Operationalizing “Trance” I: Rationale and Research Using a Psychophenomenological Approach

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Despite the popularity of the term “trance” among clinicians to describe the subjective effects associated with being hypnotized, heretofore there has been no means to operationalize that definition. The authors present a rationale and psychophenomenological method to operationalize the term “trance” in terms of (a) hypnotic depth, a quantitative measure of subjective trance assessed via a pHGS (predicted Harvard Group Scale) score, derived from regression analysis, and (b) “trance typology profiles,” a qualitative differentiation of empirically derived (via cluster and discriminant analyses) categories of subjective trance experiences. The authors then discuss theoretical and clinical implications of this psychophenomenological approach for developing an operational definition of the concept of trance.

The Notion of Trance

A core mystery of hypnosis is the notion of “trance.” Time and again clinicians and experimenters alike have raised questions concerning the nature of trance, criteria for determining whether a person is or is not in trance, and the various behavioral or physiological sequelae associated with trance. Some experts completely deny the utility of the concept (e.g., Sarbin, 1950), whereas others see trance as a secondary, but not a causative, factor (Kirsch & Lynn, 1995). Others acknowledge the concept of trance, but differ in regards to the criterion of assessment of trance. To some, it is the way the client’s eyes fluttered. To others, it might be the nature of the finger movement during ideomotor signalling; observation of an increased lacrimation as the client opened her eyes after an induction; the amount of sclera visible after the client rolls her eyes upward and inward (Spiegel & Spiegel, 1978); or an indication by the client of his subjective hypnotic depth (such as on a 1 to 10 rating scale) (see Brown & Fromm, 1986).

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Is each expert the proverbial blind man grabbing a different part of the elephant, all partly right, but also partly wrong? Although the experts may all be partially correct, this scenario creates a rather disturbing and confusing situation. T. X. Barber (1999) articulates this concern well when he quotes Andre Weitzenhoffer’s conclusion of over 40 years of intensive search for the fundamental principles of hypnosis: “more than 200 years after its start we are faced with the rather remarkable and depressing fact that hypnosis, its most central concept [that of trance], remains much of a mystery” (p. 21). (See also Barber, 2000, for his “solution” to this dilemma).

Weitzenhoffer, in his seminal volume The Practice of Hypnotism, (1989), pointed out that “there has been a tendency since Braid, but particularly in modern times, to use the term, trance, as synonymous with hypnosis” (p. 298). Yet the term trance “appears to be a much broader concept than hypnosis; its usage is very old and antedates the latter. One of the earliest uses of the word trance in English language can be found in a 1386 work of Chaucer.” (p. 298). Weitzenhoffer suggested

that many definitions of the word trance denote states of being that have the appearance of consciousness but seem to differ from normal consciousness in a number of ways. Many definitions view trance states as being a sleeplike, or a half awake, half asleep state. Decreased sensitivity or responsiveness to external stimuli, including a total lack of it, is usually considered a characteristic feature, as is a shift from voluntary to automatic activity (p. 298).

In essence, the terms hypnosis and trance, tend to be used interchangeably because both are frequently defined as altered states of consciousness (Ludwig, 1972). This can also be seen in Hilgard’s (1965) classic text, The Experience of Hypnosis, where he delineated seven characteristics of the “hypnotic or trance state” in terms of

subsidence of planning function, redistribution of attention, availability of memories and heightened ability for fantasy production, reduction of reality testing and tolerance from reality distortion, increased suggestibility, role behavior, and posthypnotic amnesia (p. 21).

Hilgard’s (1965) conclusion to his book chapter on “What is hypnosis?” was: “the testimony of investigators and subjects over 150 years leaves little doubt about the distinctiveness of the phenomena associated with the hypnotic state, despite the difficulty of defining hypnosis and of specifying exactly how it is different from other states” (p. 21).

An obvious question to ask is, Why have researchers and clinicians failed to adequately operationalize the concept of trance? Possible reasons for this failure may be linked to: (a) skepticism with regard to introspection and (b) the “state controversy” in hypnosis.

Skepticism Concerning Introspection or Phenomenological Assessment

Many hypnosis researchers continue to be skeptical about the validity of introspection, or phenomenological assessment, as it was renamed in the 1980s (Hilgard, 1980). This skepticism is partly unfounded. Nisbett and Wilson (1977) argued persuasively that introspection into the reasons, or attributions, as to why someone does what they do, is not reliable. If however, one asks not the why, but the what, then introspective reports can be reliable, as demonstrated by Ericsson and Simon (1980), Farthing (1992), Klinger (1978), Lieberman (1979), Singer and Kolligian (1987), and Smith and Miller (1978).
Thus, people may not be able to enumerate the “real” or “true” reasons why they do what they do (the “why”), but they are able to report on what they are experiencing at a particular moment in time (the “what”) in a reliable and valid manner. No doubt there are problems with self-report data, as detailed by Schwarz (1999), but there are problems with all types of assessment tools. Pekala (1991b) observed:

(A)lthough phenomenological observations may be more difficult to verify than most behavioral observations, they are not unverifiable. Repeated observations by the same subject, observations of many subjects in reference to the phenomena of interest, observations tied to verifiable and repeatable stimulus conditions, and correlation of introspective observations with behavioral, physiological, and/or neurochemical data can all lead to increased verification, as can experimental and statistical control of subject characteristics and training (p. 29).

It is interesting that despite the increased cognitive focus of psychology within the last two decades (Baars, 1988, 1997; Gardner, 1985), hypnosis research remains strongly behavioral and maybe even somewhat antiphenomenological. Such reluctance may not be conducive to generating phenomenological paradigms for understanding the nature of hypnotic trance.

The “State Controversy” in Hypnosis

Skepticism regarding the hypnotic state arose following Sarbin’s (1950) attack on hypnosis as a special state and T.X. Barber’s (1960; 1969) criticism of the state concept on the basis of logical circularity and his argument against the necessity of a hypnotic induction for the production of subjective experiences traditionally associated with hypnosis (see, Hilgard, 1965, pp. 14-20). Fellows (1990) has dubbed this 50-year controversy as the “state-nonstate” issue, that is, to what extent is hypnosis associated with a special state of consciousness?

More recently, Kirsch and Lynn (1995) argued for the demise of the state-nonstate camps in hypnosis theory and research:

Instead of two opposing camps, there is now a continuum of positions on this issue. At one end of this continuum are scholars who espouse the concept of hypnotic state in its strongest possible form, as a condition that is fundamentally different from normal waking consciousness and from other altered states, such as daydreaming and relaxation (p. 848).

At the other end are those theorists who use the term

state to describe hypnotic phenomena but deny that it explains or causes those phenomena in any way; those who acknowledge allegiance to the state construct but then ignore it entirely in their theories of hypnotic responding; and those who explicitly reject the hypnotic state construct as inaccurate and misleading (p. 848).

The state-nonstate controversy has since been superseded by the special process versus social psychological approaches to hypnosis:

Shortly after rejecting trance as an explanatory construct, E. R. Hilgard (1977) proposed his influential neodissociation theory. It was then that state and nonstate were abandoned as labels for the opposing camps and
were replaced by the labels *special process* and *social psychological*.  
(Kirsch & Lynn, 1995; p. 850)

Whereas social psychological theorists (Coe & Sarbin, 1991; Sarbin, 1989; Spanos, 1986, 1991) downplay or deny that there are any special processes associated with the hypnotic experience of highly hypnotizable individuals, special process theorists suggest that there are special processes associated with high hypnotizability (Bowers, 1992b; Hilgard, 1991, 1994; Woody & Bowers, 1994). (For a recent review of sociocognitive models of hypnosis see Lynn and Sherman, 2000, and Kirsch, 2000.)

Kirsch and Lynn acknowledge that a major difficulty in understanding the hypnotic process concerns that of defining and operationalizing trance when they state: “[w]ithout some means of determining whether a person is in trance, it is impossible to test any hypotheses about the effects of trance” (p. 489).

Kirsch (1998) pointed out that social psychological theorists have “consistently denied that these changes in experience [and physiology] are produced by the more general altered state of consciousness referred to as trance” (p. 155). However, Spiegel (1998) replied that there are “hypnotic states, and there is something different about those states from ordinary awareness” (p. 160). In a similar vein, Kihlstrom (1997) has argued “there is a state of altered consciousness in hypnosis: Amnesic subjects cannot remember things they should be able to remember; analgesic subjects do not feel pain that they should feel; subjects asked to be blind and deaf do not see and hear things that they should be able to see and hear” (p. 326). Is this, then, a resurrection of the demised state-nonstate demon?

State effects associated with hypnosis are obviously implied whether one talks about the special process or the more traditional altered state approach to hypnosis. Trying to understand such state effects, however, is fraught with difficulty, especially with the charge of circularity (Barber, 1969; Coe, 1993) that is often leveled against attempts at mapping state effects associated with hypnosis, and how they interact or relate to the more traditional notion of trait (Hilgard, 1965, 1977) effects.

Such circularity cannot be completely avoided, however, because by definition, traits imply particular states in given situations rather than being situation free. Given Bandura’s (1995) notion of reciprocal determinism, the reverse would also be true; that is, particular states imply particular traits (Kumar, Pekala, & Cummings, 1996, p. 233).

Kumar, Pekala, and Cummings (1996) examined the relationships been trait and state variables with the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A; Shor & Orne, 1962). Whereas trait factors accounted for 9% of the variance in hypnotizability, “an additional 22% was accounted for by state factors” (p. 232). Their research suggests that state effects associated with hypnosis are important and account for two-thirds more of the variance than purely trait effects. Specifically, they found that the state effects (assessed phenomenologically) factors of dissociative control (changes in trance and reality orientation), positive affect, and attention to internal processes were significantly correlated with hypnotizability. Similar results were obtained in other studies (Angelini, Kumar, & Chandler, 1999; Kumar, Pekala, & McLoskey, 1999) whether one assesses hypnotizability using the HGSHS:A or the Stanford Scale of Hypnotic Susceptibility (SHSS:C; Weitzenhoffer & Hilgard, 1962). These results point strongly to the utility of phenomenological assessment of state aspects in understanding hypnotic processes.
The validity of the state-nonstate controversy is perhaps best resolved empirically and should depend on how useful the “state” concept proves to be. In other words, empirical solutions must be sought to questions of whether or not phenomenological data is helpful in both understanding the nature of hypnosis and tailoring appropriate hypnotic interventions for clients.

Cognitive-behavioral psychotherapists, a la Beck (1979), Ellis (1973), and others (McDermott & Wright, 1992) have found it useful to talk about cognitions and emotions, that is, phenomenological data, as if they have etiological significance in understanding human behavior and experience. Likewise, the notions of trance and states of awareness can be useful in helping us understand a client’s phenomenological experiences during hypnosis, provided that they are assessed with reliable and valid tools based on adequate operational definitions. Ultimately, in the pragmatic tradition of one of the founders of American psychology, William James, truth is what works (Copleston, 1966). If phenomenological data can be found useful in clinical work, clinicians will use such data. Hence, a purpose of this paper, and a subsequent one (Pekala, in press), is to show that phenomenological data can be useful to not only help in understanding the nature of hypnosis, but to help conceptualize treatment plans in clinical work when using hypnotic interventions.

**Operationalizing Trance**

Knowledge usually proceeds from the general to the specific (Heidegger, 1927/62). Applying this to an understanding of the nature of trance, we must first come up with a general, but operational, measure of trance. Once that has been established, then this notion can be more carefully scrutinized to determine if there might be different types of trance. Historically, trance has been implied when an individual indicates experiencing certain subjective states (such as feelings of loss in volitional control, decreased rationality, or an alteration in state of awareness) and perhaps evinces evidence of unconscious dissociative processes in their observed behavior, e.g., Orne’s (1977) trance logic and Hilgard’s (1977) hidden observer.

Operationally, if we can define trance as the subjective state the highly hypnotizable person achieves in response to a hypnotic induction, then this subjective state can be assessed and described in quantitative terms. Although there may be different types of trance (possibly based on individual differences factors and dependent on the qualitative nature of that trance), there may at the same time be some commonality across these different types of trance, analogous to Spearman’s (1904, 1923) “g” factor for general mental ability vis-a-vis different types of intelligence, a la Gardner (1983).

Thus, although we may be able to quantify a general measure of trance, there may nevertheless be different types of trance, generated by different types of subjective experiences that individuals have in response to a hypnotic induction; that is, hypnotic experience may be multidimensional (Frankel, 1989). Furthermore, it may be the case, that although some highly hypnotizable people, when hypnotized, are in some type of altered state of consciousness (from normal, everyday awareness); other highly hypnotizables may not experience their state of consciousness as much different from what it normally is when hypnotized.

The methodology and the instrument. It is possible to operationally define and assess states and altered states of consciousness as they are subjectively experienced in reference to various stimulus conditions. Pekala (1991b) has dubbed this approach to assessing consciousness and (altered) states of consciousness as a psychophenomenological approach.
in the sense that it seeks to describe the phenomenological contents of consciousness as do the phenomenologists, a la Husserl (1913/72), and \textit{psychological} in the sense of using traditional psychological and statistical approaches to do this . . . (p. 5).

Additionally, we believe it is possible to use this approach to define and quantify subjective experiences associated with subjects of differing hypnotic susceptibility during hypnosis to obtain a quantitative measure of “trance.”

The approach requires subjects to retrospectively complete a self-report questionnaire, the \textit{Phenomenology of Consciousness Inventory}, or the PCI (Pekala, 1982, 1991c), in reference to a short sitting quietly interval (2-4 min) embedded in the altered state of interest (e.g., a hypnotic induction). Using the dimensions and subdimensions of the PCI, stimulus conditions associated with altered state induction procedures can be quantified as to PCI intensity and pattern parameters, and hence used to generate operational definitions of states of consciousness associated with altered state induction procedures such as firewalking (Pekala & Ersek, 1992/93) or hypnosis (Pekala & Kumar, 1986; Pekala & Bieber, 1989/90).

The PCI consists of 53 items that assess 12 major and 14 minor dimensions of subjective experience. Each item consists of two dipole items separated by a 7-point Likert scale. An example of a PCI altered state of awareness item is: “My state of awareness was not unusual or different from what it ordinarily is” versus “I felt in an extraordinarily unusual and nonordinary state of awareness.”

The PCI has been found to be reliable and valid for mapping phenomenological experiences in response to such stimulus conditions as eyes open and closed sitting quietly, hypnosis, reading erotica, progressive relaxation, breathing techniques, drumming and trance postures, and even firewalking (Forbes & Pekala, 1993, 1996; Maurer, Kumar, Woodside, & Pekala, 1997; Pekala & Levine, 1981, 1982; Pekala & Wenger, 1983; Pekala, Steinberg, & Kumar, 1985; Pekala & Ersek, 1992/93; Woodside, Kumar, & Pekala, 1997). Over the last 20 years Pekala and colleagues (Kumar & Pekala, 1988, 1989; Kumar, Pekala, & Cummings, 1996; Kumar, Pekala, & Marciano, 1996; Kumar, Pekala, & McCloskey, 1999; Pekala & Kumar, 1984, 1986, 1987, 1988, 1989, 2000; Pekala, Kumar, & Marciano, 1995; Pekala & Levine, 1981, 1982; Pekala & Wenger, 1983), have used this approach to assess and quantify states and altered states of consciousness.

The PCI has been especially useful in mapping the subjective states associated with hypnosis and has been shown to have adequate construct, discriminant (Kumar & Pekala, 1988, 1989; Kumar, Pekala, & Marciano, 1996; Kumar, Pekala, & McCloskey, 1999; Pekala, 1991b; Pekala & Forbes, 1988; Pekala & Kumar, 1986, 1989; Pekala, Steinberg, & Kumar, 1986), and predictive validity (Forbes & Pekala, 1993; Hand, Pekala, & Kumar, 1995; Pekala, 1991b; Pekala & Kumar, 1984, 1987) for measuring subjective experiences associated with hypnosis. With the PCI we have been able to operationalize a measure of trance (a subjective indicator) that correlates with the “gold standards,” the Harvard Group Scale, Form A (Pekala & Kumar, 1984, 1987), and the Stanford Scale of Hypnotic Susceptibility, Form C (Hand, Pekala, & Kumar, 1995) of hypnotizability (see below).

\textit{Operationalizing a general measure of trance.} An initial study (Pekala & Kumar, 1984) generated a validity coefficient of .62 using the PCI (sub)dimensions “by correlating the Harvard Group Scale scores obtained during hypnosis with predicted Harvard Group Scale (pHGS) scores, based on a regression equation using the [PCI’s] inventory’s (sub)dimensions” (p. 57). The PCI was completed retrospectively in reference to a sitting
quietly period embedded with the Harvard. The PCI subdimensions allowed participants to rate the intensity of various subjective effects, that is, volitional control, visual imagery, etc. during this sitting quietly period. These PCI (sub)dimensions were then entered into a regression equation to determine which PCI (sub)dimensions significantly predicted hypnotizability as measured by the Harvard Scale.

A follow-up study (Pekala & Kumar, 1987) attempted to replicate these results. The Harvard Scale was given to 434 subjects and they completed the PCI afterwards in reference to a 3-minutes sitting quietly period embedded in the Harvard. “A validity coefficient of .65 was obtained between the actual Harvard scores of the earlier study and the predicted Harvard scores (using the regression coefficients of the present study)” (Pekala & Kumar, 1987, p. 57).

A further replication study (Forbes & Pekala, 1993) generated a multiple R of .67 between subjects’ susceptibility, as measured by the Harvard Scale, and their predicted susceptibility, as determined by the (sub)dimensions of the PCI. Additionally, a validity coefficient of .86 (Hand, Pekala, & Kumar, 1995) was found when correlating the actual Stanford Scale, Form C scores obtained by subjects with their predicted Harvard Group Scale (pHGS) scores using the PCI (sub)dimensions (completed retrospectively in reference to a sitting quietly period embedded in the hypnosis). Thus, the predicted Harvard Group Scale score was found to predict hypnotic susceptibility as measured by both the Harvard (Form A) and Stanford Scale’s (Form C) actual scores. The pHGS score permits an estimate of a person’s hypnoidal state (Pekala & Forbes, 1988; Pekala & Nagler, 1989). A person is in a high hypnoidal state to the extent that the person endorses phenomenological experiences congruent with what high susceptibles, on the average, would endorse during a hypnotic induction (as measured by the Harvard Scale). It is “a state, quantified by a regression equation using the PCI (Pekala & Kumar, 1987), that is associated with the endorsement of PCI (sub)dimension intensity effects by high susceptibles during the short sitting quietly interval during the induction procedure of the Harvard Group Scale” (Pekala & Forbes, 1988, p. 123).

In a study comparing averaged pHGS scores during hypnosis and a baseline, eyes closed sitting quietly condition (Pekala & Nagler, 1989), subjects who scored 9 or above on the Harvard had an average pHGS score of 7, and their score was significantly higher than that obtained during the eyes closed sitting quietly condition. This suggested that such a hypnoidal state could be defined as a score of above 7 using the PCI regression equation mentioned earlier. Hypnoidal effects have been assessed across several stress management conditions, including progressive relaxation, hypnosis, and deep abdominal breathing (Pekala & Forbes, 1988) using the PCI based pHGS scores mentioned above. The results suggested that hypnoidal effects, as assessed by the pHGS score obtained from the use of the PCI, may provide a general measure of trance.

The case studies reported by Pekala and Nagler (1989) suggested that the PCI (sub)dimensions “may present a useful means to assess the hypnoidal state (associated with a given stimulus condition) that a person experiences” (p. 231). Consistent with the above are Orne’s (1977) remarks that the standard behavioral hypnotic instruments assess the hypnotic process only to the extent that they validly reflect alterations in an individual’s subjective experience. R. E. Shor (1979) has similarly advocated the use of phenomenological variables for understanding hypnosis.
Getting a measure of subjective hypnotizability via the pHGS score, in addition to a behavioral measure such as the Harvard, may facilitate understanding the nature of hypnosis and its relationship to associated processes such as dissociation. Figure 1 illustrates this. The z-axis represents subjects’ scores on the Dissociative Experiences Scale (DES) (Carlson & Putnam, 1993), while the y- and x-axes, respectively, delineate subjects’ scores on the Harvard, and their PCI based pHGS score. As one can see, increases in Harvard Scale scores are associated with increases in dissociation. There is also an increase in dissociation as a function of the pHGS score. What is important however, are the two “tails” of the graph. High scores on the Harvard are only associated with high dissociation scores if the pHGS score is also high. More so, a high pHGS score, without a high score on the Harvard, is also associated with a high dissociation score. If only the Harvard were used, the analyses would “miss” subjects who were found to score low on the behavioral Harvard Scale score, but high on the phenomenological scale.

**Figure 1:** Dissociation, Subjective, and Objective Hypnotizability

The PCI-HAP. Several years ago the PCI was incorporated into a hypnotic assessment procedure called the PCI-HAP (Pekala, 1995a, 1995b). The PCI-HAP consists of relaxation instructions called a body scan (progressive relaxation instructions but without the tensing), a hypnotic induction procedure called a mind calm (counting from 10 to 1 while suggesting that the mind become calm and empty), a suggestion to have a vivid hypnotic dream, an eye catalepsy item, and a 2-minute sitting quietly period embedded near the end of the induction procedure. The clinician completes a short debriefing form immediately after the hypnosis. For this the client rates the vividness of their imagery during the hypnotic dream, whether they opened their eyes during the eye catalepsy item, and a few other questions. The client then completes the PCI retrospectively in reference to the sitting quietly period.

The PCI provides three types of valuable data on the client’s phenomenological experiences during hypnosis:

1. The regression equation mentioned previously allows for the computation of a pHGS score, a general measure of hypnotic depth that is approximately normally distributed and usually runs between 1 and 9.

2. Information from discriminant and cluster analyses, that will be described shortly (Forbes & Pekala, 1996; Pekala, 1991a; Pekala & Forbes, 1997; Pekala, Kumar, & Marcano, 1995), allows for the computation of a trance typology profile, which allows the clinician to subtype clients into one of 9 different types of hypnotizable individuals, ranging from the classic low, who actually gets more distracted and muscularly tense from the hypnotic induction, to the classic high, whose mind empties out under hypnosis.

3. Finally, a graph of the client’s scores on the various PCI dimensions and subdimensions allows the clinician to get a “snapshot” of the phenomenological experiences reported by the client during hypnosis. This information is useful in “tailoring” any subsequent hypnotic interventions to the phenomenological experiences initially experienced by the client, as suggested by Valle and King (1978).

The PCI also provides a measure of how reliably a participant completes the inventory. By means of 5 pairs of reliability items embedded in the PCI, the researcher obtains a score (Reliability Index, RI, score) that indicates if the participant completed the PCI in an inaccurate or unreliable manner (scores above 2.0 on this index are considered unreliable, Pekala, 1991b).

Although the pHGS score gives a general measure of subjective hypnotic depth, or trance depth, this does not imply that hypnotic trance is experienced the same way by all people. That is, different people may have different types of “trance” experiences under hypnosis (Frankel, 1989). This is where the research on phenomenological typology may be important.

A Phenomenological Typology of Trance Types

Prior research. Pekala (1991a) examined phenomenological experience associated with being hypnotized across individuals of differing hypnotic susceptibility level. Subjects’ phenomenological experience during a short sitting quietly period during the Harvard Scale was retrospectively assessed by the PCI. Subjects were then divided into those who scored low, medium, or high on the Harvard. This was followed by a K-means cluster analysis (Hartigan, 1975) using SYSTAT (Wilkinson & Hill, 1994) to determine if the phenomenological experience of hypnosis was characterized by differences in that experience across the three groups. In other words, the study sought to determine through a cluster
analysis if there might be several different types or subclusters of highly hypnotizable, moderately hypnotizable, and low or nonhypnotizable subjects, based on their subjective experiences assessed by the PCI.

Two subclusters of high susceptible subjects and three subclusters of low susceptible subjects were found. For the high susceptibles, one group was characterized by large alterations in state of consciousness and moderate altered experiences; a loss of volitional control, self-awareness, rationality, and memory; and little vivid imagery. This group was labeled classic highs since they evinced subjective experiences characteristic of what is typically expected of highly hypnotizable subjects (Hilgard, 1965; Brown & Fromm, 1986). The second group of high susceptibles was characterized by moderate alterations in consciousness and experience, a great deal of vivid imagery, moderate positive affect, but only mild-to-moderate losses in rationality and memory. They were labeled fantasy highs since a predominance of imagery and positive affect suggested the presence of fantasy material.

For the low susceptibles, the largest group consisted of individuals who reported little alteration in altered state of awareness and altered experiences, and almost complete volitional control, self-awareness, rationality, and memory. They were labeled classic lows since their subjective experience was characteristic of what is usually expected of individuals who are not hypnotizable (Hilgard, 1965; Brown & Fromm, 1986).

The second group of low susceptibles were characterized by moderate alterations in altered state and altered experience, and major decrements in volitional control, self-awareness, rationality and memory. This group was given the label of pseudolows since their reported experience was somewhat like that reported by medium to high susceptible subjects during hypnosis, in spite of the fact that this group scored below 4 on the Harvard. A third group of low susceptibles was found who had PCI scores midway between the classic and pseudolows, and reported a great deal of internal dialogue. This group was labeled dialoging lows. Pekala, Kumar, & Marcano (1995) replicated the same three groups of low susceptible subjects and one of the two groups of high susceptible individuals.

Figures 2 and 3 illustrate the phenomenology of the high and low susceptible groups, respectively, based on unpublished figures from another replication study (Pekala & Forbes, 1997). The scores are based on a “sitting quietly” period embedded in the Harvard induction protocol, during which subjects were told “to just continue in the state are you are now in;” that is, they were given an open stimulus set, without suggestions to think of anything in particular.

Notice the classic highs in Figure 2. These subjects had the highest level of altered state of awareness, the most altered experiences, and the most internally directed attention of the three groups. They also had the lowest level of self-awareness, the largest drop in memory, little internal dialogue, no muscular tension at all (an arousal score of 0), the least negative affect, and the least imagery. It is as if their minds were emptied out of all contents of consciousness. The cluster analyses revealed two other groups; a fantasy high group that scored high on internal dialogue, and a fantasy high group who scored low on internal dialogue.

Figure 3 lists the three groups of low susceptible subjects. One group, labeled the classic lows, experienced the most intact self-awareness, the most intact memory, and the least drops in volitional control. They also reported high levels of muscular tension (the high arousal score). The relaxed lows were similar to the classic lows, except that there was not much muscular tension (low arousal). Most interesting, however, were the pseudolows.
Figure 2: Cluster Analysis of High Susceptible Subjects
Figure 3: Cluster Analysis of Low Susceptible Subjects
Despite their low scores on the Harvard, they reported significant drops in self-awareness, rationality, volitional control and memory. They were named pseudolows because even though they scored low on the Harvard scale, they evinced phenomenological experiences consistent with those of moderately hypnotizable subjects.

Two additional studies have been published on phenomenological typology (Forbes & Pekala, 1996; Pekala & Forbes, 1997). Besides looking at the PCI (sub)dimension scores across only low, medium, or high hypnotizables (as done in prior studies), these two studies looked at PCI hypnotic types across the full range of Harvard Scale scores. Table 1 summarizes the results of the cluster analyses across these four studies (Forbes & Pekala, 1996; Pekala, 1991a; Pekala & Forbes, 1997; Pekala, Kumar, & Marcano, 1995). When subjects were divided into groups based on their Harvard Scale scores (Forbes & Pekala, 1996; Pekala, 1991a; Pekala, Kumar, & Marcano, 1995) distinct groups were found who were phenomenologically similar across studies. However, when subjects were cluster analyzed across the gamut of Harvard Scale scores, certain groups, the classic and relaxed lows, and the fantasy and classic highs, were again replicated.

Table 2 lists the nine different “trance types” found by Pekala and Forbes (1997). From nonhypnotizable to highly hypnotizable (in terms of pHGS scores) the nine types were: classic lows, relaxed lows, nondialoging mediums, dialoging mediums, visualizers, rational high-mediums, dialoging high-mediums, fantasy highs, and classic highs. The classic lows had the highest level of muscle tension, and the most intact memory, rationality, and self-awareness. They also had the least drop in volitional control, a measure of the classic suggestion effect as characterized by Bowers (1992a). The classic highs, on the other hand, had the lowest level of memory, rationality, internal dialogue, imagery, and self-awareness of all the groups. Especially interesting were the visualizers. They had the highest level of vivid visual imagery; and the highest level of self-awareness and intact memory after the classic and relaxed lows (the two lowest hypnotizable groups).

Table 3 lists the 9 different cluster groups as a function of individual Harvard Group Scale score. There was a spread of different phenomenological types as a function of individual Harvard Scale score. Whereas the classic lows scored the lowest on the Harvard Scale, the fantasy and classic highs scored highest. The visualizers were spread across the low to high Harvard Scale scores. Table 4 lists the nine different types as a function of Harvard Scale score, pHGS score, PCI volitional control score, and PCI altered state score. Classic highs were highest on the pHGS scores and highest on loss of volitional control, whereas the classic lows showed the least drop in volitional control and the least altered state of consciousness score. Table 5 lists the percentages of the nine different types when averaging across three different studies for a total $n$ of 852. 7.7% of the subjects were classified as classic lows; and 12.8%, as classic highs. Another 10.1% were visualizers, while dialoging mediums made up the highest percentage of the nine groups, 22.3%.

Returning to Table 4, the reader should notice that the average objective (Harvard) and subjective (PCI-pHGS) hypnotizability scores for types 5 through 9 are quite similar. In fact, they would be classified as medium to high hypnotizables (both by Harvard and pHGS norms). Yet their responses on the PCI suggest that their subjective states during the sitting quietly period embedded in hypnosis are quite different. Thus, even though they experience the same stimulus condition and perhaps even experience the same degree of hypnotic depth (as measured by the Harvard or the pHGS scores), their particular subjective experiences are rather different. Being aware of these differences in subjective experiences and using this data in tailoring hypnotic interventions to the client may be quite useful to the clinician (see Pekala, in press).
<table>
<thead>
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<th>Study</th>
<th>$n$</th>
<th>Subjects divided into groups</th>
<th>Group Types</th>
<th>K-Means Analyses completed across all Ss</th>
<th>Results</th>
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**Table 2:** The Nine Hypnotic Types, Average Trance Depth, and Distinguishing Characteristics

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<tr>
<th>Hypnotic Type</th>
<th>pHGS Score&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Distinguishing Characteristics of Each of the Nine Cluster Types&lt;sup&gt;a&lt;/sup&gt; (based on intensity levels of PCI major dimensions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classic Lows</td>
<td>2.88</td>
<td>Highest level of arousal (muscular tension); most intact memory, rationality, and self-awareness; most internal dialogue; least drop in volitional control</td>
</tr>
<tr>
<td>Relaxed Lows</td>
<td>3.68</td>
<td>Similar to classic lows except have low muscle tension levels and less internal dialogue</td>
</tr>
<tr>
<td>Nondialoging Mediums</td>
<td>4.87</td>
<td>Similar to dialoging mediums except for lack of internal dialogue</td>
</tr>
<tr>
<td>Dialoging Mediums</td>
<td>5.01</td>
<td>Similar to nondialoging mediums except for more internal dialogue</td>
</tr>
<tr>
<td>Visualizers</td>
<td>6.06</td>
<td>Highest level of visual imagery; highest level of self-awareness and intact memory after classic and relaxed lows</td>
</tr>
<tr>
<td>Rational High-Mediums</td>
<td>6.81</td>
<td>Similar to dialoging high-mediums except for less internal dialogue and more rationality</td>
</tr>
<tr>
<td>Dialoging High-Mediums</td>
<td>6.86</td>
<td>Second highest level of internal dialogue after classic lows; similar to rational high-mediums except for more internal dialogue and less rationality</td>
</tr>
<tr>
<td>Fantasy Highs</td>
<td>7.10</td>
<td>Second highest level of imagery after visualizers</td>
</tr>
<tr>
<td>Classic Highs</td>
<td>7.60</td>
<td>Lowest level of memory, rationality, internal dialogue, imagery, and self-awareness</td>
</tr>
</tbody>
</table>

<sup>a</sup>Based on Pekala & Forbes (1997) in *American Journal of Clinical Hypnosis*

<sup>b</sup>pHGS score = average predicted Harvard Group Scale score:  Average level of trance depth:  Scores go from approximately 1.0 (not hypnotizable) to 9.0 (highly hypnotizable)
## Table 3: Cluster Groups as a Function of Number of Subjects per HGSHS:A Score

<table>
<thead>
<tr>
<th>Cluster Number</th>
<th>Name</th>
<th>HGSHS:A Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Classic Lows</td>
<td>4 2 1 2 0 1 1 0 0 0 0 0 0 0 0</td>
</tr>
<tr>
<td>#2</td>
<td>Relaxed Lows</td>
<td>5 3 2 2 3 1 3 3 2 0 0 0 0 0 0</td>
</tr>
<tr>
<td>#3</td>
<td>Nondialoging Mediums</td>
<td>1 1 2 2 3 2 0 2 1 1 3 0 0 0 0</td>
</tr>
<tr>
<td>#4</td>
<td>Dialoging Mediums</td>
<td>1 0 0 5 2 4 5 2 3 2 0 0 0 0 0</td>
</tr>
<tr>
<td>#5</td>
<td>Visualizers</td>
<td>0 0 0 3 0 0 3 3 2 5 4 0 1 0 0</td>
</tr>
<tr>
<td>#6</td>
<td>Rational High-Mediums</td>
<td>0 0 0 4 0 1 2 2 7 5 0 2 1 0 0</td>
</tr>
<tr>
<td>#7</td>
<td>Dialoging High-Mediums</td>
<td>0 0 2 1 0 2 6 1 5 5 4 0 0 0 0</td>
</tr>
<tr>
<td>#8</td>
<td>Fantasy Highs</td>
<td>0 0 1 0 0 2 5 1 2 3 3 1 2 0 0</td>
</tr>
<tr>
<td>#9</td>
<td>Classic Highs</td>
<td>0 0 0 2 0 2 4 2 3 6 5 2 0 0 0</td>
</tr>
</tbody>
</table>

A neurophysiological substratum for trance. That there may be specific neurophysiological substrata associated with the different phenomenological experiences of being hypnotized is supported by recent neurophysiological research. Crawford (1994) in her extensive review of “Brain dynamics and hypnosis” concluded that high hypnotizables, relative to lows: (a) “demonstrate greater cognitive flexibility, the ability to shift cognitive strategies, and states of awareness, than do lows” (p. 223), and (b) have a greater ability “to sustain focused attention on relevant activities and disattend to non-important stimuli in the environment” (p. 223). She further posited that the anterior fronto-limbic system is crucial to this ability, citing EEG theta power studies, evoked potentials, cerebral blood flow, electrodermal, and neuropsychological studies in support of her conclusions.

De Benedittis and Sironi (1986, 1988) have examined the electrical activity of the hippocampus and the amygdala of epileptic patients during hypnosis. They suggested that the hypnotic trance state “is associated with the hippocampal activity, concomitant with a partial amygdaloid complex functional inhibition” (1988, p. 104), and that two relatively discrete aspects of the limbic system, the hippocampus and the amygdala, are probably “the possible neurodynamic core underlying at least some aspects of trance experience” (1988, p. 101). Differences between low and high hypnotizables are also supported by the recent evoked potential research of Barabasz et al. (1999) who found “rather robust physiological markers of hypnosis” (p. 5). The aforementioned neurophysiological differences in hypnotizability may represent the “endpoints” between the classic lows/relaxed lows and fantasy highs/classic highs delineated above.

Clinical and theoretical applications. What appears exciting about the cluster and discriminant function analysis findings is that individuals can be classified not only objectively, by a traditional behavioral scale like the Harvard; or subjectively, as measured by the PCI pHGS score; but additionally, in terms of specific cluster types of phenomenological experience. The possibility of classifying an individual into one of several trance types, may not only have practical clinical applications (Balthazard & Woody, 1989), but lead to a greater understanding concerning what a hypnotic trance may be; that is, there may be different types of trance, depending on the phenomenology of the individual.

The replicated findings of classic highs, fantasy highs, and classic lows in these studies support the above. Knowledge as to which type of individual a clinician is working with may facilitate selection of hypnotic strategies to tailor interventions, and make therapy more efficient and more profitable. Most clinicians do not measure hypnotizability when they see a client (Cohen, 1989) due to a variety of reasons (Barber, 1989; Diamond, 1989; Rossi, 1989; Spiegel, 1989). Yet Mott (1989) suggested that what is needed is not the avoidance of assessment of hypnotic talent but rather “better and less intrusive ways to assess the capacity for hypnotic experience” (p. 2). The PCI-HAP may serve this need.

Consideration of different types of trance may also help in better understanding the altered state/special process debate concerning hypnosis (Kirsch & Lynn, 1995). This controversy, which surfaced in the 1960s, concerned the extent to which an altered state of awareness, as induced by a hypnotic induction, was necessary to produce hypnotic effects (Barber, 1969). Barber suggested that task motivation instructions could produce the same effects and that a hypnotic induction was not a necessary condition for the manifestation of classic hypnotic effects.

There may be some individuals, possibly the visualizers, who can produce visual hallucinations without a hypnotic induction and without feeling major losses in memory or rationality. Others, perhaps the classic highs (if replicated clinically - see Pekala, in press),
may generate hypnotic effects with major losses in volitional control and major alterations in subjective experience, as their mind empties out and becomes quiet. Finally, a third type may have rather spontaneous, vivid fantasy experiences, but without specific instructions to do so. Hence, there may be different types of trance; that is, there may be qualitatively different phenomenological experiences associated with being deeply hypnotized. Furthermore, there may be some individuals who experience trance (the visualizers) rather differently from how altered state hypnosis researchers have traditionally defined the hypnotic state (Hilgard, 1965; Weitzenhoffer, 1989).

Figure 4 illustrates the differences in phenomenological experience across the classic and fantasy highs, and also the visualizers. Visualizers had much less drops in volitional control and major alterations in subjective experience, as their mind empties out and becomes quiet. Finally, a third type may have rather spontaneous, vivid fantasy experiences, but without specific instructions to do so. Hence, there may be different types of trance; that is, there may be qualitatively different phenomenological experiences associated with being deeply hypnotized. Furthermore, there may be some individuals who experience trance (the visualizers) rather differently from how altered state hypnosis researchers have traditionally defined the hypnotic state (Hilgard, 1965; Weitzenhoffer, 1989).

Table 4: Cluster Analysis Results Across All Subjects
[from Pekala & Forbes (1997), American Journal of Clinical Hypnosis]

<table>
<thead>
<tr>
<th>Cluster Number</th>
<th>n</th>
<th>Name</th>
<th>Harvard Score</th>
<th>PCI&lt;sub&gt;b&lt;/sub&gt; pHGS Score</th>
<th>PCI&lt;sub&gt;c&lt;/sub&gt; Volitional Control Score</th>
<th>PCI&lt;sub&gt;d&lt;/sub&gt; Altered State Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>11</td>
<td>Classic Lows</td>
<td>1.91</td>
<td>2.88</td>
<td>5.09</td>
<td>0.85</td>
</tr>
<tr>
<td>#2</td>
<td>24</td>
<td>Relaxed Lows</td>
<td>3.54</td>
<td>3.68</td>
<td>4.26</td>
<td>1.04</td>
</tr>
<tr>
<td>#3</td>
<td>18</td>
<td>Nondialoging Mediums</td>
<td>5.22</td>
<td>4.87</td>
<td>3.12</td>
<td>2.26</td>
</tr>
<tr>
<td>#4</td>
<td>24</td>
<td>Dialoging Mediums</td>
<td>5.38</td>
<td>5.01</td>
<td>3.25</td>
<td>3.07</td>
</tr>
<tr>
<td>#5</td>
<td>21</td>
<td>Visualizers</td>
<td>7.67</td>
<td>6.06</td>
<td>2.86</td>
<td>4.24</td>
</tr>
<tr>
<td>#6</td>
<td>24</td>
<td>Rational High-Mediums</td>
<td>7.42</td>
<td>6.81</td>
<td>2.15</td>
<td>4.85</td>
</tr>
<tr>
<td>#7</td>
<td>26</td>
<td>Dialoging High-Mediums</td>
<td>7.12</td>
<td>6.86</td>
<td>1.40</td>
<td>4.62</td>
</tr>
<tr>
<td>#8</td>
<td>20</td>
<td>Fantasy Highs</td>
<td>7.85</td>
<td>7.10</td>
<td>1.62</td>
<td>4.77</td>
</tr>
<tr>
<td>#9</td>
<td>26</td>
<td>Classic Highs</td>
<td>7.85</td>
<td>7.60</td>
<td>1.29</td>
<td>4.82</td>
</tr>
</tbody>
</table>

<sup>a</sup>Scores go from 0 (not hypnotizable) to 12 (highly hypnotizable).
<sup>b</sup>Scores go from approximately 1.0 (not hypnotizable) to 9.0 (highly hypnotizable).
<sup>c</sup>Scores go from 0.0 (no sense of control) to 6.0 (complete control).
<sup>d</sup>Scores go from 0.0 (no altered state of awareness) to 6.0 (extremely altered state of awareness).

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Thus, looking at individual differences in phenomenological experience during hypnosis may help better understand hypnotic phenomena in the sense that a variety of individuals can arrive at the same hypnotic effect, that is, an arm levitation, possibly via different phenomenological mechanisms (Balthazard & Woody, 1989; Hilgard, J., 1970). The various trance types may reflect different phenomenological mechanisms or strategies utilized by different individuals to achieve hypnotically induced or task motivated effects.

**Implications and Conclusions**

Understanding that there may be different types of trance may help lead to further rapprochement between the various hypnotic theorists concerning whether hypnosis is an altered state of consciousness. Lynn and Rhue (1991) suggest that this controversy can be subsumed within three distinct viewpoints. One viewpoint suggests that “hypnosis involves characteristic changes in a person’s state or condition” (p. 602), and these “changes are held to play an important if not dominant role in determining the subject’s response to suggested events” (p. 602). A second viewpoint suggests “that hypnosis involves a change in the person’s state or condition; however, the altered state or condition is viewed in a
Figure 4: Cluster Analysis of Results: High Susceptibles and Visualizers
descriptive rather than in an explanatory sense” (p. 603). A third viewpoint suggests that “the concept of trance not only lacks utility but is misleading” (p. 604).

Lynn and Rhue summarize by saying that “there is no single or unique “trance” state that is the sine qua non of hypnosis; rather various somatic and perceptual changes are possible, depending on the particular social and cognitive factors that come into play in the hypnotic context” (Lynn & Rhue, 1991, pp. 604-605). The hypnotic types research presented above suggests, however, that during an open-ended stimulus setting embedded within a hypnotic context (with no specific suggestions to think a particular way), subjects report different types of subjective experiences. Although there may not be any unique trance state associated with being hypnotized, the cluster analysis research suggests that there are certain specific clusters of experiences that seem to replicate not only across groups of subjects (Pekala, 1991a, Pekala, Kumar, & Marcano, 1995), but also across the variety of low, medium, and high susceptibles (Forbes & Pekala, 1996; Pekala & Forbes, 1997), as defined by their Harvard Scale scores.

Can all three viewpoints of Lynn and Rhue (1991) be correct? We believe that two of the three viewpoints can be, provided differences in the phenomenological experiences of clients and/or subjects are taken into account. Whereas the classic and fantasy highs report drops in rationality, self-awareness, memory, and volitional control from what they usually experience; the visualizers appear to report less alterations in consciousness typically attributed to the hypnotic state. We believe a hypnotic induction may not lead to “state alterations in consciousness” for the visualizers, nor a large change in imagery vividness during hypnosis, since they may already have an ability for vivid imagery that may not be significantly modified by hypnosis or relaxation (Forbes & Pekala, 1996). Hence, changes in subjective state during hypnosis (the hypnotic induction) may be related to the therapeutic effects achieved for the classic or the fantasy highs, but not the visualizers (since there are less alterations in consciousness for this group, as evinced by their lower pHGS scores - see Table 4).

Such changes in state are probably even less effective therapeutically in altering the subjective experiences of the unhypnotizable or only mildly hypnotizable groups. The relaxed lows do not report much alterations in awareness or experience under hypnosis except relaxation (reduced subjective muscle tension). The classic lows, on the other hand, have a more negative experience with increased muscle tension, and increased negative affect during hypnosis, than if they just sat quietly with their eyes closed. Hypnosis appears to even reduce their level of trance, achieving a lower pHGS score than if they just sat quietly with their eyes closed without a hypnotic induction.

Are such changes in subjective experience etiologically related to therapeutic outcome (Lynn and Rhue’s first viewpoint), or merely descriptive of (or associated with) latent (biological or psychological) processes that are etiological to the therapeutic effects produced (second viewpoint)? This is a more difficult issue and prone to all the controversy surrounding the effects of cognition and affect on behavior, from the radical behaviorist approach of B. F. Skinner (1974, 1989) to the recent cognitive revolution in psychology (Bandura, 1995; Gardner, 1985; Rutan, 1992) and the importance of mind in influencing human behavior and experience (Baars, 1997; McDermott & Wright, 1992). Despite the possible epiphenomenal status of phenomenological events, a phenomenologically based hypnotizability measure cannot only be helpful in understanding our clients better, but possibly also in investigating therapeutic efficacy.

Recent research has looked at how well the pHGS score predicted change in state self-
esteem scores subsequent to a hypnotic ego strengthening intervention to improve self-esteem. An initial study (Spencer, Kumar, Pekala, & Conte, 2000) found an inconsistent relationship between the pHGS score (obtained in reference to intervention) and change in state self-esteem immediately following hypnotic self-esteem enhancement in different conditions. However, a significant correlation was found between change in state self-esteem and the pHGS scores obtained in reference to the Harvard Scale administered one week prior to intervention. Furthermore, the Harvard scores were significantly correlated with the change in the state self-esteem scores.

More recent research (Pekala & Kumar, 2000, Feb) using an improved ego strengthening protocol, post-intervention assessment, and a sample size of 40 participants found a significant correlation between the pHGS score during the hypnotic intervention and change in self-esteem immediately after intervention (r = .44, p < .01) that approached significance at approximately two week follow-up (r = .31, p < .06). However, a third study (Lavertue, 2000) using the same improved ego strengthening protocol, and a larger sample size of 117 participants found that the pHGS score was not correlated with a change in state self-esteem scores at one week follow-up, although the Harvard Scale scores were significantly correlated. However, we might note that even the correlations of the Harvard Scale scores with the change in state self-esteem scores were small in both the Spencer, et al. and Lavertue studies, accounting for approximately 6% and 3.6% of the variance, respectively.

In summary, there is need for further research to evaluate the efficacy of this subjective measure in predicting therapeutic outcome concerning changes in self-esteem given the inconsistent nature of the findings in different studies. Further research may also address how useful the PCI pHGS scores and trance typology profiles may be in predicting other therapeutic outcomes besides self-esteem, such as pain control and anxiety reduction. Additionally, research may examine whether tailoring hypnotic interventions to the client by using their phenomenologically based typology profiles does indeed enhance therapeutic rapport as well as outcome.

We believe, however, that the information obtained with the PCI-HAP allows the clinician to have useful data on the subjective experiences of the client during an initial hypnotic experience. This data can assist in tailoring a treatment plan for the client, in a similar manner to that advocated by the Spiegel’s (Spiegel & Spiegel, 1978) in the use of their Hypnotic Induction Profile with clients. Furthermore, just because someone does not test out to be that hypnotizable on the PCI-HAP does not mean that that person is “unhelpable.” Sometimes we go ahead with hypnosis anyway, as in the case of Dave illustrated in the follow-up article (Pekala, in press). More often, we will employ biofeedback strategies, as recommended by Wickramasekera (1988, 1997) in his high risk model of using biofeedback strategies with low hypnotizables, or EMDR (Shapiro, 1995) or flooding (Stekete & Foa, 1987), depending if the issue is one of stress-, or trauma-, reduction. Additionally, this psychophenomenological information can be integrated with dynamic interpretations (Groves, 1992; Strupp & Binder, 1984;) and personality psychopathology (Choca, Shanley, & Van Denburg, 1992; Millon, 1988) to better tailor the hypnotic intervention (in terms of activation of specific hypnotic processes) to the client’s personality disposition.

By getting an idea of the nature of the subjective experiences of the person during an initial hypnotic session, this approach allows us to “get inside the head” and “touch the heart” of the client and, we believe, be more therapeutically helpful. A follow-up paper (Pekala, in

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1The PCI and the PCI-HAP are available from the first author at the address above.
press) illustrates the use of the above psychophenomenological approach for integrating hypnotic interventions into the treatment plans of several clients.

References


Operationalizing “Trance”


Pekala, R. J. (1999, March). *Are there different “types” of hypnotizable individuals? Rationale, research, and clinical application*. Plenary address given to the American Society of Clinical Hypnosis at the Annual conference, Atlanta, GA.


Pekala, R. J., & Kumar, V. K. (1999, March). *Are there different types of trance: Research and clinical applications.* Paper presented at the Annual Meeting of the American Society of Clinical Hypnosis, Atlanta, GA.


Operationalizing “Trance”


Spencer, J., Kumar, V. K., Pekala, R. J., & Conte, A. (2000). *A phenomenologically based hypnotic assessment procedure (the PCI-HAP)*. Manuscript submitted for publication consideration.


