Are Psychology's Main Theories and Methods Biased Against Its Main Consumers?

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Until recently, the *conflict thesis* dominated our understanding of the historical relation between science and religion (Russell, 2002). Historians themselves generally viewed science and religion as essentially conflicting on almost any major conceptual dimension: reason versus faith, objectivity versus subjectivity, and natural versus spiritual (Nelson, this issue; Wilson, 2002). More recently, however, many historians have favored a more complex view of this important relation. They now recognize many historical "integrations" and alliances of science and religion as well as the diversity of ideas within each field (Russell, 2002).

Psychology's changing relation to religion has seemed to parallel this changing historical view of integration. Early in psychology's twentieth-century development, mainstream psychology appeared to have little to do with religion; psychologists considered religion to be a nonscientific, and thus completely different, subject matter. However, the work of Gordon Allport (1950) and others reprised the work of William James (1902), beginning the modern version of the psychology of religion. Now, many psychologists view not only the claims and practices of religious people as legitimate psychological subject matter but also the scientific method as the best way to investigate this subject matter.

The purpose of this article, the third in a four-part argument, is to examine some of the more problematic aspects of this relatively recent integration of psychology and

religion. Even if we grant the newer, more complex view of this relationship, its complexity does not rule out important conflicts that would need to be taken into account when conducting psychological research on religion. As Reber (this issue) noted in his article, these issues are critical to psychology for a number of reasons, including the fact that psychology's consumers are overwhelmingly religious. Further, as Nelson (this issue) observed, there are historical reasons to suspect important conflicts as part of this current relational complexity.

Specifically, psychologists often make different assumptions than religious people about human nature and the world. This article attempts to explicate many of these conflicting assumptions, especially as they affect psychological methods. Therapeutic and experimental methods are frequently viewed as theologically, if not philosophically, neutral to the subject matter they are investigating. This article aims to dispel this common myth. To discover or highlight these "hidden" assumptions of traditional methods, they are first contrasted to the assumptions of interpretive practices. However, interpretive practices are themselves often viewed as theologically neutral. Consequently, psychological methods are also compared to a theistic mode of inquiry that assumes that an active God is necessary to proper investigation.

The Myth of Neutrality in Therapeutic Methods

At the outset, it is important to understand that this article focuses more on the ideas "behind" psychology's ideas – their assumptions – rather than on the ideas themselves. Assumptions are the often taken-for-granted ideas that are logically necessary for a psychological idea to be valid or successful. For example, it is now widely acknowledged that the traditional behavioral concept of reinforcement assumes

that the environment is the causal determinant of all animal behavior, including human behavior (Slife, Yanchar, & Williams, 1999). Many behaviorists have explicitly admitted this assumption. B. F. Skinner, for example, made clear that: "behavior is wholly determined. It is controlled by the environment" (Rychlak, 1981, p. 439 - 440).

However, behaviorists have rarely defended or developed such assumptions because they are frequently philosophical in nature. To defend philosophical assumptions, such as free will and determinism, requires expertise and training that most psychologists do not have (Slife, Reber, & Richardson, 2005). Also, these assumptions are typically not provable or testable in any conventional scientific sense because they underlie and are assumed by what *is* scientifically tested. Skinner (1976) again illustrates this because he realized that he never observed determinism in his data: "we can never *prove* that man isn't free; it's an assumption" (p.242). For these reasons, most psychologists, regardless of their theoretical stripes, have focused on the "surface" of their theories and methods, often neglecting the deeper, philosophical assumptions that make these theories and methods possible.

This neglect has led not only to an impoverished understanding of these ideas but also to a widespread *myth* in psychology – that surface psychological ideas are far more neutral or unbiased than they really are. Many Christian counselors, for example, use behavioral methods with their clients (e.g., Dobson, 1996). Although many such counselors consider the theoretical assumptions of behaviorism to conflict with the assumptions of Christianity (cf. VanderStoep, 2003), they view behavioral techniques as separable from their assumptions (Dobson, 1996; McLenore, 1978). The lesson taught to many counselors, implicitly or explicitly, is that assumptions may bias a *theory*, but a

therapeutic *technique* is divorceable from these biases, and thus can be viewed as essentially unbiased or neutral (Held, 1995; Lazarus, 1995).

The problem is, as many scholars have observed (e.g., Bergin, 1997; Richards & Bergin, 2004; Ricoeur, 1981; Rychlak, 1981; Slife, Williams, & Barlow, 2001), therapeutic techniques require theoretical frameworks and philosophical assumptions to be applied. Unless therapists are "mechanicatropes," as Allen Bergin (1997) has derisively characterized inflexible therapists who refuse to deal with client differences, a theory is necessary to guide the tailoring of techniques to clients. Client diversity and changes across time require therapeutic variations that rigid techniques cannot accommodate. The conceptions "behind" the techniques are necessary to adapt the techniques to unique client needs. A new or even an implicit theory can, of course, guide a particular technique. However, techniques are always under *some* theoretical management because their responsiveness to clients requires some kind of guiding framework, however explicit of implicit.

Part of this guiding framework involves the theoretical assumptions made, which have important practical implications. If, for example, environmental reinforcements ultimately determine all behaviors, as some radical behaviorists assume, then a well-known implication of this assumption is that humans cannot be held personally responsible for their actions, good or bad (Rychlak, 1981; Slife & Yanchar, 1999). Humans are controlled ultimately by natural laws, much as a boulder rolling down a mountain. We do not say "good boulder" when the boulder rolls past a hiker without crushing her because natural laws controlled the boulder's "actions;" it cannot have acted otherwise. Another implication is that notions of good and bad themselves lose meaning

with determinism, because the natural forces that control boulders and human behavior occur without regard to morality. The point is that all therapeutic techniques are underlain with philosophical and moral assumptions that entail unproven biases, whether or not psychologists are aware of them.

Conflict with Theism

If this analysis is correct, then psychological theories and techniques can also contain biases that have important implications for religious perspectives. The focus of this article is theism, where good/bad distinctions are not trivial and human agency is generally endorsed (Richards & Bergin, 2004). Indeed, theism implies not only the existence of a God but also divine activity in the psychological events of this world (Plantinga, 1997). If all therapeutic techniques require theories and assumptions to guide them, then all the theories that guide techniques could be at variance with, to some degree or other, the assumptions and values of theism.

Actually, some variance seems likely, given the pervasive naturalism of psychology (Collins, 1977; Richards & Bergin, 2005; Slife, 2004). As Nelson (this issue) has shown in the history of psychology, ontological naturalism was considered to ground science when psychologists looked to the natural sciences as their models for explanation and investigation. The historian of psychology, Thomas Leahey (1991), also concurs because naturalism is "science's central dogma" (p. 379). This philosophy has been defined in various ways, depending on its context. However, two common features of many of these definitions can serve as our core understanding of naturalism in this article – its godlessness and its lawfulness.

First, naturalists explain and interpret the objective world as if reference to God is irrelevant or superfluous (Griffin, 2000; Plantinga, 1997; Slife, Mitchell, & Whoolery, 2004). The world is thought to occur as if its operation happens autonomously, as a result of its own independent processes. The "lawfulness" feature of this philosophy involves the most popular understanding of this godless operation: natural laws and principles autonomously govern the many processes and events of the world (Griffin, 2000; Plantinga, 1997; Ruse, 1982). We could, of course, postulate some form of deism where God created the laws and is currently passive. Deism and naturalism have formed many past and present alliances of this sort, because they both imply that God is not *currently* active in world events. The problem is that theism *does* imply this current activity (Plantinga, 1997).

Overlooking the Conflict. Perhaps surprisingly, many theistically oriented psychologists seem to have overlooked this naturalistic grounding of psychology. As mentioned, many pastoral counselors and religious researchers proceed with psychological theories and methods as if they were neutral to theological issues. Yet this disciplinary grounding would appear to be in direct conflict with theism. Even in its weakest form, naturalism assumes that God is not required for complete knowledge of the natural and social world. Many psychologists may have mistakenly assumed that "not required" implies a kind of theological neutrality. In other words, if God is not required, then no bias toward or against any particular view of God is involved.

The problem is that this naturalistic worldview, even in its weakest form, differs substantially from a theistic worldview. Theism means that God *is required* for a complete understanding of the world, because God is currently active in world events

(Plantinga, 1997). Theism is thus excluded from any set of naturalistic conceptions in which God is not required. Some scholars have attempted to make naturalism and theism compatible through dualisms, such as dividing the natural from the social world (Wacome, 2003) or separating the soul/mind from the body (Descartes, 1641/1952), with God involved in one sphere but not in the other. However, such dualisms always founder on the obvious and rich relationships between the two spheres. The human brain, for example, is often viewed as part of both spheres (Hedges & Burchfield, 2005).

Perhaps more importantly, dualisms do not resolve the incompatibility of naturalism and theism because they interface the two philosophies by *recognizing* their incompatibility. In other words, the extent to which dualisms work is the extent to which they assign these two philosophies to separate realms, separate "corners of the universe" – Descartes (1641/1952) separating the soul or mind from the body, and Wacome (2003) separating human experience from nature. The fundamental premise of these dualisms is that the two philosophies apparently cannot co-exist in the same time and place. No dualism would be necessary if they were really compatible.

The bottom-line, for our purposes, is that naturalistic theories of psychology have been formulated to understand only one side of this dualism – the godless side (Hedges & Burchfield, 2005; Slife & Hopkins, 2005), making their conceptual foundations incompatible with the God-filled side of theism. As the philosopher Griffin (2000) concludes in his review of naturalism, "Most philosophers, theologians, and scientists believe that scientific naturalism is incompatible with any significantly religious view of reality" (p. 11).

Conflict in Assumptions. This conflict between psychological naturalism and religious theism becomes even clearer when one examines the particular assumptions of these philosophies. Richards and Bergin (2005), for example, list a number of naturalistic assumptions of mainstream psychology, including determinism, atomism, materialism, hedonism, and positivism, which they view as incompatible with theistic assumptions, such as free will, holism, spirituality, altruism, and theistic realism.

Space limitations prevent a full explication of these assumptions here. Other scholars have accomplished this elsewhere (Collins, 1977; Richards & Bergin, 2005; Slife, 2004). As an illustration, however, consider the prevalence of the naturalistic assumption of hedonism in virtually every mainstream theory of psychology (Rule, 1997; Slife, 2000; Slife, 2004). Because hedonism is often viewed as integral to the survival mechanism of naturalistic evolution theory (Shaver, 1998), it is considered a natural law of sorts: animals that routinely seek pain invite extinction. Consequently, the construct of behavioral reinforcement assumes the ultimate motive of all animals is pleasure and the avoidance of pain, no matter how sophisticated the animal (e.g., striving for happiness). Many Freudians reason similarly, assuming the *pleasure principle*, while many humanists are interested more in *self*-actualization than in *other*-actualization.

Even therapeutically oriented theories, such as cognitive-behaviorism, have been concerned with self benefits, including the importance of engaging in pleasant activities (Beck, Rush, Shaw, & Emery, 1979). As Aaron Beck has made abundantly clear, "the goal of cognitive therapy is to relieve emotional distress and the other symptoms of depression" (Beck et al., 1979, p. 35). Indeed, cognition itself is thought to be organized around the evolutionarily derived interests of the individual. Cognitive schemas, as they

are called, cluster around “primal modes” that have “evolved to deal with the most basic needs of the organism” (Clark, Beck, & Alford, 1999, p. 89). As Aaron Beck (1999) puts it, "self-protection, as well as self-promotion, is crucial to our survival” (p. 6).

Moreover, none of the mainstream theories of psychology explain “helping behavior” without invoking some kind of benefit to the self. Ultimately, the helpers *must* derive some sophisticated pleasure out of helping (e.g., good feelings). Otherwise, helping behaviors would presumably not occur. This naturalistic assumption obviously conflicts with the altruism urged by many theists (e.g., Plantinga, 1997; Slife, 2005). Indeed, true altruism, which assumes that the ultimate motive for helping behavior can be the benefit of the other, is impossible from a naturalistic perspective (Monroe, 1996; Slife, Mitchell, & Whoolery, 2004). Of course, no theist would assume that it is *impossible* for humans to act selfishly, but virtually all theists would presume that humans can, especially with the help of God, possess truly and ultimately altruistic motives.

The upshot is that there are real and substantive differences between theistic and naturalistic worldviews. Although the absence of God in a naturalistic worldview is often interpreted as a neutral theological stance, this worldview contrasts sharply with a theistic worldview where God is considered present. Of course, secular disciplines, such as psychology, are supposed to provide explanations and theories that exclude divine influences. Nevertheless, this secularism does not make these explanations theologically neutral. They ultimately imply that God is not necessary to the world being explained, a theological bias with which a majority of psychology’s main consumers – theists – would disagree (Richards & Bergin, 2005).

The Myth of Neutrality in Research Methods

Another category of psychology's methods is typically considered impartial or neutral – traditional research methods of science. Experimental, quasi-experimental, and correlational methods are all viewed as essentially objective or transparent, and thus do not affect the world they supposedly reveal (Heiman, 1995). Most psychologists, for example, believe that the scientific method can decide the best therapies through comparative studies of different psychotherapies, because they assume that the methods used to investigate different therapies are not themselves biased toward any particular therapy (Messer, 2001; Slife, 2004). However, similar to therapy methods, mainstream psychologists have routinely dealt with only the surface conceptions of research methods, the conceptions usually described in methods texts.

Parallel to therapeutic methods, which require theories to guide their applications, psychological methods have philosophies of science that guide their applications (Bernstein, 1983; Bem and de Jong, 1997; Bohman, 1993; Curd & Cover, 1998; Feyerabend, 1975; Heelan 1983; Kuhn, 1970; Rorty, 1979; Slife & Williams, 1995; Taylor, 1985; Toulmin, 1972). Researchers may assume that they are merely following the "rules" of research or science, much as therapists assume that they are merely following the rules of a therapeutic technique. Still, neither set of rules was created *ex nihilo*. They both originated from assumptions that still guide, however implicitly, the "rules," and thus the application of the methods. The formulation of any method must assume, before any investigation, a certain type of world in which that method would make sense and be fruitful.

The problem is that when these assumptions are *already* assumed to be correct (as they must be for any method to be formulated or applied), they are not themselves the objects of test; they are parts of the test itself. For instance, the notion that methods should be observable is never itself empirically tested, because this notion is part of what it *means* to test. Indeed, the doctrine of observability is not itself empirically testable because this doctrine is not itself observable. It is part of a philosophy, or more specifically, an epistemology.

Some might claim that this epistemology has been successful. However, it must be remembered that this claim of success is merely a claim – an opinion – however widely it is held. No scientific evidence can be gathered to substantiate this claim without already assuming the validity of the scientific method in the first place. For this reason, natural science methods may provide empirical justification for certain psychological theories, but they provide no empirical justification for themselves and the epistemological and ontological assumptions that ground them.

What, then, is the unproven philosophy that underlies these natural science methods? Given the influence of naturalism in psychology's historical origins, could naturalism be involved in the implicit philosophy of science that is currently guiding both the formulation and application of psychology's research methods? As Dr. Nelson's paper argues and many observers and historians of psychology seem to agree (Collins, 1977; Griffin, 2000; Honer & Hunt, 1987; Leahey, 1991; Viney & King, 1998), the philosophy underlying the natural science methods of psychology is ontological naturalism.

As we will see, however, the situation concerning research methods is more complex than that of therapeutic technique (above). Many historians and philosophers separate ontological from methodological naturalism (cf. Davis & Collins, 2002), with the latter supposedly devoid of many of the problematic assumptions of the former (Plantinga, 1997). Nelson (this issue) described in his article how these scholars allow for the possibility that many research methods are nonreductively naturalistic in ways that permit theological neutrality. Ontological naturalism, on the other hand, is commonly viewed as reductive, and thus atheistic, naturalism. As Griffin (2000) notes, "The atheism of this worldview, besides denying any transcendent source of religious experiences, combines with the reductionism to rule out the idea of a divine creation of the world and even any divine influence in the world" (p. 14).

Griffin (2000), as it happens, is one of the few to explicitly describe a nonreductive naturalism that he believes is compatible with such a "divine influence," including theism.[1] Space limitations prohibit an explanation of its postmodern (Whiteheadian) philosophical tenets here. However, we should note that variations on these tenets have important method implications, because many interpretive researchers claim nonreductive forms of naturalism (Bohman, 1993; Gadamer, 1995; Ricoeur, 1981). Could some form of nonreductive naturalism also undergird the natural science methods of the psychology of religion? Our focus on research methods makes this question especially relevant because many psychological scientists have presumed that the naturalism of their methods is essentially nonreductive, and thus essentially neutral to

[1] Plantinga (1997) also describes a variation on Duhem's thesis that he believes is not ontologically naturalistic.

theological claims. Therefore, it is important to know whether the assumptions of psychology's mainstream methods are reductively or nonreductively naturalistic.

Reductive Versus Nonreductive Naturalism

To address this issue, Slife (2005) has reviewed key practices of mainstream psychological researchers to examine whether they are underlain with the assumptions of reductive naturalism. We adapt this review to the issue of theism and the psychology of religion here. Specifically, assumptions that Griffin and others have identified as reductively naturalistic are here examined in three categories: objectivism, materialism, and reductionism.[2] To help illuminate these reductive assumptions and their practical implications, we contrast traditional method practices to the practices of interpretive researchers that are widely acknowledged to be nonreductive (e.g., Gadamer, 1995; Packer & Addison, 1989). This comparison should help to resolve the issue of whether psychology's investigative methods are truly underlain with and guided by ontological naturalism.

Objectivism. The first category of ontological naturalism is objectivism. In its most basic form, naturalistic objectivism is the study of "objects" that are external to the observer's mind. In other words, the ultimate subject matter of natural science methods is not subjectivity – the mental world of opinion, biases, values, and feelings. The subject matter is the objective world that presumably occurs *outside* our subjectivity – the natural world in its pristine form – and thus the world *without values*, including our religious values (Evans, 1989; Ruse, 1982; Slife, 2004). This dualism is an assumption of

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[2] Compare these categories to Ruse's (1982) definition of naturalistic science: repeatable, merely natural, and governed by natural law. Also, compare these categories to, in Plantinga's (1997) words, the "metaphysical assumptions that divide" ontological naturalism from "methodological neutralism," including the assumptions "that human beings are material objects," "dualism," and the "deterministic assumptions that seem to underlie much social science" (p. 11).

ontological naturalism that helps researchers dismiss the activity of God in "objective" or "natural" events, because these events supposedly occur outside our subjectivity where religion supposedly resides.

Still, the question should be asked: what allows these ontological naturalists to think that researchers can get outside their "subjective" values to study these natural objects objectively? As virtually all the texts on psychological research methods proclaim (e.g., Heiman, 1995), natural science methods are considered the chief tool for accomplishing this task because they work toward eliminating the biases and values of subjectivity, either through experimental control or precise measurement, or some combination of the two (Aiken, 2003; Haslam & McGarty, 2003).

Consider for a moment the implications of this objectivism for researchers who are theistic. In their best methodological mindset, these researchers are working to eliminate their religious values. These values are not allowed to inform them about: what method design is best to use, how best to operationalize the constructs of the design, or even how to interpret their findings. From this aspect of reductive naturalism, these researchers are never permitted to call on what they consider the truth in conducting their studies. They are to follow, instead, the logic of these methods, which includes the elimination of any religious values and assumptions they might have.

Contrast this objectivist mindset to nonreductive, interpretive methods. Whereas values and biases are "bad" in natural science methods because they supposedly distort objective description and true knowledge, biases and values are considered not only *inescapable* in interpretive methods but also *necessary* to true understanding (Gadamer, 1995; Packer & Addison, 1989; Slife, Smith, & Burchfield, 2003). Mainstream

psychologists often project their own dualism onto interpretive methods and assume these methods pertain to a different domain than natural science methods – subjectivity rather than objectivity. However, interpretive researchers do not assume this dualism and thus do not separate these domains. Even the so-called "objective" natural world is interpretively known. In this sense, interpretive methods are not distinguished by a different domain of inquiry but by a different philosophy of science, including the notion that no method can proceed without interpretive biases of one sort or another.

From this perspective, saying that natural science methods are objective is like saying that multiple-choice tests are objective. Neither multiple-choice tests nor natural science methods are value-free, or even strive to be as free of values as possible, because both are structured through and through with the biases, values, and assumptions of their authors. Yet, method practices and research reports in the psychology of religion continually neglect to mention these structured biases, portraying the logic of these methods as if they transparently reveal the world they are investigating – the world of religion. The obvious reason for this neglect is the objectivism of the ontological naturalism underlying these methods.

Materialism. Consider also the ontology of materialism in this regard – the notion that matter is all that fundamentally matters and is real. In other words, the important and valued things in science for the reductive naturalist are the tangible, visible, and substantial. This value makes it impossible, for instance, for a theistic "Holy Spirit" to matter in this methodological context. Materialism manifests itself in psychological method through the traditional natural science notion that only the material and thus observable are knowable. That is to say, materialism is typically linked in psychology to

the primary epistemology of science – empiricism. Only our sensory experiences can supposedly be known (empiricism), so only tangible and observable materials can supposedly be candidates for knowledge (materialism). The widely endorsed definition of psychology as "the study of behavior" can be viewed as a product of this naturalistic assumption (Heiman, 1995). From a materialist/empiricist perspective, behavior is all that can be reasonably observed and thus studied.

The problem is that much of what psychologists want or need to study, such as attitudes, memories, and meanings, cannot be directly observed. Consequently, materialism requires the widespread method practice in psychology that *non*material constructs be *operationalized* – made into material things such as behavior – so they *can* be observed. The prevalence of this method practice does not exclude research on religion. If, for example, psychology of religion researchers were interested in agape love, they could not study this love directly; they could study only the operationalizations or manifestations of this love, such as hugs, rather than the actual love doing the manifesting.

Contrast this materialist assumption of method with the nonreductive assumptions underlying many interpretive methods. The province of these researchers is *lived* rather than merely *sensory* experiences, so they do not narrow or reduce experience to the observable and material only. They consider their source of knowledge to be the *entire* spectrum of lived experience or meaning, which includes not only experiences of our senses, as in conventional empiricism, but also experiences of our thoughts, feelings, and even spiritual events – in the tradition of William James (1902/1935, 1912). Although it is true that interpretive researchers often attempt to specify and clarify their findings, they

do not "operationalize" in any conventional materialistic or observable sense. They know that most important topics, such as love, cannot be represented in observable and material ways. Hugs may accompany agape love, for example, but hugs can occur without such love and such love can occur without *whatever* is the specified operationalization of this love.

Perhaps more importantly, a crucial aspect of many religious topics is their meaning, and meaning does not fall on one's retina. The story line or meaning of a book, such as the Koran or the Bible, is not the printed word we observe; it is the *non*observed experience of the relations *among* the printed words (not to mention the interpreter). For this reason, vital aspects of all religious experiences are either omitted entirely or considered secondary in conventional, reductive methods, when they are the primary focus in nonreductive methods. In this sense, the prevalent practices associated with observability and operationalization in mainstream psychological methods point to their clear materialist, and thus reductive, underpinnings.

Reductionism. Reductive naturalism also assumes that all change is ultimately reducible to, or governed by, unchangeable natural laws and principles (Griffin, 2000; Ruse, 1982; Slife, 2004). Reduction implies, first, that everything is ultimately determined, with the unchanging controlling the changing. This reduction is, of course, the root of behavioral determinism, as discussed above. From a traditional behavioral perspective, the environment-behavior ($S \rightarrow R$) relation is a lawfully governed relation, like any other in the natural (objective) world. This reduction also implies that these unchangeable and universal natural laws and principles are the most fundamental realities of the world (Griffin, 2000; Sanders, 1994; Slife & Williams, 1995).

As a result, natural science methods have been formulated to detect these unchangeable and universal laws. The need for replication and repeatability in psychology is perhaps the most obvious manifestation of this formulation of the scientific method, because unchangeable natural laws should be detectable and repeatable (under the same conditions). As researchers of extra-sensory perception (ESP) can attest, a lack of replicability is construed by psychologists as a lack of real or ultimate existence (Reinsel, 1994). Nonrepeatable religious phenomena would, of course, be treated similarly. Moreover, the importance of standardization and reliability in the psychology of religion (Murphy, 1990; Spilka, Hood, Hunsberger, & Gorsuch, 2003) also follows directly from the same need. Without replication, standardization, and reliability – as the naturalistic logic goes – research findings cannot reveal the ultimate realities of the world: reductive natural laws and principles.

Unfortunately, psychologists can boast of few natural (or social) laws, despite over a century of using these methods. Still, psychologists consider true knowledge to approximate this universality and unchangeability (Slife, 2004). Reductionism has led psychologists to formulate their theories as if they were universal and unchangeable (e.g., theories of personality or memory), with the hope that these theories would one day be tested and found to be valid. Therefore, the aim of testing theoretical principles has guided the practices of most psychology of religion researchers and mainstream methodologists (Spilka, et al., 2003). Reductionism has turned these practices away from the potentially changeable, lived experiences of religious people and turned them toward the replicable, standardizable, and reliable objective and material aspects of their sensory experiences.

As a contrast, consider that many interpretive methods require none of these reductive, unchangeable characteristics in their studies (Schwandt, 1994). Rather than assuming that the most fundamental knowledge is universal and unchangeable (or generalizable) across individual contexts and situations, many interpretive researchers assume that at least some fundamental knowledge is inherent in the particular, and thus not all or even most contexts. Spiritual experiences, for example, are rarely meaningful without unique and particular contexts (James, 1902/1935). Indeed, many interpretive researchers contend that pivotal aspects of individual meanings also have contextually particular characteristics (Gadamer, 1995). Hence, looking for the replicated, standardized, and reliable may prevent psychological researchers from understanding important aspects of religious experiences and practices. In this sense, the significance of these characteristics and practices for the natural science methods of psychology is a testament to the significance of the reductive naturalism that grounds them.

At this point, our comparison across the objectivist, materialist, and reductionist aspects of reductive naturalism should be sufficient to expose the ontologically naturalistic underpinnings of mainstream method practices, such as the elimination of biases (objectivism), the restriction to observables and operationalizations (materialism), and the necessity of replication and reliability (reductionism). If methodological naturalism was the intended grounding of these methods, it seems apparent at this juncture that ontological naturalism underlies this methodological naturalism – epistemology assumes ontology. After all, why would one ground a method in naturalism unless the method was meant to be successful in a naturalistic world?

Still, this comparison between reductive and nonreductive methods omits a central issue in the theism/naturalism controversy – the activity of God. Even if nonreductive, interpretive methods *can* include this divine activity, as some scholars have claimed (Griffin, 2000; James, 1902/ 1935; Plantinga, 1997), the fact is that they rarely do in psychology. These methods were formulated as if divine influences in the world (including scientific) events do not matter. If, however, a theistic worldview is correct, then psychological inquiry would be the most fruitful and successful when God's influences were taken into account.[3] A theistic method of this sort would also be helpful here because it could serve as another source of comparison. Similar to our comparison between the natural science and interpretive methods of psychology, it could potentially expose other problematic mainstream assumptions for the psychology of religion.

Unfortunately, we have found no such methods, outside or inside psychology. Even methods in the disciplines of religion and theology often do not formally assume God's activity in the performance of their procedures. Therefore, in the absence of such a method, we propose to briefly outline one here. If we could conceive of a seriously theistic line of inquiry in which God's activity is necessary to conduct a valid investigation, we could better understand the naturalistic biases of mainstream psychological methods. What would such a seriously theistic method of inquiry be like?

Theistic Inquiry

Philosophers of science have often considered the scientific method to consist of two basic phases: the context of discovery and the context of justification. The context of discovery involves the generation of the ideas, hypotheses, and topics to be studied.

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[3] The neutrality (or universality) of Plantinga's (1997) Duhemian approach to method would thus be less appropriate and less effective than a theistic approach in a theistic world. Theistic inquiry would be closer to what Plantinga calls "Augustinian science" (p. 14).

This first phase has traditionally been quite open to even frankly religious explanations (Evans, 1989). Brilliant ideas and insightful hypotheses have frequently been viewed unabashedly as "inspired" and even "a gift from God" (Slife & Richards, 2005, p. 10). O'Grady & Richards (2005) surveyed theistic natural and behavioral scientists in the United States and found that the majority had no problem believing that God inspires scientists and researchers in this discovery phase of research and scholarship.

However, the context of justification – what most scientists consider to be *the* scientific method – is another matter entirely. This context involves the procedures or logic that scientists use to test the ideas generated in the context of discovery. As Christian philosopher C. Stephen Evans (1989) put it, "Christian convictions must be put aside [in the context of justification]; here objectivity reigns . . . Distinctly Christian values do not reappear until knowledge is being applied" (p. 14). Christian values are put aside, as we have described, because the methods of justification were formulated with a godless, naturalistic world in mind. Researchers are allowed to have initial ideas that are inspired by God, but the methods for testing these ideas are decided by an epistemology that assumes God does not matter.

What would a method be like that assumes God is integral to the context of justification? Let us begin with the interpretive, hermeneutic insight – gleaned from our previous discussion – that no methods, whether therapeutic or scientific, occur without assumptions to guide them. In fact, there is unusual agreement among the observers and commentators of science that we will *never* escape assumptions and values – that *all* methods, *all* approaches to studying any phenomena will *always* require pre-investigatory assumptions and biases (Slife, Smith, & Burchfield, 2003). Indeed, even to *approach* a

phenomenon for the purpose of study is already to have decided or assumed: 1) that it is a phenomena, 2) that it deserves study, and 3) that it can be studied. The upshot is that debatable, pre-investigatory assumptions and values are inescapable for all methods. They will always govern to some degree what we see and how we interpret what we see.

Are we doomed, then, to confirm our own biases and never see the world for what it truly is? Answering this question has divided scholars into two distinct branches – those who answer it affirmatively and those who answer it negatively. Affirmative responders, often labeled "postmodernists" in psychology, inevitably move to some variety of relativism, because for them there is no way to distinguish among biases, except by way of someone else's biases. Needless to say, this relativistic framework for method is not appealing to the theist because theism assumes the existence of an ultimate truth, and thereby the notion that certain assumptions and values are bad and others are good.

For this reason, we would argue that the theist should be more interested in the negative responders. Scholars such as Alasdair MacIntyre (1981), Hans-Georg Gadamer (1995), Charles Taylor (1989), and Paul Ricoeur (1981) describe a hermeneutic approach to knowledge advancement where assumptions and biases are unavoidable. However, they do not doom us to mere opinion or relativism. Microscopes and telescopes bias their viewers by the particular way in which they illuminate the phenomena of interest, but this bias does not mean the phenomena are not illuminated. Bias, in this sense, just means that there is no knowledge that escapes a particular slant. The obvious utility of traditional methods, from this perspective, stems not from their bias-free nature, but from their application of a useful bias – reductive naturalism.

So far, however, this positive approach to biases and assumptions seems to do little to free us from the captivity of our biases. How can we learn the truth of a phenomenon and not just our pre-conceptions of it? The answer from many hermeneuticists (e.g., Gadamer, 1995) is that we somehow intuit that the phenomenon we are studying is not sufficiently explicated (or illuminated) by our methods, and thus our biases and assumptions about the phenomenon. This intuition leads us to adjust our methods and assumptions to better or differently illuminate the phenomenon and then engage it again in study. This tacking back and forth between engaged study of the subject matter and clarifying reflection about the best assumptions (or methods) for studying it is often called the hermeneutic circle (Gadamer, 1995; Richardson, Fowers, & Guignon, 1999).[4] In this sense, we never escape our biases, but we can replace them with better biases.

The problem is that an important issue arises with this approach: How is this intuition and replacement possible? How can we sense the inadequacy of our assumptions or biases for the phenomenon at hand? These questions are important because there is considerable theoretical, scientific, and historical evidence that humans cling steadfastly to their biases and assumptions as dogmatic, opinionated self-deceivers. Regarding theoretical evidence, virtually every major theory of psychotherapy describes some mechanism whereby people routinely become stuck in their biases and beliefs, from Carl Jung to George Kelly to Aaron Beck (Beck, 1999; Rychlak, 1981). Regarding empirical evidence, social science research is rife with studies indicating that we continually confirm our own biases, in our everyday lives *and* in our science (Nickerson,

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[4] This can also be understood as *dialogical*, in that the subject of study and the studier are "speech partners," mutually influencing one another (Taylor, 2002, p. 126).

1998). We attend first to what fits our assumptions and often elaborate only what we already know (Rychlak, 1994).

Historian and philosopher Thomas Kuhn (1970) called confirmation bias in science "normal science" because he believed it is the normal manner in which scientists proceed, solving the puzzles to which they already have answers. True paradigmatic change occurs only when the scientific community begins to sense the violation of their deepest assumptions and adjusts those assumptions accordingly. Although "paradigmatic change" has become a popular buzz term, Kuhn makes clear how truly rare this change occurs in science. Scientists constantly resist the recognition of assumption violations (research anomalies). Even when such violations or anomalies have been present for decades, they are often not "seen." Again, the question should be posed: Why would we ever, given these proclivities toward our own biases, notice their violation?

Those who have studied these violations label them variously, connoting their different philosophies. Gadamer (1995) labels it *surplus of meaning*; Ricoeur (1981) terms it *affectivity*; Levinas (1969) calls it *exteriority* or *alterity*; Heidegger (1982) refers to it as the *unveiling*; Taylor (1985) often puts it as *surprise*; Marion (2000) terms it *saturated phenomena;* and Faulconer (2005) considers it *interruption* or *rupture*. Nevertheless, all these varied scholars agree that somehow there is a rupture of our biased world that originates from *beyond* that world. We are quite capable of ignoring these ruptures, especially given our wish to remain safely and securely in the constructions of our own making. Still, if we are properly open and humble, these *other*-worldly ruptures can be experienced and given credence. When they are, they can lead to potentially major modifications in our fundamental assumptions and biases.

The problem with the insights of these scholars thus far is that they do not quite answer our question: How are we, as mere mortals, able to climb out of the safe, secure world of our assumptions and glimpse the other-worldly forces that persuade us to radically alter these secure biases? An important answer, emerging from phenomenology, actually fits the assumptions of the theist. Although still controversial, many phenomenologists are increasingly pointing to various forms of divinity as the source of this other-worldly rupture. Some observers are calling this improbable development the "theological turn" of phenomenology (Janicaud, Courtine, Chretien, Henry, Marion, & Ricoeur, 2000). We say "improbable" because phenomenologists are traditionally a scrupulously secular group, with little room for divinity of any kind.

Still, many feel they cannot ignore their data, which seem increasingly to reveal a divine bursting of our pre-conceptual bubbles. Emmanuel Levinas (1969) may be one of the more noted of these scholars, pointing explicitly to divinity as the *Other* of this assumption correction (p. 78, 88, 92, 211, 226). In discussing the "dialogue" between researchers and their subject matter, for example, Mikhail Bakhtin (1984) talks of the "invisibly present third party who stands above all participants in the dialogue" (p. 126). And when this improbable surprise or rupture prompts us to adjust our guiding assumptions, Gadamer calls this a "miracle of understanding" in which "religious concepts [are] thus appropriate" (1995, p. 145). Jean-Luc Marion is perhaps the most explicit when he identifies the intuition that transcends or exceeds our grasp as "revelation," with one type of revelation being "theophany." (Faulconer, 2005, p. 7; see also Marion, 1997, 2000).

What if this "theological turn" for understanding our understanding is true? It would mean that God is responsible for many of the ruptures that prompt us to change our theoretical and methodological assumptions and bring us closer to true understanding. This approach could apply to many methods, both formal and informal. For example, rupturing assumptions could occur in merely reading a book. Reading is often understood as informal hypothesis-testing where mature readers scan the text until their hypothesis/assumption is violated. They then reflect upon the violation, adjust their hypothesis accordingly, and re-scan the text until the rupture occurs again.

As it happens, virtually all formal methods are also thought to involve such hermeneutical circles (Gadamer, 1995). From this theistic understanding of science, both quantitative and qualitative methodologists *already* take advantage of this rupture, whether or not they acknowledge it. One would not have to believe in theism for God to work through your research, though it would be better if these methods were specifically formulated to take advantage of this divine activity. In this sense, a fully theistic approach to inquiry would likely have several characteristics that would distinguish it from naturalistic philosophies of method.

First, the conventional naturalistic notion that method is rule-following (Bohman, 1993; Feyerabend, 1975) is problematic from this theistic perspective. One would expect, at least at times, to question and replace core method rules (assumptions), rather than slavishly follow them. We say "slavishly" because one of the hallmarks of using a natural science method – the context of justification – is following rigidly the pre-arranged study procedure (Groth-Marnat, 2003; Heiman, 1995).

A fully theistic approach, by contrast, would be more phenomena-driven than method-driven. In other words, whatever served our understanding of phenomena, including changing the procedure and even the logic of science itself, would have the highest priority. Interestingly, some historians of science, such as Paul Feyerabend (1975), contend that many of the major contributions of the natural sciences occurred not by following the rules of the scientific method, but by breaking them. For some reason, these scientists were "prompted" to give more credence to the serendipitous and anarchic aspects of their findings. Feyerabend recommends that scientists should be ready at all times to violate the rules of method, especially if they wish to make a significant (paradigmatic) contribution to their disciplines.

This call for readiness raises a second implication of a fully theistic inquiry: researchers should maximize the possibility of assumption ruptures in their studies so that they do not merely confirm their own biases. This maximization would require a twofold knowledge or skill (Slife, Reber, & Richardson, 2005). First, researchers would need to explicitly become aware of their most cherished assumptions so that they *can* be violated, a practice that is distinctly missing from current naturalistic methods. Indeed, psychologists often proceed as if they have no assumptions and the data from their methods reflect an uninterpreted reality.

This common research practice is mainly because psychological investigators rarely have the second type of knowledge that is needed to maximize ruptures: alternative assumptions. When viable alternatives are realized, cherished assumptions can truly become assumptions, rather than truisms. Knowledge of alternatives allows current assumptions to be examined and even rejected if our ruptured experience "tells"

us we should. This knowledge could be a vital part of what many theistic systems call humility. As C.S. Lewis (1976) puts it, God is "the great iconoclast" (p. 76) – the breaker of our personal and reified images of the world. As such, a humility that allows these images to be broken would seem to be imperative to paradigmatic change in a theistic science.

This radical openness to our data leads to a third difference from natural science methods in psychology: we would have to engage rather than disengage in the phenomenon we are studying. Traditionally, researchers are taught that careful detachment or objectivity is the best approach to studying phenomena. However, as Charles Taylor (1989) has put it, this prevents us from taking advantage of the interruption that truly teaches us.

> . . . when we see something surprising, or something which disconcerts us, or which we can't quite see, we normally react by setting ourselves to look more closely; we alter our stance, perhaps rub our eyes, concentrate, and the like. Rather than disengaging, we throw ourselves more fully into the experience, as it were (p. 163).

Indeed, some theists might wish to argue that the best engagement is an agape love, the kind of engagement and intimacy that we have when we truly respect and *know* the object of inquiry – understanding its even radical differences but involving ourselves emotionally with it. This type of knowing fits nicely with Christian theism because "knowing" in the biblical sense is not a detached incorporation of facts but a relational intimacy with what we care about.

As a fourth distinction from naturalistic methods, we must revise our traditional reliance on predictability. Theists from this perspective would not abandon predictability all together, because it remains important for testing the correctness of our biases or hypotheses. However, these theists must also value the unpredictability of the ruptures and violations of their expectations and hypotheses. As Kuhn (1970) observes, it is the *un*predictability of research anomalies, not the predictability of confirmed hypotheses, that leads to paradigm shifts. Feyerabend (1975) also clarifies that it is the serendipitous and anarchic, not the intentional and systematic, that result in significant contributions to science.

The primary purpose of this broad sketch of a theistic approach to inquiry is twofold: to show that it is conceivable and to help understand some of the overlooked assumptions of a godless (naturalistic) approach to inquiry. First, it seems obvious that a distinctively theistic approach to scientific inquiry is conceivable (though it has rarely been implemented). It is "distinctively theistic," because an active, involved God is necessary to understand its operation and its success. Admittedly, it makes several assumptions about this activity and operation, but then making assumptions is one of the functions of any philosophy of science. The familiarity of a more naturalistic philosophy of science should not obscure the many unproven assumptions that underlay it.

This theistic conception of method was also intended to serve as a contrast to what many have presumed was the "only game in town," traditional naturalistic methods. We began the method section with a comparison to nonreductive, interpretive methods, which helped to illuminate many of the significant hidden assumptions of naturalistic methods. However, the secularism of both these methods prevented us from considering

how inquiry might be different if an active God were assumed. Our subsequent comparison to a theistic approach, in this sense, brought to light important differences: spirit- rather than rule-following, maximizing rather than minimizing ruptures, engaging with rather than disengaging from studied phenomena, and valuing unpredictability rather than relying exclusively on predictability for understanding the world.

Conclusion

In concluding the article, it behooves us to return to the question that titles it: "Are psychology's theories and methods biased against its main consumers?" As Reber (this issue) notes, theists are the main users and consumers of psychological information, as produced by psychological theories and methods. Yet, as this article has argued, the biases and assumptions of these consumers are incompatible with the biases and assumptions of psychology's mainstream theories and methods. Psychologists run the risk of being prejudiced against theists. This prejudice is not only unethical by the standards of psychologists but also potentially misleading. Using incompatible values and assumptions to study theism can mean selectively attending to the wrong variables, studying them in the wrong manner, misinterpreting them, and essentially missing the whole point of theism and its adherents – God.

This incompatibility has been hidden by a veil of scientific neutrality, especially for therapeutic and research methods. However, we argue that this veil should be lifted to reveal the godless biases of naturalistic science. Do these biases mean that science, specifically psychological science, is forever sealed off from theistic religions and prevented from any meaningful relationship? On the contrary, as Frank Richardson will show (this issue), many "speech partners," to use Taylor's (2002, p. 126) term, have

deeply held, even contrary assumptions about the world. These assumptions do not prevent such partners from engaging one another or even forming mutually beneficial alliances, as religion and science have shown historically (Russell, 2002). Indeed, to truly engage in dialogue and to really understand one another, knowledge of these differing assumptions would be helpful rather than hurtful to this relationship. In this sense, ontological naturalism has functioned well to illuminate specific, selected aspects of our world (i.e., the world's predictable, observable, material, and reductive aspects).

Nevertheless, it is debatable how well these theories and methods have served the religious theist, or even the secular researcher interested in the religious theist. The relationship between religion and science is complex, as historians have learned and we agreed at the outset. Although science and religion have much to teach one another, they cannot be joined without understanding this complexity. Much of what theists would seem to value – God, free will, altruism, unobservables, engagement, and some unpredictability – appear to be at variance with what naturalistic methods best investigate. This conclusion, if true, should be taken into account when discussing the relations or "integration" between psychological science and religious theism. Frank Richardson (this issue) does just that in the final portion of our four-part argument.

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