

## A Prominent Worldview of Psychological Research

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The notion that worldviews influence the theoretical expectations and biases of researchers is generally understood in psychological science. In fact, several research procedures are designed to guard against such influences creeping into our results (e.g., experimental controls). Lesser known may be the idea that not only do personal worldviews (e.g. personal culture, beliefs, values, etc.) influence the theoretical biases and expectations of researchers, but that the field of psychology itself has adopted worldview perspectives about psychological science that influence researchers' biases, expectations, and interpretations of the data. Stretching this notion further is the proposal that worldviews influence the investigative methods themselves.

Researchers are in the practice of critiquing one another about the correct deployment of the logic of psychology's methods (e.g., experimental design, replication), but they are virtually unpracticed when it comes to critiquing the fundamental logic of method itself. It is almost as if on some level we believe that the logic of methods is axiomatic or a given that we use to investigate the non-givenness of our hypotheses. It is easy to forget that the logic behind psychology's methods did not present itself in one momentous Big Bang; this logic was developed, defined, and influenced over time by the worldviews of influential scientific figures throughout history.

The primary point of this chapter, then, is to encourage the practice of researcher reflexivity about the influence of worldviews in psychology's research methods, *including* the logic behind the methods. We will demonstrate the value of the dialectic (see Chapter 3) for developing this kind of reflexivity by comparing a prominent worldview influence (WI) in psychological science, naturalism, with that of an alternative, frequently considered non-scientific worldview. The intent is not to promote one worldview over the other, nor is it to point to the limitations of the worldviews, but rather to sensitize researchers to WI in psychological science. We first consider briefly the more familiar WI in research that are outside of method, what is sometimes called the context of discovery (e.g., formulating theory and hypotheses), but the majority of the chapter is spent on the less known WI research influences "inside" the logic of method, what some label as the context of justification (e.g., testing theory and hypotheses).

### **Worldview Influences Outside of Method**

I (O'Grady) teach research methods courses and frequently serve as a methodologist on quantitative and qualitative dissertation studies. Occasionally, students wishing to conduct grounded theory qualitative studies will attempt to convince me that they should not immerse themselves too deeply in the literature or they will be unduly influenced by previous theories and findings which will bias their data collection process. To which I reply that it is not possible for them to empty their brains of theories and worldview influences: their choice of topic and methodology are inevitably informed by theory and reflect biases. Their expectations about what

they will find is currently being influenced by their grandmother's philosophies, internet blogs, professors' positions, and childhood experiences, to name just a few such influences. I explain that I would like their biases and expectations to also be informed by theory formulated in their professional field. They then head off to spend the next several months reviewing the literature.

What I am explaining to my students, with most methodologists in agreement, is that it is not possible to engage in research with an empty, unbiased mind. In fact, we could not even begin to ask the questions that inform our hypotheses or guide our research strategies if we approached any topic of human experience without a priori expectations about what we might find. Those expectations are informed by our personal and professional worldviews and what those worldviews tell us about the nature of humans. If, for example, a person's worldview included the view that humans are social beings that are capable of altruistic acts, they would probably be more inclined to form hypotheses that explore questions about social support constructs than someone who views humans as self-contained entities with primarily hedonistic motives. These two types of researchers would then interpret their data and formulate theories based on their distinct views of the nature of humans.

For the most part, modern psychological researchers have some awareness of the influence of culture and personal worldviews on research, but tend to be less aware of the worldview influences that are endemic to psychology itself, such as the professional values of individualism demonstrated in the previous chapter. For example, some researchers may assume that the basic unit of their investigation is the individual, with observations needed for each individual involved. These observations can then, of course, be added together because the assumption is that their individualist, and thus relatively independent, nature allows them to be added together, etc. A relational researcher, by contrast, might assume that the "betweenness" of persons is the fundamental unit of study, with some instrument needed to assess these relationships. If, too, these relationships are themselves related (non-independent), then other statistics might be required to analyze the data.

The point is not that one worldview or investigation is better or more useful. The point is that most methodologists recognize that we need to keep in mind these WI in order to evaluate the research. Unfortunately, because WI are often viewed as "biases" or "values," they are frequently considered potential distortions to objective data and are thus not reported or perhaps even hidden because they embarrass the researcher. Also unfortunate, for similar reasons, is the WI on journal editors and reviewers. Relational reviewers, for instance, could criticize the adding together of individual observations because these reviewers are biased against an individualist worldview without necessarily knowing it (or the reverse)! Without clear awareness and recognition of these WI, both in the formulation of studies and in their evaluation, many research reports could be rejected through sheer, but perhaps unconscious WI. We need to remind ourselves that theoretical conceptions (e.g., topics chosen, hypotheses developed) stem from a worldview, which means that these conceptions of psychology could have been shaped in a different way had another set of worldviews more powerfully influenced the development of the field. Rather than approaching our research with the assumption that our methods can somehow sterilize WI, some argue that scholarly rigor is better achieved by acknowledging that we "approach our subject matter with presuppositions and expectations and are explicit and

accountable in that process” as we carry out our research and make our research claims (Jones 1994, p..186).

### **Worldview Influences Inside of Method**

As mentioned, most psychologists, were taught that if we are not rigorous in our research, the biases and perspectives of our personal worldviews could influence our results (e.g., demand characteristics). We spent valuable and countless hours learning methods for protecting against and accounting for these influences. Most of us, however, are less familiar with the idea that the logic behind the methods of psychological science is based, to some degree at least, on untested WI. This idea is more provocative because most psychological researchers consider the logic of their methods “scientific” and thus neutral to or invisible in the outcome of their research (Slife, Reber, & Faulconer, 20xx).

However, psychological science as it is currently conceptualized did not spring forth full-blown from nothing, but has been shaped by the culture, preferences, geographical locations, and values of scholarly social structures over time. Even the logic behind the research, regardless of the method (e.g., experimental, correlational, qualitative), was created by humans over time who themselves were part of cultures with worldviews. Consequently, we need to take into account these WI from the past that are now embodied in our method logic—the context of justification or testing of our ideas—as well as the better known WI that surface in the present—as embodied in the context of discovery or formulation of our ideas. The case for the former, the lesser known WI, make up the bulk of this chapter.

**An amalgam of worldview influences.** Psychological methods were formulated over time and involve a number of cultural and philosophical influences, including religion, positivism, and secularism. However, we do not have the space to deal with all of them here (please see). Instead, we want to single out one particular influence, which is widely acknowledged outside of psychology—the influence of naturalism (refs). In this manner, we hope to raise the reader’s consciousness of WI in research more generally. We are *not* interested in eliminating such influences, partly because conventional methods are fairly successful and partly because this elimination is impossible. Worldview influences are inescapable, regardless of the method. Because the world has not yet been investigated, at least before the formulation of a method, the formulator must make some presumptions (educated guesses) about the world in which the method is deployed in order to think it might be successful (in that world). These WI may not be recognized at the time of this formulation, but they are there nevertheless, and they can originate from one or several cultural or professional sources (e.g., the paradigms of Kuhn, 1970).

The two main sources of WI in regard to psychological methods, at least in the West, are naturalism and theism. It is no coincidence that these two worldviews are also considered the most influential to Western culture generally (Huston Smith ref). Much like Western culture writ large, these two great worldviews have etched their impact on psychology’s methodology. However, *unlike* other aspects of Western culture, naturalism—through the Enlightenment—has become far more dominant in psychology’s methods. We do not have the space here to do a history lesson (Ferngren, 2002; Leheay, 1991), but suffice it to say that the secularism of

psychology has led its historical parents to favor the West's naturalistic rather than theistic roots, even though there are also many, hidden influences of theism in the discipline's methods (Delaney, H.B., & DiClemente, C.C. ,2005.). Consequently, we hope first to describe the influence of this naturalistic worldview and then provide a few examples of its impact on the often taken-for-granted logic of psychological methods. To highlight these WI we contrast them to the other influential worldview of Western culture—theism. We recognize that theism is typically viewed as outside the context of science entirely, but that's precisely the point of its contrast—what worldview assumptions, and thus logic of inquiry, are inside and outside science and what justifies their inclusion?

This type of contrast is considered a kind of dialectic (see Chapter 3). When referring to the dialectic we are not only describing a way of understanding through contrasts and paradoxes, but also suggesting that a thing—a worldview in this case— only actually exists as that thing when there is something other than it to which it can be compared. In other words, many aspects of naturalism are so endemic to psychology's methods that they are not understood or even recognized to exist *as* a WI. By analogy, there is only female because there is male; otherwise female would just be “human.” If all humans were female, there would be no need for the idea of female, because it would simply be human. And yet, the human would be comprised of, what we in a world of contrasting sexes would view as, distinctly female features. So the dialectic exposes the thing to itself.

To carry this analogy just a bit further, the less dominant sex, in our case the less dominant worldview, has historically had to exert a lot of effort trying to convince the more dominant sex that he is not the definition of human, with females as a lesser (or non) expression of human (refs). Interestingly, however, that dialectical effort, the effort of contrasting meanings, has made the female keenly aware of the male. The male on the other hand has fewer pressures to justify his humanness and thus is typically less awareness that he is only one and not the primary expression of human. He will likely need to make deliberate efforts to dialectically expose his assumptions and biases about his definition of human to increase his awareness of what makes him the male expression of human. But what has all of this discussion of the sexes and expression of humanness got to do with psychological science and worldviews? Isn't science just science?

In dialectically comparing naturalism to theism, we recognize that theists are not typically understood to be knowledge advancers, but theists do advance, after a fashion, the knowledge of their interest—scripture meanings, God's attributes, and even divine influences in the natural world. They just do not advance knowledge in the currently accepted manner of psychological science. One could argue that what is currently accepted as the logic of psychological is a product of valid evolutionary processes in the formulation of psychology methods, separating the naturalistic wheat from the theistic chaff. Again, however, our purpose here is not to argue that theism should be included in the canon of psychological methods. We just want to use theism to highlight various aspects of methodological naturalism<sup>1</sup>. Much like the female aids the male in understanding his status as human, theism's outsider status in psychological science can help us to understand naturalism's insider status—the logic of conventional method—better.

As was the case in Chapter 3, we wish to avoid awkward phrasing as we contrast worldview influences in research. In this chapter we use the terms “naturalist” and “theist” as shorthand for a person who is currently seeing the world from or acting on a particular worldview perspective. We do not mean to preclude the possibility, as we use these terms, that actual whomever uses worldviews either can mix worldviews or apply them situationally by relying more upon one than another in any particular context.

### **The Worldview of Naturalism**

Naturalism is frequently defined in a twofold manner—its abdication of the supernatural (e.g., God) and its affirmation of the notion that objective natural laws govern the world (refs in my prejudice pub). Theists would obviously disagree with the first part of this definition but it may not be well known that they would *not* necessarily disagree with the second. In other words, most naturalists and theists believe and are interested in the regularities, patterns, or “laws” of the natural world as well as the susceptibility of these regularities to the rationality of human investigation. However, many naturalists and theists might disagree about how the laws work, the meaning of those laws, etc. Consider, for example, Charles Taylor on this point:

“Modern science offers us a view of the universe framed in general laws. The ultimate is an *impersonal* order of regularities in which all particular things exist, over-arching all space and time. This seems *in conflict* with Christian faith, which relates us to a *personal* Creator-God, and which explains our predicament in terms of a developing exchange of divine action and human reaction to his interventions in history...” (p. 362).

This quote from Taylor (italics added) seems to distinguish two very different meanings of order in the two worldviews of naturalism and theism, the first an impersonal, lawful, and determined order, and the second a personal, divine, and obedient order, at least for this particular tradition (Christian) of theism. The point here is that the common term “order” denotes the importance of natural regularities for both worldviews, hence the possibility of some complementary work between researchers from the two worldviews. Still, it must be noted that the nature, source, and meaning of order can be substantially different and could conceivably lead to very different methods and practices, even in considering the “regularities” of the world.

In this sense, there might be many aspects of method in common—due to some common assumptions such as order and rationality—but there are still important aspects that might be different. We focus below on a few differences only to highlight them. We do this, in part, to combat the notion—common among psychological investigators—that the current logic of their method is *completely* neutral to all worldviews. Some aspects, procedures, and strategies of psychological research may not be shared. And, as we will see, these differences can potentially influence every step of the research process: topic selection, methodological approach, research design, selection of items on research measures, and the analysis and interpretation of data.

### **Worldview Differences in Research**

We start with two obviously different WI in this logic involving divine guidance and immanence, and then we describe three more subtle differences: the need for generalization, the need to separate the subjective from the objective, and the need to detect causality.

### ***Obvious Differences***

***Divine Guidance.*** Naturalism, of course, does not imply that researchers should pray for divine guidance in their research nor does it presume that God can or should guide the research process. Similar to naturalism, many theists can consider systematic observation an important way to gain knowledge, but they typically do not consider this mode of experience the *only* way to advance knowledge. Many theists, for instance, also presume that God cares about and is involved in all human endeavors, so these theists assume that God can enlighten scientists in their research efforts, if not affect the research itself. The theist may rely on the scientific method while *also* assuming that God's guidance and influence can "get us to some truths that would otherwise be inaccessible to us" (Kemp, 1998, p.466). Therefore, God is at least a necessary condition for true knowledge advancement, whereas God is irrelevant to the naturalist. Interestingly, many natural and behavioral scientists do report feeling some divine guidance in the context of discovery—the context of formulating their theory and hypotheses. However, these scientists frequently assume that there is no need for prayer or divine guidance in the context of justification—the process of the method's working and testing these theories and ideas (O'Grady & Richards, 2011).

***Immanence.*** Naturalists also confine their studies to the natural world, whereas theists are interested in both the supernatural and natural worlds. However, theists typically do not label the transcendent or divine as "supernatural," because they have no reason to distinguish the two worlds—God is considered to be involved in both. The notion of supernatural is a naturalistic term and conception anyway—understanding what is "super" or beyond the natural requires understanding the natural (Griffen, 2001). Moreover, the naturalist has to understand the natural apart from the supernatural, a dualism or separation that most theists would not endorse. Indeed, theists would likely hold that the natural could not be understood completely without knowledge of the transcendent or divine, given the integration of the two "worlds." In this sense, the worldviews of theists and naturalists allow them both to be interested in the natural world, but only the naturalists assume a dualism that leads them to confine their studies to the natural world exclusively. Some naturalists might contend that such a dualism is not necessary for their naturalistic worldview, because they do not believe the supernatural exists, so there is no need to distinguish the natural from it. This contention, however, would belie a lot of historical and contemporary attempts to demarcate the scientific from the pseudo-scientific in psychology, with much of the latter understood as attempts to access and advance knowledge of the spiritual or transcendent. In any case, the point here is the clear difference between the theistic broadening of the world of interest to include the "supernatural" and the naturalistic reduction of the world to the natural, at least in comparison.

Even these examples of obvious areas of WI difference, divine guidance and immanence, can begin to sharpen our awareness of the influence of worldviews in the logic of psychological methods. Method texts in psychology do not counsel psychological researchers to pray over or seek divine guidance in their experiments, and they do not advise these investigators to formulate

procedures for studying the elements of the supernatural—*for worldview reasons*. Again, someone may say that the absence of these practices is because psychology is about “science” and not “religion,” but then this assertion merely begs the question of this chapter: why these particular practices in psychological science? There is no more empirical evidence for *not* seeking divine guidance in conducting experiments as there is for seeking it. Indeed, there is no empirical evidence for empiricism itself. These are views of the world or views of knowledge advancement that need to be assumed *before* investigation can occur in order to get the evidence.

Less obvious WI require even closer attention to the taken-for-granted nature of WI. For this reason, the following WI in psychological methods are easily mistaken for the givens or the axioms of research as opposed to the WI that they are. Some psychologists may view the presence of such WI as embarrassing, as if these expose hidden biases and thus vitiate the validity of psychological investigations. Again, however, *there are no methods—in the natural or behavioral sciences—that do not involve WI*. Not only are these worldview influences inescapable; they are necessary to the knowledge gained. Such worldview influences are *inherent* to the method and are not some artifact that should be kept apart from it. Therefore, we need to take them into account as we gather our data and make our interpretations—what we are calling here researcher reflexivity.

### ***Subtle Differences***

As mentioned, worldview influences can also be manifested in psychological research in subtler ways. We consider here the psychological investigator’s typical need to find generalization, prevent bias, and discover causality.

***The Need for Generalization.*** To discover the natural or social laws assumed by naturalists, generalizable findings are pivotal. Studies that are generalizable are presumed to have the potential to become dependable laws that will manifest consistently across populations. Given the lawfulness of laws, this generalizability implies the importance of other method conceptions, including replication, reliability, standardization, quantification (to help make comparisons), and even the approximation of these laws in less prestigious correlational studies. In fact, generalizability is so influential to psychological methods that non-generalizable (or unique or singular) findings are often considered bogus or unreal (e.g., parapsychology, refs).

Of course, theists would also be interested in generalizable findings, because many of them believe that God created and sustains the regularities and generalities of nature. The difference, however, is that they would not *automatically* reject non-generalizable findings because many forms of knowledge, including many psychological forms of knowledge, from their perspective may only occur once and still have implications for the present and future. This means that some aspects of psychological methods (e.g., replication, standardization, reliability) are not automatically required, and some methods might be devised that attempt to detect uniquenesses and singularities.

Some psychological researchers might argue that such unique events would have no implication transfer to other situations and context, given that they only occurred once and thus have no real psychological relevance for the present or future. However, there are other notions of relevance

than the repeatability of a particular pattern of natural events. The Big Bang, for example, is thought to have occurred only once but still has implications for the present and future. Or closer to home for many theists, many religious people have experienced distinctly singular spiritual experiences only once that nevertheless hold vital psychological relevance for them into the future and other situations. The point again is not that one or the other worldview is more correct than the other; the point is that WI are fairly directly affecting some aspects of current psychological methods.

***The Need to Separate the Subjective from the Objective.*** The objectivity of natural laws is also important for the naturalist, because these are the laws of a pristine nature that should be distinguished from the opinions and biases of psychological researchers. Consequently, the real and the meaningful, from a naturalist perspective, are those regularities that are both generalizable (and thus candidates for lawfulness) and objective (not subjective). This separation of the subjective from the objective, another form of dualism, is therefore the prime reason that researcher biases, values, and subjectivity of all sorts in psychological science are considered bad—potential distortions of objective data. This worldview reasoning in our methodology has thus led to all kinds of method procedures from the prevention of demand characteristics to the need for control groups. The irony is that this WI, as we have mentioned, has also led naturalistic researchers to attempt to avoid or ignore WI, because such influences are considered biases and thus distortions of the pristine natural world (and one of the reasons a book like this needs to be written).

Many theists, on the other hand, not only admit to and prize many subjective conceptions, such as spirituality, beliefs, and values, but also hold that many types and pieces of knowledge are only accessible to researchers with the right interpretations and values (e.g., in Christianity, “he who hath ears to hear” and in Judaism *Shema* “Hear O Israel”). From this frame of reference, hermeneutic qualitative research, which assumes the value and even necessity of the researcher’s interpretation in discovering knowledge (e.g., Packer), could be as important as experimental quantitative research to the theist.

Take, for example, Kohlberg’s early work on moral development. This research was assumed to objectively measure levels of moral development, with obedience to moral authority reflecting a low level of moral development; blind obedience to a religious leader was considered to undermine the need for complex decision making. However, many theists conceptualize moral authority in a complex system of both divine and human authority. Richards and Davison (1992), for instance, make the case that such complex reasoning requires *more* advanced moral development not less. Given that theists make up the bulk of psychology’s clientele, Kohlberg’s interpretations and values regarding moral authority may not have been the right interpretations and values to understand the *actual* experience of moral authority and moral development, at least for many theists (see Richards & Davison, 1992).

***The Need to Detect Causality.*** Physical or psychological laws are also thought to be “causal” laws for the naturalist. That is, the naturalist assumes that natural laws govern the entities of the world, including humans, and thus discovering the causation of this governance is important to understanding the laws themselves. This feature of naturalism is one of the reasons that



experimental design is the most highly prized method logic in psychological research; it supposedly provides evidence for and an understanding of this causality, and thus how the physical or psychological laws govern nature.

Again, this type of research could also be important to the theist, given their interest in the regularities of nature, but many theists also assume human agency, which would presume that humans are not governed or caused (or determined) by natural laws but rather are more constrained by them. Many theists, for example, assume that in order for humans to love others and God they must have the capacity, at least to some degree, to choose to do otherwise (ref). Without this capacity, their love would be no different from other entities governed by natural laws, such as a boulder rolling down a mountain, and this “love” would thus not be meaningful. Experimental evidence, from this theistic perspective of human agency, is not necessarily the most important type of evidence.

Indeed, this evidence might be viewed as inappropriate for some types of specifically human phenomena. Some psychology of religion researchers, for example, have attempted to use experimental methods for understanding sanctification (Pargament & Mahoney, 2005), but others have argued that this approach strips away what sanctification actually is—the use of one’s agency to engage in a sacred relationship with God through the dedication of one’s will in service of that relationship. The point again is that the assumption of causal law, and thus the need to detect it, has led the naturalist to a particular approach to method that other worldviews do not necessarily need to hold.

### **Can Theists Use Naturalist Method Features?**

The short answer to this question is yes. Not only are there method features in common, such as order and rationality, theists should feel free to explore strategies and approaches to methods that are considered to be more manifestations of naturalism, even in the service of their worldviews (just as naturalists might probe into distinctly theistic features). The obvious caveat to these uses is that researchers should become sensitive to the possible influences of worldviews that may complement or detract from the goals of their investigations. From a theist perspective, for example, researchers should not be locked into knowledge gathering that exclusively investigates replicable, objective, or causal phenomena, even if much of this knowledge gathering could be relevant to the theist. To be “locked in,” given the logic of conventional psychological methods, is to be guided both in *what* is investigated and in *how* it is investigated, which is to “make a metaphysic of the method,” as Burt (2003) warned so many years ago. In other words, without suitable awareness the method itself can affect the results in ways that the researcher has no knowledge.

From the perspective of WI, such method biases cannot be avoided, because all methods are human-created and thus implicitly entail an amalgam of the worldviews of the humans involved. However, this human involvement does not mean that researchers with worldviews other than those entailed in the methods cannot use them. A carpenter can skillfully use a hammer to pound a screw—a connector not designed for hammer pounding—but the good carpenter bears in mind the pros and cons of such a connector when it has undergone such pounding. Moreover, theism

was itself historically involved in the formulation of scientific method, which means it has its own features endemic to psychological methods (refs). Our contrast of naturalism and theism here is only meant to highlight some of the naturalistic method features of psychological methods. It is not meant to rule out such features for the skillful and careful use of theists, as we have noted throughout this chapter.

## Conclusion

The aim of this chapter was to encourage the practice of researcher reflexivity about WI in psychological science. Many researchers have developed a level of sensitivity to WI in formulating and evaluating research, but most are less aware of the need to attend to WI in the logic behind the research methods themselves. They may have assumed that previous researchers have tested this logic through some evolution of their repeated and seemingly successful use, yet there is no historical evidence that they have systematically tested this method logic against *other* logics of methods. And even if researchers wanted to compare logics of method, what logic of method would they use to do the comparison? Our point is a simple one: all methods are based to some degree on untested worldviews, views of the world in which the methods would likely be successful.

We also used the time-tested dialectic to encourage researcher reflexivity by highlighting WI in the logic of methods. We chose one of the well-known WI in the West—theism—to help elucidate psychology's prominent WI: naturalism. Theism's outsider status qualified it to expose the "thing"—naturalism—to itself. Once again, the point of comparing the two WI was not to claim that one worldview or method of investigation is better or more useful, but rather to increase researchers' sensitivity to the influence of worldviews in the taken-for-granted expectations of psychological science.

One of those expectations is that researchers should not reach beyond the evidence in their claim by drawing conclusions about the findings without accounting for additional influences on the results (refs). We are, for example, expected to use methods to attend to possible historical influences in our longitudinal studies or other potential cofounds (e.g. social desirability) in our research. In other words, the logic behind our methods, itself likely influenced by a worldview, requires us to justify our claims by considering a variety of possible influences in our findings. Attending to and accounting for these influences helps researchers to avoid making claims about the world without recognizing the embedded, and perhaps even long-forgotten, cultural views influencing their method logic.

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<sup>1</sup> We understand that some have argued for a fairly sharp dividing line between methodological and metaphysical naturalism (e.g., Bishop, 2009). However, we would contend that this line, though important for some purposes, is more blurred in the present context. In this sense, epistemologies such as methodological naturalism are influenced by ontologies such as metaphysical naturalism, and vice versa. Hence, we focus here on more of the blurring than the

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dividing, hoping to avoid the deeper philosophical issues of their relationship (see Slife & Reber, 20xx for more information).

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