

Computerization of the Therapeutic Task of Working Through

In 1937, as one of his last psychological writings, Freud wrote “Analysis Terminable and Interminable.” His therapeutic technique had progressed from hypnosis to abreaction to psychoanalysis. Each stage in the development of his technique was marked by his realization that the patient’s first uncovering of unconscious drives or memories might not lead to a longer-term change in behavior. He had earlier described “working through” as the psychoanalyst’s task of using ever deepening interpretations of the patient’s resistance to help the patient gain control over the unconscious emotional basis of the neurotic behavior (1). Based on his experience with patients who had received longer psychoanalyses, he now realized that even this repeated interpretation and apparent resolution of the patient’s neurosis could be overturned if a new emotional situation presented new challenges. Psychoanalysis, he concluded, “is a time-consuming business” (2).

The situation is no different for cognitive-behavioral therapists more than 75 years later. To teach a patient cognitive control over his or her emotional responses—and the skills to apply this control in a variety of challenging situations that elicit these emotions—is not accomplished in one or two instructional sessions. For a substance-dependent patient, whose addictive habit has become deeply ingrained, emotions, both positive and negative, have become strongly connected to alcohol or drugs. Like Freud, Kathleen Carroll, the senior author of an article in this issue (3), realized that for her patients with substance abuse, the emotional and cognitive lessons required to teach the patient alternative approaches must be taught many times. Freud recognized that the psychoanalyst would have personal limitations that might make the therapeutic task difficult. Carroll realized that the repetitive nature of the task itself challenges not only resources but the endurance of most therapists as well. Like many other repetitive tasks, she hypothesized, it might be amenable to computerization. Hence, she developed Computer-Based Training for Cognitive-Behavioral Therapy, or CBT4CBT. She first demonstrated the effectiveness of the therapy in her 2008 study (4), and in this issue she reports the results of her group’s replication of their initial finding.

All of us now routinely receive much of our continuing compliance certification by computer. Having just finished my hospital’s annual required web-based course for Medicare coding, I was not inclined to believe that such encounters could possibly be therapeutic. I called Dr. Carroll to find out what her patients think and experience. “See for yourself,” she responded, and logged me in as a patient. The key feature is not the cognitive instruction, which although well enough done, has little emotional impact. Rather, it is the patients’ ability to identify emotionally with characters in a brief vignette who experience the same challenges the patients face, caught in dysfunctional lives whose only relief seems to be through substance abuse. Dr. Carroll’s actors aim for a level of dramatic reality similar to that seen on television, where situations involving interactions between dysfunctional characters in “The Office” and other comedies and dramas are common. Although all

therapies have in common the element of the patient's identification with the therapist's more controlled and neutralized handling of emotion (5), for these substance-dependent patients the bridge to these video characters may be more facile than it is to doctoral-level mental health professionals. As part of the identification with the characters, the actors evoke emotions that the patient is also likely to be experiencing. Thus, the computerized psychodrama supports not only repetition of problematic situations, but through the psychodrama, continues to involve the patient emotionally in these conflicted situations. The evidence for this emotional identification for Dr. Carroll is that the patients cannot wait for the next session, when they will be able to see their favorite character engage in the next situation. Their anticipation is reminiscent to her of the consuming engagement of daytime soap opera fanatics.

The development of this technique is just beginning. Carroll has written about standards for the validation of computer-based therapies, emphasizing the same rigor that is being applied to other psychotherapeutic techniques (6). I was curious about what other common elements of psychotherapy might be incorporated. She told me that the Spanish version will be filmed as a *telenovela*, the Telemundo version of a soap opera. A central character is an elderly Latina woman who serves as a moral anchor for the dysfunctional younger characters. She often addresses the viewer directly, which is not a feature of the English version. Thus, the character may become a benign introject, a presence in the patient's mind that provides the neutral, controlled guidance that he or she currently lacks.

Many therapeutic tasks cannot be accomplished on this platform, and Dr. Carroll emphasizes that the empathy of the therapist to help patients discover more troubling aspects of their psychology has not been duplicated. Nor does computer-based therapy provide the opportunity for the therapist to see what the patient brings to the situation as transference. Of course, for highly dysfunctional patients, the computer's inability to have countertransference would seem to be a counteradvantage. The current movie *Her* suggests that these more emotion-laden interchanges might someday be possible. In *Her*, the protagonist falls in love with his computer's interactive operating system, portrayed only in voice by Scarlett Johansson. Carroll is beginning to assess patients more formally to see how much relationship is evoked between her characters and her patients. I began to think of a playwright whose characters become her communication with her audience.

We began with Freud, and we are ending with Tennessee Williams. The computer may have been brought in to save money, but it has the possibility to help us invoke personas that reach the patient emotionally in a way that we cannot. Carroll emphasizes that the programs are developed not to replace the therapist-clinicians but rather in service as machines that can be invoked at the clinician's discretion to handle particular parts of the therapeutic task as the clinician directs. Standards for their use, replications of their effectiveness outside research settings, and distinguishing the art from the science—the bugaboo of all psychotherapy research—are hurdles not yet crossed. It is encouraging that a multisite trial sponsored by the National Institute on Drug Abuse now reports similar results (7).

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A financial model beyond research grants to support the development and marketing of these tools does not yet exist. Recommending and monitoring the results of a computer program for an individual patient is not a reimbursable expense. That restriction may be an issue for solo practitioners and their patients, but larger groups like Kaiser and Veterans Affairs that already have financial responsibility for their patients may well be early adopters. If you want to take a look yourself, visit the Journal online (ajp.psychiatryonline.org) to view a short video demonstration.

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