Are the Natural Science Methods of Psychology Compatible with Theism?

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> "There was a time, a very long time, when the assumption of God completely dominated Western imagination. . . In the seventeenth century, it was hard, courageous work to imagine – consequently reimagine – the world without God. And now, into the twenty-first century, in the face of Enlightenment autonomy issuing in autonomous power and autonomous knowledge, it is hard, courageous work to imagine – consequently reimagine – the world with God" (Brueggemann, 2000, p. 1, 2)

Nancy Murphy (this volume) cuts a necessarily broad swath in her proposal to integrate psychology and theology. However, as encompassing and thoughtful as her proposal is, she omits many issues that are perhaps peculiar to the social sciences. This chapter concerns one of those issues – what might be called the method issue. The method issue concerns the suitability of certain methods, and thus certain ways of knowing and philosophies of science, for studying human beings. Perhaps the most visible manifestation of this issue is the ongoing battle between quantitative and qualitative methods in the social sciences (Banister, Burman, Parker, Taylor, & Tindall, 1994; Crabtree & Miller, 1992; Denzin & Lincoln, 2000; Gilgun, Daly, & Handel, 1992; Patton, 1990; Slife & Gantt, 1999).

There are probably many reasons that Murphy does not tackle this issue in her chapters of this volume, including space limitations and the scope of her social science inquiry. Still, I wonder if one of them is that the natural sciences, where much of her work has been centered (Murphy & Ellis, 1996; Murphy, 1990), do not typically have a "method issue." As far as I know, no pitch battles are currently raging about qualitative methods or phenomenology in the natural sciences. Also, philosophy-of-science issues tend to be far less contentious and divisive in the natural sciences.

Psychology, by contrast, has been fragmented by such issues (Yanchar & Slife, 1997; 2000). With the application of method as psychology's main claim to scientific status (Slife & Williams, 1995), any debate or questioning of this method has been considered an identity crisis (Polkinghorne, 1983; Rychlak, 1988). Moreover, method controversies in psychology are deeper than is commonly thought. Although many psychologists would like to portray these controversies as merely issues about the procedures one uses to conduct studies (e.g., Heiman, 1995; Capaldi & Proctor, 1999), trenchant analyses have shown that these disparate methods originate from radically dissimilar world views, including differing views of human nature, reason, knowing, and even different views about what is real (Denzin & Lincoln, 2000; Polkinghorne, 1983; Richardson, Fowers, & Guignon, 1999; Slife & Gantt, 1999). Consequently, the method issue really <u>is</u> an identity crisis for psychology, because it involves the very nature of psychology.

The thesis of this chapter is that the method issue presents a pivotal problem for Murphy's proposal. Because she focuses almost exclusively on psychological methods that are derived from the natural sciences – what I call in this chapter <u>natural science</u>

methods – she overlooks the profound differences among the qualitative and quantitative methods of psychology. Indeed, she seems to assume in her chapters that there is no method issue and thus no issue in psychology of the competing world views that undergird these methods.

The first task of this chapter, then, is to describe the worldview of natural science methods. It is no secret that this worldview is naturalism itself (Borg, 1997; Collins, 1977; Griffin, 2000; Johnson, 1995; Leahey, 1992; Marsden, 1997; Richards & Bergin, 1997; 2003; Slife, 2003; Smith, 2001). However, the problematic status of this worldview for theism[1], and thus many religions, is less known in psychology. In fact, most of what is today considered the psychology of religion involves the application of natural science methods (Richards & Bergin, 1997). Still, naturalism is often defined as an understanding of the world without God, so if this understanding truly underlies the natural science methods of psychology, then the method issue could reveal an overlooked incompatibility between psychology and the religions that understand the world with God, such as Murphy's theism.

Exploring this possibility is the second task of this chapter. As we will see, this incompatibility may be so deep that it jeopardizes the prospect of any of integration of psychology and theology – Murphy's or any other. In other words, the conceptual grounding of natural science methods could be so different from the theism of some religions that no integration is possible. For this reason, the third main task of the chapter is to point to another way of relating psychology and theology altogether – hermeneutic dialogue. As I show, this mode of relating the two disciplines requires neither the compatibility nor the neutrality needed for projects of integration.

Natural Science Methods

Historically, there seems to be no dispute that the "physics envy" of early psychologists led them to adopt natural science methods (Leahey, 1992, p. 33), including what is now considered experimental, quasi-experimental, and even many correlational methods. Indeed, the suitability of these natural science methods was unquestioned at the time, because they were considered the transparent revealers of the natural world, with no inherent biases or assumptions. To this day, many research methods texts in psychology present the positivistic logic of many natural science methods as essentially without biases or assumptions (e.g., Heiman, 1995). As Leahey (1992) observes, "physics envy" still leads mainstream psychologists to entertain the "fantasy" that a bias-free Newton "will arise among psychologists and propound a rigorous theory of behavior, delivering psychology unto the promised land of science" (p. 33).

No bias-free lunch. Unfortunately, recent scholarship in the philosophy of science has challenged the bias-free status of natural science methods. Many philosophers of science have argued that the positivistic logic of this method is underlain with unproven and uninvestigated assumptions and values of various sorts (Bem and de Jong, 1997; Bernstein, 1983; Bohman, 1993; Curd & Cover, 1998; Feyerabend 1988; Heelan 1983; Kuhn, 1970; Rorty, 1979; Taylor, 1985b; Toulmin, 1972). The gist of their argument is that the formulation of any method must assume, before investigation, a certain type of world in which that method would be 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), they are not themselves the objects of test; they are parts of the test. For instance, the naturalistic assumption that methods should be

observable is never itself empirically tested, because this assumption is part of what it means to test (Slife, 2003).

In this sense, natural science methods may provide empirical justification for certain psychological theories, but they provide no empirical justification for themselves and the assumptions that ground them. There is no empirical justification for the epistemology of empiricism, no scientific validation for the metaphysic of naturalism. Some traditional scientists would argue that these philosophies and assumptions of science have been successful nevertheless. There seems to be widespread agreement that these assumptions have worked well, at least for the natural sciences. Still, it must be remembered that this claim of success is merely a claim—an opinion—however widely it is held. No empirical evidence can be gathered to substantiate this claim without already assuming the validity of natural science methods in the first place.

Underlying Philosophy. What, then, is the philosophy of naturalism that underlies these natural science methods? This philosophy has been defined in various ways, depending on its context (cf. Griffin, 2000). However, two common features of these definitions can serve as our core understanding of naturalism in this chapter – its godlessness and its lawfulness. First, naturalists explain and interpret the objective world as if reference to God is irrelevant or superfluous. The world is thought to occur as if its operation occurs autonomously, as a result of its own independent processes. The "lawfulness" feature of this philosophy involves the most popular understanding of this godless operation: the many processes of the world are all autonomously governed by natural or physical laws or principles.

These related naturalistic features are rarely explicitly connected to psychology's natural science methods (see Richards & Bergin, 1997 and Slife, 2003 for exceptions), so it might help the reader to provide two brief examples of this connection (with more examples to follow later) – one of omission and one of commission. Regarding omission, natural science methods never require that investigators pray (or generally consult God or Revelation) before designing or conducting a study. This consideration is omitted because God's current activities are presumed to be irrelevant to designing and conducting an effective investigation (though God's created order might be considered relevant to the results of the investigation).

As another example, consider how predictability is presumed to be completely relevant to designing and conducting studies. Because the world is thought to be governed by unchangeable, autonomous laws, any discernment of these laws (or principles as they are more frequently known in psychology) should yield predictability. Predictability, not prayer, is thus the sine qua non of truth for natural science methods in psychology. These methods are explicitly formulated to detect predictable relationships, such as the relationship between independent and dependent variables, in order to discern the assumed natural laws and principles of the psychological world.[2]

The Compatibility Issue

We will review other method practices in psychology and explore their relation to naturalism later in the chapter. For now, let us consider how a naturalistic philosophy might raise the compatibility issue: is a theistic world in which God's activity is relevant, perhaps even required, compatible with the naturalistic world that might ground and guide the natural science methods of psychology? Is Murphy's own theism compatible

with this naturalistic world? Many psychologists who have attempted to formulate religious strategies of psychotherapy have believed they had to overcome psychology's naturalism to do so (Collin, 1977; Richards & Bergin, 1997; 2003; Slife, Mitchell, & Whoolery, 2003). Richards and Bergin (2003), for instance, list a number of naturalistic assumptions of 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.

Why do they consider these naturalistic and theistic assumptions to be at odds? The primary reason is that natural laws supposedly govern all aspects of human beings, including their bodies, minds, and even spirits. Consequently, naturalistic psychologists have assumed that God cannot or does not govern these aspects of humanity. Natural laws essentially fill up the conceptual space where God might have been, explaining human behavior and cognition without a God (and thus without the need of prayer, revelation, etc.). Because theism <u>does</u> require an active God, by definition, naturalism and theism have been viewed as incompatible philosophies in principle (cf. Collins, 1977; Griffin, 2000; Johnson, 1995; Richards & Bergin, 1997; 2003; Slife, Mitchell, & Whoolery, 2003; Smith, 2002). As Griffin (2000) put it 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).

<u>Deism and Dualism</u>. The problem is that psychology's methods are commonly assumed to be compatible with theism. As mentioned, researchers in the psychology of religion have routinely presupposed that traditional, natural science methods could illuminate (transparently) religious topics of all kinds, without any issues of

incompatibility. Some of these researchers have considered naturalism to be compatible with theism by assuming a form of deism – God created the naturalistic order of the world but is not involved in its ongoing operation (cf. Borg, 1997; Johnson, 1995; Richards & Bergin, 1997; Wacome, 2003). No reference to God would be warranted or needed in psychology's methods because the laws or principles of psychology are currently autonomous and working essentially independently of Him (except perhaps in rare "supernatural" instances). The problem is that this kind of deism obviates those religions that believe in a presently active, rather than a passively deistic, God (e.g., Christianity).

Many types of dualisms have also been marshaled to attempt to make naturalism and theism compatible. Descartes (1641/1952) perhaps framed the prototypical dualism with his claim that the mind or soul permitted God's actions and influences but that the body was mechanistically autonomous (except, again, in rare supernatural cases). Wacome (2003) exemplifies a variation of this dualism when he holds that God is involved with some entities of the world but not with others, as in this passage:

> "Christians, unlike deists, believe that God miraculously intervenes in his creation, but our essential commitment is to God's intervening in human history; in human experience; and, above all, in the life, death, and resurrection of Jesus—not to God's intervening in nature as such. We accept a great variety of explanations of things coming about by natural processes that are what they are in the world God has created without feeling the need to postulate divine interventions." (emphasis added, p. 200)

Here, Wacome (2003) distinguishes his position from deism because he believes God is currently active in the events of humans (e.g., their history, experience). However, he then postulates a deism of nature where God created the processes of nature but they now "come about by natural processes."

Actually, such dualisms do not resolve the incompatibility of naturalism and theism. They merely assign these two philosophies to separate corners of the universe – Descartes separating the soul from the body, and Wacome separating human experience from nature. Deism, in this sense, is dualism across time, with God having been active in the past (as creator) but is now passive. Indeed, this separation of the naturalistic (no intervention) from the theistic (active and current intervention) in both deism and dualism is a tacit admission of their incompatibility. Whether separated in time or in space, the two philosophies apparently cannot co-exist in the same time and place. No dualism or deism would be necessary if they were really compatible. The important point, for the purposes of this chapter, is that natural science methods of psychology have been formulated to investigate one side of this dualism – the godless side (Hedges, in press; Slife & Hopkins, in press), making their conceptual foundations incompatible with the God-filled side of Murphy's theology.

Reductive Naturalism. Nevertheless, some would view this conclusion as a bit hasty. Griffin (2000), for example, has argued that incompatibility depends on the type of naturalism. He reviews the main historic and contemporary types and finds two primary forms: nonreductive and reductive. The first he considers compatible with theism, while the second is not. Our focus on psychology's methods makes his distinction particularly relevant because so many scholars have presumed that the

naturalism of these methods is essentially nonreductive (Heiman, 1995), and thus essentially neutral to theological claims such as Murphy's (cf. Slife, Yanchar, & Williams, 1999). Therefore, it is important to know whether the assumptions of psychology's methods are reductively naturalistic.

According to Griffin (2000), reductive naturalism, "rules out not only supernaturalistic religious belief but also any significantly religious interpretation of reality whatsoever" (p. 14). He believes that "since the nineteenth century . . . the scientific community [has become] increasingly committed to" this form of naturalism (p. 14). "The atheism of this worldview," according to Griffin, "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 provides a list of the main characteristics or assumptions of this worldview and establishes how they obviate an actively involved, theistic God. Space constraints prohibit an extensive development of his arguments here. However, I summarize them here under the categories of objectivism, materialism, and reductionism. We will briefly review his main conclusion regarding these categories and then explore their method implications in depth in the following sections. For instance, he argues that objectivism leads scientists to rely exclusively (in their science) on the sort of revelation provided by the value-free logic of their methods rather than the value-laden revelation of God. Because materialism assumes that matter is all that really matters, it makes it impossible, for example, for a traditional Christian understanding of the Holy Spirit to matter. And reductionism asserts the determinism of natural laws and physical principles that

completely control all natural events and prevent the ongoing activity of God in the natural world. The upshot, according to Griffin, is that there can be no source of religious experience, no idea of divine creation, and no way for any sort of God to act in the world. Reductive naturalism is thus completely incompatible with theism.

Specific Assumptions of Reductive Naturalism

Are psychology's natural science methods truly reductive in this manner? To answer this question, I review key method practices of psychologists to examine whether their natural science methods are underlain with the assumptions of objectivism, materialism, and reductionism. To help illuminate these practices, I contrast them to the method practices of qualitative methods that are widely acknowledged to be non-naturalistic.

Objectivism. In its most basic form, objectivism is the study of "objects" that are external to the observer's mind. Reductive naturalism requires this assumption because nature and social processes are presumed to exist and involve study external to the 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 biases and values.

What allows reductive naturalists to think they can get outside the biases and values of individual scientists? As methods texts in psychology exemplify (e.g., Heiman, 1995), natural science methods are considered the chief tool for accomplishing this task because they ideally provide a value-free, transparent method or logic that does not affect the outcome of investigation (Burtt, 1954). Although investigators themselves may have

biases and values, the ideal or logic of natural science methods is to work toward eliminating these biases and values, either through experimental control or precise measurement, or some combination of the two. Objectivism, in this sense, is not the claim that all scientific research is absolutely free of values (e.g., Borkovec & Castonguay, 1998; Chambless & Hollon, 1998), but rather that scientific research should strive to be as free of values and biases as possible.

Contrast objectivism with many qualitative methods. Whereas biases are bad in natural science methods because they supposedly distort objective description and true knowledge, biases and assumptions are not only inescapable in qualitative methods but also necessary to true understanding. Qualitative methods are typically viewed in psychology as pertaining to a different domain than natural science methods – subjectivity rather than objectivity. However, what is often overlooked is that qualitative methods stem from a different philosophy of science, including the notion that no method can proceed without 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 objective in the sense of being value-free, or even in striving to be as free of values as possible, because both are structured through and through with the biases, values, and assumptions of their authors (e.g., that one should be "objective"). Yet, method practices in psychology continually neglect to mention these structured biases, portraying the logic of these methods as transparent indicators of the natural or social world.

For example, research on therapy outcome is often conducted and reported as if the logic of the methods is transparent, i.e., not itself affecting the outcome of the investigation. Indeed, the mark of objectivists in this research is that they believe the logic of scientific method does not favor one type of therapy over another (Slife, 2003). This belief has also been pivotal in recent moves to objectify therapy. Many eclectics now favor divorcing the techniques of therapy from their theories and then testing them objectively for their effectiveness (cf. Beutler & Clarkin, 1990; Held, 1995; Lazarus, 1995; Lazarus, Beutler, & Norcross, 1992; Slife & Reber, 2001). Empirically supported treatments are a similar type of professional endorsement of objectivism (APA, 1995; Chambless & Hollon, 1998; Nathan, 1998; Nathan & Gorman, 1998; Seligman, 1994). In both cases, the logic of therapy research is assumed to be without any systematic biases of its own. It is universal for all the relevant subject matter and unconstrained by culture or context. Consequently, the objectivist aspect of reductive naturalism clearly abounds in the natural science method practices of psychologists.

Materialism. Materialism is the notion that "the ultimate nature of reality is material" (Leahey, 1992, p. 33), or as I have put it elsewhere, "matter is all that really matters" (Slife, 2003, p. 58). That is, a reductive naturalist does not study intangible constructs or entities, such as spirits and ghosts. Rather, the important (and valued) things are tangible, visible, and substantial. Materialism manifests itself in psychological method through the traditional natural science notion that only material things are knowable. That is, materialism is typically linked 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).

Of course, psychologists investigate social as well as natural relations. Because social relations cannot be observed (only the things having the relations can be observed), some of the subject matter of the social sciences is, by its very nature, nonmaterial. However, the philosophies of empiricism and materialism require these nonmaterial constructs to be operationalized—made into material things or processes (e.g., behavior)—so they can be observed. Otherwise, the methods are useless, betraying their dependence on materialism. Still, operationalization means that only the material aspects of the constructs are investigated. Indeed, materialism is so pervasive that many psychologists would be hard-pressed to know how the nonmaterial aspects of the life world can be investigated, if not by operationalization.

Contrast this, again, with the philosophy underlying many qualitative methods. First, qualitative methods begin with a different epistemology. Although their province is experience, they do not narrow this experience to the sensory only (e.g., observation, as in natural science methods). They consider their source of knowledge to be the broader realm of lived experience, with observations and sensory experiences, to be sure, but also with our experiences of thoughts, feelings, and spiritual events.

Do these qualitative researchers "operationalize" their findings? It is true that all qualitative researchers attempt to specify and clarify their findings. However, they do not operationalize in any conventional natural science sense because their focus is meaning rather than the material objects of the world, such as behavior (or other material manifestations). Meaning is not a sensory experience as such because it does not fall on

one's retina (though it is a lived experience). For this reason, the primary interest of qualitative researchers is not the objective material world, which from a naturalistic philosophy is without subjectivity. Nor are qualitative researchers interested in the supposedly material manifestations (operationalizations) of nonobservables, such as meanings. They are interested in the meanings themselves.

This contrast makes the materialism of natural science methods apparent. These methods cannot study meanings in themselves because they are formulated for objective (and material) things, not for subjective and meaning-oriented "things." At best, they study meanings secondarily, as they are manifested in more observable characteristics, such as behaviors and surveys. They never study them directly, nor do they pretend to. The upshot is that these methods assume that knowledge of the materiality of things is sufficient to understand the natural world. If they did not assume sufficiency, then materialist and operationalized procedures would prohibit a complete understanding of that world. In this sense, natural science methods readily show their materialistic grounds and thus Griffin's second criterion of reductive naturalism.

Reductionism. Reductive naturalism also assumes that all change is ultimately reducible to, or governed by, unchangeable natural laws and principles. This reduction implies not only that everything is ultimately determined – with the unchanging controlling the changing – but also that unchangeable and universal natural laws and principles are the most fundamental realities (Griffin, 2000; Sanders, 1992; Slife & Williams, 1995). As a result, natural science methods have been formulated to detect these unchangeable and universal laws. The need for replication, or as Murphy terms it, "reliability" (Lecture 1, p. 15), is perhaps the most obvious manifestation of this

formulation of the scientific method, because unchangeable natural laws should be detectable (under the right conditions) anywhere, anytime. However, the importance of standardization and reliability also follows directly from the same need. Without replication, standardization, and reliability – as the logic goes – research findings cannot reveal the ultimate realities of the world: reductive natural laws and principles.

An interesting, but often overlooked, aspect of this reductionism is that natural laws are not themselves physical (material) entities. Although the law of gravity is thought to govern physical entities, such as our weight, the law itself is not a physical or material entity in the conventional sense. It does not fall on the retina, nor can we touch or weigh it. This lack of physicality may seem to conflict with materialism. However, natural scientists learned from the ancient Greeks that the ideal reductions – those reductions that are the most simple and parsimonious – are unchangeable (and thus not complex). Because all physical entities change, however slowly, the reductions that are beyond the physical – metaphysical reductions – are the most fundamental and natural. They transcend time and space, and so they seem to apply to all situations universally.

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. Metaphysical reductionism has led psychologists to formulate their theories as if they were metaphysical principles (e.g., universal personality theories), with the hope that these theories would one day be tested and found to be valid. Therefore, the aim of testing these theoretical principles has guided the practices of researchers and methodologists. Reductionism has turned the these practices away from the subjective, and thus changeable, lived experiences and

turned them toward the replicable, standardizable, and reliable objective and material aspects of their sensory experiences.

As a contrast, consider that many qualitative methods require none of these unchangeable characteristics in their findings. Rather than assuming that the most fundamental knowledge is universal and unchangeable across individual contexts and situations, many qualitative researchers assume that at least some fundamental knowledge is inherent in particular, and thus not all, contexts. Consider the indigenous cultural aspects of particular contexts as examples. Although these aspects have obviously not been ignored in psychology, they have frequently been considered secondary because they are not unchangeable and universal across time and space. Indeed, many qualitative researchers contend that pivotal aspects of individual meanings also have contextually particular characteristics. Hence, looking for the replicated, standardized, and reliable may prevent a fundamental understanding of these meaningful and cultural aspects of the world. In this sense, the significance of these characteristics for natural science methods is a testament to the significance of the naturalistic reductionism that grounds them.

Conclusion. The bottom-line here is that the assumptions Griffin (2000) identifies with reductive naturalism are the assumptions that undergird the method practices of natural science researchers in psychology, from striving to eliminate bias and values (objectivism) to limiting investigations to the observable and operationalizable (materialism) to focusing on the replicable and reliable (reductionism). This combination of assumptions and research practices has long been known in psychology as a broadly logical positivistic framework for method (Polkinghorne, 1983; Richards & Bergin, 2003;

Slife & Williams, 1995). Many scholars have noted the incompatibility of these positivistic assumptions for theism (Collins, 1977; Johnson, 1995; Richards & Bergin, 1997; 2003; Slife, 2003; Slife, Hope, & Nebeker, 1999; Smith, 2001). However, to help make this point for the present volume, let us compare the reductive assumptions of psychology's natural science methods to Murphy's (this volume) own theological assertions.

Murphy's Theology

At the outset, Murphy's theology may need to be distinguished from what she considers the "basic logical structure" (p. 2, lecture 1) or "fine structure" of research (Murphy & Ellis, 1996, p. 8). Murphy explicitly identifies this structure (in both quotations) with Carl Hempel's logical positivist understanding of method, an understanding that would seem to place her own view of method in the category of reductive naturalism. Could she be using the term "logical positivism" with a different meaning? Other passages would seem to affirm her support of positivism as it is used in this chapter. For instance, she boldly proclaims that it is a **"**fact that scientific reasoning moves from an observation (fact, datum, experimental result) to a hypothesized explanation of that observation**"** (Murphy & Ellis, 1996, p. 8), a "fact" that is clearly at variance with the scientific reasoning of non-reductive, qualitative researchers in psychology. A paragraph later, she concludes that **"**hypotheses must be tested by deducing further observable consequences from them and then checking to if these predictions are confirmed**"** (Murphy & Ellis, 1996, p. 9). Both quotations would appear to be consistent with the method practices identified with objectivism, materialism, and reductionism above.

Even her appeal to Lakatos's (1970; 1978) approach to method does not necessarily obviate this positivistic interpretation. Lakatos (1978) long claimed that his methods "rehabilitate, in radically new ways, a 'positivistic' respect for the facts" (p. 180). Yet, as we will see in her theology, Murphy contends that her Radical Reformation theism is "radically different" from naturalistic accounts (p. 22, lecture 2). How do we square these seemingly contrary claims, especially in light of the foregoing analysis about naturalism's central role in the positivism of psychology's natural science methods? Let us examine each of the three categories of reductive naturalism in turn.

Objectivism. Murphy clearly seems to oppose objectivism in her theology. In fact, she devotes several sections to how inherently value-laden psychology and all the sciences are. She even cites Charles Taylor (1989) as having "dealt a mortal blow to the concept of value-neutrality" (p. 4). Still, I am not clear how or even whether she applies Taylor's lessons to "scientific reason" or her "basic logical structure of research." How, for instance, can this reason or structure move "from an observation (fact, datum, experimental result)," as she insists (Murphy & Ellis, 1996, p. 8), and be value-laden in Taylor's sense? Are all other aspects of psychology inherently value-laden, but this research structure somehow devoid of values and assumptions? If this is true, then scientific and theological reason are not integratable in principle, because the former is value-free and the latter is value-laden. Another way to put this is that theology cannot have anything to say to the method aspects of psychology, because the basic logic of its research operates without theological assumptions and values. It is not "theology-laden," as Murphy puts it (p. 25, lecture 3) – implicitly or explicitly.

On the other hand, if this basic structure of research is inherently value-laden, then what are these values and how do they compare to the basic values and assumptions of her theology? I do not see her addressing this issue. As mentioned, some scholars have suggested that only an epistemological (methodological), and thus not an ontological (reductive), naturalism is inherent in the scientific method. However, many influential thinkers have argued forcefully that all epistemologies require ontologies, with reductive epistemologies requiring reductive ontologies (Gadamer, 1995; Griffin, 2000; Richardson, Fowers, & Guignon, 1999; Slife & Williams, 1995).

Needless to say, the analysis of psychology's natural science methods (above), especially in contrast with the truly nonreductive naturalism of qualitative methods, betrays their reductive origins. In other words, the issue is not the location of the naturalism, with a methodological location somehow allowing a kinder and gentler naturalism. The issue is the type of naturalism, wherever it is implicitly or explicitly held. In this sense, Murphy's theology of the inescapability of values is incompatible with the value-free pretensions of psychology's natural science methods.

Materialism. Reductive materialism is also deeply problematic to Murphy's theology. Although Murphy favors physicalism to stave off inaccurate accusations of dualism, she surely does not mean here reductive physicalism (Brown, Murphy, & Maloney, 1998). Not only does she attempt to avoid reduction to the lower disciplines of her "hierarchy of sciences," she also adds "top-down" causation to oppose any claims of exclusively materialist reduction. Indeed, an exclusively materialist reduction would prevent any influence from the apex of her hierarchy, where theology supposedly lies, because only bottom-up causation from the lower disciplines would be possible (Slife &

Hopkins, in press). Moreover, Murphy clearly endorses versions of free will, countering any claims of materialistic determinism.

On the other hand, her endorsement of a positivist view of the structure of research is again puzzling in this regard (p. 2, lecture 1, Murphy, this volume). As she correctly notes, neo-positivists, such as Hempel, allow only bottom-up processes in the hierarchy of science (pp. 16, 17, lecture 1). Positivistic methods are also traditionally understood as data-driven in this same bottom-up mode (Slife & Williams, 1995). Consonant with this, but doubly puzzling in light of her theology, is Murphy's belief in the "necessity of operational definitions" and the "empirical" (p. 3, lecture 1), as if only the material and the sensory are knowable.

Can altruism and forgiveness really be studied, as she seems to contend (p. 13, Lecture 3), in their operational manifestations only? Could someone behave in an altruistic or a forgiving manner and not truly be altruistic or forgiving? If so, then a conventional materialist operationalization (e.g., behavior) would be insufficient, if not completely misleading, in the study of these topics (cf. Slife & Hopkins, in press). Once again, Murphy seems inconsistent. She is far from the reductive materialist in her theology, touting, as she does, the influences of top-down causation and value-laden systems. However, she seems to exempt some levels of method from these top-down and value-laden properties. Operational definition, for example, is a "necessity" rather than a top-down value.

Reductionism. Recall that reductionists (as defined above) make two basic claims about the most real and natural entities of the world, such as physical laws – they are unchangeable and they govern all that does change. The first claim has prompted natural

science methods to be formulated in such a way as to discover and discern these unchangeable entities, such as through replication or, as Murphy terms it, "reliability" (p. 15, Lecture 1). As she puts it in her first lecture, "reliability means, simply, that a measurement or process results in roughly or exactly the same results under similar circumstances" (p. 15, Lecture 1). But why do results require this property of reliability or replicability? The answer is the first claim of the reductionist – the need to find unchangeable principles or laws in the natural science mold, as dictated by natural science naturalism.

This first claim, as we have seen, implies that the subjective realm, with its changeability, must be either excluded from science or operationalized to meet the demands of method. Either way, research that looks to lived religious experiences, such as Murphy's poignant story of Julia (p. 13, lecture 3), cannot be fundamentally significant. As qualitative researchers have shown, the full import and meaning of such lived experiences requires an entirely different set of method assumptions (Denzin & Lincoln, 2000; Polkinghorne, 1983; Slife & Gantt, 1999). Indeed, from a reductionist's perspective, Julia's redemptive experiences would be epiphenomenal to the reductions that supposedly govern these experiences, such as the natural laws of her neurology (cf. Slife & Hopkins, in press). This line of thinking would seem problematic to the significance of Julia's lived experiences in Murphy's chapter (this volume) and her theology.

The second claim of the reductionist is that these unchangeable and universal laws determine (and predict) all that does change. In other words, all changes of the world occur in patterns that are ultimately controlled by unchangeable and universal laws,

preventing human agency and possibility. Human behavior would not be qualitatively different from a boulder rolling into a hiker (Slife & Hopkins, in press). We do not say "bad boulder" because we assume the boulder is completely governed by natural laws, and thus its "behavior" is without meaning and morality. Even a complex system of boulders rolling down complex mountains, etc., would not negate these laws (Slife & Hopkins, in press). However, Murphy contends that the Anabaptist tradition – far from endorsing this reductive notion – "restores free will" (p. 8, lecture 3). She knows that without human possibility all enterprises, including her own integrationist project, are meaningless. The problem is that it is just this type of reduction that underlies the positivist methods of natural science that she endorses.

Conclusion. In general, therefore, Murphy rejects the assumptions of objectivism, materialism, and reductionism in her theology. In fact, she develops lines of argument and programs of research that distinctly oppose these assumptions. However, with respect to her basic logic of research, what she calls in other contexts (e.g., Murphy, 1996) the "fine structure" of research (p. 8), she appears to do precisely what many social scientists have done – assume uncritically that this method is either settled with logical positivistic and naturalistic formulations or essentially free of important assumptions and values. In either case, her method seems incompatible with her theology, which illustrates the incompatibility of reductive naturalism and theism more generally.

The Incommensurability Issue

Just how incompatible are the assumptions associated with theism and the assumptions that underlie the natural science methods of psychology? As Richard Bernstein (1983) has shown, the concept of incompatibility is essentially a logical one.

Two philosophies are typically viewed as incompatible if they entail a logical contradiction. Indeed, for a rationalist this incompatibility is the most radical sort of difference imaginable – a contradictory or an irrational relationship. However, in order to say that there is any relationship, even an irrational one, incompatibility assumes that there is some sort of neutral logic, method, or rationality from which to judge the contradiction. In other words, there must be a separate standard of rationality – to which both philosophies assent – to compare their ideas and ascertain their compatibility. It is in this sense, as I have attempted to show in this chapter, that Griffin and other scholars have compared reductive naturalism and theism and found them to be incompatible.

Frequently overlooked, however, is a more provocative possibility – the possibility that these two philosophies are also incommensurable. As we will see, this question has great import for how or whether a program of integration can even proceed. When philosophers hold that a philosophy is not only incompatible but also incommensurable, they are contending that no neutral or common decision criteria exist by which to compare and thus integrate them. The two philosophies can even differ in what they consider to be rational (Bernstein, 1983). The philosopher Thomas Kuhn (1970) made this point when he likened competing paradigms to "different worlds" (p. 150). Indeed, as Kuhn considered it, incommensurability is the "most fundamental aspect" of competing paradigms, because their relationship “cannot be made a step at a time, forced by logic and neutral experience” (p. 150). Incommensurable paradigms, then, are the proverbial “two ships that pass in the night.”

The philosopher Paul Feyerabend (1975; 1977) made a similar contention in his distinctions among three types of incommensurability. Space prohibits reviewing these

distinctions here, but one of his many conclusions is that Kuhn and others usually only mean one type of incommensurability. This type occurs when different paradigms "use concepts that cannot be brought into the usual logical relations of inclusion, exclusion, overlap" (Feyerabend, 1977, p. 363). In this sense, it is clear that Kuhn, Feyerabend, and Bernstein are assuming that philosophies can move well beyond the rationalist dimension of compatible and incompatible relationships. Indeed, it is clear they are claiming that the enlightenment view of rationality is not always up to the challenge of comparing rival paradigms, because this view of rationality is itself part of one paradigm.

If these philosophers of science are correct, then an intriguing question is raised regarding theism and reductive naturalism: Are the assumptions associated with these philosophies incommensurable in this sense? More specifically, is there neutral or value-free rational territory available for evaluating these two philosophies? Looking at the distinctions just reviewed, it is difficult to answer this second question affirmatively. This is not to say that the two philosophies do not each have some form of rationality, but there are strong indications that they disagree about the form of that rationality in at least two related senses. First, they seem to disagree about whether rationality can be neutral. Reductive naturalists strive to be objective and bias-free (objectivism), whereas theists such as Murphy contend that values are unavoidable.

Second, these two philosophies appear to disagree about whether values and biases are good. This disagreement is especially provocative in regard to method because knowledge advancement has long been associated with the minimization or elimination of biases and values – objectivity. Bias is considered bad because bias supposedly distorts the gathering of data and thus knowledge. However, Murphy's (this volume)

theology – certainly MacIntyre's (1984) theology whom she liberally cites – not only seems to avoid viewing values as bad for knowledge advancement (e.g., understanding religious experiences) but also appears to consider the involvement of the right values as required for knowledge advancement. In other words, no real advancement can take place without values, perhaps even without theology itself (cf. Murphy, 1996).

The point is that this type of theistic thinking is a far cry from the objectivity of reductive naturalism. Value-laden knowledge advancement does not just negate objectivity, as if it is merely a logical contradiction or an incompatibility. Such advancement also obviates the possibility of a neutral or objective logic, method, or rationality from which to judge a contradiction or an incompatibility. Like the qualitative methods that endorse this assumption, value-laden advancement operates in a completely different manner, with entirely divergent criteria about what makes method or reason good. This lack of common decision criteria for method is precisely what is meant by an incommensurable relationship between two philosophies, leading directly to our next question: What are the implications of a potential incommensurability between psychology's natural science methods and theisms such as Murphy's?

Implications of Incommensurability

Perhaps foremost, this incommensurability could restrict considerably the type of integration that is possible between two philosophies. When each philosophy differs not only in its assumptions but also in its criteria for comparing assumptions (e.g., rationality, method), then any conventional integration of the two seems deeply problematic. Indeed, without common or neutral ground, an "integration" becomes an assimilation of one philosophy into the other. The assumptions of one must prevail over the incompatible

and incommensurable assumptions of the other. Yet, this type of assimilation cannot be a true integration because the core of both philosophies – their core assumptions – is not preserved. When one philosophy has truly assimilated the other, only one set of assumptions can stand; the other must be changed into the assimilator.

If theism and naturalism are incommensurable, could Murphy's project of integrating psychology and theology be a form of assimilation? The key is the ground she proposes as common (or neutral) between psychology and her theology. Here, it seems obvious that Murphy is suggesting a type of "reason," drawing on Lakatos's (1978) prescription, that originates from the realm of science. The question is, is this truly common ground, or is it really scientific ground that is being used – however knowingly or unknowingly – to assimilate theology and perhaps even the less conventional, qualitative methods of psychology?

One way to approach this question is to note the similarity between Murphy's "common ground" of scientific reason and the rationalist's presupposition that some universal structure or neutral logic or reason exists across all domains of knowledge (Guignon, 1998; Richardson, Fowers, & Guignon, 1999). Consider this statement from her book with Ellis (1996): "Thus, while it is philosophers of science who have described this form of reasoning, we shall claim that it is essential in most other domains of knowledge, from everyday explanations of events to theology and metaphysics." (p. 9).

Even Lakatos's (1978) structure of scientific investigation is often cast as rationalist in this sense (e.g., Leahey, 1992). Lakatos (1978) was also looking for, as he put it, the "universal conditions under which a theory was scientific" (p. 168). Recall,

however, that philosophers of incommensurability have questioned this very presupposition (Bernstein, 1983; Feyerabend, 1977; Kuhn, 1970, MacIntyre, 1984). They contend that this rationalist view of universal logic or reason is itself a philosophy, in which case there exist philosophies, perhaps even theologies, that are incommensurable with rationalism.

A relevant example might help illustrate this contention. What if, as Gunton (1992) and others theologians have argued, that theistic reasoning requires the Holy Spirit. That is, the Holy Spirit is not merely a content within, or an add-on to, the universal process of logic or reason, as a rationalist would envision. The Holy Spirit is fundamental to the very nature of the reasoning of a religiously theistic person. If this is true, then this type of reasoning would be incompatible, if not incommensurable, to the scientific reasoning of Murphy (and Lakatos). It would certainly violate rationalist universality, because its very nature or process involves something – the Holy Spirit – that no other reason entails.

Theistic reasoning may violate rationalist universality for another reason. As Gunton (1992) has described, the Holy Spirit aspect of theistic reasoning may be wholly contextual (and particularistic), allowing theistic reasoning to vary fundamentally from situation to situation as the Holy Spirit prompts us in relation to the exigencies of varying circumstances. Recall that qualitative researchers are similarly contextual (and thus non-universal). They believe that the values that guide and are inherent in reason and rationality should themselves be sensitive to context, and thus potentially different from situation to situation. In this sense, it is difficult to understand how these approaches to methods could be "rationally reconstructed" (p. 23, Lecture 1) to meet the universal

requirements of scientific reason and Murphy's own notion of common ground. They could well be incommensurable with natural science reason.

Would such incommensurability mean that we have to give up relating psychology and theology altogether, surrendering the spirit of Murphy's integrationist project? Philosophers such as Bernstein (1983) and MacIntyre (1984) deny that the incommensurability of two philosophies requires their incomparability. Indeed, they contend this type of incommensurability implies, by its very nature, that we know about and can bring into relationship the two philosophies we consider incommensurable. If we do not have some basis for comparison, how do we know they are incommensurable? Two ships that truly pass one another in the night do not know that they are passing. Two incommensurable philosophies, then, cannot be known as incommensurable unless there is some way of identifying and comparing them.

The unavailability of a neutral rationality for drawing the comparisons does not mean that there are not other, non-neutral means of comparison (Kristensen, Slife, & Yanchar, 2000). There might be some light to view the ships, however slanted or biased the light might be. The point of incommensurability—the point of philosophers like Kuhn, Feyerabend, Bernstein, and MacIntyre on this issue—is that this light does not have to be traditional rationality and thus traditional scientific reasoning (positivism). Consider as an alternative the Light of Christ or Gadamer's (1995) notion that the "spirit" of dialogue rules such comparisons (p. 66). These alternatives would obviously have their own biases for comparing and "integrating" the two philosophies. The main point here is that there are no alternatives to a biased adjudicator. Indeed, rationality itself is a biased adjudicator for those philosophies that hold differing values from the rationalist.

What does this mean for our project of integration? Fundamentally, there can be no neutral overseer, such as scientific reasoning, for building the integrative bridge and preserving the integrity of the philosophies involved. There are only non-neutral internal and external criteria available for integration. Internal criteria are grounded in one philosophy or the other, in which case an "integration" based on one set of internal criteria is an assimilation of one philosophy into the other. Murphy's "scientific reasoning" would seem to be an example of an internal criteria approach to integrating psychology and theology, leading to the possibility that theistic reasoning is being assimilated into scientific reasoning, without preserving the integrity of the theistic. Recall that if theistic reasoning requires the Holy Spirit, and Murphy's scientific reasoning does not, then this requirement would be lost in such an assimilation.

There are, of course, many external criteria for integration available. Yet, without neutral external criteria, the integration project is again about conversion to the external assumptions rather than convergence of the fields being integrated. Many aspects of each field or philosophy would necessarily be ignored (e.g., Holy Spirit) because they would not fit the external criteria used and thus not be valued. No true integration is thus possible, either using internal or exterior criteria, because the identity of one or both of the philosophies being integrated would be lost.

An Alternative to Integration

The failure of an integrative approach does not mean that a relationship is impossible. An alternative to integrative relating in the rationalist tradition is dialogical relating in the hermeneutical tradition. Space limitations prohibit a full explication here, but a number of respected philosophers, including Gadamer (1995), Habermas (1973),

Bakhtin (1981), Taylor (1985), and Guignon (1983; 1998), have rendered excellent texts on the subject. Frank Richardson's chapter in this volume and his book (e.g., Richardson, Fowers, & Guignon, 1999) are helpful for applying this philosophy to psychology. Before I close this chapter, allow me to supplement these resources and outline why I believe hermeneutic dialogue is helpful to our particular context of the "method issue."

The key for the hermeneuticist is that no individual or philosophy is truly self-contained. As Charles Taylor (1985) put it, "we are aware of the world through a 'we' before we are through an 'I'" (p. 40). Individuals and philosophies, in this sense, are radically social creatures. Mikhail Bakhtin (1981) describes our very voices as "half-ours and half-someone else's" (p. 385). Indeed, the metaphor of an individual's voice is a good one because there is a strong sense in which humans and embodied philosophies are always and already engaged in dialogue, whether verbal or nonverbal. For Hans-Georg Gadamer (1995), humans just <u>are</u> ongoing dialogues.

This constant relationship and continuing dialogue has at least five implications for our integration project. First, integration is really unnecessary, at least in the conventional sense of blending or merging. Psychology and theology are always and already highly related; our job is to begin to recognize this relationship and act on it appropriately. Surely, no scholar in this arena would seriously doubt the historic importance of science and theology for each other. Indeed, there is a keen sense in which they "begat" each other, to use a Biblical phrase, because neither discipline could be what it is without the other. The hermeneuticist would claim that they have always had a shared being, a mutual constitutiveness.

Still, as a second implication, this mutual constitutiveness does not make the two disciplines identical. On the contrary, as I have attempted to show in this chapter, the fields and philosophies involved are deeply and perhaps even incommensurably different from one another. Again, the analogy to individual voices is apt because an analogous incommensurability is often recognized among individuals, particularly among different cultures and languages. Still, we do not assume that such differences prevent us from relating to or even loving one another. In fact, these differences often provide unique opportunities to relate and love that individuals with similar backgrounds and philosophies do not provide.

Third, there are no neutral or universal criteria for conducting or evaluating the dialogue. If the participants in the dialogue are truly relating to one another, then its moral structure will require no small amount of negotiating to effect the exchange and understanding that we would consider productive (or an advance in knowledge). There is, of course, no reason to exclude "authority figures" from this negotiation, such as the Holy Spirit (for the theist) or the data of research (for the naturalist). The important point is that no participants, including authorities, are neutral participants. Their participation should always be evaluated in light of the values they proffer.

In this sense, as a fourth implication, theists should consider the psychological findings of natural science methods, not because they are the neutral or value-free descriptors of some objective psychological world, but because they stem from the time-honored and value-laden philosophy of naturalism. In other words, it is the perspective, rather than the lack of perspective, that is valuable. Knowing the values that spawn these perspectives also helps the theist to know how to value these findings, including the

limits of such findings. Of course, the natural science psychologist should value the perspective and "findings" of the theist as well. The point is that engaging in such a dialogue will inevitably enrich the participants, even if knowledge advancement in the conventional sense does not occur.

Fifth, hermeneutics points to the richness or, as Dueck and Reimer (2001) term it, the "thickness" of this dialogue. This thickness implies that the individuals and philosophies involved in the dialogue do not need to be transformed into each other for communication to occur. There is no need, in this case, to "rationally reconstruct" theology in the image of science, as Murphy (this volume) seems to advocate. As Emmanual Levinas (1987) would view it, psychology and theology have need for relation and dialogue only if they are truly and irreducibly different from one another. The degree to which the participants in dialogue are the same is the degree to which they are no longer resources for the other. This is not to say that dialogical transformation cannot occur as the dialogue develops and new understandings and perhaps agreements are achieved. It is only to say that part of the thickness of any ongoing dialogue is a preservation of the participant's differences, even as voluntary transformation occurs.

This combination of difference preservation and openness to transformation is well known in hermeneutic circles to involve struggle. However, this struggle, too, is a part of the thickness of dialogue, with its inevitable stops, starts, fits, and tensions, rather than certainty of development and invariance of progression. Still, many hermeneuticists, such as Gadamer (1995) and Taylor (1985), believe that a thick dialogue can not only occur and be productive; a thick dialogue has <u>already</u> occurred and produced the fields and philosophies as they are currently (and mutually) constituted. Our job, then, is not to

create their relations by using the supposedly neutral language of Enlightenment reason as a bridge; our job is but to discover the dialogue already ongoing and celebrate its incompatible, if not incommensurability, differences as part of these relations.

Conclusion

At this juncture, the question posed in the title of this chapter must be answered in the negative. The natural science methods of psychology – underlain as they are with the philosophy of reductive naturalism – cannot be compatible with the theism of theologians such as Murphy. Indeed, there is some evidence that the incompatibility of theism and naturalism is deeper than is typically understood. Our focus on the "method issue" has revealed not only incompatible assumptions for the contents of theism and naturalism, as has long been known (Griffin, 2000), but also incompatible assumptions for the methods of theism and naturalism, especially if Murphy's theism and psychology's natural science methods are any indication.

This twofold incompatibility creates many difficulties for the conventional integration project, because it means that there are no neutral or universal evaluation criteria, such as scientific reasoning, for comparing and relating the two disciplines and philosophies. Still, as with any two individuals with markedly dissimilar and even incommensurable backgrounds, there is room for dialogue and much learning. Incommensurability does not mean incomparability. Indeed, the depth of the individual differences is an indicator of how much learning is possible, given the openness and humility of the dialogue.

References

American Psychological Association, Division of Clinical Psychology, Task Force on Promotion and Dissemination of Psychological Procedures. (1995). Training in and dissemination of empirically validated psychological treatments: Report and recommendations. The Clinical Psychologist, 48, 3-23.

Bakhtin, M. M. (1981). The dialogical imagination: Four essays by M. Bakhtin. (M. Holquist, Ed.). Austin: University of Texas Press.

Banister, P., Burman, E., Parker, I., Taylor, M., & Tindall, C. (1994). Qualitative methods in psychology: A research quide. Philadelphia: Open University Press.

Bem, S., & de Jong, H. L. (1997). Theoretical issues in psychology: An introduction. London: Sage Publications

Bernstein, R. J. (1983). Beyond objectivism and relativism: Science, hermeneutics, and praxis. Philadelphia, PA: University of Pennsylvania Press.

Beutler, L. E., & Clarkin, J. F. (1990). Systematic treatment selection: Toward targeted therapeutic interventions. New York: Brunner/Mazel.

Bohman, J. (1993). New philosophy of social science. Cambridge: MIT Press.

Borg, M. (1997). The god we never knew. New York: Harper Collins.

Borkovec, T. D. & Castonguay, L. G. (1998). What is the scientific meaning of empirically supported therapy? Journal of Consulting and Clinical Psychology, 66 (1), 136-142.

Brown, W. S., Murphy, N., & Maloney, H. N. (1998). Whatever happened to the soul? Scientific and theological portraits of human nature. Minneapolis: Fortress Press.

Brueggemann, W. (2000). Deep memory, exuberant hope. Minneapolis, MN: Fortress.

Burtt, E. A. (1954). The metaphysical foundations of modern science. Garden City, NY: Doubleday.

Capaldi, E.J., & Proctor, R.W. (1999). Contextualism in psychology research? A critical review. Thousand Oaks, CA: Sage Publications.

Chambless, D. L. & Hollon, S. D. (1998). Defining empirically supported therapies. Journal of Consulting and Clinical Psychology, 66 (1), 7-18.

Collins, G. R. (1977). The rebuilding of psychology: An integration of psychology and Christianity. Wheaton, Il: Tyndale House Publishers.

Crabtree, B. F., & Miller, W. L. (1992). Doing qualitative research. Newbury Park, CA: Sage.

Curd, M., & Cover, J. A. (1998). Philosophy of science: The central issues. New York: W. W. Norton & Company.

Denzin, N. K., & Lincoln, Y. S. (Eds.). (2000). Handbook of qualitative methods. Thousand Oaks, CA: Sage.

Descartes, R. (1641/1952). Meditations on first philosophy. In Great Books of the Western World. Chicago: Encyclopedia Brittanica.

Dueck, A., & Reimer, K. (2001). Psychotherapy and religious discourse: Thick and/or thin. Paper presented at the meeting of the American Psychological Association, Washington, D.C??.

Feyerabend, P. (1975). Against method. London: Verso.

Feyerabend, P. (1977). Changing patterns of reconstruction. British Journal of Philosophy of Science, 28, 363.

Gadamer, H. G. (1995). Truth and method. (J. Weinsheimer & D. G. Marshall, Trans.) (Rev. ed.). New York: Continuum. (Original work published 1960)

Gilgun, J. F., Daly, K., & Handel, G. (Eds.) (1992). Qualitative methods in family research. Newbury Park: Sage.

Griffin, D.R. (2000). Religion and scientific naturalism: Overcoming the conflicts. Albany: SUNY Press.

Guignon, C. (1983). Heidegger and the problem of knowledge. Indianopolis, IN: Hackett.

Guignon, C. (1998). Narrative explanation in psychotherapy. American Behavioral Scientist, 41, 558-577.

Gunton, C. (1992). The one, the three and the many: God, creation and the culture of modernity. Cambridge: Cambridge University Press.

Habermas, J. (1973). Theory and practice (J. Viertel, Trans.). Boston: Beacon.

Hedges, D., & Burchfield, C. (in press). Depression and its treatment: The assumptions and implications of a conceptualization. In B.D. Slife, J. Reber, & F. Richardson (Eds.), Developing critical thinking in psychology. Washington, D. C.: American Psychological Association Press.

Heelan, P. A. (1983). Space-perception and the philosophy of science. Berkeley, CA: University of California Press.

Heiman, G. W. (1995). Research methods in psychology. Boston: Houghton-Mifflin.

Held, B. S. (1995). Back to reality: A critique of postmodern theory in psychotherapy. New York: W. W. Norton and Company.

Hempel, C. G. (1966). Philosophy of natural science. Upper Saddle River, NJ: Prentice-Hall.

Johnson, P. E. (1995). Reason in the balance: The case against naturalism in science, law & education. Downers Grove, IL: InterVarsity Press

Kristensen, K., Slife, B. D., & Yanchar, S. (2000). On what basis are evaluations possible in a fragmented psychology? An alternative to objectivism and relativism. The Journal of Mind and Behavior, 21 (3), 273 - 288.

Kuhn, T. S. (1970). The structure of scientific revolutions (2nd edition). Chicago: The University of Chicago Press.

Lakatos, I. (1970). Falsification and the methodology of scientific research programs. In I. Lakatos & A. Musgrave (Eds.), Criticism and the growth of knowledge. (pp. 91 – 195). New York: Cambridge University Press.

Lakatos, I. (1978). The methodology of scientific research programmes: Philosophical papers, Volume I. (J. Worrall & G. Currie, Eds.). Cambridge: Cambridge University.

Lazarus, A. A. (1995). Different types of eclecticism and integration: Let's be aware of the dangers. Journal of Psychotherapy Integration, 5 (1), 27-39.

Lazarus, A. A., Beutler, L. E., & Norcross, J. C. (1992). The future of technical eclecticism. Psychotherapy, 29 (1), 11-20.

Leahey, T. H. (1992). A history of modern psychology, 2nd Edition. Englewood Cliffs, NJ: Prentice Hall.

Levinas, E. (1987). Time and the other. (R.A. Cohen, Trans.). Pittsburgh, PA: Duquesne University Press.

MacIntyre, A. (1984). After Virtue, 2nd ed. Notre Dame: University of Notre Dame Press.

Marsden, G. (1997). The outrageous idea of Christian scholarship. New York: Oxford University Press.

Murphy, N. (1990). Theology in the age of scientific reasoning. Ithaca, NY: Cornell University Press.

Murphy, N., & Ellis, G. (1996). On the moral nature of the universe: Theology, cosmology, and ethics. Minneapolis: Fortress Press.

Nathan, P.E. (1998). Practice guidelines: Not yet ideal. American Psychologist, 53, 290-299.

Nathan, P. E. & Gorman, J. M. (1998). A guide to treatments that work. New York: Oxford University Press.

Polkinghorne, D. E. (1983). Methodology for the human sciences: Systems of inquiry. Albany, NY: SUNY Press.

Richards, P. S., & Bergin, A. E. (1997). A spiritual strategy for counseling and psychotherapy. Washington, D.C.: American Psychological Association.

Richards, P. S., & Bergin, A. E. (2003). Case studies in theistic strategies for psychotherapy. Washington, D.C.: American Psychological Association.

Richardson, F. C., Fowers, B. J., & Guignon, C. B. (1999). Re-envisioning psychology: Moral dimensions of theory and practice. San Francisco: Jossey-Bass.

Rorty, R. (1979). Philosophy and the mirror of nature. Princeton, NJ: Princeton University Press.

Rychlak, J.F. (1988). The psychology of rigorous humanism, (second edition). New York: New York University Press.

Sanders, J. (1994). Historical considerations. In C. Pinnock (Ed.), The openness of God. (pp. 59 – 100). Downers Grove, IL: InterVarsity Press.

Seligman, M.E.P. (1994). What you can change and what you can't. New York: Knopf.

Slife, B. D. (1999). Values in Christian families: Do they come from unrecognized idols? Brigham Young University Studies, 38 (2), 117 – 147.

Slife, B. D. (2000). Are discourse communities incommensurable in a fragmented psychology? The possibility of disciplinary coherence. The Journal of Mind and Behavior, 21 (3), 261 - 271.

Slife, B. D. (2003). Theoretical challenges to therapy practice and research: The constraint of naturalism. In M. Lambert (Ed.) Handbook of psychotherapy and behavior change. New York: Wiley.

Slife, B. D., & Gantt, E. (1999). Methodological pluralism: A framework for psychotherapy research. Journal of Clinical Psychology. 55 (12), 1 – 13.

Slife, B. D., & Hopkins, R. H. (in press). Alternative assumptions for neuroscience: Formulating a true monism. In B.D. Slife, J. Reber, & F. Richardson (Eds.), Developing critical thinking in psychology. Washington, D. C.: American Psychological Association Press.

Slife, B. D., & Reber, J. (2001). Eclecticism in psychotherapy: Is it really the best substitute for traditional theories? In Slife, B., Williams, R., & Barlow, S. (Eds.)

Critical issues in psychotherapy: Translating new ideas into practice (pp.213-234). Thousand Oaks, CA: Sage Publications.

Slife, B. D., Hope, C., & Nebeker, S. (1999). Examining the relationship between religious spirituality and psychological science. Journal of Humanistic Psychology, 39 (2), 51 – 85.

Slife, B. D., & Richards, R. S. (2001). How separable are spirituality and theology in psychotherapy? Counseling and Values, 45, 190 – 206.

Slife, B. D., & Williams, R. N. (1995). What's behind the research? Discovering hidden assumptions in the behavioral sciences. Thousand Oaks, CA: Sage Publications

Slife, B.D., Mitchell, L.J. & Whoolery, M. (2003). A theistic approach to therapeutic community: Non-naturalism and the Alldredge Academy. In (S. Richards & A. Bergin, Eds.) Case histories of theistic therapy strategies. Washington, D. C.: American Psychological Association Books.

Slife, B. D., Yanchar, S., & Williams, B. (1999). Conceptions of determinism in radical behaviorism: A taxonomy. Behavior & Philosophy, 27, 75 - 96.

Smith, H. (2001). Why religion matters: The fate of the human spirit in an age of disbelief. San Francisco: Harper.

Taylor, C. (1989). Sources of the self: The making of the modern identity. Cambridge, MA: Harvard University Press.

Taylor, C. (1985). Philosophy and the human sciences: Philosophical papers. Cambridge, England: Cambridge University Press.

Toulmin, S. (1972). Human understanding. Princeton, NJ: Princeton University Press.

Wacome, D.H. (2003). Evolutionary psychology. In S.W. VanderStoep (Ed.), Science and the Soul: Christian faith and psychological research. (pp. 183 – 208). Lanham, MD: University Press of America.

Williams, R.N. (2001). The biologization of psychotherapy: Understanding the nature of influence. In B. Slife, R. Williams, and S. Barlow (Eds.), Critical issues in psychotherapy: Translating new ideas into practice (pp. 51-67). Thousand Oaks, CA: Sage Publications.

Yanchar, S., & Slife, B. D. (1997). Pursuing unity in a fragmented psychology: Problems and prospects. Review of General Psychology, 1 (3), 235 - 255.

Yanchar, S.C., & Slife, B.D. (Eds.) (2000). Toward a Unified Psychology: Incommensurability, Hermeneutics, and Morality. New York: Institute of Mind and Behavior.

[1] The meaning of theism here is not what Borg (1997) calls "supernatural theism" because supernatural theism postulates a God that is "out there" and even completely passive following the world's creation. As it is used here, theism involves the ongoing activity of God in the world – closer to what Borg calls "panentheim."

[2] Other characteristics of psychology's natural science methods will be reviewed later. At this juncture, let us briefly contrast these features – godlessness and lawfulness – with an example of non-naturalistic scientific methods. Because qualitative methods focus on meaning, including the meaning of the investigators themselves, religious meanings that require an active God can be part and parcel of its fare. Although such meanings can be predictive, qualitative methods do not require and are not formulated to yield predictable relations. In fact, meanings are viewed as varying from context to context, so some unpredictability is expected. Many psychologists may assume that the difference in methods is one of "location," with qualitative methods focusing on the subjective realm and natural science methods focusing on the objective realm. However, this understanding completely underestimates the philosophical differences that lead to other differences. Indeed, the difference is location is itself a philosophical difference in where the truth of the world is "located."