mode or identification of constancy; whereas, the infinite sequence of the natural numbers is typically not (i.e., it is a mode or identification of change). So if, as I argue, the difference seems at bottom to be temporally based, any sharp boundary between potential-infinity and actual-infinity is, perhaps, no more than a function of time. The foregoing suggests, therefore, that the Cantorian view on where the potential-actual distinction is to be drawn merely reflects the problem of the bifurcation of time, and its limitations (I will call this Type I Bifurcation).

If Absolute-infinity is introduced into the mix, the contrast with natural infinities, subject to the physical world and said to have a beginning, suggests there is another bifurcation of Cantor’s theory corresponding to an underlying bifurcation of time. And, if appealed to, this bifurcation of time would also beg the question by relying on the very thing that is at issue—time. For there is found in nature infinity thought as created (said to have a beginning)—taken as transfinite (to use Cantor’s term) and contingent (a mode or identification of change). In contrast, there is infinity thought as *...eternal, uncreated, Absolute Infinite related to God*¹⁰⁰ and never subject to change (a mode or identification of constancy). Accordingly, under careful scrutiny one may note that Absolute-infinity is not subject to further increase, taken to be a mode or identification of constancy; whereas, actual-infinity is subject to further increase and is characteristically relative¹⁰¹ (i.e., it is a mode or identification of change). So if, as I argue, the difference seems at bottom to be temporally based, any sharp boundary between Absolute-infinity and actual-infinity is, perhaps, no more than a function of time. The foregoing suggests, therefore, that the Cantorian view on where the actual-Absolute distinction is to be drawn merely reflects the problem of the bifurcation of time, and its limitations (I will call this Type II Bifurcation).

Finally, Type III Bifurcation occurs when one denies there may be such a thing as actual-infinity (embodied in nature or not) so that we are only left with potential-infinity and Absolute-infinity. But the Absolute-potential distinction only pushes our discussion from the problem of drawing the line between *divine eternity* and *the creation* to an underlying dispute of drawing the line between *the immutable nature of God* and *the temporal* (skewed as change)

⁹⁸See Guillen, 55-60.

⁹⁹Russell, R. J., 200.

¹⁰⁰Ibid, 20.

¹⁰¹Ibid, 216.

character of the physical universe. So, we may still ask how can all of *temporal* creation ever receive God's transcending and immutable touch—at the *same time* and in the same sense (begging the question by using the very thing that is at issue—time)? Accordingly, we are forced to ask whether there is a rational relation between God's transcending immutability and the dynamic character of the physical universe. In the extreme, the Types I, II & III forms of the bifurcation of time have led some to commit the fallacy of misplaced temporality, which privileges one aspect of time (i.e., the static or dynamic) over another.¹⁰²

This strikes a fatal blow to the notion of eternity as no-time (conflated as no-change). But, what of eternity involving the other competing interpretations: eternity as infinite constancy, eternity as infinite change, and eternity as both infinite constancy and change?

In an effort to establish a rational relation between God and the world, eternity may be interpreted as infinite constancy. But, the argument would require that we reason from **CONSTANCY** to **CHANGE**, which corresponds to the invalid argument form: **TRUE STATEMENT/HENCE, FALSE STATEMENT**. So we may argue that there is no logical way to get from the true premise to the false conclusion. We cannot get change from constancy because the conclusion describes something that is, by definition, diametrically opposed to what is contained in the premise. The premise says nothing about change.

More generally, for the static (which, by definition, is not dynamic) to interact with the changing physical world, it must be static and not static at the same time (and in the same sense). However, this amounts to violating the law of noncontradiction.¹⁰³ So, the static nature of divine eternity is itself inconsistent with the dynamic character of the physical universe. In short, because a static and not-static interaction is not logically possible, it cannot be physically possible. In this sense, we can determine how and where to draw the line between the dynamic character of the physical universe and the static nature of divine eternity.

But, this is the same problem religionists get into when invoking a *mediating* factor or entity¹⁰⁴ to serve as a *spiritual* bridge to establish an interaction between the static nature of a divine eternity and the dynamic character of the physical universe. For, this only pushes our discussion from the problem of drawing the line between *divine eternity* and *the physical universe* to an underlying dispute between the static nature of a nonphysical soul or spirit and the dynamic character of the physical human body (i.e., the mind-body problem). Moreover, the hypothesis that the spiritual (e.g., gods, angels, ghosts, embodied souls, disembodied souls, or spirits of people who have died) interacts with the physical world is problematic in itself, since

¹⁰²For example, Robert John Russell commits the Types I & II form in *Time in Eternity*, 19-21, 197-204, 209-210, 214-223; William Lane Craig commits the Type III form in *Time and Eternity*, 221-233.

¹⁰³Aristotle, *Metaphysics*, Book 4: Chapter 3, 1005b 19-20.

¹⁰⁴Consider, for instance, the central Christian doctrine of a *nonphysical* soul or spirit allegedly in (or out) of a *physical* body as a *mediator* (*intercessor* or *contact*) between God and humanity (e.g., 1 Timothy 2:5; Romans 8:26, 27, 34; Job 32:8; John 4:24). The standard example of this is that of the Incarnation of Jesus Christ the eternal Son of God—an alleged intersection of atemporal divine reality (or, divine reality in *a state of undifferentiated time*—a mode or identification of constancy—that looks very much like timelessness) and temporal physical existence (see Torrance, *Space, Time and Incarnation*, Chapter 3). But, the question remains whether the eternal, infinite, and transcendent Son of God can, at the same time and same sense, become incarnated as a finite human being to serve as mediator between the atemporal and temporal.

the *spiritual* is, by definition, *not physical*. The hypothesis would certainly not take a risk in being found false, since it *will not admit* as evidence any possible reasoning and/or physical or natural circumstances that could show it to be false. Specifically, since something that is not physical cannot ever causally interact with the physical objects of the world, physical experimentation and corroboration is not feasible—we cannot investigate causal relationships to test the hypothesis.

Hence, logically allowing any spirit-in-the-flesh, as an example of the spiritual realm interacting with the physical world of temporal items and happenings, inescapably leads to an absurdity (i.e., a contradiction). And the only way to avoid the absurdity (here I rely on a *reductio ad absurdum*) is to reject the hypothesis that leads to it. In short, because a static and not-static interaction is not logically possible, it cannot be physically possible. In this sense, we can determine how and where to draw the line between the dynamic character of the physical universe and the static nature of divine eternity.

The theist may seek to save the situation, however, by interpreting eternity as infinite change. Now, the argument requires that we reason from CHANGE to CHANGE, which corresponds to a valid argument form. So we may argue that there is a logical way to get from the premise to the conclusion. We can get change from change because the conclusion describes something that is contained in the premise. The premise says something about change. This is a crucial point, since *...flowing time is, arguably, essential to most forms of religious experience and their theological systematization.*¹⁰⁵ But, to sustain that the nature and character God is subject to change, given that an infinite God is over and above all created things, strongly suggests that there is no rational relation between the static nature of divine eternity and the dynamic character of the physical universe. For instance, biblical theists maintain that the nature and character of God is described by constancy, given Deuteronomy 33:27, Psalm 102:24-27, Malachi 3:6, James 1:17, Hebrews 13:8, Numbers 23:19 (This, possibly, to avoid challenges to the uniqueness and sovereignty of God, to avoid charges of pantheism, and/or to avoid having God limited within the constraints of time [e.g., the imperfect, corrupt, or evil as a mode or identification of change]).

Nevertheless, biblical theists can (and often do) maintain that the nature and character God is also characterized by change (here we must set aside the blatant contradiction with the foregoing, for the sake of argument) because, for example, God changes His mind (Genesis 6:6-7, Exodus 32:14, Jonah 3:10). Accordingly, the theist can argue that *from a human perspective*, God knows all things from all eternity (even the plan to *change His mind*). But, this is to beg the question by relying on the very thing which is at issue—time. For, by assuming a human perspective (as a subset of the *changing* physical universe) that experiences a world which is ever changing, we still may ask whether the static nature of divine eternity can be rationally related to the dynamic character of the physical universe. This is because to claim that *God knows all things from all eternity*, is to affirm something about His nature and character that does not change. This invokes an underlying mode or identification of constancy that reaffirms the doctrine of God's immutability.¹⁰⁶

¹⁰⁵Russell, R. J., 22.

¹⁰⁶<http://www.gotquestions.org/God-change-mind.html> (accessed July 20, 2013).

Another variation of the Fallacy of Misplaced Temporality arises by interpreting eternity as both infinite constancy and change. Biblical theists can (and often do) maintain that the nature and character of eternal God invokes constancy and change, given, for instance...*the boundless temporality of the Trinitarian God...with...an eternity that flows...as...an overarching and differentiated unity...—providing...a structured duration of diversity in unity.*¹⁰⁷ To be sure, the argument that reasons from CONSTANCY and CHANGE to CHANGE corresponds to a valid argument form. So we may argue that there is a logical way to get from the premise to the conclusion. We can get change from constancy *and* change because the conclusion describes something that is contained in the premise. The premise says something about change (which is, however, problematic, given the previous concerns about interpreting eternity as infinite change). Nevertheless, this view of eternity is too high a price to pay to lessen or remove the *bite* of change. For, since the premise describes two notions that are, by definition, diametrically opposed, the argument is unsound. One cannot, on pain of contradiction, claim that something is both static and dynamic at the same time (and in the same sense). Thus, one cannot avoid a challenge to this interpretation of divine eternity—or even deflect it—by pulling back from a characterization of eternity as exclusively infinite change to argue for a robust (yet contradictory) characterization of eternity as both infinite constancy and change.

The problem of claiming contradictory things is not just the problem of uttering a special class of false statements. The law of noncontradiction is in place not just to help us avoid false statements with a particular type of inconsistency. The law of noncontradiction is also a central principle of thought and communication without which we could not distinguish one thought or statement from another. Since, we could not think or communicate because our thoughts and statements would not be consistently about one thing rather than the other. Moreover, without the law of noncontradiction every claim would be equally true (false), since the specific content of each statement would not be consistently true (false) about one thing rather than the other.

Accordingly, logically allowing God's divine eternity to be static and dynamic at the same time (and in the same sense) would amount to claiming that there is no difference between being static and being dynamic. So, our thoughts and statements about being static *would not* be consistently about one thing rather than the other. And such claims would be equally true (false), since the specific content of each statement would not have to be consistently true (false) about one thing rather than the other. Thus, without the law of noncontradiction, thinking or communicating about what is static or dynamic would be impossible. And if thinking or communicating were impossible, we could not reason. Hence, arguing against the law of noncontradiction begs the question, since it not only makes reasoning theoretically impossible, but on the most basic level, appeals to reason while disowning it.

Summary and Responses to Objections

Plato first brought together in a systematic way the ancient distinction between constancy (principally a Parmenidean influence) and change (principally a Heraclitean influence) and defined the work of philosophy and (derivatively) natural science ever since. And, in modern times, Alfred North Whitehead characterized the whole of Western philosophical tradition as nothing but a series of footnotes to Plato. Thus, the bifurcation of time (and/or corresponding bifurcation of knowledge) was to leave its mark upon the whole body of ancient Greek

¹⁰⁷Russell, R. J., 5-6.

philosophy, and through Plato, upon the whole of Western philosophy. As a result, Western philosophy, natural science, and, derivatively, theistic religion, have been haunted by a contradictory conception of time: by talking from both sides of a mouth, time is sometimes thought of and articulated as essentially transitory, while at the same time (begging the question by relying on the very thing that is in issue: time) and in the same sense it is assumed that time stands still (apart from the world of temporal items and happenings).

In the extreme, this bifurcation of time has led some to commit the fallacy of misplaced temporality, which in its most damaging form dismisses essential aspects of true time by quietly disposing of constancy (labeling it *timeless*) and/or quietly disposing of change (labeling it as *lower/subjective* or *unreal*). The Judeo-Christian tradition that sees God as active within the historical process which, in consequence, represents not only a causal but also a purposive order, exemplifies this fallacy by locating God outside of time—entirely external to the realm of change and process. Moreover, variations of the Fallacy of Misplaced Temporality arise in efforts to derive *creaturely* time from divine eternity—to establish a *rational* relation between God and the world. Nevertheless, as we have seen, to sustain that God is either in time or out, given that an infinite God is over and above all created things, strongly suggests that there is no rational relation between the static nature of divine eternity and the dynamic character of the physical universe. This, then, suggests why *[s]ome claim that theism is itself inconsistent....*¹⁰⁸

As a result, when we factor in the aspects of true time (i.e., both change and constancy), there cannot be a rational relation between God and the world. For, at the very least, to be rational we must avoid unintelligibility, inconsistency/contradiction, and/or unsound reasoning. To be sure, the assertion that God is in time and God is outside time expresses a blatant contradiction, and therefore, in the same sense, cannot be true at the *same* time (invoking the very thing that is at issue). So, all of creation could never receive God’s transcending and immutable touch (at the same time and the same sense). And this is the case, even if the idea of the eternal God in play is conceived of being *inside* time and therefore bound to time (conflated with change); or, the idea of God in play is conceived of as being *outside* time and therefore bound to timelessness (or *a state of undifferentiated* time—a mode or identification of constancy).

This, however, is not simply a matter of paradox¹⁰⁹ or simply a problem of language that points to a transcendental God or *ground*; otherwise, we commit a blatant contradiction ourselves by relying on the very thing we are arguing against: using reason (logic/rationality) to defeat reason (logic/rationality), using language to undermine language. For, to speak of the limits of reason and/or language¹¹⁰ is to attempt, by way of our reason and/or language, to uphold the very

¹⁰⁸Point made by Alvin Plantinga at the American Philosophical Association Central Division Meeting in Chicago for 2009 (Dennett and Plantinga 2011, 1-2).

¹⁰⁹The problem, as Charles Hartshorne notes, is that *[a] theological paradox, it appears, is what a contradiction becomes when it is about God rather than something else, or indulged in by a theologian or a church rather than an unbeliever or a heretic. See The Divine Relativity, 1.*

¹¹⁰This may be motivated, for example, by the position that human minds (allegedly) lack the necessary capacity to know, or decide questions about, a transcendental God (or *ground*) using their limited rational faculties. Since the human mind (including that of the biblical theist?) cannot understand the work of God (Ecclesiastes 11:5, 8:17; Isaiah 55:8–9), it is useless to try to apply our limited human knowledge, understanding, and/or reason to things we can’t possibly understand and make sense of. But, the theistic believer is inconsistently claiming to also have some

thing that in is question (or, being undermined). Moreover, to speak of the limits of reason and/or language is to promote the understanding/knowledge that we do not (and/or cannot) understand/know (this itself is a blatant contradiction)—a self-defeating epistemology that uses mystery to account for mystery (this itself is a form of circular reasoning). Accordingly, in an important sense, the alleged *paradoxical* nature of theistic faith rests on the very thing that is being challenged—contradiction and/or unsound reasoning.

Unfortunately, armed with such contradictions and unsound reasoning found in interpretism or antifoundationalism (usually as a social constructivist or postmodernist response), the religionist (inconsistently appealing to a relativism at odds with his/her religious absolutism) may seek to dismiss the critical thinker here as someone who is no better, since he or she *worships at the altar of reason*. But this only pushes our discussion from the problem of drawing the line between *the static nature of divine eternity* and *the dynamic character of the physical universe* to an underlying dispute between *reason* and *faith* (or *belief*). Accordingly, persons refusing to conform to reason (logic/rationality) may *reason* that the progress sought in this discussion cannot be achieved by appealing to *reason* because reason does not trump faith. But this is problematic, since we would be using reason to defeat reason—thus begging the question. So, if the claim that reason does not trump faith is itself derived by reason, then we are using the very thing we are arguing against. On the other hand, if the claim is itself derived by faith, then we are engaged in circular reasoning—where faith (which is itself in question) somehow establishes faith. Since either result is untenable, we can thus reject the claim that reason does not trump faith.

Moreover, even if our debate were to be characterized as relying exclusively on matters of faith (or belief), the issue remains whether the beliefs appealed to are true and/or there are good reasons and arguments for believing so.¹¹¹ For, by itself the belief would fail to elucidate the *right* belief, since we could not show how we are to choose between competing beliefs. In the end, all of this would trivialize matters of faith (or belief). Besides, we would not always be sure of, or in agreement about, the beliefs of the many prevailing religious authorities or faiths, or on how these would treat diverging or new beliefs. For history has shown that some may not fare well in such a scenario, if the authorities or faiths are (as it is often charged) *class-conscious, racist, oppressive, fascist, prejudiced, unjust, or pathological*.

Finally, drawing on a medieval distinction, we may pit the faith with which we believe (i.e., *believing*—traditionally understood and simplified as *fides qua*) against the faith of what we believe (*believing in*—traditionally understood and simplified as *fides quae*)—revealing an underlying ontological foundation for a dynamic versus a static view of faith. The bifurcation of faith as *fides qua* and *fides quae* is attributed to St. Augustine, who wrote: *But that which is*

capacity to know, or decide questions about, a transcendental God. For, how are we to justify the theist's very admonition that human minds have limited rational capacities? To be sure, if these epistemological claims are themselves derived by human knowledge, understanding, and/or reason, then the theistic believer is guilty of using the very thing that is disallowed. On the other hand, if the claims (blatant contradiction with Ecclesiastes 11:5, 8:17 and Isaiah 55:8–9 aside) are themselves derived by faith/revelation (Psalm 19:1; Romans 1:20; 1 Corinthians 13:12; Proverbs 3:5–6), then the theistic believer is engaged in circular reasoning—where faith/revelation (which is itself in question) somehow establishes faith/revelation (which, in the extreme, amounts to mystery somehow establishing mystery).

¹¹¹Talavera, *Science and Religion: Drawing the Line*, 4, adapted.

*believed is a different thing from the faith by which it is believed.*¹¹² To be sure, that which is believed is the unchanging objective content (e.g., the stabilizing body of belief: sound doctrine, eternal truth, or the content of Holy Scripture) that provides the reasons or understanding why one has faith in God. In contrast, the faith by which it is believed is a changing personal experience—characterized by the individual’s actions or decisions of faith. As Augustine once noted, believing is not for the sake of reaching faith by means of reason or understanding (*...do not seek to understand in order that you may believe, but believe in order that you may understand.*¹¹³). To be sure, it is not sufficient to simply understand why one believes in order to have faith in God, because faith also requires action (James 2:14-18). In contrast, since sound doctrine, eternal truth, or the content of Holy Scripture is what God has revealed for believers to understand, it is not sufficient to simply possess a vague trust that is devoid of reasons or understanding (1 Peter 3:15; Acts 18:4; Acts 8:28-38). Otherwise, one would be stricken silent when faced with the question: *Why do you believe?*¹¹⁴ Agreeing with Augustine, Anselm (1033–1109), writing in another era, would say that all this reduces to faith seeking understanding (*fides quaerens intellectum*).¹¹⁵

Nevertheless, believing for the religionist may take the form of an idiosyncratic spirituality where *it is what the individual says it is* (e.g., the individual maintains that faith is a *miracle* or a *gift* from God; the individual ignores reason or understanding altogether holding to a fideistic view; the individual’s *belief* is a *personal decision* to not reason or understand; or, in the extreme, the individual’s believing is characterized by Kierkegaard’s¹¹⁶ Existentialist Philosophy of Faith—a *leap of faith* by virtue of the absurd). Pitted against the religionist that adheres to Anselm’s motto, one may grant that faith as believing in does not typically stand in the same close relationship to the personal experience that an idiosyncratic spirituality demands, and it is to that extent more *absolute* (a mode or identification of constancy) or less subject to temporal risk, decision, and action (a mode or identification of change). Accordingly, under careful scrutiny one may note that a faith informed by understanding may be taken to be *unwaveringly objective and universal* (i.e., it is a mode or identification of constancy); whereas, an idiosyncratic spirituality (since it is subjective and personal—characterized by temporal choice and freedom, dynamically renewed by means of repeated affirmations of faith, and meaning different things for different people) is typically not (i.e., it is a mode or identification of change). So if, as I argue, the difference seems at bottom to be temporally based, any sharp boundary between faith seeking understanding (faith as believing in) and a highly idiosyncratic spirituality (faith as believing) is, perhaps, no more than a function of time.

The foregoing suggests, therefore, that the traditional view on where the distinction is to be drawn merely reflects the problem of the bifurcation of time, and its limitations. For, since in the distinction between formulations of faith a kind of dichotomous gap appears between an underlying (mode or identification of) constancy and an underlying (mode or identification of) change, Augustine’s bifurcation of faith reveals a bifurcation that correlates to a temporal rift

¹¹²*On the Trinity* (Latin: *De Trinitate*), XIII, 2, 5. See Philip Schaff’s *Nicene and Post-Nicene Fathers: First Series, Volume III--St. Augustine: On the Holy Trinity, Doctrinal Treatises, Moral Treatises*, 169.

¹¹³In his *Sermon* (Latin: *Sermo*), 43.7, 9. See Paul Helm’s *Faith and Understanding*, 27.

¹¹⁴Adapted from Father Mauro Gagliardi, *Believing, and Believing in*.

¹¹⁵Proslogion. In *The major works*, 83.

¹¹⁶See Søren Kierkegaard (1813-1855) in *Existentialist Philosophy* (Gould and Truitt); and, *Existentialism: From Dostoevsky to Sartre* (Kaufmann).

between constancy and change. And any prejudice for either the *fides quae* or *fides qua* formulation amounts to a form of reductionism that may result in either an escape from (a mode or identification of) constancy or an escape from (a mode or identification of) change. Moreover, because of the bifurcation of time, we would also need to disentangle the constant nature of faith/belief from the changing, which in the extreme underwrites the fallacy of misplaced temporality in theistic religion. So, for instance, the *understanding* that real faith (as dynamic) requires that the believer *not understand*, circularly points to the self-sabotaging reasoning that what changes must stand in an absolute (as unchanging and objective: a mode or identification of constancy) relation to God (as unchanging and objective: a mode or identification of constancy). Hence, invoking such a relation amounts to relying on the very thing that is undermined or condemned by such a faith: unchanging objectivity). Nor, can the theist *have the cake and eat it too*—claiming that *...there are [no] two separate forms of faith, each which can exist without the other; rather they are two inseparable aspects of the unique virtue of faith.*¹¹⁷ For, in matters of faith/belief, we cannot consistently silence faith to make room for understanding God and (at the same time and same sense) silence our understanding of God to make room for faith.

Accordingly, (exhausting all possibilities) the theist would have to be centrally concerned with faith as the point of origin upon which reason or understanding rests; or, reason or understanding as the point of origin upon which faith rests; or, faith that ignores reason or understanding altogether; or, reason or understanding that ignores faith altogether; or, faith that holds the Church together as the one stable doctrine or truth. So, given the bifurcation of faith (which in the extreme may privilege one aspect of faith over another) we would also need to disentangle the constant nature of faith/belief from the changing, which in the extreme underwrites the fallacy of misplaced temporality in theistic religion. This is because, more fundamentally, this is just the problem of the bifurcation of time, and its limitations in disguise.

The upshot is that we would either need to silence change to make room for constancy; or, we would need to silence constancy to make room for change. For, these diametrically opposed aspects of time cannot occur in the same sense at *same* time; or, cannot occur timelessly (at the *same* time), begging the question by relying on the very thing that is disallowed—time. Although this admission of flagrantly duplicitous or inconsistent behavior does not offer immediate solace to our problems of the bifurcation of time and/or the fallacy of misplaced temporality, on the whole I conclude that concerning both aspects of true time (change and constancy) there has been a partial vision in Western Philosophy, traditional and modern Science (as natural philosophy and epistemology), and Theistic Religion that, taken to its extremes, has lost sight of the true meaning and experience of time.

¹¹⁷Gagliardi.

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