

# HERMENEUTIC SINGLE-CASE EFFICACY DESIGN

## *An Overview*

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AUTHOR'S NOTE: I gratefully acknowledge the inspiration of Art Bohart, on whose initial work the method described here is based, as well as the contributions of colleagues and students, both in the US and in the UK. This revision is dedicated to the memory of David Rennie, friend and colleague, whose suggestions and support contributed to the development of the HSCED method.

The first systematic studies of therapy process and outcome were carried out by Carl Rogers and colleagues (e.g., Rogers & Dymond, 1954; see also Elliott & Farber, 2010). From the perspective of 60 years on, it is unfortunate that this scientific tradition was allowed largely to die out in North America, because humanists' abandonment of therapy research now appears to have been a key factor in the declining fortunes of humanistic psychology 1980's and 1990's (Lietaer, 1990). Today, however, there is no doubt that humanistic therapists have begun once more to study the process and effects of their work with clients (Elliott, Watson, Greenberg, Timulak & Freire, 2013). Nevertheless, we need to do much more; as I see it, there is a scientific, practical, political and even moral necessity for us to evaluate how our clients use what we offer.

Unfortunately, the standard tools for addressing the efficacy of psychotherapy are extremely blunt instruments. The predominant research paradigm, the randomized clinical trials (RCT) design, suffers from a host of scientific difficulties (see Cook & Campbell, 1979), including poor statistical power, randomization failure, differential attrition, failure to measure important aspects of clients' functioning, lack of clarity about the actual nature of the therapies offered, and poor generalizability.

Not the least of these difficulties are two that are key to humanistic psychology. First, RCTs typically cast clients as passive recipients of standardized treatments rather than as active collaborators and self-healers (Bohart & Tallman, 1999). Thus, the fundamental presuppositions of RCTs are at variance with core humanistic values regarding personal agency and person-to-person relationships.

Second, RCTs do not warrant causal inferences about single cases. This is because they rely on an operational definition of causal influence rather than seeking a substantive

understanding of how change actually takes place. In other words, they are “causally empty”; they provide conditions under which inferences can be reasonably made but provide no method for truly understanding the specific nature of the causal relationship. Even when a therapy has been shown to be responsible for change in general (because randomly assigned clients in the active treatment condition show outcomes superior to those of control clients), this overall result does not necessarily apply to particular clients. After all, for any specific client, factors other than therapy might actually have been the source of observed or reported changes or the client’s apparent change might have been illusory. Furthermore, RCTs leave open questions about which aspects of therapy clients found helpful, which might have little to do with the theorized components.

For these reasons, humanistic psychologists are in need of alternatives to RCTs, designs that are consistent with the humanistic perspective while also allowing careful examination of how clients use therapy to change themselves. In fact, the past ten years, since the first edition of this book, have seen a renaissance of systematic case study research (see McLeod, 2010). In this chapter, I present a sketch for one such humanistic alternative, a form of systematic case study I mischievously labelled *hermeneutic single-case efficacy design* (HSCED). (For others, see also McLeod, 2012, and Schneider, 1999.)

Traditionally, systematic case studies have been classified under the traditional design rubric of *single-case pre-post designs* and have been designated as *nonexperimental*, that is, causally uninterpretable (Cook & Campbell, 1979). However, Cook and Campbell (1979), following Scriven (1974) also described the use of retrospective “modus operandi” designs that can be interpreted under certain conditions, that is, when there is rich contextual information and *signed causes*. Signed causes are influences whose presence is evident in their effects. For example, if a bumper-shaped dent with white paint in it appears in your new car after you have left it parked in a parking lot, then the general nature of the causal agent can be readily inferred, even if the offending vehicle has long since left the scene. Mohr (1993) went further, arguing that the single case is the *best* situation for inferring and generalizing causal influence.

Furthermore, standard suspicions about systematic case studies ignore the fact that skilled practitioners and laypeople in a variety of settings continually use effective but implicit practical reasoning strategies to make causal judgments about single events, ranging from medical illnesses, to crimes, to airplane crashes (Schön, 1983). For example, forensic and medical practice both are fundamentally systems for developing and testing causal inferences in naturalistic situations.

Thus, the challenge is to explicate a convincing practical reasoning system for judging the influence of therapy on client change. Hermeneutic single-case efficacy designs (HSCEDs) attempt to explicate a set of practical methods that are transparent, systematic, and self-reflective enough to provide an adequate basis for making inferences about therapy efficacy in

single cases. The approach outlined here makes use of rich networks of information (“thick” description rather than elegant design) and interpretive (rather than experimental) procedures to develop probabilistic (rather than absolute) knowledge claims. Such an approach is hermeneutic in the sense that it attempts to construct a plausible understanding of the influence processes in complex ambiguous sets of information about a client’s therapy.

HSCED is also dialectical in that it uses a mixture of positive and negative, quantitative and qualitative evidence to create a rich case record that provides the basis for systematic construction of affirmative and opposing positions on the causal influence of therapy on client outcome. As outlined here, it involves a set of procedures that allow a therapist/researcher to make a reasonable case for claiming that a *client very likely improved* and that the client *very likely used therapy* to bring about this improvement. Making these inferences requires two things. First, there is an *affirmative case* consisting of two or more types of positive evidence linking therapy to observed client change, for example, client change in long-standing problems and a self-evident association linking a significant within-therapy event to a shift in client problems. Second, *sceptic case* is also required, marshaling the evidence that plausible nontherapy explanations might be sufficient to account for apparent client change. The collection and presentation of negative evidence requires good-faith efforts to show that nontherapy processes can explain apparent client change, including systematic consideration of a set of *competing explanations* for client change (cf Cook & Campbell’s [1979] account of internal validity).

It is worth noting that humanistic psychologists are generally suspicious of words like *explanation* and *cause*, which they equate with natural science modes of understanding (i.e., mechanical and physicalistic processes) and which they rightly mistrust as reductionistic and dehumanizing. However, thinking causally and searching for explanations is part of what makes us human (Cook & Campbell, 1979), like telling each other stories. When we describe therapy as *responsible for*, *bringing about*, or *influencing* change on the part of our clients, we are speaking in explicitly causal terms. Even language such as *facilitating* and *empowering* is implicitly causal. However, in discussing causal influence processes in humans, it is clear that we are not talking about anything like mechanical forces; rather, we are talking about *narrative causality*, which employs a range of modes of explanation including who did something (agentic explanation); what the person’s purpose was in acting (intentional explanation); what plan, role, or schema the person was enacting (formal explanation); and what situation allowed the action (opportunity explanation) (Elliott, 1992). At the same time, it is very important for humanistic psychologists to be very careful with their language so as not to fall into the common trap of treating psychological processes as if they were mechanical causes. In other words, therapists do not “cause” their clients to change; rather, clients make use of what happens between them and their therapists so as to bring about desired changes in their lives.

## **A PRACTICAL REASONING STRATEGY FOR INFERRING CAUSAL INFLUENCE OF THERAPY**

In our society, various types of experts must rely on practical reasoning systems in complex circumstances marked by multiple possible causal factors and contradictory evidence. Such circumstances preclude certainty or even near certainty (i.e.,  $p < .05$ ) and often require that decisions be made on the basis of “probable cause” or “the weight of the evidence” (i.e.,  $p < .20$ ).

The challenge, then, is to make this practical reasoning system transparent, systematic, and self-reflective enough to convince ourselves and others. This requires three things: (a) a rich case record consisting of multiple data sources, both qualitative and quantitative; (b) two or more positive indicators of direct connection between therapy process and outcome; and (c) a systematic assessment of factors that could account for apparent client change. This reasoning process is not mechanical and is more like detective work in which available evidence is weighed carefully and contradictory evidence is sought for possible alternative explanations.

### ***Rich Case Record***

The first prerequisite for HSCED is a rich comprehensive collection of information about a client’s therapy. This collection includes basic facts about client and therapist and the client’s presenting problems as well as data about therapy process and outcome using multiple sources or measures. The following are some useful sources of data:

*Quantitative outcome measures.* Therapy outcome is both descriptive/qualitative (*how* the client changed) and evaluative/quantitative (*how much* the client changed). Thus, it is useful to use selected quantitative outcome measures including at a minimum one standard self-report measure of general clinical distress (e.g., Symptom Checklist-90; Derogatis, 1983) and one presenting-problem-specific or theoretically-relevant measure (e.g., Social Phobia Inventory; Connor, Davidson, Churchill, Sherwood, Foa & Weisler, 2000). It is best if these measures are given at the beginning and end of therapy, and periodically during therapy (e.g., once a month or every 10 sessions).

*Weekly outcome measure.* A key element in HSCED is the administration of a weekly measure of the client’s main problems or goals. This procedure has two advantages. First, it provides a way of linking important therapy and life events to specific client changes. Second, it ensures that there will be some form of outcome data at whatever point the client stops coming to therapy. (These data are particularly important in naturalistic practice settings.) One such measure is the Simplified Personal Questionnaire (Elliott, Shapiro, & Mack, 1999), a 10-item target complaint measure made up of problems that the client wants to work on in therapy.

*Qualitative outcome assessment.* As noted previously, therapy outcome is also qualitative or descriptive in nature. Furthermore, it is impossible to predict and measure

every possible way in which a client might change. Therefore, it is essential to ask the client. At a minimum, this inquiry can be conducted at the end of therapy, but it is a good idea to conduct it periodically within therapy (e.g., once a month or every 10 sessions). Because clients are reluctant to be critical of their therapists, qualitative outcome assessment probably is best carried out by a third party, but it can be engaged in by the therapist if necessary. The Change Interview (Elliott, Slatick, & Urman, 2006) is a useful method for obtaining qualitative information about outcome.

*Qualitative information about significant events.* Because therapeutic change is at least partly an intermittent discrete process, it is a good idea to collect information about important events in therapy. Sometimes, the content of these events can be directly linked to important client changes, making them *signed causes* (Scriven, 1974; e.g., when a client discloses previously unexpressed feelings toward a significant other shortly after a session involving empty chair work with that same significant other). Questions about important therapy events can be included as part of a Change Interview (Elliott et al., 2006), but an open-ended weekly post-session client questionnaire such as the Helpful Aspects of Therapy Form (Llewelyn, 1988) can also be very valuable for identifying therapy processes linked with client change.

*Assessment of client attributions for change.* The client can also be asked about the sources of changes that the client has observed in self. Both qualitative interviewing and quantitative attribution ratings can be used for this purpose (Elliott et al., 2006; Elliott et al., 2009). However, careful detailed interviewing is essential, for example, asking the client to elaborate the story of how therapy processes translated into general life changes. Rich descriptions by the client provide information for judging whether attributions are credible.

*Direct information about therapy process.* Much useful information about change processes occurs within therapy sessions in the form of (a) client narratives and (b) the unfolding interaction between client and therapist. For this reason, it is a very good idea to record all sessions of cases that are going to be used in HSCED research. Although they are not completely trustworthy, detailed therapist process notes can be used as a rough guide to what happened in sessions. Lastly, therapist and client postsession rating scales can be correlated with weekly outcome to test whether particular theoretically important in-session processes or events are linked to extra-therapy change.

### ***Affirmative Case: Clear Links Between Therapy Process and Outcome***

As noted previously, making valid causal inferences about the relationship between therapy and client change requires using the available evidence to assemble both affirmative and sceptic positions. The *affirmative case* consists of positive evidence connecting therapy process to client outcomes and requires two or more of the following:

- ◆ During the course of therapy, client experiences changes in long-standing problems.
- ◆ Client explicitly *attributes* posttherapy change to therapy.
- ◆ Client describes *helpful aspects* in therapy clearly linked to posttherapy changes.
- ◆ Examination of weekly data reveals covariation between in-therapy processes (e.g., significant therapy events) and week-to-week shifts in client problems (e.g., helpful

therapeutic exploration of a difficulty followed by change in that difficulty the following week).

A post-therapy Change Interview, a weekly Helpful Aspects of Therapy Form, and a weekly measure of client difficulties or goals (e.g., Simplified Personal Questionnaire) provide the information needed to identify positive connections between therapy processes and client change.

### ***Sceptic Case: Evaluating Competing Explanations for Observed Pre-Post Change***

The other basic requirement for causal inference is one of ruling out the major alternative explanations for observed or reported client change. In other words, we are more likely to believe that the client used therapy to make changes if we can eliminate other possible explanations for observed client change. This determination requires, first, a good-faith effort to find nontherapy processes that can account for apparent client change. What are these nontherapy processes that would lead the therapist to discount observed or reported client change? Following is a list of the major nontherapy competing explanations in systematic case study designs such as HSCED:

1. The apparent changes are *negative* (i.e., involve deterioration) or *irrelevant* (i.e., involve unimportant or trivial variables).
2. The apparent changes are due to *statistical artifacts* or random error, including measurement error, experiment-wise error from using multiple change measures, or regression to the mean.
3. The apparent changes reflect *relational artifacts* such as global “hello-goodbye” effects on the part of the client expressing his or her liking for the therapist, wanting to make the therapist feel good, or trying to justify his or her ending therapy.
4. The apparent changes are due to cultural or personal *expectancy artifacts*, that is, expectations or “scripts” for change in therapy.
5. There is credible improvement, but it involves client self-help efforts unrelated to therapy or self-corrective easing of short-term or temporary problems.
6. There is credible improvement, but it is due to *extra-therapy life events* such as changes in relationships or work.
7. There is credible improvement, but it is due to *unidirectional psychobiological processes* such as psychopharmacological medications or recovery from a medical illness or condition.

8. There is credible improvement, but it is due to the *reactive effects* of being in research.

Space does not allow a full description of these explanatory threats and how they can be evaluated here, but Table 25.1 contains additional information including examples and procedures for assessing their presence.

Note that the first four competing explanations have to do with whether observed or reported client changes are illusory or credible. Initial attention is paid to documenting and evaluating whether change has actually occurred, that is, whether there was any change to explain in the first place. The remaining four factors address whether nontherapy causes can largely or exclusively account for client change: natural self-help/self-corrective processes, extra-therapy events, psychobiological processes, and effects of research.

Thus, the task of the sceptic position in HSCED is to organize the available evidence to address each of these possible alternative explanations for client change. Because the change processes operating in therapy are *opportunity causes*, mechanistic data collection and analysis procedures will not work. Instead, the researcher must use multiple informants (client and therapist) and data collection strategies, both qualitative and quantitative. These strategies confront the researcher with multiple possible indicators that must be sorted out, typically by looking for points of convergence and interpreting points of contradiction.

In any case, careful examination of nonchange and nontherapy processes can lead to a number of different conclusions:

- ◆ Some alternative nontherapy processes may be ruled out entirely.
- ◆ Other alternative processes may be found to be present but as a whole may fail to provide a full explanation of the observed change.
- ◆ Alternative processes may mediate therapeutic influence on outcome. For example, the client may use therapy to develop a more solid sense of direction, enabling him or her to develop more rewarding relationships.

**TABLE 25.1** Nontherapy Processes That May Account for Observed Client Change and Methods for Evaluating Them

<i>Nontherapy Process</i>	<i>Examples</i>	<i>Methods for Assessing</i>
1. Nonimprovement	<ul style="list-style-type: none"> <li>• Negative: deterioration</li> <li>• Irrelevant: unimportant, trivial</li> </ul>	<ul style="list-style-type: none"> <li>• Analyze for deterioration as well as improvement</li> <li>• Ask about negative changes</li> <li>• Analyze clinical significance of change</li> </ul>

		<p>(Jacobson &amp; Truax, 1991)</p> <ul style="list-style-type: none"> <li>• Ask client to evaluate importance/significance of changes (Kazdin, 1999)</li> </ul>
<p>2. Statistical artifact (random error)</p>	<ul style="list-style-type: none"> <li>• Measurement error</li> <li>• Regression to the mean</li> <li>• Experiment-wise error</li> </ul>	<ul style="list-style-type: none"> <li>• Calculate Reliable Change Index (Jacobson &amp; Truax, 1991)</li> <li>• Use multiple pretests (rapid drop vs. stable or worse)</li> <li>• Assess duration of problem (short vs. long)</li> <li>• Assess consistency across multiple measures</li> <li>• Calculate global reliable change (e.g., require reliable change on two out of three measures)</li> </ul>
<p>3. Relational artifact (interpersonal dynamics between client and therapist)</p>	<ul style="list-style-type: none"> <li>• “Hello-goodbye” effect: emphasize distress at beginning, positive functioning at end</li> </ul>	<ul style="list-style-type: none"> <li>• Measure social desirability</li> <li>• Researcher, not therapist, interviews client</li> <li>• Encourage negative comments</li> <li>• Listen for spontaneous remarks expressing desire to please or evaluation apprehension</li> <li>• Global or vague positive descriptions versus supporting or convincing detail</li> <li>• Presence of both positive and negative descriptions</li> </ul>
<p>4. Expectancy artifacts (cultural or personal “scripts”)</p>	<ul style="list-style-type: none"> <li>• Client tries to convince self and others that change has occurred when it has not</li> </ul>	<ul style="list-style-type: none"> <li>• Ask client to evaluate changes as expected versus surprising</li> <li>• Examine client descriptions for consistency with cultural stereotypes versus plausible detail</li> <li>• Look for spontaneous client attempts to</li> </ul>



		convince self and therapist that change has occurred
5. Self-generated return to baseline	<ul style="list-style-type: none"> <li>• Temporary initial state of distress or dysfunction</li> <li>• Reverts to normal baseline through client's own natural corrective or self-help processes</li> <li>• Not caused by therapy; would have happened anyway</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate duration of problems (interview or ratings)</li> <li>• Ask client to evaluate likelihood that change might have occurred without therapy</li> <li>• Use multiple pretests; look for change before therapy starts</li> <li>• Look for client narratives of self-help efforts begun before therapy</li> </ul>
6. Extra-therapy events (positive life events)	<ul style="list-style-type: none"> <li>• Improvements in relationships or work</li> <li>• Changes in health status unrelated to therapy (e.g., successful surgery, negative biopsy)</li> </ul>	<ul style="list-style-type: none"> <li>• Ask client: qualitative interview</li> <li>• Look for in-session narratives about positive extra-therapy events or changes</li> <li>• Look for extra-therapy events associated with weekly change</li> </ul>
7. Unidirectional psychobiological causes	<ul style="list-style-type: none"> <li>• Psychopharmacological medications/herbal remedies</li> <li>• Hormonal stabilization in recovery from stroke or childbirth</li> </ul>	<ul style="list-style-type: none"> <li>• Keep track of medications and herbal remedies including changes and dose adjustments</li> <li>• Look for in-session narratives about medical intervention</li> </ul>
8. Reactive effects of research	<ul style="list-style-type: none"> <li>• Effects of research activities (e.g., posttraumatic stress disorder assessment)</li> <li>• Relation with research staff (e.g., better than with therapist)</li> <li>• Sense of altruism (e.g., derives meaning from</li> </ul>	<ul style="list-style-type: none"> <li>• Ask client about effects of research (qualitative interview)</li> <li>• Use less obtrusive data collection</li> <li>• Use naturalistic clients rather than recruited ones</li> </ul>

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## **DISCUSSION AND IMPLICATIONS**

This has been a necessarily brief overview of HSCED. When it was developed in the late 1990's HSCED was a relatively informal critical reflection method that an single psychotherapist could apply to one of their clients (Elliott 2002). One of the first learnings my colleagues and I made, however, was that the question of whether the client improved is more complex than we originally thought. Our clients typically presented us with a mixed picture, showing improvement on some measures but not on others or reporting that they had made important improvements while the quantitative data contradicted this (or vice versa).

This complexity has led us to elaborate our adjudication procedures, so that today it has become standard to use sceptic and affirmative sides, developed either by the same of different teams of researchers, sets of briefs, rebuttals and summary narratives, panels of three or more judges, and systematic procedures for rendering judgements (e.g., Elliott et al., 2009; MacLeod, Elliott & Rodgers, 2012; Stephen & Elliott, 2011). In addition, there has been an increasing interest in change processes, driven by two things: First, we found that demonstrations of causal influence were more convincing if they were accompanied by a plausible theory for how change came about (Haynes & O'Brien, 2000). Second, we concluded that the best basis on which to generalize the results of a case study are the causal processes operating; that is, you can generalize to other cases in which the same background (moderators) and within-session processes (mediators) are operating (Elliott et al., 2009). Therefore, we have increasingly focused on the the question of how change came about, adding summary narratives and the specification of likely moderator and mediator processes to the judgement step in the method

As it is currently practiced, HSCED involves the following steps: (a) Collect appropriate measures. (b) Apply them with a client to construct a rich case record. (c) Analyze the information to see whether change occurred. (d) Develop an affirmative case that there is at least two kinds of evidence linking therapy processes to client change. (e) Develop a sceptic case based on the evidence for each of eight nontherapy processes. (f) Create a dialectical argumentation process consisting of opposing affirmative and sceptic briefs, rebuttals and summary narratives that interpret and weigh the various sets of sometimes conflicting information. (g) Finally, apply an adjudication process (usually using three or more judges) in order, first, to assess the likelihood that the client changed substantially; second, to rate the degree to which therapy was responsible for client change; and third, to specify the likely mediating and moderating factors.

In comparing HSCED to traditional RCT design, we have found that HSCED requires fewer resources but in some ways is more difficult and demanding in that it requires researchers to address complexities, ambiguities, and contradictions ignored in traditional designs. These complexities are present in all therapy research, but RCTs are able to ignore them by simplifying their data collection and analysis. In fact, every group design is made up of individual clients whose change processes are as rich and contradictory as the clients we have studied. The fact that these complexities are invisible in RCTs is yet another reason to distrust them and to continue working toward viable alternatives that do justice to each client's uniqueness while still addressing the same fundamental scientific questions about the causal status of psychotherapy. This is a rigorous, highly challenging standard by which to hold ourselves—higher, in fact, than group designs such as RCTs. However, as humanists, we owe it to ourselves, as well as to our clients, to understand our role in providing our clients with opportunities for desired change and growth.

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