

Examining the Relationship Between  
Religious Spirituality and Psychological Science

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## Abstract

Scientific interest in religious spirituality and mental health has increased dramatically. However, many researchers have tended to ignore the historic incompatibility between spirituality and traditional science. A review of the spirituality research suggests that important themes of this historic incompatibility persist in contemporary theories of spirituality. Yet, many spirituality researchers have proceeded as if this incompatibility did not exist. Indeed, there is evidence that spiritual conceptions have been altered to "fit" the requirements of science. No alteration would seem necessary if scientific method were a neutral tool of investigation that did not affect the conceptions themselves. However, if method itself has philosophical commitments, and if these commitments are incompatible with the conceptual foundations of many conceptions of spirituality, then spirituality researchers may be undermining their own conceptions in the service of science. We outline the philosophical commitments of traditional scientific methods and the philosophical commitments of many contemporary conceptions of spirituality to begin a conversation about this possibility.

## Examining the Relationship Between Religious Spirituality and Psychological Science

There has long been an interest in the relationship between religious spirituality and mental health. However, this interest has recently extended to the use of traditional scientific methods for examining this relationship (cf. Clay, 1996; Donohue, 1989; Shafranske, 1996). This use of science to examine the spiritual is unprecedented, uniting two historically separate realms of knowledge and even methods.<sup>1</sup> This unity, however, has been effected without much critical discussion. Calls for such discussion have been issued (e.g., Dennis, 1995; Gorsuch, 1988; Tjeltveit, 1989; Williams and Faulconer, 1994), but with certain exceptions (e.g., Jones, 1996; Richards & Bergin, 1997), these calls have not been heeded in the spirituality and mental health literature.

Critical examination is nevertheless required, because the philosophical commitments of traditional scientific method may conflict with the theoretical assumptions of many conceptions of spirituality (cf. Bergin, 1980; Ellis, 1980; Walls, 1980). This conflict could lead to unintended and unfortunate consequences. There is evidence, for example, that some spirituality researchers alter, ignore, or fail to elaborate important conceptions of spirituality that are incompatible with the traditional philosophy of science (Slife, Nebeker, & Hope, 1996).

The present paper attempts to address these issues. The purpose of the paper is to begin laying the foundation for fertile theoretical discussion and productive empirical work in the important realm of spirituality. We feel that the first task in laying this foundation is one of clarification. Therefore, we begin by describing the historical separation between science and spirituality. We focus our inquiry on religious spirituality to narrow the vast domain of spirituality to a manageable size. This focus also allows us to point to a more specific history and philosophy with which to compare the history and philosophy of science.<sup>2</sup>

Our main point of departure for this comparison is modernism, both in its emphasis on method for evaluating truth claims and in its assumptions about the nature of the world. Interestingly, many contemporary spirituality researchers embrace modernist scientific methods but reject the naturalistic philosophical assumptions that underlie these methods in their conceptions of spirituality. We characterize these researchers as antimodernists and attempt to begin a discussion of the appropriateness of their approach to spirituality research. This discussion cannot occur in any productive manner without considering alternative approaches, so relevant postmodernist assumptions are also outlined. First, however, historical context is needed.

#### A Brief History of the Separation of Science and Spirituality

Historically, both spiritual and scientific knowledge have revolved around the issue of authority: Who or what has the authority to decide the truth? In the Middle ages, the authority for knowledge was primarily considered to be a "who"—God—with the priest or some other "instrument" as a sometimes fallible conduit for God's authority.<sup>3</sup> This authority involved not only what we would consider today to be "religious" or "spiritual" issues, but also what we would consider today to be "scientific" or "secular" issues. To give God authority especially over the latter types of knowledge, such as medicine, sounds strange to many today, but this strangeness is due to the intellectual movements that followed the Middle Ages—the Renaissance and the Enlightenment.

These latter movements saw the church gradually lose its authority over general knowledge to two philosophical movements involving rigorous logic and systematic observation.<sup>4</sup> The first philosophical movement, known as Rationalism, held that the primary authority for truth is rationality or logic. If knowledge, including religious knowledge, did not stand up to the test of rigorous reasoning, then it was suspect. Most religions, however, were not founded upon totally rational systems of thought. In addition, many "faith" assertions were considered to be outside the bounds of the purely

logical. Still, many religious apologists, such as St. Anselm and St. Thomas Aquinas, were partially successful in responding to this challenge by making rational arguments for many religious precepts.

The second movement, known as Empiricism, presented perhaps the more difficult challenge. Empiricism held that the primary authority for truth lies in observation or sensory experience. This movement grew out of the recognition that logic and rationality—Rationalism—are only as valid as their initial premises, and that initial premises cannot themselves be logically derived. Empiricists held that valid premises come from valid observations of the world. This movement was particularly troublesome for religious authority, because many aspects of religion are not thought to be directly observable, and hence cannot be used as initial premises for rational systems of thought.<sup>5</sup> Both rationalist and empiricist approaches to authority reached the peak of their popularity during the Enlightenment, because they were viewed as bringing the "light" of reason and observation to the "dark" Middle Ages of religious authority.

What is now considered science—at least in the traditional sense<sup>6</sup>—also took hold during the Enlightenment. Indeed, traditional science is, in some sense, the wedding of the two philosophical movements of Rationalism and Empiricism (Polkinghorne, 1983; Slife, 1993). As many commentators have noted (e.g., Popper, 1959; Rychlak, 1988; Slife & Williams, 1995), science is a form of logic as well as a type of systematic observation. Traditional science is thought to begin with systematic observations of the world to ascertain valid initial premises, and then the scientist makes logical inferences that presumably lead to coherent theories regarding these observations. This wedding effectively combined the authoritative powers of both philosophies. Knowledge was now considered to be conclusively and irrefutably certain, because both the powers of logic and the powers of observation ensured it to be so.

Note, however, that the traditional authority of the spiritual, as grounded in "instruments of God" (e.g., priests, signs), was pointedly omitted from the authority of traditional science. For over three centuries—indeed, until very recently—this put the scientific and the spiritual in distinctly different categories regarding knowledge. In fact, for a time, science and religion bitterly battled for the same knowledge territory. Galileo's famous recanting of his heliocentric theory of the solar system is only one of many such historic battles. Although religion ultimately lost most of these battles, many church leaders continued to fight the encroachment of science.<sup>7</sup> These leaders believed that the new authority of science encompassed assumptions of the world that conflicted with a spiritual world view.

This historic conflict has not been ignored by contemporary psychological researchers of spirituality (cf. Dennis, 1995; Jones, 1996). Still, a review of the relevant literature reveals that it has rarely been addressed or discussed in the light of present research practices. Jones (1996) and Dennis (1995) correctly note that a growing consensus of scholars has rejected this traditional philosophy of science (sometimes known as "positivism"). However, this rejection is rarely reflected in the research practices of mainstream researchers (cf. Harmon, 1993, 1995; Slife & Williams, 1995; Slife & Williams, 1997), including, we contend, those researchers investigating spirituality.<sup>8</sup> Indeed, it appears that most spirituality researchers have proceeded as if the assumptions and practices of traditional, positivistic science—including such practices as replication, reduction, and operationalization—do not conflict with the assumptions they make about spirituality. Many researchers seem to have presumed that scientific method qua practice is a neutral or objective tool of inquiry into spirituality.

However, relatively recent advancements in the philosophy of science cast doubt on this neutrality (Bohman, 1993; Dennis, 1995; Gadamer, 1993; Harmon, 1993; Jones, 1996; Polkinghorne, 1983; Robinson, 1985; cf. Slife & Williams, 1995). Because

scientific practices are based upon the philosophy that underlies science, these practices embody certain assumptions about the world. That is, practices assume a world in which they make sense and are effective. Therefore, a lack of conflict between scientific practices and spirituality conceptions should not be presumed until a formal examination of the assumptions that underlie these practices and conceptions has been conducted. We begin this examination here by first explicating some of the primary assumptions of mainstream, psychological science—now termed modernism—and then comparing them with assumptions undergirding many conceptions of religious spirituality in the contemporary psychological literature.

### Modernism and Psychological Science

Modernism has been variously described by many historians and philosophers, but fundamentally revolves around the belief that science provides a sure foundation for evaluating truth and knowledge claims. The methodologist Donald Polkinghorne (1990) put it this way:

At the core of modernism or Enlightenment discourse was the belief that a method for uncovering the laws of nature had been discovered, and that the use of this method would eventually accumulate enough knowledge to build "the heavenly kingdom on earth". . . The modernist idea was that formal reasoning applied to sense data provided a foundation for certain knowledge. (p. 92)

Traditional science, then, is the offspring of modernism. The modernist understanding of method was that a Rationalist type of "formal reasoning" should be combined with the "sense data" of Empiricism to lay a firm scientific foundation for knowledge.

Modernism's legacy in psychology is a similar belief in the importance of method for evaluating truth claims and accumulating knowledge. As many have noted, one of the most important and distinctive features of psychology is its focus on research method (Bevan, 1991; Polkinghorne, 1983; Slife & Williams, 1995; Slife & Williams, 1997). No

subject matter or course material is more commonly discussed or taught, even within introductory courses. In fact, there is considerable historical evidence that psychologists decided their methods before they settled on their subject matter (Koch, 1959; Leahey, 1992; Robinson, 1995; Slife & Williams, 1995). The natural sciences, by contrast, developed their methods as a specific response to particular theoretical and practical problems: problems and questions came first and method came second (cf. Polkinghorne, 1983; Ronan, 1982). Psychology, however, was born of a determination to apply the methods of natural science to human beings. Thus, psychology has been a distinctly modernist discipline—traditional scientific methods have historically been given priority in the discipline.

What has this priority of method meant for claims of validity or truth? How does one discern the accuracy of certain ideas in psychology? The answer given by many psychologists is that scientific method is the main, if not sole, means of determining validity. One must find a way to submit the idea to empirical test. One must translate the idea into a testable hypothesis that allows the procedures of science to determine its validity or lack of validity. This methodological approach to validity has so dominated the field of psychology that testability is itself thought to be an indicator of the quality or truth of the idea.

In Carver and Scheier's (1996) popular book on personality theory, for instance, this dominance is illustrated in a paragraph on "how to decide whether a theory is any good" (p. 8). As they put it, "in describing the predictive function of theories, we've revealed a bias that many of today's personality psychologists hold. The bias is this: theories should be testable and should be tested" (p. 8). In other words, if the idea cannot be readily operationalized for testing, then this raises questions about its quality and significance to the discipline. A theory is not "any good," unless it conforms to the dictates of method. In this sense, method not only dictates the procedures one follows in

establishing the validity or accuracy of an idea; method also dictates the criteria for deciding whether and how the idea should be considered in the first place.

Interestingly, these procedures and criteria are rarely questioned in the mainstream of psychology; they are taken as scientific givens.<sup>9</sup> Method has long held this unquestioned status, because it is considered invisible or transparent. This transparency is, again, a property of a modernist understanding of method (and language) (Bevan, 1991; Polkinghorne, 1983; 1990; Slife & Williams, 1995). Method is viewed as providing the experimenter with a window to the objective world. As a transparent window, it is not itself thought to have an effect on what the experimenter sees; it does not affect the truth of ideas and events. Indeed, this window is assumed to clear away extraneous factors affecting the recognition of truth, so that the objective truth—as it "really is"—is allowed to emerge. In this sense, method has priority over theory and truth, because it is a necessary means by which theory is tested and truth is attained.

This priority of method in psychology implies that theorizing about spirituality must itself be testable and operationalizable, because its relevance and importance to the discipline depends upon its verifiability (or falsifiability) by scientific method. Conceptions of spirituality must be cast as the method dictates. Otherwise, such conceptions risk being viewed as untruthful, because they cannot be observed through the window that reveals truth. Indeed, these conceptions risk being viewed as mere biases that the objectivity of method clears away when considering what is actually true. All these considerations, then, have prompted those who believe in the importance of spiritual factors to demonstrate their importance in methodologically acceptable ways. For these very understandable reasons, psychological researchers investigating spirituality have emphasized the empirical over the theoretical.

### The Priority of Theory<sup>10</sup>

As understandable as this might be, we question this state of affairs in the literature on spirituality literature. We question the current prioritizing of method and theory, because method follows from and must be determined by our theories about what truth is and how it must therefore be found (Bevan, 1991; Gadamer, 1993; Jones, 1996; Slife & Williams, 1995). This means, among other things, that much of the spirituality literature has put the cart before the horse. Much of this literature has made theoretical commitments and ruled out certain truth claims because of its commitments to certain methods, without deliberately meaning to do so. The so-called transparent window of method is really opaque (Polkinghorne, 1990), and questions about spirituality have unknowingly been answered in a very unscientific manner—by philosophical fiat in the guise of method.

This is made clear when one realizes that method cannot validate itself. Method has a "boot strap problem," because it cannot use its own methods to validate the methods it is using (Slife & Williams, 1995; Slife & Williams, 1997). In this sense, there can be no grounding for method that is itself empirical or objective; philosophy (or theory) grounds method.<sup>11</sup> Because there is no neutral or unbiased philosophy, there can be no unbiased or neutral method. One must assume a particular nature of the world to suppose that the practices of method will be effective. Therefore, the philosophy underlying a particular method results in scientific practices that rule out (or are opaque to) certain theoretical and therapeutic ideas and events, before any investigation even begins. These ideas are not ruled out because they are "unsupported by the data;" they are ruled out because they belong to a different, but not necessarily fallacious philosophical position.

The philosophy of method affects the theories and findings of any research enterprise in many ways and at many levels. First, as described above, "testable" theories are thought to be the only theories acceptable to science. This implies that other theories

are somehow less acceptable or irrelevant to the discipline, because they do not meet the philosophical biases inherent in the accepted method. Second, theories that are deemed to be testable usually undergo a process of translation into the procedures of method, often termed "operationalizing." Here again, the translation process is itself guided by the biases of the method's philosophical grounding. Third, this translation means that only the "translated" is tested. That is, only those aspects or that particular rendition of the original idea is truly investigated (Slife & Williams, 1995, Ch. 6). Resulting findings, therefore, may have little to do with the original ideas before translation, particularly if the ideas conflict with the philosophy of method in the first place.

Fourth, the best interpretation of the findings is typically thought to be that which is "closest" to the data itself. Interpretation that attempts to take any license with the data is considered to be speculative, and "speculative" is usually a pejorative term in science. This pejorative judgment effectively keeps interpretation "close" to the assumptions inherent in method. Fifth, method is thought to clear away biases so that only the so-called objective truth is exposed. With method itself exposed as a philosophical bias, it is apparent that the supposed "clearing away of biases" is merely a means of privileging one particular philosophical agenda. This agenda may not be objectionable in itself. However, the general point is that the multi-layered influence of a method's philosophy—from the designation of testable theories to the supposed clearing away of biases—has occurred without our knowing that this influence occurs and what this influence is.

This point underscores the importance of theoretical discussion, before method is invoked. One must first decide the theoretical nature of spirituality and only then decide the type of method that is suitable to its exploration. As noted, this is the historic path of the natural sciences: theoretical issues and problems preceded methodological procedures. Method was derived from the problems and context of the people posing the problems. This view of the origin of scientific method raises the question of whether

natural science methods are appropriate to the problems and context of spirituality. This question seems particularly germane in light of the historic separation of spirituality and science. That is, the nature of spiritual issues may be sufficiently different from the nature of natural science issues that spirituality requires another type of method. At this juncture, however, we have established only that any method has a philosophy. To address the appropriateness of modernist methods for research on spirituality, we must now explicate the philosophy underlying these methods.

### Three Assumptions of Modernist Method

Recall that the purpose of traditional science is, in Polkinghorne's words, "for uncovering the laws of nature." Of course, this purpose presumes that the laws themselves exist. That is, the method assumes, as described above, that the world is constituted in a manner that its discovery procedures will be effective. The modernist nature of this world—as derived from Rationalism and Empiricism—involves three essential assumptions about the world.<sup>12</sup> Although these assumptions are rarely made explicit in the psychological literature, they can, nonetheless, be shown to underlie many psychological practices and explanations (Bevan, 1991; Dennis, 1995; Harmon, 1993, 1995; Polkinghorne, 1983; Rychlak, 1981; 1994; Robinson, 1985; 1995; Slife & Williams, 1995), as we will (later) attempt to illustrate by means of the research on spirituality.

The first assumption is that the laws or principles of science are universal in nature (Faulconer & Williams, 1985; Slife, 1993; 1995b; 1996b; Slife & Williams, 1995). Universalism is simply the notion that natural laws—because they are lawful—do not change in time or space. This assumption does not require that a law or principle be constantly "in force;" universalism only requires that a law be applicable to the conditions under which it specifically applies. However, it must be applicable to all these specified conditions—i.e., must be universal to these conditions—regardless of the conditions' time or place. This notion is derived primarily from Rationalism, where principles of reasoning

and thus principles of truth are considered not to change across contexts or eras. Similar to logic, then, a law should work universally; otherwise, it only applies to one point in time and space and thus is not lawful (or truthful). The law of gravity, for example, applies to both South America and North America (unchanging across space). Similarly, the law of gravity applied to both the people of the Tenth Century and the people of the Nineteenth Century (unchanging across time).

Psychologists may not discuss laws per se, particularly laws having a status equal to that of gravity. Still, from the modernist perspective, knowledge itself—including "probabilistic" knowledge—is thought to have similar universal properties. That is, knowledge must apply to more than one place and time to be knowledge. The main reason that researchers attempt to uncover laws and probabilities is that they assume these empirical realities have application to other places and/or other times. If they do not have this application, they cannot be replicated. Replication, of course, is a requirement of method, because it tests whether findings have met the assumption of universality.

Indeed, the lack of universalism—the lack of replicability—has been a major obstacle to the acceptance of parapsychological research in the scientific community (Reinsel, 1990). Because certain findings that supposedly demonstrate "psi phenomena" cannot be reliably replicated, many modernists have dismissed psi phenomena altogether. Its lack of replicability in other places and at other times argues against its very existence. Even the most rigorous experimental conditions will not convince modernists of the reality of such phenomena, if related findings cannot be shown to have some universality.

The reality of phenomena is also governed by a second modernist assumption—materialism. Materialism postulates that the real is the visible and tangible things of the world which exist independently of the observer. This assumption is derived primarily from Empiricism wherein materialistic entities are perceivable through the senses. That is, real, material things are thought to make impressions on our minds through the channels

of the senses (Slife, 1995a). However, the validity of mental impressions that do not stem from material objects—and thus do not come through our senses—is suspect, by definition.

According to materialism, psychological science is possible only because the behaviors of people make sensory impressions on psychological scientists. Although many psychologists are not averse to doing research on nonbehavioral, nonmaterial phenomena, such as attitudes and cognitions, they must translate these nonsensory phenomena into sensory phenomena to be acceptable to scientific method. That is, the practice of operationalization, which is central to traditional social scientific method, is a practice driven by the assumption of materialism—the need to make everything visible and tangible (Koch, 1992). Operationalism assumes that all constructs must be represented as a set of observable and tangible operations for any test to be possible. This means, of course, that only the material properties of any construct are actually involved in any empirical investigation. How well these material properties actually represent a particular construct is a matter of considerable debate (Bickhard, 1992; Green, 1992; Koch, 1992; Slife & Williams, 1995).

The third assumption of Modernism is closely related to the other two—atomism. Atomism is the notion that the material objects of our observation and knowledge can themselves be separated and divided into variables, constructs, and laws that are smaller and presumably more basic than their larger counterparts. These atoms contain within themselves all the essential properties of the larger units. Indeed, each atom is itself a self-contained entity, with all its properties and qualities contained within itself. No properties, for example, are endowed by entities from the "outside;" all the essential properties of each atom stem from the atom itself. This does not prevent atoms from interacting with other atoms, but it does imply that each atom must first exist as a self-contained entity and then cross time and space to interact with other atoms. The qualities of a biological

organism, for example, stem directly from the smaller organs and cells that make up the organism. Once these atomistic qualities are understood, then the larger unit is understood.

Similarly in psychology, some have viewed individual people as the "atoms" of larger communities. The qualities of the community are thought to stem directly from the qualities of the individuals who make up the community, and each individual is considered to be a self-contained entity.<sup>13</sup> That is, the qualities of each individual are understood as originating from the individual, either in terms of their unique pasts or unique biochemistries (or some interaction of the two).

Even many "systems" and "interactional" approaches retain this perspective, because individual characteristics are still thought to be contained "within" the individuals themselves (see Slife, 1993, chapters 6 and 8). This has allowed such characteristics (e.g., personality) to be viewed as relatively stable (and universal) from context to context (e.g., McCrae & Costa, 1997). The interaction of these atomistic individuals is expected, along with many changes as a result of this interaction. However, these individuals are thought to begin as individuals, and only later form interactions and communities. Consequently, science's task—including that of psychology—is to grasp the properties of these individual atoms and account for their lawful interaction and combination.

#### Problems with Modernist Assumptions in Conceptions of Spirituality

These three modernist assumptions have not been favored by those currently attempting to understand religious spirituality. Even during the Enlightenment, the popularity of these three assumptions of modernism posed several problems for spirituality. First, the focal point or "object" of study for those interested in spirituality—a supreme being or a divine presence—was assumed to have a nature that violated one or more of these modernist assumptions.<sup>14</sup> Few theistic theologies, for example, held that God was a material entity who was known only through sensory experiences. Even fewer

contended that God was made up of smaller, more fundamental particles and laws. The importance of these three assumptions for judging what was real, however, meant that a supreme being's existence had to be questioned. Even if God did exist, divine interventions could not be understood in the modernist world of natural laws, because any such intervention would have to subvert natural laws in order to be a genuine intervention (e.g., a miracle, something supernatural). God could have created the universe and its laws, but God could not continually intervene, because this would destroy the order of the world assumed by the modernist.

The three assumptions of modernism were similarly problematic for notions of religious spirituality. Because God either did not exist or could not intervene in the modernist world, it was difficult to consider a supreme being to be the source of spirituality. Moreover, how could spirituality truly exist unless it consisted of some type of observable matter? And if spirituality consisted of atoms of matter in the modernist sense, would it not be subject to the same laws as any other physical system? How then could God be understood to use such spirits when they were already governed by their own, physical lawfulness? Either God could subvert the natural laws to intervene spiritually—in which case the natural laws would not be lawful—or God could avoid intervening and allow the natural laws to stand on their own. In the latter case, God could be said to have set the whole universe in motion originally, but God could not be a personal God who acted constantly and purposely through spirituality. From a modernist perspective, God had to be outside this natural system, and spirituality was, at best, faith in the divine initiator of this lawful world.

Concerns such as these led many researchers of spirituality to reject modernist assumptions. William James (1902), for example, fought all three assumptions of modernism in his seminal book, The Varieties of Religious Experience. Rather than focusing on the material realities of spirituality, such as a person's behavior, he focused on

spiritual experiences, claiming that they had at least an equal ontological status. Instead of postulating universal principles of spirituality, James was careful to present these experiences in their own, unique contexts, grounding even his own interpretations of these experiences within this context. And finally, James rejected the atomism of modernism. His understanding of spirituality was explicitly holistic, contending that the whole of spiritual experiences could not be reduced to or deduced from the qualities of their component parts. In this manner, he fought all three assumptions in his unique alternative to modernistic methods—radical empiricism (James, 1976/1912).

James is an excellent example of scholars who appear to reject modernist assumptions as a basis for understanding religious spirituality. Indeed, from our review of the religious spirituality literature, this rejection is more the rule than the exception, despite the popularity of modernism more generally in psychology. In this sense, the spirituality literature appears to continue the historic fight against the encroachment of modernistic assumptions into the spiritual realm. Of course, it is also possible that spirituality—at least as conventionally and historically viewed—is not conceivable in a modernist world. This possibility would certainly be grounds for a spirituality researcher challenging modernist assumptions. Even so, it is striking—given the modernist tendencies of psychology—how frequently each of the three assumptions is rejected, though rarely explicitly, in conceptualizations of spirituality. Indeed, for each modernist assumption, there appears to be a competing assumption in the literature on spirituality.

### Three Competing Assumptions in Spirituality Research

The first competing assumption stems from a common theme found in many descriptions of spirituality—transcendence. This theme generally connotes a rising above or going beyond the ordinary limits of physicality. It may describe rising above our natural world to relate with a divine being, or it may refer to going beyond our own physical state to effect some heightened awareness of ourselves. In either case, it directly contrasts with

the materialism of modernism. Materialism, as explained above, confines itself to physical objects and their observable properties. It cannot deal with any process or movement that is extraphysical or beyond the parameters of a particular object in a particular time and place. Transcendence, however, clearly implies this movement; it implies an ability to supersede altogether that which is real in the modern sense—the world of matter.

Chandler, Holden, and Kolander (1992) illustrate this theme when they state that the spiritual "pertains to the innate capacity to, and tendency to seek to transcend one's current locus of centrality, which transcendence involves increased knowledge and love" (p. 168). Although the exact meaning of transcending one's "current locus of centrality" is not completely clear, it is clear that this definition was not inspired by modernistic materialism. Such materialism requires a precise locus at any given moment, because it is a material object. Consider, also, conceptions of spirituality that are related to health and well-being. Transcendence is a frequent theme, as Reed (1992) exemplifies in this passage, ". . . spirituality is a broad concept useful for conceptualizing the person as having the capacity for health through transcendence of ordinary boundaries in a variety of understandable ways" (p. 351). Other researchers who seem to incorporate similar transcendence themes in their conceptions of spirituality include Assagioli (1971), Benor and Benor (1993), Ellison and Smith (1991), Kuhn (1988), and Carl Rogers (as cited in Bergin, 1991).

Another important theme of contemporary spirituality is holism. Holism is the notion that many qualities of things arise only in relation to other things. That is, parts get their meaning (and qualities) as parts from their arrangement together as a whole. This, of course, is antithetical to atomism. Atomism assumes that qualities inhere in the things themselves. Although atoms are parts, in a sense, atomism assumes that the properties of each part originate not from the relation of that part to other parts, but from the individual part's self-contained properties. Atomistic wholes can thus be reduced to their constituent

components, because these components retain all their original properties. Holistic wholes, by contrast, cannot be reduced to their component parts without losing their original qualities.

Many conceptions of spirituality in psychology evidence this holism. Ellison and Smith (1991b), for example, describe spiritual well-being as, "the affirmation of life...that nurtures and celebrates wholeness" (p. 57). Roth (1988), also commenting on spiritual well-being, characterizes it as "a measure of the internal organization of that religious and existential orientation which has been well integrated into the inner fiber of the person" (p. 153). Likewise, Wirth (1993) considers "an individual's spirituality [as] the very cornerstone of health and well-being because it facilitates the holistic integration of mind, body, and spirit (p. 69). Along with many others (e.g., Muldoon & King, 1991; Sheldrake, 1992), these scholars view spirituality as a celebration of relationship and connectedness that is more than merely the mechanical interaction of "atoms." The unity of mind, body, and spirit in Wirth's conception, for example, gives a meaning—and properties—to each part that cannot be understood from the modernist perspective of "self-contained" properties and their interaction (Merleau-Ponty, 1963; Slife, 1993).

The final theme that emerged from our literature review of spiritual conceptions is contextuality. Although this term per se is rarely used in this literature, we use it here to coalesce several related themes found in spiritual conceptions—possibility, meaning, uniqueness, and subjectivity. The common thread that seems to run through these conceptions is that spirituality somehow takes into account a person's unique, "subjective" meaning and situation. This unique meaning and situation—what we have termed "context"—is different from modernism's universalism, because universalism implies that the general and the lawful, instead of the particular and the exceptional, are ultimately real. Universalism leads to a focus on what is the same—across contexts—whereas contextuality leads to a focus on what is different and contextually bound.

Many scholars of the spirituality literature would appear to disagree with universalism. Fowler (1991), for example, describes the development of spirituality and faith as a "dynamic quality of human meaning making [that] can be defined in terms of each individual's center of values, images of power, and master stories" (p. 27). This acknowledges a unique personal context for spirituality. Individuals "make meaning" rather than become effects of the universal laws that "make them." Similarly, Prest and Keller assert that spirituality involves "concerns with subjective beliefs regarding intangible aspects of human and existential functioning" (as cited in Everts & Agee, 1994, p. 292). These "subjective beliefs" obviously challenge modernism's materialism as well as its universality. The point is that a substantial number of researchers of spirituality incorporate the unique and possible into their conceptions (Assagioli, 1971; Hinterkopf, 1994; Kuhn, 1988; Tillich, 1959), and this incorporation violates the assumptions of modernism.

#### Accepting the Method of Modernism

Interestingly, this disagreement with the assumptions of modernism does not seem to extend to a disagreement with the methods of modernism. Recall that the engine of the three assumptions of modernism was modernistic method. Whether the method was itself derived from the three assumptions about the world, or whether the three assumptions about the world were derived from the method's range of effectiveness, is of no consequence here. The important issue is that modernist world views and modernist methods—content and process—are inextricably interrelated; one implies the other. As noted above, one must assume that the world is made up of laws for there to be a particular method aimed at uncovering them. Likewise, any method—itsself a theory—makes assumptions about how the world must be in order for its procedures to be effective.

Many spirituality researchers, however, have proceeded as if modernist process and modernist content are completely divorceable from one another. This is what we have termed antimodernism in the spirituality literature. Some researchers, as we have demonstrated above, reject modernist notions of the world in favor of their own conceptions of spirituality. However, most of these same researchers have attempted to test their conceptions using methods originally derived from the natural sciences—i.e., modernist methods (e.g., Ellison & Smith, 1991; Kass, Friedman, Leserman, Zuttermeister, & Benson, 1991; Ledbetter & Foster, 1989; Ledbetter, Smith, Fischer, Vosler-Hunter, Chew, 1991; Shafranske, 1996; Stifler, Greer, Sneck, & Dovenhuele, 1993).

Why have such researchers adopted this strategy, often without formal justification? As described above, many investigators assume that modernist methods are transparent. Methods are assumed to help illuminate reality as it really is; they do not affect our view of reality in any substantial manner. Although many in this literature have questioned this assumption (e.g., Dennis, 1995; Jones, 1996; Richards & Bergin, 1997), this questioning has not appeared to move researchers to modify their research practice. If anything, spirituality researchers have seemed to rejoice in their hard won opportunity to use the methods of traditional science, along with scientifically acceptable practices, to reveal the principles of spirituality generally and the influences of religious spirituality on mental health more specifically.

Indeed, in this sense, antimodernism is a provocative intellectual movement. Given the historical acrimony between science and spirituality, antimodernism is itself historically significant as an attempted rapprochement between these two seemingly antagonistic positions. For perhaps the first time in many years, science and spirituality appear to meet on the same ground—the empirical investigation of spiritual phenomena (cf. Dennis, 1995; Jones, 1994). Or do they? Have spirituality researchers really established this

rapprochement? Have they finally united all forms of historic authority: systematic observation, rigorous rationality, and spiritual insight? Although no one has claimed to achieve this integration formally, the literature proceeds as if it has occurred. Is this supposed concord the pinnacle of knowledge discernment—finally a unity of the scientific and the spiritual? Or, is this presumed harmony only a false and misleading promise?

We suspect that the latter is true. Perhaps the most important indication of this is that some researchers seem to be modernizing their conceptions of spirituality in order to render them more amenable to their methods. As we will attempt to illustrate (below), these researchers appear to alter their theories of spirituality to be acceptable to modernism, particularly when they move from their theories to their methods of testing their theories. Their antimodern content becomes "translated" through method into modernist content. We cannot say how widespread this "modernizing" might be, and we do not attempt to represent the spirituality literature in general. However, if this "modernization" of findings were occurring with some frequency, no rapprochement would have actually happened. Modernism would still be tested by modernism, and the antimodern content that many scholars have fought to sustain would be lost. Unfortunately, this literature is relatively new, so that intellectual trends of this nature are somewhat difficult to discern. Still, we believe that there is some evidence that this "modernizing" of spiritual conceptions is occurring.

#### Modernizing Spirituality Through Method

At this point, we offer several examples of how the many characteristics of method might filter into the theorizing on spirituality. We do not offer these examples as a demonstration or proof of our suspicions, but rather as something for scholars of this literature to consider and discuss. Our first example concerns the prevalent modernist notion that researchers must operationalize their theoretical constructs. As described above, this requirement originated in the materialism of modernism (Koch, 1992). That is,

a construct must be transformed into a procedure—a set of observable and tangible events—that one performs within the experiment. Somehow, this operationalization is thought to represent the construct. If the operationalization did not represent the construct, of course, the method would not really be testing the construct. It is possible, of course, that antimodernist spiritual conceptions cannot be represented in "operationalized" or "materialist" terms at all (cf. Bickhard, 1992; Green, 1992; Slife & Williams, 1995). However, the issue here is whether this requirement of method affects theorizing about spirituality.

As a first example, consider how method encourages researchers to reduce and divide theoretical concepts into supposedly more basic components. This encouragement derives from the assumption of atomism. The notion that wholes consist entirely of smaller "factors" or "variables," however multivariate or interactional they may be, is atomistic, because the phenomena are still thought to be reducible to their component parts. Indeed, the customary separation and sequencing of independent variables and dependent variables in experimental design is another manifestation of atomism. While independent and dependent variables may be both considered necessary to understand a particular process, they must each exist independently of the other—with their own sets of properties—to be conceptualized in this methodological sequence (Slife, 1993). Holistic approaches to spirituality, on the other hand, assume that crucial properties of parts stem from their simultaneous relationship as a whole. To sequence or separate these parts into variables is to lose their very identities.

As an illustration, consider Wirth (1993) who described his holistic view of mind, body, and spirit. From his perspective, it seems doubtful that he could consider one of these parts as an independent variable and another as a dependent variable. If his conception is truly holistic, then the sequencing of any one set of parts—one part occurring without and before the others—would strip those parts of the qualities they

have as a whole. Nor is this holistic relationship merely an interaction among "factors," because the factors that "interact" cannot exist outside this "interaction." That is, they are not first factors (atoms) which then come together to form an interaction. For a holist like Wirth, they are first and foremost parts of a whole that gives them their very identities. In this sense, no "interaction" is necessary, because they are already and always related.

Can the atomism of modernist method affect the theorizing of a holist? Here, we consider the pioneering efforts of Ellison and his Spiritual Well-Being Scale. Ellison (1983) proffers a holistic conception of spiritual well being in relation to this scale: "It is the spirit which synthesizes the total personality...The spiritual dimension does not exist in isolation from our psyche and soma, but provides an integrative force" (p. 331-332). Ellison and Smith (1991a) likewise contend that the spirit is "integratively interwoven with the body and soul of the individual..." (p. 37). Here, spirituality is not just part of a whole; spirituality is itself the relation or link among parts. Thus, spirituality is the "betweenness" of factors, rather than an isolable or reducible factor itself.

Despite this apparently clear holistic conception for spiritual well being, Ellison chooses to factor analyze spiritual well being into its supposedly more fundamental constituent factors. Although there is insufficient space to review factor analytic procedures here, suffice it to say that these procedures cannot do much justice to an "integrative force." Factors are created in summary fashion from data points as vectors. As the gestaltists noted long ago, the whole is not the sum of its parts. Factor analysis, as a tool of traditional scientific method, ultimately assumes an atomistic approach to the construct being measured, and Ellison, in taking his atomistic findings seriously, incorporates this atomistic assumption into his evolving understanding of spiritual well-being. In this manner, his method affects his theorizing. The upshot is that Ellison may be coaxed—perhaps unknowingly—away from his holistic roots.

Consider Reed's (1987) work as a second example of how method can affect theorizing about spirituality. Although she clearly favors a transcendent conception of spirituality (see above), we see her moving toward a behavioral, and thus a materialist, conception as she nears operationalization, as in this passage: "Spirituality is defined in terms of personal views and behaviors that express a sense of relatedness to a transcendental dimension or to something greater than the self" (p. 336). Clearly, Reed here is relating behaviors that are observable to this "transcendental dimension." Our question is: Why? Although there are surely behaviors associated with this spiritual dimension, why define spirituality in terms of behaviors? How adequately can a behavioral definition capture something that is, by definition, above or beyond the ordinary limits of physicality? Although we cannot know for certain, we suggest that the answer to these questions involves the requirement of operationalization in Reed's method. We wonder if this is not an instance of method's materialism affecting the very definition of a spiritual conception.

Our third example concerns the requirement of replication in modernistic method. Replication is, of course, the notion that a finding must be repeated (or replicated) sufficiently so that it can be shown to be generalizable to other times and other places. If replicability cannot be demonstrated, then the finding is not considered real. Still, this replicability requirement is not a necessity of reality itself; it is a necessity of a particular view of reality. The notion of replicability is underlain by the modernist notion that real empirical laws or principles must exhibit stable and universal characteristics. That is, they must operate in more than one context, at more than one period of time. If a spiritual occurrence happens only once, for instance, it cannot be replicated and thus must not be considered real. Even if this spiritual occurrence happens under rigorous experimental conditions, it cannot be said to be a real empirical (read "modernist") phenomenon. Even if this spiritual occurrence is the truth—i.e., it really and truly did occur—modernist

assumptions preclude such truths a priori (i.e., before any data are gathered). The only phenomena that can be said to be real are those that happen across at least some conditions.

Does the replicability (and thus the reality) status of a phenomenon affect theorizing about it? Surely it does, if we take our method at all seriously. That is, if our method requires replicability and thus universality to some degree, why would we even postulate a nonreplicable, nonuniversal conception of spirituality in the first place? Why postulate a spiritual phenomenon that happens only uniquely and nonrepeatedly, when it not only cannot be proven true, but cannot even be true, a priori? Method is our test of truth, so why conceive of something untestable? Even if we begin with a nonmodernist conception—such as the contextuality of antimodernism—we would necessarily have to "modernize" the conception as we moved toward testing. This aspect of "modernization" is difficult to document in the literature. However, we believe that conceptions of spirituality would eventually have to assume universality, either in anticipation of the replicability requirements of traditional method, or after operationalization has translated contextual phenomena into replicable (and hence universal) phenomena.

We also find evidence that many scholars hold one definition of spirituality which they possess privately and hold another definition of spirituality publicly which they put to scientific test. For example, any private reference to divine beings in a spiritual conception would be problematic to a scientific and public test. That such beings cannot be operationalized—at least in modernist method—would necessarily imply their exclusion during the conducting of the scientific procedure. However, if such beings were considered essential (i.e., not merely added on) to one's conception of spirituality, as might be expected in religious conceptions of spirituality, these conceptions would either be untestable, and thus untruthful, or undergo a "translation" process that omits their religious essence.

Presumably, neither alternative would be acceptable to the researcher interested in religious spirituality. And yet, we contend that these are the only alternatives made available to antimodernists. Because antimodernists begin their theorizing outside modernist assumptions and test their theories with modernist methods, they must either consider their conceptions wholly untestable or transform their conceptions into a form acceptable to modernist method. We have attempted to show here how some researchers may do the latter. Unfortunately, this transformation for the sake of acceptability may come at high price—in some cases subtle, but significant, changes in the conception of spirituality itself.

#### Where Do We Go From Here?

If this is true, then where does the researcher concerned about spiritual issues turn? If the use of natural science methods requires alterations, however subtle, in the very core of some spiritual conceptions, then what can the spirituality researcher do? How can researchers preserve the integrity of their conceptions and yet advance knowledge of them? In a sense, this situation is reminiscent of the late Middle Ages where science and spirituality originally went their separate ways. However, such a separation is problematic, because it promotes compartmentalization, with spiritual insights kept in one compartment and scientific information kept in another compartment. Compartmentalization can be detrimental to the pursuit of knowledge, because different realms of knowledge may complement one another. Perhaps neither the scientific nor the spiritual can claim to be complete without the other.

Difficulties with compartmentalization were part of the original impetus for the scientific study of spirituality (Bergin, 1980; Bergin, 1991). We agree that historical compartmentalization, where the concerns of people interested in spiritual issues were isolated from the concerns of scientists, is not the answer. However, we cannot endorse an uncritical meshing of modernist methods and antimodernist theories. We contend,

instead, that the first step is a broad-based discussion of this issue. Recent recognition that method should not precede (and thus dictate) theory disallows a purely empirical answer to the issue. Method is not a transparent window or an objective instrument for testing our ideas. All methods (and languages) come with their own liabilities and assets, their own assumptions and implications. Consequently, each method must be evaluated in relation to the context of its proposed use. Modernist methods must therefore be critically examined for their appropriateness to conceptions of spirituality.

This examination, however, will require alternative assumptions and methods in order to be truly meaningful. That is, without contrasting options, modernist method will appear, as it has always appeared, as the only "game in town." Here we believe, as do others in the spirituality literature (Fahlberg & Fahlberg, 1991; Harmon, 1993, 1995; Williams & Faulconer, 1995), that postmodernism may be able to make a positive contribution. We should emphasize that we view postmodern assumptions with caution (Slife & Williams, 1995); postmodernism is not the answer in our view, but rather a necessary part of the discussion we believe should take place.<sup>15</sup>

Postmodernists not only introduce an alternate set of assumptions—some of which are compatible with antimodernist content; postmodernists also offer alternate methods that are themselves based on the alternate assumptions. These methods have been termed qualitative methods to distinguish them from the quantitative methods of modernism (e.g., Crabtree & Miller, 1992; Denzin & Lincoln, 1994; Gilgun, Daly, & Handel, 1992; Patton, 1990; van Zuuren, Wertz, & Mook, 1987). Although limited space prohibits any review of these methods here, we offer a brief description of relevant postmodern assumptions that underlie these methods. We have purposefully framed these assumptions so that they directly contrast with the three assumptions of modernism described above. This may oversimplify the postmodern position<sup>16</sup>, but we hope it will better facilitate the conversation about modernism and antimodernism that we advocate.

Lived Experience. Instead of focusing on an observable, material reality that is considered to be "behind" changing experience, many postmodernists argue for a focus on experience itself.<sup>17</sup> They contend that we do not have anything to study but experience anyway. No one, including the most rigorous of scientist, gets outside their experiences. Even the material world of the modernist can only be known, and only occurs within our experience. However, the problem with materialism, according to the postmodernist, is that it stems from a narrowed understanding of experience, as promulgated by Empiricism. That is, only sensory, so-called objective experiences are allowed. The postmodernist notes, however, that this limiting of experience is arbitrary, or at least biased, because our lived experience offers us far more than what comes through our senses, including our feelings, mental events, and even spiritual events. What gives "material" experiences a privileged status anyway? This status is a quirk of intellectual history; reality does not have to be limited in this manner. Indeed, if material events are themselves experiences, then they are, in a sense, as "subjective" as our other experiences.<sup>18</sup> From this more postmodern perspective, if spirituality is experienced, then it is a candidate for reality status.

Radical Holism.<sup>19</sup> Rather than postulating that the whole is derived from more fundamental, atomic parts "out there" in material reality, the postmodernist asks us to consider that the parts themselves depend upon the whole for their very existence. In this sense, the whole of experience (as discussed above), including the past, present, and future, is required to understand any portion of experience (Slife, 1993, Ch. 10). To focus on sensory or present experiences alone, for example, is to miss the qualities these experiences derive from and give to other forms of experiences. This radical holism asserts that subjective and objective factors cannot be atomistically separated, nor can they "interact," because they do not originate from independent sources. The "objects" of our experience must be interpreted to exist and be meaningful, at least as we experience them

(which is the only way we know them anyway), and subjective "factors" must have objects against which the subject stands out and on which the subject "works." In this sense, neither the objective nor the subjective need to "interact," because they are always and already one entity (e.g., Dasein). In fact, many postmodernists advocate dissolving the traditional subject/object distinction altogether. Spirituality, in this sense, is neither a subjective factor nor an objective factor, but an experience as real as any other.

Moreover, a holist can validly contend that spiritual experiences must be understood to comprehend completely other experiences, such as sensory and material experiences.

Because spiritual experiences can be considered to be part of the greater whole of experiences, they can lend meaning to sensory and material experiences, just as parts lend meaning to other parts of a whole.

Contextuality. Instead of searching for timeless, universal laws that occur without regard to context, the postmodernist advocates the search for experiential "patterns" (e.g., Bohman, 1993). These patterns are not laws and thus need not be lawful or universal. They are, instead, regularities that are culturally and contextually bound. That is, they pertain to and must be understood within the context in which they are found—potentially unique and nonrepeatable.<sup>20</sup> Further, these patterns are never considered final or complete, because they are constantly evolving as our contexts change and the interpreters of such regularities themselves evolve. The postmodernist notes that our experiences, shorn of our modernist biases, constantly change. The changes can be gradual and seemingly lawful, or discontinuous and cataclysmic, such as sudden insights and miracles. Spiritual researchers, therefore, would not be required to find the unchanging laws that govern spirituality. They could embrace experienced change for its own sake, finding patterns in the change perhaps, but not elevating these patterns to a status that says that the patterns themselves determine the change. This would mean that the change is not itself "determined;" the regularities discerned are not patterns of necessity but patterns of

possibility. This would allow nondeterministic constructs, such as the "meaning making" and "transcendence" of the antimodernists (above), to be part of the research enterprise.

Although we certainly feel that these postmodern assumptions, and the qualitative methods that are implied by them, deserve careful consideration, we emphasize that we do not proffer them as "truths." Postmodern assumptions have their own sets of problems. We offer them, instead, in the spirit of the conversation that we feel is so sorely needed in the spirituality literature. That is, we offer them as a set of contrasting ideas that are required for any critical discussion about ideas. We note ongoing research, or at least research proposals in the spirituality literature, that use similar postmodern assumptions (Harmon, 1993, 1995; Fahlberg & Fahlberg, 1991; Williams & Faulconer, 1994). In fact, spirituality research has a long tradition, at least as old as William James, of assumptions compatible with what we identify here as postmodern assumptions. James would probably endorse variations of these assumptions, and much of his research is exemplary of the qualitative research that could be conducted.

It is also important to note that some have claimed that qualitative methods can be effectively combined with quantitative methods (e.g., Faulconer & Williams, 1985; 1990; Polkinghorne, 1983). The combination has come to be known as "methodological pluralism" (Slife & Williams, 1995; cf. Bevan, 1991). This position essentially holds that all methods are languages through which we make sense of the world. All languages open a world of understandings in some way, but close off understandings in other ways. No language can open all understandings; no method can claim preeminence. Each has its own set of advantages and disadvantages, depending upon the context of their use. An important task of scientists, then—as methodological pluralists—is to know these advantages and disadvantages. Scientists must know the various assumptions of the various methods available and consider which of them is the best tool for the job at hand. We normally wouldn't use a screwdriver to pound a nail. Yet, from the perspective of a

methodological pluralist, this is metaphorically what some spirituality researchers—depending upon their conception of spirituality—have been attempting with traditional scientific methods.

### Conclusion

At this point, several issues facing the research on spirituality have been clarified, and several questions have been raised as a result of this clarification. First, the historic emphasis in psychology on certain methodological practices, such as replication and operationalization, has led spirituality researchers to emphasize these practices in their investigations. However, what has not been widely acknowledged is the theory-laden nature of these practices. As with all theories, method has certain assumptions about the world that allows it to make sense and be effective as a method. Historically, the assumptions underlying contemporary psychological methods—known as modernism—have conflicted with the assumptions of many conceptions of spirituality. Interestingly, the many movements of history—including the Enlightenment, where modernism rose to prominence—have not seemed to diminish the importance of these conflicting assumptions for those concerned with understanding spirituality. The net effect is that the assumptions of many current conceptions of religious spirituality are not consonant with assumptions of many scientific methods used to test the conceptions.

The reason for this lack of consonance seems clear: Modernists have historically assumed that their methods were transparent windows to the principles governing reality. Researchers of spirituality have thus assumed that the same methods would reveal the principles governing spirituality, and a large research enterprise has arisen as a result. At this point, however, there are questions about whether this enterprise is fulfilling its promise. There is evidence that some spirituality researchers are essentially "modernizing" their conceptions in order to be compatible with their modernist methods. This modernization has the potential, at least, to undermine the very conceptions these

researchers are attempting to test. The nature of this evidence is such that it cannot be entirely convincing. Still, we offer it as a "hypothesis" of sorts, in the spirit of a needed and continuing conversation regarding the appropriateness of modernist method for spirituality research.

We recommend two avenues of conversation: First, researchers must begin a formal discussion about these issues. Editors of relevant journals and chairs of pertinent conventions could include special sections devoted to the topic. Second, and perhaps more importantly, researchers should begin to discuss these issues locally. That is, this important conversation should also take place informally, within research teams and among affiliated colleagues. To facilitate this conversation, we offer a list of questions that researchers concerned with spiritual issues might consider addressing before beginning their next study (see Table 1). In either case, the growing popularity of spirituality in the mental health literature demands a more critical discussion than has been attempted thus far. We hope this paper serves as a catalyst for facilitating such discussion.

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Table 1

Questions for Researchers of Spirituality

- 1) Given that spirituality researchers cannot proceed without a conception of spirituality, what are the assumptions that underlie this conception? Is this conception or explanation antimodern? Modern? Postmodern? Another?
- 2) How has this conception of spirituality been influenced by the intellectual and cultural context of the research and researchers--e.g., spiritual tradition, community, culture?
- 3) What implications does this conception and its assumptions have for investigations of spirituality? Are the assumptions of spirituality compatible with the assumptions of method?
- 4) Have these methods been chosen deliberately, i.e., with knowledge of both their philosophical assumptions and their alternatives? Can this conception of spirituality be measured in traditional scientific ways?
- 5) Are there points in the research program where "drift" away from its theoretical assumptions is occurring? If some form of antimodernism is embraced, do the research methods facilitate a drift toward modernism?

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Footnotes

<sup>1</sup>By "separate realms" we do not mean to imply that there were no historical attempts to integrate science and spirituality. Medieval science, for example, was sometimes interested in investigating the spiritual. However, many of the methods and assumptions of this "science" were quite different from modern, or what we are terming here (from a present perspective) "traditional," scientific methods and its assumptions. It is also true that many modern scientists took inspiration from their religious beliefs (e.g., Isaac Newton). However, few, if any, held that they were using such methods to investigate spiritual phenomena, such as many researchers hold today. For a review of this rich history, see Vande Kemp (1996).

<sup>2</sup>Our focus may seem even narrower in some places, because we exemplify religious spirituality through primarily theistic spiritual illustrations. However, it is not our intention to exclude nontheistic spirituality. Indeed, we believe that many of our points are applicable to such nontheistic conceptions of spirituality. We use theistic illustrations, because we are most familiar with them, and because many, though certainly not all, researchers ground their conceptions of spirituality in some sort of supreme being or divine presence.

<sup>3</sup>We may commit the error of many "historians" here--oversimplifying the Middle Ages. Thinkers of the Middle Ages tried to combine reason, experience, tradition, and revelation. The principle difference between this period and the Enlightenment is that Enlightenment thinkers wanted to exclude tradition and revelation. We ask the reader's indulgence here, because we intend only a brief description of the historical context.

<sup>4</sup>The seeds of these philosophical movements--Rationalism and Empiricism--were, of course, planted well before the Middle Ages.

<sup>5</sup>We do not intend here to pose an artificial polemic between Enlightenment and religious figures. Many Enlightenment thinkers, for example, viewed their proposals as harmonious with their faith (e.g., Isaac Newton). Indeed, some scholars now trace part of the development of science to

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Judeo-Christian ideas about the regularity of created order and the ability of the created human mind to grasp this order. Still, the preponderance of Enlightenment figures favored excluding the religious and spiritual from scientific and secular knowledge.

<sup>6</sup>By "traditional sense" we refer to positivism (and logical positivism) broadly defined (see Slife & Williams, 1997). We acknowledge that this approach to method is not the sole expression of psychology's "tradition" of investigation. Case studies, for instance, have been important to the development of many psychotherapies. However, we would hold, as do others (Polkinghorne, 1983), that positivism dominates psychology's general tradition. Even theory construction has been conducted within the auspices of positivistic method. Theory is viewed as part of this method, i.e., as the generator of testable hypotheses (as we illustrate later in the article).

<sup>7</sup>We note here that some church leaders welcomed traditional science as itself an instrument of God.

<sup>8</sup>It is not the purpose of this paper to review this literature. Still, we offer a selective review of investigations later in the article that we consider prototypical of spirituality research. However, such a selective review does not indicate how widespread positivistic research practices have been, from parapsychological laboratory investigations of "the spirit" to many studies of transpersonal phenomena to modern experimentation into mind/body medicine.

<sup>9</sup>This is not to say that others, primarily outside the mainstream of psychology, have not questioned these procedures and criteria. This is only to note that traditional practices of science are still alive and well in the practices of mainstream contemporary psychology.

<sup>10</sup>We do not mean to separate theory from method (or sequence theory and method) through this "prioritizing." Our point is that one cannot know method--along with its advantages and disadvantages--without also knowing its theoretical commitments (see Slife, 1993; Slife & Williams, 1995).

<sup>11</sup>Some have contended that the success of science demonstrates its validity. However, this contention has the same "boot strap problem." Noting success merely begs the philosophical

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question of what one considers success and how one verifies it. "Success," in this sense, is not an objective thing; its criteria must be decided subjectively. Likewise, "verification" of science's putative success cannot be verified by the very thing being examined--science itself. Therefore, there is no objective or "scientific" grounding for scientific method.

<sup>12</sup>These assumptions are not intended to be comprehensive. They are instead presented as assumptions that are important to modernism.

<sup>13</sup>Many conceptions of systems in psychology are exceptions to this atomism. However, many conceptions of systems are not exceptions (cf. Slife, 1993, Ch. 8).

<sup>14</sup>We do not mean to imply that all people concerned with spirituality in psychology are religious, except in perhaps a very broad sense of the term "religious." Religious spirituality is merely our focus in this paper.

<sup>15</sup>We are particularly wary of the relativism of some postmodernists (cf. Fowers & Richardson, 1996; Slife, 1996a; Slife & Williams, 1995). However, as others have noted (e.g., Widdershoven, 1992), many postmodernists are not relativists.

<sup>16</sup>See, for example, Faulconer & Williams (1990), Messer, Sass, & Woolfolk, (1988), and Polkinghorne, (1983; 1990) for a more complete rendering of postmodern thought.

<sup>17</sup>See, for example, the work of Duquesne's Institute of Spiritual Formation which studies the commonalities of spiritual experiences across a diversity of religious beliefs.

<sup>18</sup>Many postmodernists dissolve the subjective/objective distinction altogether. We use it here in quotes, so that we can make contact with the prior discussion.

<sup>19</sup>The inclusion of not only spatial but also temporal experiences is the reason we call this assumption "radical holism." Many postmodernists in the Heideggerian tradition include the past, present, and future in the lived experience of the now--i.e., temporal context as well as the usual spatial parameters of experience (Slife, 1993).

<sup>20</sup>This assertion may raise the specter of relativism for many readers. Does this contextuality prohibit truth? The answer of many postmodernists is clearly in the negative. This question

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assumes that truth is identified with modernist universalism. If, however, one assumes--as many postmodernists do--that truth is itself contextual, even religious truth, then it can only be found in contexts. For example, some Christians consider Christ (as manifested through the Holy Spirit) to be part and parcel of particular contexts, rather than a universalized, abstract truth (e.g., Slife, 1996a). See Widdershoven (1992) for a broader discussion of this issue in regard to postmodernism.