

Commentary on *Logical Operations in Theory-Building Case Studies*

The Logic of Theory and the Logic of Practice

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ABSTRACT

Stiles (2009) has articulated a powerful argument for the surprising logical parallels between the way a case study and experimental data test a scientific theory in the field of psychotherapy. Though this contradicts the orthodox account of research methods in psychology, Stiles shows that careful attention to the tenets of logical positivist and neo-positivist philosophy of science requires such a conclusion. While this is no doubt a sound argument, it rests on Stiles' assumption that theories of psychotherapy are essentially scientific theories. It is clear that Stiles thinks of theories of psychotherapy as different from theories in the physical sciences, but exactly how these theories are different is not clearly articulated. I would argue that psychotherapy theories are fundamentally moral theories, a form of what Aristotle referred to as *phronesis*, and as such are radically different than scientific theories. Nevertheless, Stiles' conclusion is a sound one: case studies are the best way to test *phronesis* in psychotherapy because as Aristotle observed, practical wisdom is highly context dependent and action oriented.

Key words: case-study; *phronesis*; clinical knowledge

In "Logical Operations in Theory Building Case Studies" Stiles (2009) refines further the philosophy of science of case study research that he has been developing and applying in his research team's Assimilation Model of psychotherapeutic change (e.g., Stiles, 1981; 1993, 1997, 2003; 2005; 2007). This is an impressive body of work. It is philosophically informed by the latest thinking in the philosophy of science, clinically grounded in the experience of psychotherapeutic practice, theoretically rich and informative, and backed both by a series of traditional empirical research studies, as well as clinical case studies. What I find particularly important in this paper is that Stiles has analyzed the basic tenets of the logical positivist tradition in the philosophy of science (and by implication, our mainstream empirical research methodology in clinical psychology), and demonstrated that the case study research tradition follows a very similar logic. Since most researchers in the field of psychotherapy still adhere to this traditional methodology, and tend to support it with traditional logical positivist or neo-positivist arguments, Stiles' argument goes a long way towards providing the kind of rationale for case study research in psychotherapy that mainstream researchers will find hard to refute.

METHODOLOGY

Stiles does this by shifting the focus of discussion from the usual topic of hypothesis testing, which gets the lion's share of the treatment in most mainstream accounts of the experimental tradition in psychology, to the prior question of the relationship between theory, research and practice. He makes a strong argument that the central function of science is to aid us in the construction of theories that allow us to adequately describe our world. He observes that we also need theories in order to practice psychology. I would add we need them pre-professionally, as well, in order to live our everyday lives. Theories are expressions of the basic human capacities for linguistic representation (the theory of signs) and rationality.

Central to Stiles analysis is the next step—the well-crafted argument that hypothesis testing is just one form of systematically bringing observations of real world phenomena to bear on a theory. Using Campbell's (1979) degrees of freedom argument, but explaining it more clearly than I think Campbell ever did, Stiles shows that an experimental study of psychological treatment tests one aspect of a theory over multiple subjects, while a theory-testing clinical case study tests multiple aspects of a theory over the course of one person's treatment. In so doing, the case study may provide sufficient degrees of freedom to allow us to have confidence that our findings are not simply the result of random effects. Stiles then takes this argument a step further pointing out that in clinical work we require powerful theories that apply across diverse contexts, across often unique client characteristics, and across therapeutic relationships that follow non-linear patterns. Under these circumstances of clinical reality, a theory that has been tested against a clinical case study is more likely to be useful to a clinician than a theory that has been tested experimentally, because the case-tested theory has had more features of its theory tested, while the hypothesis-tested theory has had only one. This is a clear and powerful presentation of the logical advantages of case study research.

THEORIES

The broader concern in Stiles paper is how we understand the role of theories in clinical psychology. This is a critical and little discussed topic, and he is to be commended for tackling such a difficult conceptual/philosophical topic. Nothing is more abstract in a field like clinical psychology, yet of everyday practical importance, than the theory of theories. First, I think Stiles is absolutely correct when he states that broad personality and psychotherapy theories are critical to successful practice. Person-centered, psychodynamic, family systems, cognitive-behavioral, and other therapy theories are not just scholarly projects, but the life-blood of successful clinical training and practice.

Second, I also think Stiles is correct in agreeing with Meehl (1978) and others who have observed that in the "soft" science disciplines (like psychology, sociology, and education) empirical research rarely results in rejection of theories (as Popper's falsification theory had led us to believe would happen), but rather post-hoc modifications are made to the original theory so that it can be maintained. This being the case, it can hardly be argued that hypothesis testing is a more rigorous test of a theory than a case-study-based test, since this "rigorous" method designed to among other things reduce the experimenter's bias in favor of her/his theory does not

have the intended effect. The theory is not rejected even when the statistical results would dictate that it should be.

Third, by emphasizing that both the theory describing phenomena, and the observations made of phenomena must be expressed through or ultimately related to the natural language of the community, deductive, inductive, and abductive logical processes involved in theory building in psychology are threatened by the vagaries of meaning in the use of psychological terms (signs). Stiles again correctly indicates that the physical sciences have generally tried to solve this problem by operationalizing and quantifying variables in a manner that greatly increases precision and clarity. He notes that while precision and clarity are gained, direct applicability of such a physical science theory to the practical problems of daily life is attenuated. Since we are working on the theory of theories in an applied field (psychotherapy research and clinical psychology), the abstract processes of operationalism and quantification are luxuries we can little afford in our clinical theories if these are ultimately to be of use to practitioners functioning in clinical reality.

However, the development of theories that (1) are based upon concepts which are defined as clearly as is possible given the subject matter, (2) adequately describe and account for the widest range of observations without becoming contradictory, and (3) are fruitful when encountering new unexpected phenomena are not luxuries but necessities for clinical psychology.

MULTIPLE CASE RESEARCH

Stiles concludes his paper with a discussion of how a theory tested with multiple cases can become infused with observations, and thus more useful and applicable in clinical contexts. He argues succinctly that one could view the evolution of most clinical theories, and particularly Freud's psychoanalysis, as following this model of theory development. One could say then that Stiles' paper is a defense of the epistemology or philosophy of science of the classical clinical tradition in psychology. Clinical work with an individual client (i.e., a case) is initially based upon a pre-existing theory (in Freud's case, the psychological theory of hypnosis), and is gradually transformed in order to accommodate the repeated case observations. Each individual case provides multiple tests of various parts of the theory. Stiles insists wisely, I think, that clinical theory include empathic and nuanced observations of the complex relational components of the clients' and therapists' clinical and extra-clinical experiences, and case studies are the only research method we have that can provide this feature.

THE LOGIC OF CLINICAL PRACTICE

I found Stiles' discussion of signs and meaning (which he rightly acknowledges is a vast topic in linguistics and the philosophy of language beyond the scope of the paper), both helpful and a bit confusing. It is helpful to remind us that our theories and articulations of our observations, whether experimental or clinical, are linguistic constructions (signs), at least once removed from our actual experience of the world. It seems that Stiles uses this argument to maintain a position of the subjectivity of all knowledge in psychology – that all signs have somewhat unique meanings to each user or listener. Consequently, our ability to prove

statements (using signs) true or false is always less than optimal. This seems to fit with his examination of the limitations of both deductive and inductive reasoning, and his interest in abductive reasoning where theories are modified. In the abductive realm, it would appear that empirical studies and case studies are virtually equivalent in their power to correct for theoretical shortcomings, and that our theories are always in need of revision as our access to the truth is always limited by the subjectivity of meaning.

So far this seems fine. However, when discussing the physical sciences and their ability to avoid the pitfalls of the vagaries of natural language, Stiles seems to imply that mathematical formulas describing the relationships among variables avoid or greatly reduce the problem of the subjectivity of meaning. This seems inconsistent both with Stiles own “experiential correspondence” theory of truth (where the experiences of the observation and the experiences pointed to by a theory, are compared, and either match-up or don’t), and the aforementioned theory of signs.

Granted these are the most difficult questions in all of the philosophy of science: how theories represent the world, the role of theory in framing or determining observational data, and the independence of the knower and the known. It is difficult to maintain a consistent and coherent position given the level of abstraction and complexity of the arguments. Still, if the main point of Stiles’ argument is to assert the scientific status of theories of psychotherapy tested by case study research, the manner in which scientific theories are characterized is no peripheral issue.

Toulmin (1990) would agree with Stiles that scientific theories gain their relative objectivity by de-contextualizing problems, and by creating idealized abstract formulations involving conditions or circumstances that never actually exist in the real world of practical problems. However, such theories are of no use to an applied field like psychotherapy or clinical psychology, and Toulmin notes that such circumstances are standard in practical affairs and should be to be guided by reason rather than science. In fairness to Stiles, his characterization of psychotherapy theories is very context-oriented and practice-oriented. One wonders whether his claim for scientific status is more a function of the current *zeitgeist* in which the current use of the term “scientific” in the wider culture has become honorific, and essentially means “legitimate.” This can also translate into meaning “fundable,” a term with great political consequences in both the world of practice and scholarship. Still, if that is what Stiles is after, it would seem hardly necessary to discuss the philosophy of science in such careful detail.

In my book, *Facing Human Suffering: Psychology and Psychotherapy as Moral Engagement* (Miller, 2004), I set forth the idea that theories of psychotherapy are ultimately theories of how to be helpful to people who are suffering from the pain of being human. This requires theories of the origin and meaning of that pain, how it is communicated in direct and indirect ways, and how it can be understood and transformed in the process of forming relationships with other people. All of this happens within the context of the effort of human beings to make the most of their lives under the often difficult circumstances in which we find ourselves. In other words, psychotherapy is only possible within a framework in which we view or theorize human beings as moral agents, capable of forming and reforming their own patterns of living in relationship to the physical and social world.

Many of the principles of any theory of psychotherapy are implicit moral principles about the proper goals of living. Seemingly scientific or theoretical phrases such as “good mental health,” “adaptive ego functioning,” “appropriate behaviors,” “functional family systems,” “self-awareness/acceptance” are moral concepts masquerading as psychological constructs (Miller, 2004, pp. 39-69). Therapeutic strategies usually involve the therapist modeling for the client or encouraging the client to engage in specific examples of these valued actions (Miller, 2004, pp. 71-114). Stiles’ Assimilation Model of Therapeutic Change, derived from a person-centered approach to psychotherapy, describes the specific actions one must engage in order to integrate within oneself traumatic experiences from one’s past that one has sought to avoid consciously experiencing. How does one help a client to do this? The therapist offers the famous Rogerian conditions: unconditional positive regard (respect), accurate empathy (supportive listening), and genuineness (honesty), which are intended to increase the client’s willingness to respect, accept, and express her/his own true thoughts, feelings, and memories in the sessions. The goal is increased awareness and self-acceptance and the therapeutic technique is simply to create the opportunity for that kind of self-awareness and acceptance in each session.

So a theory of psychotherapy is first and foremost a moral theory of the meaning of human suffering, and what we can do to make our lives whole again after we have sustained a moral injury or become entangled in a moral conflict. The problem is that our moral theories or principles are very general and somewhat abstract, while human lives are very specific, contextualized, and complex. It is in the context of everyday living that we have to work out how to apply general principles, such as the “Golden Rule,” the Ten Commandments, the Buddha’s Tenfold Path, the Delphic Oracle’s admonitions to “First, know thyself,” or the “Golden Mean.” Sometimes the principles conflict, while other times what is ostensibly good and right (e.g. being honest; obeying authority; not injuring other people) has terrible consequences that might harm those we love. In the Middle Ages, Catholic theologians developed the field of *casuistry* to attempt to resolve such moral dilemmas that inevitably arise in trying to live a principled life. Jonsen and Toulmin (1988) have suggested that medical ethics should be approached in the same manner, and that the practice of medicine is as much applied ethics as applied science. If this is true of medicine, it is doubly true of clinical psychology.

This is why I believe we need our clinical theories infused with the clinical observations of our cases. The broad moral principles of the meaning of human happiness and the nature of the good life incorporated into our theories of psychotherapy and personality do not provide the practical solutions to real life moral conflicts that clinical situations demand. (Perhaps this is also the reason that the general moral teachings of religious institutions also fall on deaf ears when delivered to congregations in sermon formats. Most congregants can’t translate or apply the sermon’s general moral teaching to the specific contexts of their own life in a manner that makes sense and is truly helpful.) In the recounting of the clinical case in a case study we have a chance to capture the process whereby these moral dilemmas and injuries are worked through in the context of a particular individual life. When the therapeutic process works, the conflict is resolved, and the human suffering ameliorated as the client acts to make a life for her/himself consistent with her/his own goals and purposes.

The process of theorizing about moral conflicts has its own logic, identified by Aristotle in the *Nichomachean Ethics* as *phronesis*, or practical wisdom (McKeon, 1941). It is a process

governed, as is all theorizing, by human reason, but has its own specific features distinct from deductive logic. Aristotle noted that such practical wisdom was essential to living the good life, and is involved in much of our everyday activities. Because it is so context dependent and practical, he noted that it is a much less certain form of knowledge than pure theory (i.e., deductive logic and mathematics). It is also unique in that the conclusion to a practical syllogism (e.g., *It is always good to tell the truth when speaking; I am speaking now; therefore, I will now tell the truth*) is an actual action, not a proposition of something to be believed as true. I take this as further support for my own contention (Miller, 2004, pp. 159-198) that the purpose of clinical case studies is to capture clinical knowledge as best we can in propositional form, but that the real essence of clinical knowledge is experiential and practical *know how*.

Nonetheless, there is an important role for theory in communicating, in as concise a manner as is possible, the principles of clinical work. As with other theories, there is a kind of architecture to theory. At the foundation are philosophical assumptions, then the overarching broad principles or theories, followed by sub-theories, and then mini-theories. Observations are always expressed using concepts taken from the theory, and the further down the theoretical chain the better. If I observe that the therapist was practicing from a phenomenological stance (philosophical assumption), the observation is so encased in abstract language as to be difficult to interpret, though it is not without meaning. If I say a therapist offered unconditional positive regard, the statement is more specific, but does not indicate exactly what the therapist did. If I say (1) the therapist encouraged the client to give a detailed account of the evening in which he had lost control of his anger, (2) the client then revealed that in a blind rage he had screamed at and shaken his seven year old child, and (3) the therapist then empathized with the shame the client had felt at having done this, I am communicating quite clearly a clinical situation and intervention. Note there are still theory-loaded terms such as “empathy” even in this description of a therapeutic interaction, but that just shows that theory infuses our observations as much as our observations infuse our theories.

Case studies also infuse our moral theories with concrete details and give them a richer and more applicable meaning, and require us to revise the moral component in our theories (abductively) when the consequences of our actions are not consistent with what the theory would have led us to expect in a given clinical situation. For example, it may be that for some clients who have been raised in very laissez-faire homes, a non-directive therapeutic stance is not experienced by the client as respect and positive regard, but actually as neglect and rejection. In such a clinical case, if one really wants to communicate unconditional positive regard, one will have to find a way to be more directive and structuring of the therapeutic hour, and still encourage autonomy and growth in the client. It is only in the day-to-day world of clinical reality that the subtle meanings of our moral principles and clinical theories emerge, and it is only in the case study that we can record and reflect on the process.

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