Observations, Speculations and an Experimentally Testable Hypothesis
ON THE MECHANISM OF THE PRESUMED EFFICACY OF THE PENISTON AND KULKOSKY PROCEDURE

Ian Wickramasekera, Ph.D.

Peter Rosenfeld and Len Ochs raise several important questions in the News magazine regarding the alpha-theta procedure for addictions. The alpha-theta procedure was originally showcased by AAPB at the Dallas meeting on the "Unconscious Mind" in 1991. Barry Sterman's reaction to the Peniston and Kulkosky procedure at the Dallas meeting was a mild precursor to the gathering storm of heat and light that exploded at Colorado Springs in 1992. Len told me that the explosion produced PTSD in some people.

The Issue of Clinical Efficacy
The issue of clinical efficacy can be addressed by independent clinical trials with all appropriate methodological controls and above all else long term objectively and independently verified follow-ups for relapse. But there is another question about that procedure, and Peter Rosenfeld also raises this question in his article. What, if any, are the active ingredients in this clinical procedure? This question stimulated my curiosity to the point that I decided to risk $395 of my own, and take the Menninger workshop on the Peniston and Kulkosky procedure in March 1992. Without answers to this question we could repeat as we are doing today the large scale mindless groping empirical studies that continue in the headache field. These studies add only a decimal point to science. What are the mechanisms through which the supposed efficacy is driven? Today there is empirical evidence that mean hypnotic ability is elevated in substance abuse, obesity and eating disorders (Andersen, 1985; Pettinati et al., 1985; Pettinati et al., 1991; Wickramasekera, 1992 in press). Isolating the active ingredients in a clinical procedure enables us to design intelligent tests of the empirical efficacy of a procedure and to refine and abbreviate the procedure. It is not too early to be thinking about mechanism. The clinical ability to intervene specifically, rapidly and effectively can also potentiate placebo effects (Wickramasekera, 1980, 1985). To paraphrase Kurt Lewin, "there is nothing so practical as a good theory."

Because I believe that live observation is the best way to learn about a complex procedure, I decided to take the workshop at a "mission" in Denver from people who were already "disciples" and had found the procedure efficacious in their own anointed hands (e.g. the Menninger Team). Faith in the therapist and the treatment can amplify any active ingredients in a clinical procedure. Skepticism on the other hand can attenuate any active ingredients in a clinical procedure (Wickramasekera, 1980, 1985). We are all familiar with Sunil's problems in replicating the early promising temperature training work that appears to have extinguished his biofeedback research. There are others whose skepticism disrupted their ability to replicate the hypertension work, but who eventually "saw the light." The Menninger team has a track record of brilliant clinical creativity and integrity. After 2 1/2 days of participant observation at the workshop and careful
questioning of the "disciples," I reached the following conclusions.

**Training Procedures**

First, the temperature/alpha/theta training procedure, with its emphasis on spontaneous and constructed visualization are techniques of modesty potentiating if only temporarily the baseline hypnotic ability of the workshop participants. (This is empirically testable but I think it is unlikely this study will ever be done for obvious reasons.) Second, the Peniston and Kulakosky procedure probably amplifies the baseline hypnotic ability of alcoholic patients even more because of the established potency a therapeutic alliance (Strupp, 1989) with a patient and the intensive (60 minutes twice per day) and extended (40 - 66 sessions) EEG training protocol. The workshop teachers were clearly committed, "converted," compassionate, empathic and very creative clinicians. It is, of course, an empirical issue as to whether a

1. hypnotically potentiated therapeutic alliance, plus
2. spontaneous images from unconscious long term memory,
3. intrusive abreactive memories, and
4. structured conscious visualizations can alter the complex and chronic psychophysiological and behavioral mechanisms that drive addictions. Those who marshal armies of doctoral students can converge on this opportunity. But the clinical components of this procedure may be too complex for pre-doctoral students and even their mentors.

In two early controlled case studies (Wickramasekera, 1972, 1973A) replicating Budzynski et al. and the Greens, I was able to show that EMG and temperature feedback reduced the intensity and frequency of chronic muscular and vascular headache pain. But I was not convinced 20 years ago nor am I today that reducing EMG levels and altering vascular reactivity were the primary or the only active ingredients in these clinically efficacious procedures for headache pain. Subsequent controlled research (Hatch et al., 1987) has supported my suspicions (Wickramasekera, 1976) that altering physiology is neither an essential nor a sufficient condition for the sustained remission of chronic functional headache pain. But before I did the above controlled case studies on headache I was able to show that EMG feedback training at least temporarily appeared to amplify hypnotic ability above baseline levels (Wickramasekera, 1971, 1973B, 1977). I suspected then that the alteration of hypnotic ability was a mechanism that facilitated the alteration of the perception of threat. The perception of threat to well-being becomes transduced in somatizers into headache pain (Wickramasekera, 1988, 1992 in press). In fact, my original curiosity about biofeedback was driven by the need to find reliable methods of increasing the percentage of patients responsive to hypnotherapy. Baseline hypnotic ability measured under controlled laboratory conditions is notoriously stable across (e.g. 25 years) the life span (Piccione et al., 1989), has been found to be partly genetically based (Morgan et al., 1970; Morgan, 1973) and is regarded as resistant to long term enhancement by any methods (Perry, 1977).

**EEG Procedure for Addictions**

To return now to the EEG procedure for addictions. There is already considerable promising (Crawford & Gruzeier, 1992) but controversial (Perlini & Spanos, 1991) empirical evidence that some EEG parameters may be related to hypnotic ability. There is some promising but also controversial evidence to support the notion that 1) biofeedback training (Engstrom, 1976; London et al., 1974; Wickramasekera, 1971, 1973, 1977) with EMG, alpha/theta and 2) sensory restriction (Wickramasekera, 1977) procedures can temporarily potentiate baseline hypnotic ability. There is only one failure to replicate (Radtke et al., 1983) the EMG biofeedback work.

It is important to note that all low arousal biofeedback training procedures (including alpha/theta) are confined with sensory restriction (Wickramasekera, 1976, 1988). It has been shown that sensory restriction alone, at least temporarily, amplifies baseline hypnotic ability (Barabasz & Barabasz, 1989; Wickramasekera, 1969, 1970B, 1977). Hence, I think it is very unlikely that the remission of alcoholism is a direct result alone of altering EEG parameters.

It appears more likely that EEG feedback training during therapy even temporarily amplifies the baseline hypnotic ability of the individual alcoholic, permitting "regression in the service of the ego." This temporary boost in hypnotic ability increases the probability of several "healing" events. 1) The patient and therapist can more efficiently and reliably access and verbalize the conscious and unconscious perceptions of threat to the alcoholic's well-being that at least in part drive alcoholic behaviors. For example, during the workshop I observed approximately 12% of 50 year old Ph.D. research and other types spontaneously burst into abreactive tears and report intrusions of childhood memories of injury, etc. and even anomalous experiences occurring during the "alpha/theta" training. The hypnosis literature suggests that this is approximately the percentage of people whom you would expect these operant and respondent behaviors with two days of alpha/theta training on a variable interval schedule.

It is unlikely that Oral Roberts or A.A. can generate these behaviors more efficiently and reliably using religious (e.g. music, testimonials) and group protocols that also inhibit critical-analytic-linear information processing. 2) Having accessed these highly idiosyncratic templates that drive the perception of threat to the alcoholic's well-being, the therapist and alcoholic can work within a therapeutic alliance to alter the alcoholic's psychophysiological response to these threatening perceptions and memories with psychotherapeutic techniques like reframing, shaping and

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desensitization, etc. The empirical evidence is growing that these top-down psychodynamic (e.g., repression) and behavioral procedures (e.g., desensitization, shaping) may have biochemical and immune system correlates (Jamner et al., 1988; Jensen, 1987; Meru et al., 1991).

The above are, of course, promising theoretical speculations suggested at this time by limited but uncontested empirical evidence. Therefore, I hypothesize that the temporary potentional of hypnotic ability may be one of the active ingredients in the Peniston and Kulkosky procedure. This hypothesis would be fairly easy to test empirically by determining the baseline hypnotic ability of the patients prior to the Peniston and Kulkosky therapy and immediately after the therapy. I predict that poor clinical response and relapse would be more likely in those patients who do not show an enhanced hypnotic baseline in response to EEG biofeedback training and who are low on hypnotic ability. The first step in testing this hypothesis is to get a stable baseline, behavioral and subjective measure of the individual alcoholics hypnotic ability. The behavioral measures of hypnotic ability can be secured with group testing with the "silver standard," the Harvard Hypnotic Susceptibility Scale Form C (Shor & Orne, 1962). This behavioral baseline must next be verified with individual testing of hypnotic ability with the "gold standard," the Stanford Hypnotic ability scale Form C (Weizenhoffer & Hilgard, 1962).

Classic Suggestion Effect

Ideally, during hypnotic testing and the collection of behavioral baseline data there should be concurrent subjective-verbal report measures of the "classic suggestion effect" (Kirsch et al., 1990; Bates et al., 1991) and/or electrophysiological measures (DePasquale & Penna, 1980; Spiegel et al., 1985; Spiegel et al., 1988) of hypnotic ability. The "classic suggestion effect" is the hypnotized person's subjective perception that during hypnosis things "happen by themselves" or occur "involuntarily." It is a unique perception that motor behaviors, sensations, memories and moods change without the hypnotized person's "voluntary" control. In the research literature of hypnosis this is called the perception of "involuntariness" or "effortlessness" and is universally regarded as the litmus test of a genuine hypnotic experience. The downside of this perception of "loss of control" over one's thoughts, memories and sensory perceptions (e.g., hypnotic analgesia) during hypnosis can be anxiety about this feeling of loss of self-control. The up side of this perception of "involuntariness" is that creative ideas, memories and fresh intrusive perceptions are occurring "effortlessly" and flowing "involuntarily" into consciousness and can be transduced into laboratory experiments or artistic productions. Recently in the literature of experimental cognitive science it has been proposed that the best single measure of unconscious influence is also the lack of "conscious control" of cognitive events (Jacoby et al., 1992).

Clearly implicit or unconscious (Kihlstrom, 1987, 1991) perceptions, memories, and moods that are perceived by the patient as "involuntary" or outside of "self-control" drive the self-destructive behaviors seen in substance abuse. High hypnotic ability is known to be related to the major changes in perception, memory and mood that appear "involuntary" to the patient and can drive psychopathology and pathophysiology (Wickramasekera 1979, 1986, 1988). I have suggested that psychophysiological disorders may be treated with psychophysiological psychotherapy (Wickramasekara 1988, 1992), which reverses the direction of activity of one of the very mechanisms generating psychophysiological disorders (Wickramasekara, 1979, 1986, 1988). In other words, taking what contributes to the patient's sickness (high or low hypnotic ability), turning it around and using specifically that ability to make them well. Theoretically, at least this modest proposal has slender elegance. I hope that the numerous and skilled methodologists or hypothesis testers in AAPB will consider this proposal. This proposal applies to both headache and addictions.

References


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