

Philosophy of Science Considerations for Evidence-Based Practice

Brent D. Slife and Dennis Wendt, Jr.

Brigham Young University

As someone who writes about the philosophy of science, I am a relative newcomer to the issues of evidence-based practice, especially in comparison to the other participants of this symposium. I am also aware that many of these participants feel they have already come to some well-considered conclusions about this controversy, given the president's task force on this topic. Still, I would ask that you and they consider a philosophy of science perspective before you foreclose forever on the issues. I have an article in the *Journal of Contemporary Psychotherapy* that fleshes out this perspective better than I have time for here. Allow me to highlight some aspects of it briefly.

First, I am supportive of what I believe is the spirit of the EBP project. The early history of psychotherapy is little more than a set of elaborate testimonials, with various personality theorists trumpeting their particular pet theory and therapy. The best parts of the EBP project, from a philosophy of science standpoint, are accountability and examination. To further develop psychology's professionalism, as Larry Beutler has emphasized, it makes sense that we are accountable to standards of care and that we examine these pet theories and therapies in the light of these standards.

If anything, my concern is that this spirit of accountability and examination has not gone far enough. Although there is more concern today with examining the methods of therapy, there is not enough concern, in my view, with examining the methods of science used to examine the methods of therapy. Perhaps most pertinently, the philosophy of empiricism seems to enjoy an almost dogmatic status as *the* philosophy for

guiding the examination of therapy methods. Particular methods, such as randomized controlled trials, have come under fire, as you heard here today, but the epistemology that grounds almost all these methods has emerged unscathed.

The central assertion of this philosophy is that sensory experiences are the true source of all scientific knowledge. I say “assertion” because there is no empirical evidence for the philosophy of empiricism, and this assertion. Many will claim this philosophy has been successful, but this claim is little better than the testimonials of the personality theory tradition. There is no scientific evidence for this claim because the method of providing evidence is itself the issue in dispute.

Empiricism, in this sense, is more a value system than an empirically derived fact of the world. It asserts rather than describes. It tells us what to value – sensory experiences – over other things we *could* value, such as other types of experiences. We should focus on what falls on our retina, for example, rather than experiences that are not externally observable and thus not retinal, such as our thoughts or emotions. This selectivity is the reason psychotherapy researchers have valued observability in science. Like any other value, observability leads researchers to selectively attend to observable events over unobservable events.

Some psychotherapy researchers will say that operationalization has allowed us to study the unobservable, but this is a prominent, professional myth that has greatly hampered the development of nonempirical methods. At best, operationalizations permit us to study the observable manifestations of the unobservable; they never permit us to study the actual unobservable that is doing the manifesting. If the actual feeling of love is considered externally unobservable, we can empirically investigate its manifestations

of hugs and kisses. However, no one should view such an investigation as a study of love, because hugs and kisses occur without love, and love occurs without hugs and kisses. We need to dispel the myth that our methods study the unobservables we care about. All they can do is study the observables we think might possibly be connected to the unobservables, and we cannot even know that, according to empiricism, because we cannot see the unobservable to which our operationalization is supposedly connected.

Consider qualitative methods as a contrast. Although these methods are often mistakenly understood in the EBP literature as originating from this same empiricist epistemology, many qualitative methods were spawned by a radically dissimilar epistemology. Early qualitative researchers were interested in meaning. Meaning is one of those interesting experiences that cannot be observed. The printed words of the latest Harry Potter book can fall on our retinas, but the relations among the words – their meaning – *never* fall on our retinas, though we clearly *experience* the story line and Harry's adventures. In other words, there are important experiences that we can understand and know *without* their being externally observable. Early qualitative researchers, such as phenomenologists, were interested in these meanings, so they formulated another epistemology – one that does not depend on sensory experiences – as its sole source of knowledge.ⁱ

Some psychotherapy investigators have questioned the legitimacy and even existence of such alternative epistemologies, but these questions merely indicate the dogma and monopoly of empiricism. The popularity of an epistemology does not make it the truth of science, especially when neither history nor most psychologists have compared epistemologies. Some will say, of course, that alternative epistemologies are

“unscientific” or “untestable,” but what standard are they using to make these judgments – the philosophy of empiricism, which is the issue in dispute? I understand the temptation to confound this philosophy with science, but this category mistake is akin to having only a hammer and seeing everything as a nail to pound. The unobservable meanings we experience everyday cannot be operationalized without encountering the same problems as equating love with kisses. If meanings are important, then the proper scientific response is to turn to alternative epistemologies and the methods they imply, rather than to turn unobservable meanings into something they are not.

Speaking of turns, one of the most encouraging turns in the brief history of the EST and EBP movements is the recent discussion of methodological pluralism.ⁱⁱ I am glad to hear many of the participants of this symposium touting similar concepts as a guiding framework for the EBP project. It suggests these scholars recognize the need for a diversity of methods. My only concern is the depth of this diversity. With some exceptions, such as Art Bohart, therapy researchers have assumed more of a *method* pluralism than a *methodological* pluralism. Method pluralisms attempt to coordinate and “triangulate” different sorts of methods, such as the old multi-trait, multi-method approach. This old idea is almost exclusively understood within an empiricist philosophy of science.

A truly *methodological* pluralism, on the other hand, implies the “ology” of methods, the actual study and examination of the methods themselves – their epistemological advantages and disadvantages. Traditional empirical methods, for example, would seem to be advantageous when the entity studied is observable and countable. However, they are disadvantageous for unobservable meanings, such as

therapeutic alliance or group cohesion, constructs endorsed by participants of this symposium. Cohesion may be experienced, in some sense. However, cohesion involves the unobservable relations *among* observable entities. These relations do not fall on the retina and cannot be translated into an externally observable measure, such as the ever-present questionnaire, without the accompanying loss of meaning that any translation requires. Group cohesion simply is not identical to a questionnaire about group cohesion.

The bottom line is that a truly methodological pluralism requires not only a pluralism of the methods that examine therapies, but also a pluralism of the unproven philosophies that guide these methods. To do justice to the rich context of psychotherapy, as John Norcross and others have observed, we need to know more than just the observables. This means that we require more than alternative methods. We require alternative epistemologies for guiding those methods, if for no other reason than to break up the dogmatism of empiricism and allow for the healing of philosophical diversity. The epistemology of empiricism, in this sense, is not unlike the untested personality theories of old. Testimonials can be provided, but the hallmark of science is examination, in all its many forms, including philosophical examination.

The problem is that this type of examination requires philosophical expertise. Like it or not, all our methods originated from philosophical assumptions about the nature of the world. We must first speculate about how the world is before we can formulate methods to investigate it. This makes all methods ultimately dependent on these speculative philosophical assumptions. I realize that few psychologists have this expertise. Moreover, the adolescent discipline of psychology often wants to rebel against its parent of philosophy. Still, if we can learn enough physiology to gain prescription

privileges, we can learn enough philosophy to do the EBP project correctly. Although the Society of Theoretical and Philosophical Psychology is little known in this area of research, I can tell you as a former president of this APA division that this society has the resources to help you in this regard. And help you it will, if you will recognize the import of the philosophy of science to the issues of evidence-based practice.

ⁱ Meanings are primary, which involve values that are not bad and not escapable. Also, meanings are not “subjective” in that they are inaccessible; meanings are more intersubjective in nature and thus accessible to others.

ⁱⁱ Page: 4

Norcross, Levant, and Beutler (Prologue, in press) use the term “informed pluralism” (pp. 8, 12) and Bohart (Rejoinder to Kennair, 2003) uses the term “methodological openness” (p. 4).