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Therapist Skills: A Cognitive Model of their Acquisition and Refinement

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Abstract. A new model of therapist skill development is presented. Grounded in information processing theory, it provides a comprehensive framework that accounts for a range of phenomena encountered by trainers and trainees – for example, why different training methods are needed for different elements of therapist skill. The model features three principal systems: declarative, procedural and reflective (DPR). Reflection is identified as central to therapist skill development and, accordingly, a pivotal role is given to a reflective system, which enables therapists to reflect and build on their conceptual (declarative) knowledge and procedural skills. The DPR model incorporates a taxonomy of therapist skills, and explains why different skills develop in different ways at different rates. It highlights the centrality of therapists' perceptual skills, and of when-then rules, plans, procedures and skills (rules that determine when to implement what interventions with which patient under what conditions) in the development of therapist expertise. It makes a distinction between personal and professional selves (the self-schema vs. the self-as-therapist schema); and it identifies the role of the personal self in therapist skill development. While there are still many questions to be investigated, it is hoped that the model will stimulate researchers and provide guidance for trainers.

Keywords: Therapist skills, reflection, supervision, training, therapist competence.

Introduction

The last 50 years has seen a major expansion in psychotherapy, with the development of new theory and new therapies, and a considerable body of empirical research. We are now in a far better position to understand what treatments work for whom, under what circumstances, what the most important components of therapy are, and the characteristics of the most effective therapists (Lambert, 2003).

In stark contrast, the amount of theoretical development and empirical research on the training of psychotherapists has been paltry. In 1984, Schacht, paraphrasing Paul's earlier question for psychotherapy outcome research, posed the question for training researchers: "What training, by whom, is most effective with which student, who is acquiring the specific knowledge or competency, under which set of circumstances, and at what cost?" (p. 707). In the past 20 years, with a few exceptions (e.g. Baker, Daniels and Greeley, 1990; Henry, Schacht, Strupp, Butler and Binder, 1993; James, Blackburn, Milne and Reichfelt, 2001), rather little progress has been made. Thus, in 2001, O'Donovan and Dyck (2001) were forced

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to conclude:

> In practice, we mainly don't know how teacher variables, content variables, process variables, and student variables interact to determine the outcome of our training courses. We don't know who will benefit from training, or even what the exact benefits might happen to be. In fact, we don't know nearly enough about what contributes to effective training to be dogmatic about what any training program needs to comprise.

Clearly the training of psychotherapists is an important issue, because the value of psychotherapy research and new practices is limited if its product is being ineffectively disseminated by psychotherapy trainers. At this stage, we can tentatively conclude that: (i) there is evidence that trainees' therapeutic competence is enhanced by some training programs (Baker et al., 1990; Crits-Christoph et al., 1998; Ivey, 1990; Milne, Baker, Blackburn, James and Reichelt, 1999), (ii) therapist competence has been related to outcome in a number of studies (Beutler, 1997; Kingdon, Tyrer, Seivewright, Ferguson and Murphy, 1996; Luborsky, McLellan, Digner, Woody and Seligman, 1997; Trepka, Rees, Shapiro, Hardy and Barkham, 2004), (iii) interestingly, interpersonal skills can sometimes be negatively affected in the initial stages of training (Henry et al., 1993; Perlesz, Stolk and Firestone, 1990). As yet, no conclusive study linking the training of therapists to increases in competence *and* enhanced therapeutic outcomes with patients has been carried out.

There are many reasons for the dearth of empirical studies. These include: methodological difficulties (e.g. experimental studies with control groups are usually inappropriate and/or unfeasible); complexity of the issues (training programs may extend over many months, have multiple components, usually multiple trainers with different styles, with trainees from a variety of backgrounds); and apparent difficulties in obtaining funding for training research (Binder, 1999), which falls uncomfortably between psychotherapy and education. Hence, occasional calls for more research, and of a more rigorous nature (Alberts and Edelstein, 1990; Bootzin and Ruggill, 1988; Liddle and Halpin, 1978) have not been met with a greatly enhanced output.

Another major problem in the area is the absence of theoretical frameworks to give any sense of coherence or direction to the research endeavour. Apart from some useful stage models of therapist evolution (Grater, 1985; Skovholt and Rønnestad, 2001), and the work of Binder (1999) on declarative and procedural knowledge (see below), it is hard to find any useful models of therapist skill development to guide researchers or trainers. It is this theoretical vacuum that the present paper seeks to address.

What is presented below is a cognitive model of therapist skill development, which seeks:

(1) To account for the mechanisms by which therapists learn therapy skills, and
(2) To conceptualize different types of therapist skill (e.g. interpersonal, perceptual, technical, conceptual skills) and how these interrelate within a coherent model.

The model has been derived from previous theoretical and empirical literature, in particular the work of Binder and of Skovholt and colleagues, and the research work of the present author over the past seven years.

In describing the relationships between different components of therapist skill development, the model, perhaps for the first time, provides a theoretical framework to answer questions such as: What are the mechanisms by which novice therapists learn? What are the mechanisms by which more advanced therapists learn? Which skills are more trainable, and which are relatively

immutable? What is the value of personal therapy or personal experiential work in training? What should be our goals in training therapists? A number of novel concepts are presented. To ease its assimilation, the model is described below in four sections:

Section 1. The basic model: a three-systems cognitive model of therapist skill development.
Section 2. The elaborated model incorporating a taxonomy of the main components of therapist skill.
Section 3. Relationship between different elements of the model.
Section 4. Summary and implications.

Where examples are given, these are mainly derived from the author's preferred therapeutic approach, cognitive therapy. However, the model is designed to have general applicability to psychotherapy training in most orientations.

Section 1: The basic model: a three-systems (DPR) model of therapist skill development

Declarative and procedural systems

One of the only authors to have considered therapist training from an information processing perspective is Binder (1993, 1999), who proposed that the distinction between declarative and procedural knowledge provided a useful framework for thinking about therapy training. Following Binder, declarative and procedural systems form two of the main elements of the present model.

The declarative system is concerned with "knowing that" – knowledge of factual information, which may be either autobiographical or abstract. For instance, understanding the cognitive model of panic disorder, or knowing that empathy, warmth and genuineness are key skills for most forms of therapy are examples of declarative knowledge. Typically declarative knowledge is learned didactically through lectures, observational learning, supervision, or reading assignments. However, these training approaches may produce "inert knowledge" (Binder, 1999), which fails to transfer to practical (procedural) skills in the real world unless supplemented by other strategies (e.g. role-play, practice in clinical contexts, supervision).

Procedural knowledge is the knowledge of "how to" and "when to" – rules, plans, and procedures – which leads to the direct application of skills. The procedural knowledge of experienced therapists is often tacit – they just "do it". Like experts in other fields (Anderson, 1993; Chi, Glaser and Farr, 1988), the cognitive strategies of therapists change over the course of development (Skovholt, 2001). Their knowledge "chunks" and problem solving strategies become progressively elaborated and refined, and they build a formidable repertoire of representative when-then rules, plans, procedures and skills (e.g. *when* patient has a clinical depression and is withdrawn, *then* assess level and kind of activity, as well as achievement and pleasure, using a Weekly Activity Schedule).

How does the procedural system acquire a sophisticated set of when-then rules? An important distinction needs to be made between novice therapists building their therapy skills, and more experienced therapists refining theirs. Taking the example of cognitive therapists learning to create successful behavioural experiments, novice therapists may learn these skills through a series of teaching strategies: a brief lecture, and classroom demonstration, followed by a role-play setting up a behavioural experiment with another trainee and getting feedback. Next, they transfer these newfound skills to clinical situations. With repeated use,

evaluation and feedback, they refine these basic skills until they become relatively automatic and fluent. Didactic learning, modelling, practice and feedback therefore form the key learning mechanisms for the relative newcomer.

For the more experienced therapist, however, the DPR model suggests that the principal strategy that takes a therapist from being average to expert is reflection. The experienced therapist already knows the mechanics of setting up behavioural experiments in a variety of situations. However, when s/he faces a difficulty engaging a particular patient in an experiment, there may be an apparent mismatch between the therapist's current knowledge and the challenge the patient presents. The therapist's curiosity is aroused. S/he may reflect afterwards on this difficulty, and perhaps take it to a supervisor, who poses a series of questions to help the therapist conceptualize the difficulty, and develop potential strategies. In this example, the therapist may end up not so much learning new skills de novo like the novice therapist; rather, through reflection, s/he may apply *existing* knowledge and skills from other contexts to the *new* situation.

The reflective system: key to the development of therapist expertise

The adult education literature has consistently highlighted the role of reflection in adult learning (Boud, Keogh and Walker, 1985; Kemmis and McTaggart, 2000; Kolb, 1984; Schön, 1983), and Schön (1983), in his seminal book *The Reflective Practitioner*, noted that reflection played a key role in the development of professional expertise. Once basic skills are learned, reflection enables practitioners to discern in what context, under what conditions, and with what people, particular strategies may be useful. They learn when-then rules, plans, procedures and skills governing the application of particular techniques in particular contexts when they reflect on their own experience and that of their patients.

Perhaps the most widely quoted definition of reflection in the adult learning literature is that of Boud et al. (1985) who wrote: "Reflection is . . . a generic term for those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to new understandings and appreciations" (p. 19). Essentially, self-reflection is a metacognitive skill, which encompasses the observation, interpretation and evaluation of one's own thoughts, emotions and actions, and their outcomes. Therapists apply much the same processes in reflecting on the patient's experiences.

The concept of reflection has had a long history in psychoanalysis and psychotherapy from the time of William James (von Wright, 1992). However, as I have indicated elsewhere, it has barely featured in the experimental psychology literature, partly, it would seem, because it is a purely internal process out of reach of the experimenter's best attempts to bring it under control in the laboratory (Bennett-Levy, 2003c). This is a major oversight in the development of psychological theories of learning since self-reflection may be one of the most important mechanisms by which humans learn from their own experience and develop life wisdom (Staudinger, 1999), or clinical wisdom (Bennett-Levy, 2003c; Skovholt and Rønnestad, 1992a).

Schön identified two forms of reflection: reflection-on-action (e.g. reflection *after* a therapy session) and reflection-in-action (e.g. reflection *during* a therapy session). With practice at reflection-on-action, the practitioner becomes progressively more able to reflect-in-action. For instance, novice therapists practising new techniques are customarily more focused on verbal than nonverbal cues. Reflection-on-action (e.g. reviewing a videotape) might indicate that a client had shown clear nonverbal signs of distress at a particular line of questioning,

which the therapist failed to pick up. This later manifested as resistance. The therapist might now start to notice non-verbal communication during therapy sessions (reflection-in-action), and adjust his/her response accordingly.

Studies of therapist development have indicated the key role played by reflection (Bennett-Levy, Lee, Travers, Pohlman and Hamernik, 2003; Bennett-Levy et al., 2001; Milne and James, 2002; Skovholt, 2001). In particular, Skovholt and colleagues (2001, 1992b, 1997), in a series of studies, have suggested that continuous professional reflection is what distinguishes expert therapists from average therapists. As they have written: "A therapist and a counselor can have 20 years of experience or one year of experience 20 times. What makes the difference? A key component is reflection" (Skovholt et al., 1997, p. 365).

Binder (1999) has also identified reflection as a key element of expertise. He noted that the capacity to improvise is a cardinal characteristic of the expert therapist, and appears to rely on two sets of generic skills: a highly disciplined and automatized procedural knowledge, and a refined ability to reflect. Milne, Claydon, Blackburn and James (2001) used Kolb's (1984) experiential learning model to indicate the importance of reflection in both in both therapist and client learning. The work of Schön, Skovholt, Binder, Milne and colleagues, and Bennett-Levy leads to the logical conclusion that the capacity to reflect is arguably the central skill that trainers should be developing in trainees for ongoing professional development. The present model builds on Binder's by adding a reflective system to yield a three-system declarative-procedural-reflective (DPR) model.

Figure 1 indicates the relative contribution of the reflective system at different stages of development. In the first stages of therapist learning when declarative knowledge and procedural skills are acquired, didactic learning, practice and feedback may play a greater role in learning than reflection. Later, reflection plays a more central role in the development of clinical expertise, and in converting tacit procedural skills into declarative principles that may be taught to others. It should be noted that the changes in the contribution of declarative, procedural and reflective systems to therapist development are relative, not absolute. Expert therapists continue to add to their existing declarative knowledge and procedural skills, using their reflective systems to identify areas for development.

Section 2: The elaborated DPR model

Despite the fact that the goal of therapist training is the attainment of competence, remarkably little has been written about what therapist competence is or how it is acquired. For instance, Snyder and Ingram (2000, p. 709) commented:

> Research into the psychotherapists' skills that foster improvement and growth in clients should be at the forefront of our research activities. Given their importance, we are surprised at the relatively scant attention that has been paid to the issues of what constitutes the good and competent psychotherapist . . . To find the characteristics of good therapists is a logical parallel to finding efficacious psychotherapies. The field will profit enormously as we learn about and agree upon such psychotherapist competencies.

Different writers have used different frameworks to describe key elements of therapist skill. Shaw and Dobson (1988) identified four characteristics of the competent therapist: a theoretical or conceptual framework to guide interactions; a memory of the patient's issues; the skillful use of intervention techniques to promote the desired changes in behaviour or

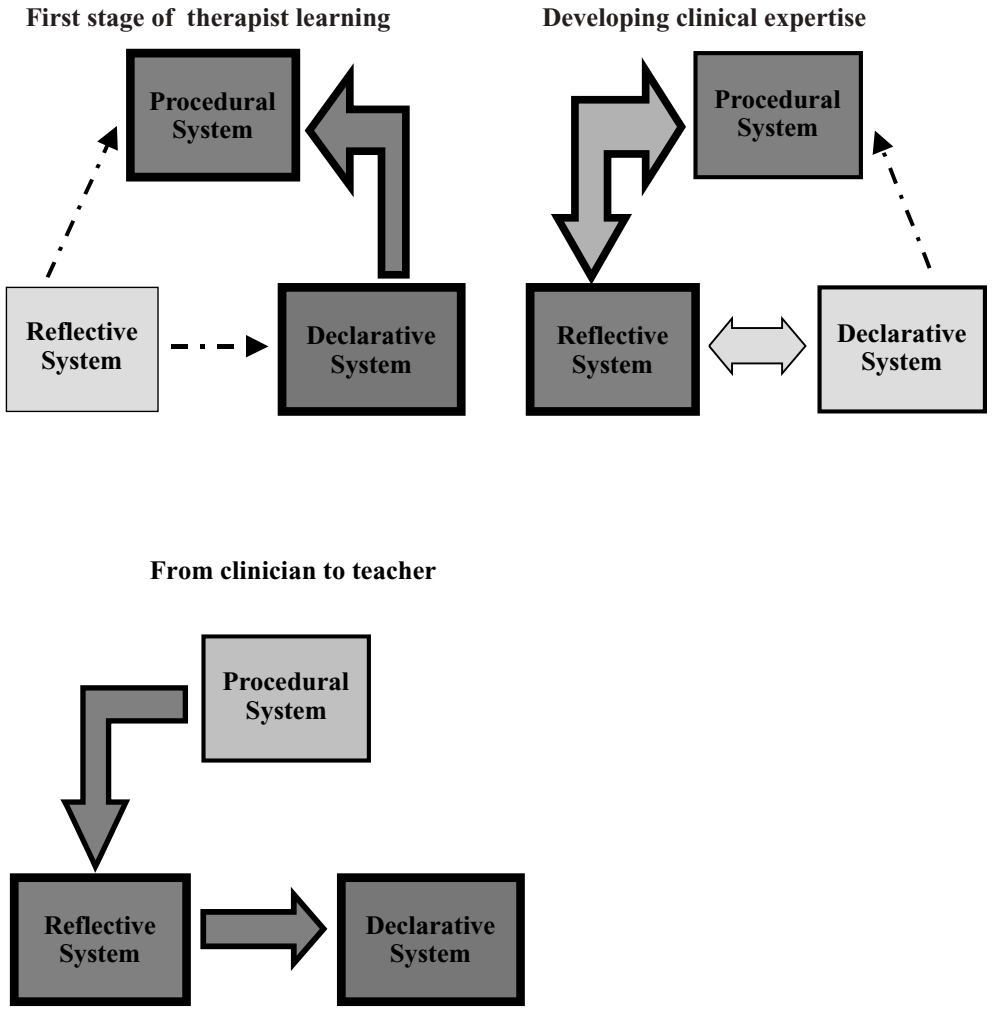

Figure 1. Where the action is for (i) First stage of therapist learning (ii) Developing clinical expertise and (iii) Moving from clinician to teacher. Darker shading indicates greater activity within that system

the conditions necessary for change; the knowledge of when to apply (and when not to apply) these interventions. Cleghorn and Levin (1973) suggested that three key elements are conceptual, executive and perceptual skills. Many writers (e.g. Trepka et al., 2004) make a distinction between technical (therapy-specific) and interpersonal skills; and Binder (1999), amongst others, has noted that a highly automatized procedural system of situations-actions-consequences (or when-then rules, plans, procedures and skills using the present nomenclature) is characteristic of the competent therapist. Others have noted the contribution of therapist attitudes (Mahoney, 2000; Rogers, 1951) and, at times, personal knowledge and experience (Hill et al., 1988; Kuehlwein, 2000).

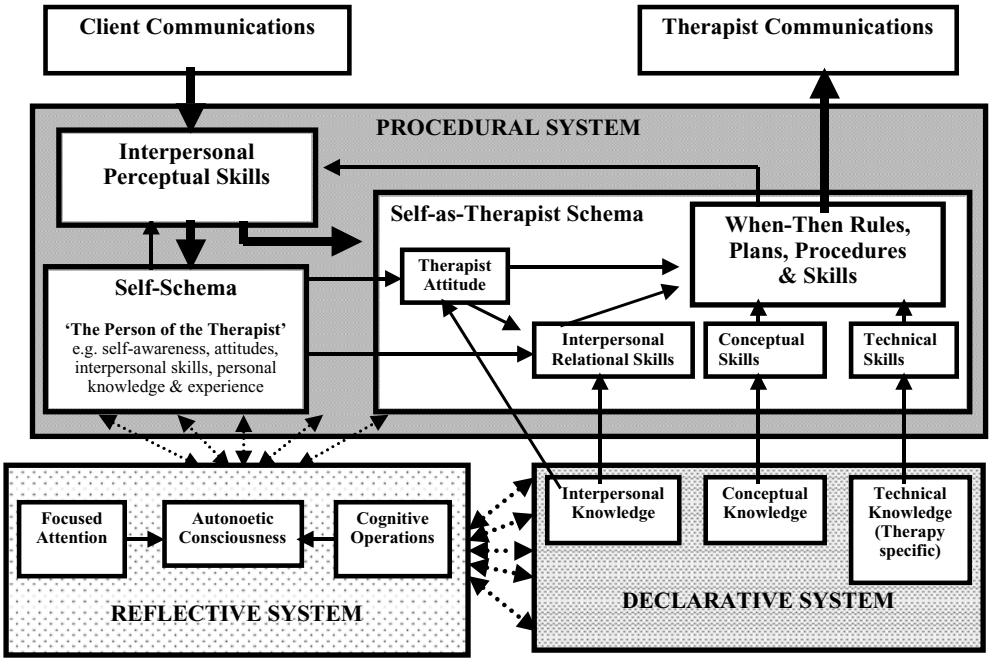

Figure 2. Cognitive model of therapist skill development

The present system draws on these categories, and represents their relationships within the DPR framework. Components of the model are described under the Declarative, Procedural and Reflective sections below; relationships between them are illustrated by the arrows in Figure 2.

The reader's attention is drawn to novel aspects of the model – in particular:

- the focus on interpersonal perceptual skill, a central therapist skill frequently neglected by writers; and identification of its components (empathy, mindfulness and reflection-in-action);
- the distinction between the self-as-therapist schema, and the self-schema;
- the identification of when-then rules, plans, procedures and skills as a core element in the procedural system;
- the identification of the reflective system, and its components.

Declarative system

The declarative system comprises three components: conceptual knowledge, interpersonal knowledge and technical knowledge. These are the basic building blocks of training, which will be familiar to all trainers and trainees. The declarative system first understands the "what?" of these skills; then, through their application in practice, they are translated into procedural skills.

Conceptual knowledge

Conceptual knowledge refers to the basic theory and understanding of the therapy model. For instance, cognitive therapists learn about Beck's cognitive model of emotional disorder and diagnosis-specific models.

Interpersonal knowledge

Therapists from every orientation learn particular microskills, some generic, and some specific to their particular orientation. For psychodynamic therapists, interpersonal knowledge would include learning about defense mechanisms such as projection and resistance.

Technical knowledge

Technical knowledge refers to therapy-specific knowledge. For instance, gestalt therapists acquire declarative knowledge about procedures for the two-chair technique.

Procedural system

The procedural system is where declarative understandings become actualized in practice and refined. The components of the procedural system are described in this Section. The input and output of the procedural system are *client communications* and *therapist communications*. In between, the DPR model posits that the therapist applies his/her *interpersonal perceptual skills* to the client communications. This information is then processed through two systems: the *self-schema* (the person of the therapist), and the *self-as-therapist schema* (the therapist self), which is constructed when the therapist starts to learn therapy-specific skills.

Interpersonal perceptual skills

When therapists are working with patients, there are two basic elements to therapy. At input, they use their *interpersonal perceptual skills* to assess on a moment-to-moment basis what Greenberg and Goldman (1988) call the "in-process state" of the client, reflected in part in their own feelings and reactions. At output, they respond verbally and non-verbally to facilitate insight and change processes (therapist communications).

Whereas the output from the procedural system – therapist communication – is easily observed, interpersonal perceptual skills are *internal events* denoting the therapist's attunement and receptivity to "where the client is at" (e.g. noticing subtle features of nonverbal communication, especially those that might be outside the awareness of the patient). For instance, a therapist may note (*interpersonal perceptual skill*) that s/he feels concerned about saying the wrong thing to a client who appears to recoil from mild exploratory questions (*in-process state*). The therapist then facilitates a discussion of process issues (*therapist communication*) by articulating this experience in a tentative way: "It feels to me like we're tip-toeing around one another, not quite sure whether to go backwards or forwards. Does it feel anything like that to you?"

It seems likely that perceptual skills are fundamental, indeed central, to effective therapeutic practice. Greenberg and Goldman (1988) have written, in the context of training experiential therapists:

> Ultimately, it is the experiential therapist's perceptual discriminations and his or her ability to hear, see, and understand the subtleties of the client's experience and to identify markers of underlying information processing difficulties that determines the quality of the therapy (Greenberg and Goldman, 1988, p. 701).

However, as Safran and Muran (2000) have noted, there has been remarkably little focus in the therapist literature on perceptual skills, which remain poorly conceptualized. It is suggested here that perceptual skills include elements of at least three partially overlapping attributes: empathy, mindfulness and reflection-in-action.

The first, *empathy*, denotes an *emotional* stance or attitude towards the client that enables the therapist to "operate within the internal frame of reference of the client . . . listening from the inside as if 'I am the other' . . . being attuned to the nuances of feeling and meaning, as well as the essence of another's current experience" (Greenberg and Elliott, 1997, pp. 167–168).

The second, *mindfulness* (Martin, 1997; Safran and Muran, 2000), denotes a quality of "bare attention":

> (Mindfulness) . . . involves directing one's attention in order to become aware of one's thoughts, feelings, fantasies, or actions as they take place in the present moment. The goal of mindfulness is to become aware of and then de-automate our habitual ways of structuring our experience through automatic psychological activities and actions (Safran and Muran, 2000, p. 57).

In the therapist context, Martin has defined mindfulness as "a state of psychological freedom that occurs when attention remains quiet and limber, without attachment to any particular point of view" (Martin, 1997, pp. 291–292).

The third component, *reflection-in-action* (Schön, 1983, 1987), denotes the capacity of experts to process complex information as it is happening, and derive appropriate plans of action. While there is overlap between these three attributes, there are also clear distinctions. At the very least, this analysis would suggest that interpersonal perceptual skills are a complex process involving attentional, emotional, and higher order cognitive processing systems.

Self-schema

The self-schema in this context refers to the "person of the therapist" – the knowledge, attitudes, skills and personal attributes that have mostly been established prior to becoming a therapist; in other words, the "normal", non-therapist self, which continues to be present in "normal" situations (e.g. with family and friends). The self-schema is of course idiosyncratically related to personal history. For a given individual, this might include: personal experience in overcoming poor schooling or economic deprivation; attitude towards disability; experience of bereavement; skills in self-management, networking, or identifying community resources; perseverance, tolerance of ambiguity, and compassion.

It is assumed that before the therapist has acquired therapy skills, all information about other people is processed through the self-schema. As the therapist acquires therapy-specific skills, there is a progressive transfer of processing to the self-as-therapist schema.

Self-as-therapist schema

The model assumes that when people train as therapists, they develop a new *therapist identity*. While elements of this identity share attributes in common with their "normal self" (e.g. a

generally compassionate attitude towards suffering), there are also elements that are quite specific (e.g. therapy-specific skills and conceptualizations; therapists not disclosing their own problems, except for specific therapeutic reasons). Accordingly, in terms of the present model, therapists develop a self-as-therapist representational system distinct from the normal self-schema system. There are five elements to self-as-therapist system: therapist attitudes, interpersonal relational skills, conceptual skills, technical skills and when-then rules, plans, procedures and skills.

Therapist attitude. Therapist attitudes have a significant impact on both interpersonal relational and perceptual skills. Since the work of Carl Rogers, it has been recognized that warmth, understanding, respect and genuineness are fundamental to the development of effective therapeutic relationships (Rogers, 1951). Many therapist attitudes are likely to be derived directly from tacit, long-standing attitudes established prior to therapist training (self-schema → therapist attitude). Others (e.g. valuing the collaborative relationship in cognitive therapy) may be developed as a direct result of training (interpersonal knowledge → therapist attitude).

Interpersonal relational skills. A distinction is made in the model between two kinds of interpersonal skill, relational skills and perceptual skills (already described). Interpersonal relational skills encompass those active therapist communications that foster and maintain the therapeutic relationship; for instance, basic counselling skills such as nodding, eye contact, summarizing, and reflecting, as well as higher level relational skills, such as repairing therapeutic ruptures (Safran and Muran, 2000). The model suggests interpersonal relational skills are derived from therapist attitudes, interpersonal declarative knowledge and pre-existing interpersonal skills (self-schema).

Conceptual skills. Conceptual skills refer to the implementation of declarative conceptual knowledge; for instance, mapping out a developmental conceptualization with the patient.

Technical skills. In a similar manner, technical skills refer to the implementation of therapy-specific knowledge (e.g. the practice of the two-chair technique, or the planning of a behavioural experiment).

When-then rules, plans, procedures and skills. At the novice stage, the conceptual, technical and relational skills of the self-as-therapist system tend to develop in a somewhat "clunky", awkward manner. Once the self-as-therapist system has acquired fluency with basic techniques, therapists acquire expertise by combining facilitative attitudes and skills into an increasingly sophisticated range of when-then rules, plans, procedures and skills, which are highly contextual: which strategy, for whom, under what circumstances? For example, when-then rules might include particular types of intervention (e.g. activity schedule), procedures for their introduction (e.g. explanation of rationale, practice during session, potential difficulties anticipated), preferred times of introduction (e.g. during sessions 1–3), types of client favoured (e.g. moderate-to-severe depression), and consideration of the potential influence of cognitive or behavioural patterns (e.g. distorted, overgeneralized thinking; inertia; withdrawal; few behaviours). The DPR model suggests that the reflective system is central to the development of when-then rules.

Reflective system

The role of a reflective system is a comparative one: to analyse past, current or future experience; compare it with past stored information; identify a plan of action as necessary; and either maintain or change information in storage in the light of the analysis.

In the DPR model, the important difference between the reflective system, and the declarative and procedural systems, is that the reflective system is *content free*; there is no built-in knowledge, no storage of information or experiences. Instead, information is imported into the reflective system from the declarative and procedural systems for analysis and evaluation, prior to re-export back to these systems with plans for action, change, or retention of the status quo. In the reflective system, events/experiences are both re-experienced and "thought about". Thus, the reflective system is a short-term representational system, whose content-free reflective quality is represented by the dotted bidirectional arrows to and from declarative and procedural systems in Figure 2.

Focused attention

Reflection requires focused attention. Initially, focused attention is stimulated in various ways: for instance, by a sense of "inner discomfort" (Boyd and Fales, 1983); by a mismatch between expectations and reality; by curiosity, or by a useful socratic question; or by a formal learning process like reflective practice (Bolton, 2001) or action research (Kemmis and McTaggart, 2000). Thereafter, while the practitioner is grappling with a particular issue, attention is held while a series of cognitive operations are undertaken.

Autonoetic consciousness

The reflective system also requires a representational system to mentally represent past, current or future experience (e.g. last week's therapy session, the current one, or next week's), and evaluate it against the contents of procedural or declarative memory. Such a system has been identified by Wheeler, Stuss and Tulving (1997) who gave the term autonoetic consciousness to "a special kind of consciousness . . . which allows healthy human adults to both mentally represent and become aware of their subjective experiences in the past, present and future" (p. 331). There are clear parallels between the notion of autonoetic consciousness and working memory (Baddeley, 1997). Wheeler et al. (1997) have suggested that autonoetic consciousness is "perhaps the ultimate achievement of the human brain-mind", its seat clearly located within the most evolutionarily advanced and recent development of the human brain, the prefrontal cortex.

Cognitive operations

The reflective system also undertakes a series of cognitive operations in order to analyse, expand, compare, contrast and evaluate the contents of autonoetic consciousness. Examples of such operations are: following trains of thought, persistent self-questioning, logical analysis and problem solving. In particular, persistent self-questioning (or socratic questioning from an external source) appears to be critical to the process of reflection (Bennett-Levy, 2003b).

Throughout these cognitive operations, probably the key mechanism of learning that is most characteristic of the reflective system is *perceptual learning* (Bransford, Franks, Vye and Sherwood, 1989; Gibson and Gibson, 1955). The reflective system does not learn new

information through instruction, modelling, rehearsal and the other mechanisms identified with declarative and procedural systems. Its function is to perceive differences: to compare and contrast present experience with past experience. Where there is a match, then existing rules are likely to be implemented. Where there is a mismatch, it either undertakes further analysis and draws inferences, which are then transferred to declarative, procedural or perceptual systems with instructions for further action; or endeavours to collect further data.

For instance, a client's problem in carrying out homework assignments may be noted and referred to the reflective system, where it is compared and contrasted with "knowledge about homework problems", imported from declarative and procedural systems. If the problem is identified as similar to previous experience, then a therapist communication, drawn from those rules is implemented; if it is dissimilar, then either further reflective analysis is undertaken to determine possible reasons and implications; or another rule, which anticipates new learning, such as [explore further] or [consult with supervisor], is adopted.

Thus, the DPR model suggests that therapist expertise is founded on use of the reflective system to make finer and finer differentiations between different situations and circumstances in therapy, and to develop a progressively more sophisticated set of when-then rules, plans, procedures and skills.

At a theoretical level, the significant point about self-reflection is that, through the autonoetic capacity to mentally represent past events, humans are able to engage in *new learning often at a significant temporal distance from the occurrence of the event*. The new learning is derived, not from the event itself, but from *a set of complex cognitive operations consciously carried out on the mental representation of the event* in order to *facilitate new understandings*. This is a form of learning barely acknowledged in the experimental or clinical psychology literature (in contrast to theories of adult education). It is probably uniquely human, and of an entirely different nature to classical or operant conditioning, or social learning. It is central to the process of therapy (e.g. re-experiencing and re-evaluation of past – sometimes childhood – events); and it is central to the process of learning to be a therapist (e.g. a supervision session to learn from last week's therapy session, or reflections on practising therapy techniques on oneself). On this analysis, facilitation of trainees' reflective capacity is one of the key tasks for psychotherapy trainers.

Section 3: Relationships within the model

This section examines relationships between elements within the model, and places them within the context of previous literature. In focusing on novel aspects of the model, the following issues are discussed:

1. How does learning take place within the DPR systems?
2. What are the determinants of perceptual skills?
3. What is the relationship between the self-schema and the self-as-therapist schema?
4. What is the contribution of personal experiential work to therapist development?

Learning within the DPR systems

In Section 1, it was noted that different mechanisms of learning tend to be involved at different stages of the learning process. For instance, at the start of therapist development, the principal

Table 1. Helpful learning strategies for the three systems

DECLARATIVE SYSTEM	Reading
Developing knowledge/skills	Case studies
	Lectures
	Didactic/modelling supervision
	Clinical demonstrations
	Problem-based learning
	Clinical experience
	Written conceptualizations
	Feedback
Refining knowledge/skills	Reflective practice
	Socratic supervision
	Self-practice/self-reflection
PROCEDURAL SYSTEM	Practice
Developing knowledge/skills	Experiential training
	Role-play
	Clinical experience
	Self-practice/self-reflection
	Personal therapy
	Clinical demonstrations
	Experiential/modelling supervision
	Feedback
Refining knowledge/skills	Reflective practice
	Problem-based learning
	Practising new strategies for new situations
	Self-practice/self-reflection
	Experiential/socratic supervision
REFLECTIVE SYSTEM	Reflective attitude
	Reflective practice
	Self-practice/self-reflection
	Personal therapy
	Reflective/socratic supervision
	Self-supervision
	Reflective writing
	Reflective reading

tasks are to gather conceptual knowledge (declarative system), and learn relevant technical and interpersonal skills (procedural system). Later development tends to be focused on the differential application of knowledge and skills in specific contexts (characteristics of client, stage of therapy, type of issue, other problems etc), where reflective learning plays a central role (reflective system).

Table 1 focuses on preferred strategies of learning for the three systems; it should be noted that these strategies are preferences, not absolutes (e.g. while role-plays are a strategy of choice for acquiring procedural skills, trainers can also ask trainees to reflect on the declarative knowledge implications of their role-play experience). Table 1 suggests a distinction in the declarative and procedural systems between *developing* knowledge/skills and *refining*

knowledge/skills, since they involve different strategies. As may be seen, preferred strategies across the three systems differ considerably.

The acquisition of declarative knowledge usually relies on more traditional, didactic forms of learning – reading, lectures, case studies, a didactic style of supervision – in order to learn this basic information (e.g. the cognitive model of obsessive-compulsive disorder). Clinical demonstrations, and modelling by supervisors, may also be helpful (Padesky, 1996), as may be doing written conceptualisations for clinical reports, case studies or workshops (Padesky, 1996). However, as Binder (1993, 1999) has noted, there is a real danger of knowledge being "inert", unless it is acquired in the context in which it is likely to be used. Therefore, problem-based learning and clinical experience are particularly important strategies for acquiring useable declarative knowledge. Binder's (1999) suggestion that trainers could make more use of IT with problem-based learning strategies is a particularly promising idea, which is starting to be implemented (Weingardt, 2004).

Once basic declarative knowledge has been acquired, it may be refined through reflective practice and more socratically-styled supervision (Overholser, 1991). Self-practice/self-reflection (SP/SR) – a training strategy where trainees practise therapy strategies on themselves, either on their own, or in a limited "co-therapy" relationship – is also reported by trainees to deepen declarative understanding (Bennett-Levy et al., 2001). For instance, cognitive therapy trainees who had undertaken behavioural experiments understood much better their power and value as an important therapeutic strategy (Bennett-Levy, 2003a; Bennett-Levy et al., 2004).

In order to acquire procedural knowledge and skills, books and lectures are an inefficient method. Experiential learning is the key strategy. Practice with real people in clinical or role-play situations is the best way to acquire relevant technical and interpersonal skills (Alberts and Edelstein, 1990; Milne, 1982); constructive feedback is invaluable. In this context, it is a matter of concern how many workshop leaders and lecturers still insist on running long workshops with minimal experiential practice. Again, clinical demonstrations and modelling, and SP/SR may be helpful.

Once basic procedural skills are learned, therapists need to refine their when-then rules, plans, procedures and skills. Strategies that promote reflection (reflective practice, self-practice/self-reflection, personal therapy, problem-based learning, socratic-style of supervision), together with further experiential practice, are key elements of more advanced skill development. For instance, Bennett-Levy et al. (2003) found that experienced cognitive therapists reported that SP/SR made them more empathically attuned to clients, increased their attention to the therapeutic relationship, refined some specific cognitive therapy skills, and enhanced their communication of the conceptual framework of cognitive therapy.

How can the reflective system be enhanced? If the main assumption of this paper is correct – that reflection is a key metacognitive skill that determines whether or not therapists develop expertise – then clearly we need to find ways to promote reflection, and develop the *reflective systems* of trainees. Skovholt and Rønnestad (2001) suggested that "reflective stance" is an important characteristic of expert therapists. My own work suggests that trainees commence training programs with quite varied reflective stance and ability. It is also apparent that in most trainees reflective skill develops considerably with practice; for example, one of the other outcomes reported by participants in the Bennett-Levy et al. (2003) study was enhanced therapist reflection in their clinical work. It seems that practice at reflection in facilitative contexts is what most increases reflective capacity (Bolton, 2001). Hence, reflective practice

(Stedmon, Mitchell, Johnstone and Staite, 2003), reflective writing (Bolton, 2001), SP/SR, a reflective/socratic style of supervision, and self-supervision are all strategies which may potentially enhance reflective skill.

Determinants of perceptual skills

As noted above, perceptual skills are amongst the most important skills of the therapist, yet some of the least researched, acknowledged and understood. The DPR model seeks to highlight the importance of perceptual skill, and cast light on its determinants.

Three attributes of perceptual skill were identified in Section 2: empathy, mindfulness and reflection-in-action. Importantly, all three suggest that perceptual skills are dependent not only on perception of the client's state but also crucially, on the therapist's perception of his/her *own internal state*. Consistent with this idea, Greenberg and Goldman (1988) and Safran and Muran (2000) have suggested that perceptual skills are learned principally through *personal development and experience*. In terms of the DPR model, this implies the close link of self-schema system → perceptual skills. There are also some limited empirical data that appear to support this relationship (Bennett-Levy et al., 2003; Machado, Beutler and Greenberg, 1999).

Put simply, the self-schema appears to function as an emotional barometer. Therapists tune into their client's emotional experience and their own. Therapists who have "been there" either through self-experience or symbolically (e.g. with other clients) are likely to be more accurate with their in-process diagnosis of client state (Machado et al., 1999). For instance, Safran and Muran (2000), commenting on subtle therapeutic ruptures, have noted: "In those situations in which the withdrawal marker is particularly subtle, the therapist's awareness of his or her own feelings or action tendencies may be the best indicator that something is taking place that warrants exploration" (p. 144). This relationship between personal development and perceptual skill has clear implications for training, discussed below.

The DPR model posits a second input to interpersonal perceptual skills: When-then rules, plans, procedures and skills → interpersonal perceptual skills. Therapists develop hypotheses, and think about their next steps, as they proceed. For instance, a therapist may be developing his/her case conceptualization (e.g. of social anxiety). In such circumstances, his/her perceptual antennae are likely to be probing the client's experience for particular pieces of information (e.g. potential safety behaviours) to see if they "fit".

There are of course potential contradictions between being "where the client is at" and implementing when-then rules: novice therapists often have a hard time maintaining empathy (self-schema → perceptual skills) while focusing on the conceptualization and their next intervention (when-then rules → perceptual skills). This contradiction inherent in the model can explain important differences between trainee and expert therapists, and between working with different kinds of client.

For trainee therapists, the model may account for the observation that their interpersonal skills sometimes decline during training, while they place the majority of their attentional resources on becoming technically proficient (Henry et al., 1993; Rønnestad and Skovholt, 1993; Stolk and Perlesz, 1990). In contrast, expert therapists have a developed capacity to process higher order chunks of information in parallel (Chi et al., 1988; Dreyfus and Dreyfus, 1986) and can use different parts of the system (e.g. when-then rules + self-schema) more or less simultaneously.

Different types of client may be more or less suited by therapy and therapist biases towards in-process state vs. conceptualization. Clients who "fit" DSM-IV Axis I diagnoses tend to do well with the clear conceptualizations of cognitive therapy (Hollon and Beck, 2003), and with therapists who favour a systematic manual-based approach (Wilson, 1998). However, where clients have co-existing Axis II disorders, standard cognitive therapy may require considerable adaptation to work with the client's "in-process state", and therapists need greater self-awareness and expertise (Beck, Freeman et al., 2003; Linehan, 1993).

There is some suggestion that personal experiential work and personal therapy may help to keep trainees' attention focused on the interpersonal process, as might be predicted by the model (Bennett-Levy et al., 2003; Macran and Shapiro, 1998). It remains to be seen whether this mitigates potential loss of focus on in-process state, while the trainee is learning conceptualization and technical skills.

The relationship between the self-schema and self-as-therapist schema

The relationship and balance between the self-schema and the self-as-therapist schema changes over time. Prior to training as a therapist, the novice processes information about others through the self-schema. At the start of therapist development, the novice has to construct a self-as-therapist schema, which now takes over as the dominant processing schema. Later in therapist development, the self-schema may re-emerge to play a greater role as the self-as-therapist system gains in expertise and confidence. For instance, aspects of the therapist's "normal" personality (e.g. humour) may be more apparent (Skovholt, 2001), and the therapist may be more willing to use relevant disclosure from personal experience.

In this way, the self-schema can make a positive contribution to self-as-therapist function. However, this is not always the case. The DPR model suggests that when therapists find themselves having strong emotions and counter-transference reactions to patients (e.g. anger, irritation), self-schema processing becomes more dominant, and interferes with self-as-therapist schema processing. This is a particularly important time for self-reflection or supervision. The DPR model implies that the professional (self-as-therapist) can never be entirely divorced from the personal (self-schema); the art is to achieve appropriate balance, and to have sufficient awareness to know when the personal is facilitative and when it getting in the way.

Contribution of personal experiential work to therapist skill development

Various elements of the self-schema inevitably contribute to the development of the self-as-therapist schema. In particular, other interpersonal elements of the self-as-therapist schema – *therapist attitudes* (e.g. compassion, empathy with distress, tolerance etc.) and *interpersonal relational skills* (e.g. encouragers, openness) – are likely to be substantially derived from overlearned, tacit attitudes and skills that are part of the self-schema. It is therefore not surprising that some authors have reported that interpersonal skills are rather less amenable to the impact of training than technical skills (Dobson and Shaw, 1993; Henry et al., 1993). Indeed, cognitive therapists Dobson and Shaw (1993) have gone so far as to suggest that "the ability to build sound therapeutic relationships, based on our experiences, is an aspect of therapists' functioning that is relatively immutable over the course of training" (p. 575), while Horvath (2001) has hypothesized that while the capacity to *develop* an alliance may be relatively impervious to training, it may be possible to learn alliance-*maintenance* skills (Safran and Muran, 2000).

From this analysis, it seems probable that the person of the therapist does play a significant part in therapist skill development, particularly in the interpersonal skill domain. Thus, schools of psychotherapy in which personal development plays little part may be neglecting an important aspect of training (Mahoney, 2000). Indeed, if therapists are not willing to engage in personal development work, this may restrict the extent to which they are able to "tune in" to the client, and facilitate the client's process of self-exploration.

One of the reasons that Dobson and Shaw (1993) may have concluded that therapist interpersonal skills are immutable over the course of training is because cognitive therapy training has not traditionally included personal experiential work. When this component is included, therapists report enhancement of interpersonal perceptual and relational skills (Bennett-Levy et al., 2001, 2003), which may suggest that there is at least some room for improvement. Data from the impact of personal therapy, though sketchy, leads to much the same conclusion; participants' self-report suggests that interpersonal skills such as empathy may be positively affected (Macran and Shapiro, 1998; Williams, Coyle and Lyons, 1999).

Cognitive therapy trainees also report that personal experiential work may enhance therapy-specific skills (Bennett-Levy et al., 2003). How does this come about? The suggestion here is that the personal nature of SP/SR means that the newly learned skills are represented in two different memory systems: the self-schema, which experiences the impact of the interventions on itself, and the self-as-therapist schema, which notes how the interventions are carried out. Thus, there are two alternative pathways for retrieval, not just the one. Furthermore, memory research indicates that self-referenced information is recalled better than almost any other kind of knowledge (Hartlep and Forsyth, 2000; Symons and Johnson, 1997) – "If I practise cognitive therapy techniques on myself, I tend to recall them better". From an information processing perspective, there are therefore good grounds to suggest that personal experiential work can lead to enhancement in therapist skills, provided that it is competently carried out.

To summarize, personal experiential work may impact on therapist development in at least two ways. First, it may enhance specific skills by facilitating greater depth of processing and access to memory systems. Second, it may impact on the person of the therapist, affecting self-schema and related interpersonal functions.

Section 4: Summary and implications

The aim of this paper has been to construct a cognitive model of therapist skill development to provide a coherent theoretical framework in an area of research and practice that has lacked one. Building on Binder's earlier declarative-procedural model, the present model introduces a third information processing system, the reflective system, which gives dynamism to the process of learning, and in particular explains how therapists gain additional skills and expertise, once they have learned basic concepts and techniques.

The model also identifies key elements of therapist skill, and places these within the context of the DPR systems. In particular, the role of perceptual skills, and when-then rules, plans, procedures and skills is highlighted, and mechanisms for their development specified. The model also clearly indicates a role for the therapist's personal development in the development of their therapeutic skills, and identifies which skills are most likely to be affected.

Judged against the limited empirical literature, and more descriptive writing about training, the DPR model appears to have good explanatory power. Furthermore, it generates some clear predictions, which can be tested in future empirical studies, for instance:

- Experimental manipulations in training programs or supervision, which increase trainee reflection, should produce enhanced learning.
- A naturalistic study comparing therapists who routinely engage in reflective practice with those who do not should demonstrate enhanced skills in the former group.
- Self-referenced learning (e.g. learning through SP/SR) should be better remembered than information learned through lectures or role-plays.
- Therapists engaging in self-development practises should show enhanced perceptual skills.

However, the model also raises as many questions as it answers. For instance, what are the best ways to teach therapy skills? Teaching therapy skills requires a mix of different strategies, addressing different skills and different elements of the DPR system, and we still have little idea which are the best ways and combinations. For instance, should we teach formulation before skills or vice-versa (Stopa and Thorne, 1999)? Should declarative skills be taught before procedural skills, or are they best taught in combination as part of a problem-based learning strategy (Binder, 1999)? Are different training methods (e.g. role-play, didactic learning, SP/SR) differentially suited to the training of different types of skill? What use should we be making of technology in training programs (Binder, 1999)? Might this be a suitable avenue to fast-track skill development by providing a variety of situations and contexts for trainees to reflect on and develop when-then rules, plans, procedures and skills?

Another set of questions concerns the place of personal experiential work and/or personal therapy in training programs. While the value of personal work to therapist development has still to be unequivocally demonstrated, it is already integral to training in many schools of psychotherapy, and self-report studies of practising therapists and trainees indicate that, for the most part, the experience is highly valued (Bennett-Levy et al., 2001; Orlinsky, Botermans, Rønnestad and SPR Network, 2001). The DPR model suggests that personal work is likely to impact particularly on those aspects of self schema that feed most directly into the self-as-therapist system (perceptual skills, relational skills and attitudes), a conclusion that is supported by self-report studies (Laireiter and Willutzki, 2003; Macran and Shapiro, 1998; Norcross, Dryden and DeMichele, 1992; Williams et al., 1999).

What is unclear is precisely how the personal element of training should be incorporated into training programs; to what extent should it be a formal element, or a compulsory one? Should trainees be able to undertake such work at a time of their own choosing, since self-exploration may be contraindicated at times of high stress (Bennett-Levy et al., 2001)? Ethical issues abound (Aponte, 1994). Current therapy training models range from an absence of any formal focus on the personal in some brief therapy training programs through to hundreds of hours of personal therapy over many years in the training of Freudian and Jungian analysts. Until we understand more precisely the impact of personal therapy and other personal experiential work, it is difficult to know where lines should be drawn for training purposes.

The DPR model suggests that one of the primary purposes of psychotherapy training should be to facilitate a reflective stance and continuous self-reflection (Skovholt and Rønnestad, 1992a). There is little research on reflection for psychotherapy trainers to draw on, though a number of instructive texts are available, generally from other disciplines (Bolton, 2001; Clinical Psychology Special Issue, 2003; Palmer, Burns and Bulman, 1994; Schön, 1983, 1987).

In this paper, there has been an implication that reflection is a purely internal event within the information processing system; this is not strictly true. Best reflective practice purposely

draws on external sources such as supervisors and client feedback to provide perspectives that might otherwise be unavailable. Furthermore, open supportive environments can enhance the opportunity for reflection, while dogmatic environments diminish it (Skovholt, 2001). We are still at an early stage in learning how best to facilitate reflective practice, and it remains uncertain how trainable reflective practice is, and what are the best methods.

These kinds of questions are not going to be resolved without a considerably greater focus on empirical research on training than has been the case to date. Experience suggests that there is little funding available for such studies. The need has simply not been recognized by grant giving bodies, even though training is central to the effective dissemination of psychotherapies, and therefore to mental health outcomes on a broad scale. Indeed, at this stage, now that there is clear evidence for the effectiveness of certain therapeutic approaches for particular disorders, it is arguably as important for public health to fund research on training as it is to fund further outcome studies. Without such studies, we may fail to capitalize on the important developments in psychotherapy over the past 50 years.

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References

Alberts, G. and Edelstein, B. (1990). Therapist training: a critical review of skill training studies. *Clinical Psychology Review, 10*, 497–511.

Anderson, J. R. (1993). *Rules of the Mind.* Hillsdale, NJ: Lawrence Erlbaum.

Aponte, H. J. (1994). How personal can training get? *Journal of Marital and Family Therapy, 20*, 3–15.

Baddeley, A. (1997). *Human Memory.* Hove: Psychology Press.

Baker, S. D., Daniels, T. G. and Greeley, A. T. (1990). Systematic training of graduate-level counselors: Narrative and meta-analytic reviews of three major programs. *The Counseling Psychologist, 18*, 355–421.

Beck, A. T., Freeman, A. and Associates (2003). *Cognitive Therapy of Personality Disorders* (2nd ed.). New York: Guilford.

Bennett-Levy, J. (2003a). Mechanisms of change in cognitive therapy: the case of automatic thought records and behavioural experiments. *Behavioural and Cognitive Psychotherapy, 31*, 261–277.

Bennett-Levy, J. (2003b). Navel gazing or valuable training strategy? Self-practice of therapy techniques, self-reflection, and the development of therapist expertise. In J. Henry (Ed.), *European Positive Psychology Proceedings* (pp. 10–14). Leicester: EPS/BPS Books.

Bennett-Levy, J. (2003c). Reflection: a blind spot in psychology? *Clinical Psychology, July*, 16–19.

Bennett-Levy, J., Butler, G., Fennell, M., Hackmann, A., Mueller, M. and Westbrook, D. (2004). *The Oxford Guide to Behavioural Experiments in Cognitive Therapy.* Oxford: Oxford University Press.

Bennett-Levy, J., Lee, N., Travers, K., Pohlman, S. and Hamernik, E. (2003). Cognitive therapy from the inside: enhancing therapist skills through practising what we preach. *Behavioural and Cognitive Psychotherapy, 31*, 145–163.

Bennett-Levy, J., Turner, F., Beaty, T., Smith, M., Paterson, B. and Farmer, S. (2001). The value of self-practice of cognitive therapy techniques and self-reflection in the training of cognitive therapists. *Behavioural and Cognitive Psychotherapy, 29*, 203–220.

Beutler, L. E. (1997). The psychotherapist as a neglected variable in psychotherapy: an illustration by reference to the role of therapist experience and training. *Clinical Psychology: Science and Practice, 4*, 44–52.

Binder, J. L. (1993). Is it time to improve psychotherapy training? *Clinical Psychology Review, 13*, 301–318.

Binder, J. L. (1999). Issues in teaching and learning time-limited psychodynamic psychotherapy. *Clinical Psychology Review, 19*, 705–719.

Bolton, G. (2001). *Reflective Practice*. London: Paul Chapman Publishing.

Bootzin, R. R. and Ruggill, J. S. (1988). Training issues in behavior therapy. *Journal of Consulting and Clinical Psychology, 56*, 703–709.

Boud, D., Keogh, R. and Walker, D. (1985). Promoting reflection in learning: a model. In D. Boud, R. Keogh and D. Walker (Eds.), *Reflection: turning experience into learning* (pp. 18–40). London: Kogan Page.

Boyd, E. M. and Fales, A. W. (1983). Reflective learning: key to learning from experience. *Journal of Humanistic Psychology, 23*, 99–117.

Bransford, J. D., Franks, J. J., Vye, N. J. and Sherwood, R. D. (1989). New approaches to instruction: because wisdom can't be told. In S. Vosniadou and A. Ortony (Eds.), *Similarity and Analogical Reasoning* (pp. 470–497). New York: Cambridge University Press.

Chi, M. T. H., Glaser, R. and Farr, M. J. (Eds.) (1988). *The Nature of Expertise*. Hillsdale, NJ: Erlbaum.

Cleghorn, J. M. and Levin, S. (1973). Training family therapists by setting learning objectives. *American Journal of Orthopsychiatry, 43*, 439–446.

Clinical Psychology (2003, July). *Special Issue on Reflective Practice*.

Crits-Christoph, P., Siqueland, L., Chittams, J., Barber, J. P., Beck, A. T., Liese, B., Luborsky, L., Mark, D., Mercer, D., Onken, L. S., Najavits, L. M., Thase, M. E. and Woody, G. (1998). Training in cognitive, supportive-expressive, and drug counseling therapies for cocaine dependence. *Journal of Consulting and Clinical Psychology, 66*, 484–492.

Dobson, K. S. and Shaw, B. F. (1993). The training of cognitive therapists: what have we learned from treatment manuals? *Psychotherapy, 30*, 573–577.

Dreyfus, H. E. and Dreyfus, S. L. (1986). *Mind over Machine*. New York: Free Press.

Gibson, J. and Gibson, E. (1955). Perceptual learning: differentiation or enrichment. *Psychological Review, 62*, 32–51.

Grater, H. A. (1985). Stages in psychotherapy supervision: from therapy skills to skilled therapist. *Professional Psychology: Research and Practice, 16*, 605–610.

Greenberg, L. S. and Elliott, R. (1997). Varieties of empathic responding. In A. C. Bohart and L. S. Greenberg (Eds.), *Empathy Reconsidered: new directions in psychotherapy* (pp. 167–186). Washington: American Psychological Association.

Greenberg, L. S. and Goldman, R. L. (1988). Training in experiential therapy. *Journal of Consulting and Clinical Psychology, 56*, 696–702.

Hartlep, K. L. and Forsyth, G. A. (2000). The effect of self-reference on learning and retention. *Teaching of Psychology, 27*, 269–271.

Henry, W. P., Schacht, T. E., Strupp, H. H., Butler, S. F. and Binder, J. L. (1993). Effects of training in time-limited dynamic psychotherapy: mediators of therapists' responses to training. *Journal of Consulting and Clinical Psychology, 61*, 441–447.

Hill, C. E., Helms, J. E., Tichenor, V., Spiegel, S. B., O'Grady, K. E. and Perry, E. S. (1988). Effects of therapist response modes in brief psychotherapy. *Journal of Counseling Psychology, 35*, 222–233.

Hollon, S. D. and Beck, A. T. (2003). Cognitive and cognitive-behavioral therapies. In M. J. Lambert (Ed.), *Garfield and Bergin's Handbook of Psychotherapy and Behavior Change: an empirical analysis* (5th ed.) (pp. 447–492). New York: Wiley.

Horvath, A. (2001). The therapeutic alliance: concepts, research and training. *Australian Psychologist, 36*, 170–176.

Ivey, A. E. (1990). Systematic counselor/therapist training: "Training as treatment" and directions for the future. *The Counseling Psychologist, 18*, 428–435.

James, I. A., Blackburn, I-M., Milne, D. L. and Reichfelt, K. (2001). Moderators of trainee therapists' competence in cognitive therapy. *British Journal of Clinical Psychology, 40*, 131–141.

Kemmis, S. and McTaggart, R. (2000). Participatory action research. In N. K. Denzin and Y. S. Lincoln (Eds.), *Handbook of Qualitative Research* (2nd ed.). Thousand Oaks, CA: Sage.

Kingdon, D., Tyrer, P., Seivewright, N., Ferguson, B. and Murphy, S. (1996). The Nottingham study of neurotic disorder: Influence of cognitive therapists on outcome. *British Journal of Psychiatry, 169*, 93–97.

Kolb, D. (1984). *Experiential Learning: experience as the source of learning and development.* Englewood Cliffs, NJ: Prentice Hall.

Kuehlwein, K. T. (2000). Enhancing creativity in cognitive therapy. *Journal of Cognitive Psychotherapy, 14*, 175–187.

Laireiter, A-L. and Willutzki, U. (2003). Self-reflection and self-practice in training of cognitive behaviour therapy: an overview. *Clinical Psychology and Psychotherapy, 10*, 19–30.

Lambert, M. J. (Ed.) (2003). *Garfield and Bergin's Handbook of Psychotherapy and Behavior Change: an empirical analysis* (5th ed.). New York: Wiley.

Liddle, H. A. and Halpin, R. J. (1978). Family therapy training and supervision literature: a comparative review. *Journal of Marriage and Family Counseling, 4*, 77–98.

Linehan, M. M. (1993). *Cognitive-Behavioural Treatment of Borderline Personality Disorder.* New York: Guilford.

Luborsky, L., McLellan, A. T., Digner, L., Woody, G. and Seligman, D. A. (1997). The psychotherapist matters: comparison of outcome across 22 therapists and 7 patient samples. *Clinical Psychology: Science and Practice, 4*, 53–65.

Machado, P. P. P., Beutler, L. E. and Greenberg, L. S. (1999). Emotional recognition in psychotherapy: Impact of therapist level of experience and emotional awareness. *Journal of Clinical Psychology, 55*, 39–57.

Macran, S. and Shapiro, D. (1998). The role of personal therapy for therapists: a review. *British Journal of Medical Psychology, 71*, 13–25.

Mahoney, M. J. (2000). Training future psychotherapists. In C. R. Snyder and R. E. Ingram (Eds.), *Handbook of Psychological Change* (pp. 727–735). New York: Wiley.

Martin, J. R. (1997). Mindfulness: a proposed common factor. *Journal of Psychotherapy Integration, 7*, 291–312.

Milne, D. (1982). A comparison of two methods of teaching behaviour modification to mental handicap nurses. *Behavioural Psychotherapy, 10*, 54–64.

Milne, D. L., Baker, C., Blackburn, I., James, I. and Reichelt, K. (1999). Effectiveness of cognitive therapy training. *Journal of Behavior Therapy and Experimental Psychiatry, 30*, 81–92.

Milne, D., Claydon, T., Blackburn, I. M. and James, I. (2001). Rationale for a new measure of competence in therapy. *Behavioural and Cognitive Psychotherapy, 29*, 21–33.

Milne, D. L. and James, I. A. (2002). The observed impact of training on competence in clinical supervision. *British Journal of Clinical Psychology, 41*, 55–72.

Norcross, J., Dryden, W. and DeMichele, J. T. (1992). British clinical psychologists and personal therapy: III. What's good for the goose? *Clinical Psychology Forum* (June), 29–33.

O'Donovan, A. and Dyck, M. (2001). Effective training in clinical and counselling psychology: not as simple as it sounds. *Australian Psychologist, 36*, 92–98.

Orlinsky, D. E., Botermans, J.-F., Rønnestad, M. H. and SPR Collaborative Network (2001). Towards an empirically grounded model of psychotherapy training: four thousand therapists rate influences on their development. *Australian Psychologist, 36*, 139–148.

Overholser, J. C. (1991). The socratic method as a technique in psychotherapy supervision. *Professional Psychology: Research and Practice, 22*, 68–74.

Padesky, C. A. (1996). Developing cognitive therapist competency: teaching and supervision models. In P. M. Salkovskis (Ed.), *Frontiers of Cognitive Therapy* (pp. 266–292). New York: Guilford.

Palmer, A., Burns, S. and Bulman, C. (Eds.) (1994). *Reflective Practice in Nursing*. Oxford: Blackwell.

Perlesz, A. J., Stolk, Y. and Firestone, A. F. (1990). Patterns of learning in family therapy training. *Family Process, 29*, 29–44.

Rogers, C. R. (1951). *Client-Centred Therapy.* Boston: Houghton Mifflin.

Rønnestad, M. H. and Skovholt, T. M. (1993). Supervision of advanced graduate students of counseling and psychotherapy. *Journal of Counseling and Development, 71*, 396–405.

Safran, J. D. and Muran, J. C. (2000). *Negotiating the Therapeutic Alliance: a relational treatment guide*. New York: Guilford.

Schön, D. A. (1983). *The Reflective Practitioner.* New York: Basic Books.

Schön, D. A. (1987). *Educating the Reflective Practitioner.* San Francisco: Jossey-Bass.

Shaw, B. F. and Dobson, K. S. (1988). Competency judgements in the training and evaluation of psychotherapists. *Journal of Counseling and Clinical Psychology, 56*, 666–672.

Skovholt, T. M. (2001). *The Resilient Practitioner: burnout prevention and self-care strategies for counselors, therapists, teachers, and health professionals.* Boston: Allyn and Bacon.

Skovholt, T. M. and Rønnestad, M. H. (1992a). *The Evolving Professional Self: stages and themes in therapist and counselor development*. Chichester: Wiley.

Skovholt, T. M. and Rønnestad, M. H. (1992b). Themes in therapist and counselor development. *Journal of Counseling and Development, 70*, 505–515.

Skovholt, T. M. and Rønnestad, M. H. (2001). The long, textured path from novice to senior practitioner. In T. M. Skovholt (Ed.), *The Resilient Practitioner: burnout prevention and self-care strategies for counselors, therapists, teachers, and health professionals* (pp. 25–54). Boston: Allyn and Bacon.

Skovholt, T. M., Rønnestad, M. H. and Jennings, L. (1997). The search for expertise in counseling, psychotherapy, and professional psychology. *Educational Psychology Review, 9*, 361–369.

Snyder, C. R. and Ingram, R. E. (2000). Psychotherapy: questions for an evolving field. In C. R. Snyder and R. E. Ingram (Eds.), *Handbook of Psychological Change* (pp. 707–726). New York: Wiley.

Staudinger, U. (1999). Social cognition and a psychological approach to an art of life. In T. M. Hess and F. Blanchard-Fields (Eds.), *Social Cognition and Aging* (pp. 343–375). New York: Academic Press.

Stedmon, J., Mitchell, A., Johnstone, L. and Staite, S. (2003). Making reflective practice real: problems and solutions in the South West. *Clinical Psychology, July*, 30–33.

Stolk, Y. and Perlesz, A. J. (1990). Do better trainees make worse family therapists? A followup study of client families. *Family Process, 29*, 45–58.

Stopa, L. and Thorne, P. (1999). Cognitive behaviour therapy training: teach formulation first. *Clinical Psychology Forum, 123*, 20–23.

Symons, C. and Johnson, B. T. (1997). The self-reference effect in memory: a meta-analysis. *Psychological Bulletin, 121*, 371–394.

Trepka, C., Rees, A., Shapiro, D., Hardy, G. and Barkham, M. (2004). Therapist competence and outcome of cognitive therapy for depression. *Cognitive Therapy and Research, 10*, 19–30.

von Wright, J. (1992). Reflections on reflection. *Learning and Instruction, 2*, 59–68.

Weingardt, K. R. (2004). The role of instructional design and technology in the dissemination of empirically supported, manual-based therapies. *Clinical Psychology: Science and Practice, 11*, 313–331.

Wheeler, M. A., Stuss, D. T. and Tulving, E. (1997). Towards a theory of episodic memory: the frontal lobes and autonoetic consciousness. *Psychological Bulletin, 121*, 331–354.

Williams, F., Coyle, A. and Lyons, E. (1999). How counselling psychologists view their personal therapy. *British Journal of Medical Psychology, 72*, 545–555.

Wilson, G. T. (1998). Manual-based treatment and clinical practice. *Clinical Psychology: Science and Practice, 5*, 363–375.