Psychiatric Medicine—Vol. 10, No. 1

Personality Style and Hypnotizability: The Fix-Flex Continuum

Herbert Spiegel, M.D. Special Lecturer in Psychiatry, College of Physicians and Surgeons, Columbia University, New York; Adjunct Professor of Psychology, John Jay College of Criminal Justice, New York

Marcia Greenleaf, Ph.D. Assistant Clinical Professor, Department of Psychiatry, Albert Einstein College of Medicine, New York; Assistant Clinical Attending, Consultation-Liaison Division, Department of Psychiatry, Hospital of the Albert Einstein College of Medicine, New York

ABSTRACT

Since Mesmer, there has been much confusion about the inter-relationship between an individual's degree of hypnotizability, the personality style of the individual and the importance of the therapeutic strategy. Empirical and experimental research supports the hypotheses that there are: 1) biopsychosocial components of hypnotizability on a continuum ranging from ecologically insensitive (not modifiable by external stimuli) to ecologically sensitive (very modifiable by external stimuli); 2) biopsychosocial components that can be measured to identify an individual's degree of hypnotic capacity and responsivity; 3) distinct personality styles which correlate with low, mid-range and high hypnotizability on a *fix* (ecologically insensitive)-*flex* (ecologically sensitive) continuum; and 4) different clinical syndromes which correlate with these categorical distinctions. We propose that measuring hypnotizability and personality style is a way to clarify diagnosis and choose appropriate treatment strategies to maximize existing biopsychosocial resources of an individual with a specific problem in a particular context.

HYPNOSIS: CONFUSION IN THE STATE OF THE ART

Since Mesmer, techniques of inducing trance and the use of trance phenomena in psychotherapy have been fused and confused. This dilemma has obscured differences between aspects of hypnosis that are influenced by the

therapist and the degree of hypnotizability that is due to individual characteristics and patient motivation. Where does the induction of trance end and the use of trance phenomena begin? At what point does the practitioner make the distinction between therapeutic technique and the inherent characteristics of the patient to respond to therapy?

The domain of hypnosis has been hampered by myth encumbered misconceptions and lack of information. By 1960, the American Medical Association and the American Psychiatric Association had formally accepted hypnosis as a legitimate therapeutic modality. However many training programs in medicine, psychiatry, psychology and social work have not included hypnosis in their curriculum. Because of the lack of training, clinicians often fail to recognize the clinical manifestations of hypnosis. In addition, many health care professionals consider hypnosis to be "nothing but overheated imagination," a view held by the Royal French commission who dismissed it in 1784.[1]

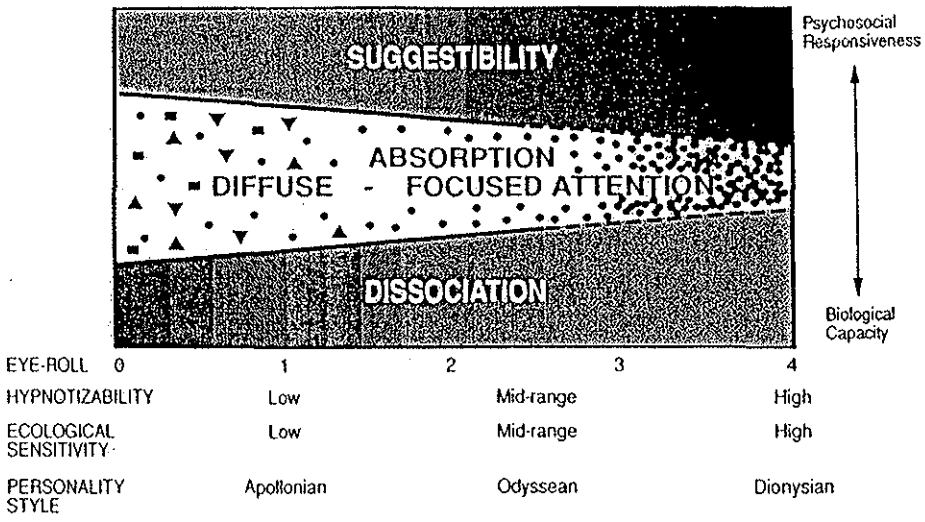
IMPACT OF THE ENGINEER MODEL IN PSYCHOTHERAPY

Medicine is in an ongoing struggle to develop and maintain scientific discipline. In the middle of the 19th century, the development of anesthesia and the use of antiseptics resulted in improved patient outcome following patient interventions. Since that time, the discovery of antibiotics, chemotherapies and surgical treatments has led to earlier identification and treatment of disease with impressive specificity through medication, surgical techniques and instruments.[2]

Medical advances are usually the result of cause and effect linear thinking. This analytical approach tends to isolate a problem and then develop a solution to that problem. Koch's postulates were appropriate and effective when coping with bacteria-caused diseases. The underlying assumption of this methodology is that effective therapy is the product of reductionistic thinking and an engineering approach.

The bias in favor of the *engineer* model of medical care has influenced many therapists to think more like mechanics than gardeners.[3] The mechanic puts the emphasis on the tools of the trade and the actions of the intervener. The gardener respects the difference between fixed conditions (the givens), what needs to be added to these conditions (strategies, insight, skills, interpretations); and the potential for continued growth. The gardener continues to ask what seeds can be planted that will flourish in the existing terrain, climate, and available natural resources. The mechanic is likely to see a problem in terms of the tools with which he is familiar. If all he knows is how to use a hammer, he tends to see everything as a nail. The gardener, on the other hand, will want to identify the problem, look for available resources to solve that problem and continue to assess interactions

FIGURE 1
Theory of Hypnosis



From a series of diagrams compiled by H. Spiegel, D. Spiegel and M. Greenleaf

between content and context. The gardener's mission is to gather information and decide when to choose a reductionist engineer model, a teacher/learner model or a mix of the two.

The engineer model has had a major impact on the use of hypnosis in psychotherapy. Hypnosis is often viewed as something that is done to the patient. Patients who have been conditioned by the engineer model in medicine easily view hypnosis as another treatment modality in which they expect to be "done to," "fixed up" or "repaired." For patients who have felt depersonalized by the engineer model, to find the same philosophy in psychotherapy may lead to mistrust and alienation for the psychological treatment.

As the use of hypnosis has become more widespread, there have been many positive effects. A point of view has emerged which allows for rapid intervention and change. It permits a more animated approach to treatment in psychiatry, creating alternatives in a field which had become dominated by classification of disease and the pharmaco-centric paradigm. An interactive-systems approach with hypnosis, which we are now advocating, encourages patients to become involved on their own behalf, to participate in developing and realigning their resources to discourage behavioral victimization, to make healthy choices, to develop intra and inter-relationships which are guided by self-knowledge and self-respect, and to have ongoing brain-mind, heart-mind relationships.

CLINICAL CONFLICT AND CONFUSION

Even though many clinicians have observed a leverage effect with hypnosis which results in rapid and sometimes dramatic change, the use of hypnosis continues to be trivialized by individuals who are influenced by psychoanalytic thinking or drug therapies. Some individuals presuppose that psychodynamic insight is essential before behavioral change is possible; others presuppose that controlling through biology is the whole solution. Many psychoanalytic treatments for habit control, symptom management or problem solving are unnecessarily long, ineffective, and expensive because of the emphasis on "why" rather than "how." Many pharmacologic solutions for behavioral problems produce harmful side-effects that require additional medications as antidotes for harm caused by the primary drug treatment.

Practitioners who report on the use of hypnosis, often emphasize induction procedures which mistakenly suggest that hypnosis is sleep or that individual characteristics are less significant than the therapist's ministrations. Newcomers to the field are led astray when patient responses fall short of sleep and lengthy hypnotic ceremonies prove ineffective. Patients are led astray when they want to believe the therapist can do the work for them or when these assumptions challenge their sense of control.

While clinical and experimental research is being done to explore hypnotic phenomena, there are more benefits of treatment effects claimed than tested. There is a tremendous need for clinical investigations to explore variables associated with success of treatment strategies, to correlate treatment outcome with individual attributes of the patient (i.e., hypnotizability) and to use acceptable methodological criteria for data interpretation.[4,5] Data based on anecdotal experience has encouraged an attribution of power to the "hypnosis," or what the therapist is doing, without taking the person's capacities into account to understand therapeutic change.

Hypnosis is not a good fit as a tool in the engineer model. It is not a pill or a piece of hardware. Rather, the effectiveness of hypnosis lies in the potential for the therapist to recognize the unique style of a given individual to use the hypnotic mode to activate and internalize a commitment to change.

ORDER OUT OF CONFUSION

There has been much debate and many contradictory assertions regarding hypnosis. When clinical observation is combined with measurement of hypnotizability, a body of data can emerge to support or refute certain hypotheses. It is possible to observe and measure the entrance, experience and exit from trance as one continuum. Using a measure of hypnotizability can help assess hypnotic

capacity and responsivity as a predictor of an individual's fixity and flexibility in regard to therapeutic change and situational adaptation. The measure we find useful for this purpose is the Hypnotic Induction Profile.[4,6,7]

COMPONENTS OF HYPNOTIZABILITY

Braid regarded hypnosis as "controlled imagination."[8] Hypnosis is an ability to shift into an attentive, receptive state of concentration with a relative decrease in peripheral awareness and cognitive evaluation. The control of this state is sensitive to inner cues as well as cues from the hypnotist and the external environment. The experience of hypnotic concentration is characterized by the degree and interrelationship among three essential components—all of which must be present to some degree. These components are dissociation, absorption and suggestibility, as illustrated by Figure 1.[9]

Dissociation is a conscious and/or unconscious separation of memory, perception or motor response from the mainstream of awareness which may manifest as an adaptation to stress in a healthy or pathological manner. The capacity for dissociation seems to be biologically determined and is reflected in the mobility of the external ocular eye muscles. The Eye Roll sign (ER), i.e., the ability to look upward while closing the eyelids is a fixed capacity.[4] Empirically, the movement range of the eye-balls has been found to relate to the degree of potential for dissociation. Braid reported in 1843[8] that an upward ER indicated that a patient could be hypnotized "most rapidly and intensely." Low movement indicates less ability to control dissociative experience while high movement correlates with maximal ability to control dissociative experience.[10,11]

Absorption is an ability to more or less constrict peripheral awareness to facilitate greater focal attention. This biopsychosocial phenomenon appears to permit a psychological "zoom" lens to shift back and forth between diffuse and finely focused attention. As attention becomes more intense and focalized, the less awareness there is of orientation in time and place.

Suggestibility is a proneness to perceive and accept signals and information with a relative suspension of customary critical judgement. Motivation, secondary gain or loss and the degree to which one can suspend cognitive process will have an effect on suggestibility. For the highly suggestible person, response to input can be almost compulsively compliant. The social setting or contextual atmosphere usually influences the nature of the compliant response.

Taken together, these components suggest the degree of malleability that exists within an individual to alter prior expectations, behaviors, reactions and beliefs in the service of learning, adapting, assimilating, accommodating or using new strategies to solve problems.

An assessment of hypnotizability, as a reflection of biopsychosocial factors

representing inter and intra-personal malleability, permits a clinician to understand where the person is on the fix-flex continuum, i.e., to understand the ease or lack of ease with which a person can take in new information, make use of affective and cognitive process as well as access and respond with commitment to conscious and unconscious material. This information has tremendous implications for practitioners who are choosing interventions to effect therapeutic change.

PERSONALITY STYLES

The components of hypnotizability interact in different ratios which converge into synchronized and identifiable patterns. Three distinct personality styles emerge as correlates of low, mid-range and high hypnotizability and have been labelled Apollonian, Odysseans and Dionysian.[4,10]

The *Apollonian* (named after the Greek god, Apollo, who was guided more by reason than passion) has a limited degree of dissociation; sharply focalized attention with *concomitant* and constant peripheral awareness; and slight suggestibility. This style is predominantly cerebral, ever critical, biased toward cognitive dynamism and relatively remote from or somewhat independent of ecological (contextual) influence. The Apollonian scores low on the Hypnotic Induction Profile (HIP).

The *Odyssean* (named after Homer's mythical man, Odysseus, a wanderer of fluctuating moods) has a moderate tendency to dissociate; is capable of focalized attention with less emphasis on vigilant peripheral awareness than the Apollonian; and has a moderate degree of suggestibility. This individual typically has a tendency to shift away from a predominantly "brain" orientation toward a "heart" or intuitive feeling. The Odyssean personality style characteristically seeks a mid-way balance between internal commitments and responsivity to social or ecological context. This person scores in the mid-range on the HIP.

The *Dionysian* (named after the Greek god, Dionysus, who was known for unrestrained and undisciplined spontaneous behavior) has an extreme propensity to dissociate, a marked ability for total absorption, with an almost complete abandonment of peripheral awareness and a readiness to respond uncritically to new signals. This individual has a clear preference to be dominated by the "heart" rather than the "brain," with a bias toward feelings and intuition over logic and rationality. The Dionysian is ever ready to suspend critical judgement and comply with impositions from the outside. They are the most ecologically sensitive and the most vulnerable to persuasion. The Dionysian personality type consistently test high on the HIP.

Overall, on a personality style continuum with fixity on one end and flexibility on the other end, the Apollonian tends to be more fixed with a propen-

sity to control, the Odyssean is less fixed with a tendency to oscillate and the Dionysian tends to be quite flexible and malleable.

From a biopsychosocial perspective, understanding where an individual fits on the fix-flex continuum is a way to be more sensitive to an interaction of biological features (such as dissociation and relative fixity as indicated by the ER sign) with psychological factors and social context.[9] By assessing for specific personality styles, i.e., Apollonian, Odyssean and Dionysian, one can begin to identify the interaction of fixed biological determinants with the panoply of psychosocial factors.

HYPNOTIZABILITY AS A MEASURABLE ENTITY

The Hypnotic Induction Profile (HIP) is a 5 to 10 minute clinical assessment of hypnotizability. It was standardized on a clinical population of adult patients who were seeking help for a wide range of problems.[4] In contrast, the Stanford Scales take 20 minutes to an hour and a quarter and were standardized on a college student population in an experimental setting.[12]

The HIP is comprised of instructions to enter, experience and exit hypnosis. Simultaneously, an examiner is able to observe and monitor low, mid-range or high degrees of ability to experience subjective and objective hypnotic phenomena. Of particular importance is the absence or presence of involuntariness and an intact ribbon of concentration as primary factors in dissociation, post-hypnotic suggestion, alteration of somatosensory responses and spontaneous amnesia which characterize the trance experience.[4] Responses reflect situational factors, personality style, context, therapeutic alliance and hypnotic ability.

With the ER sign as a biological marker and a measure of dissociative capacity and the HIP induction score indicating psycho-social responsivity to instructions,[10] there is information on the biological (ability to dissociate and maintain a ribbon of concentration) the psychological (motivation to respond and interact with the therapist) and the social (compliance with suggestion).[4,10] The degree of capacity and responsivity as well as resonance or dissonance between the two (capacity and responsivity) correlate with:

1. Personality style;
2. Cognitive flow, the absence of which implies probable psychopathology;
3. Degree of hypnotizability.

These three aspects give us a frame of reference in which the total clinical picture can be taken into account. (Details of the HIP procedure and interpretation of the scoring are published elsewhere).[4,10]

While conducting research on hypnotizability, two different therapists used

the HIP with a total of 8,796 consecutive patients. In both patient populations, about 75% of the subjects were hypnotizable (20% low, 48% mid-range and 7% high) and about 25% were not.[13,14] Most of the patients who showed dissonance between their capacity and responsiveness (clinically non-hypnotizable) showed evidence of cognitive impairment because of various psychiatric disorders.[10] These findings are remarkably similar to the Manhattan Project which found that 23.5% of the city population revealed marked to severe psychiatric problems.[15]

SPECTRUM THEORY OF HYPNOSIS

Based on the findings from testing the HIP, a spectrum of theory of hypnosis has emerged. Where an individual falls on the spectrum of hypnotizability is determined by a combination of variables. Among these variables, are varying ratios of ecological insensitivity (trait-capacities which are not subject to change) and ecological sensitivity (state dependent responsivity which is influenced by environmental cues). In the adult population, each individual can be assessed to determine the where the individual fits on a fix-flex continuum (not responsive to very responsive to external stimuli) by determining low, mid-range, high or non-hypnotizability. It is postulated that the degree of hypnotizability correlates with a range of predictable, characteristic behaviors in which an individual relates to the self and the world around the self.

Figure 1 presents a diagram to illustrate a spectrum theory of hypnosis. At the left end of the diagram, zero to low hypnotizability is represented as the most ecologically insensitive: less mobility of the eyes, less ability to produce and control dissociation, more diffuse vs focalized attention and the least suggestibility. These individuals are the least sensitive to ecological factors, placing them at the fixed end of the fix-flex continuum. At the right end of the diagram, high hypnotizability is represented as the most ecologically sensitive: maximum mobility of the eyes, capable of extreme dissociation of a reversible nature, able to intensely focalize attention and have the most suggestibility. These individuals are the most sensitive to ecological factors, placing them at the most flexible end of the fix-flex continuum.

FALL-OUT INTO PSYCHOPATHOLOGY

When a patient presents with a psychiatric problem, the provocation may be related to internal factors (e.g. genetics, drugs, biological deficits) and/or external factors (e.g. stress, deprivation or trauma) which result in an impairment of psychological function. It is hypothesized that these factors interact in identifiable patterns consistent with hypnotizability and personality style.[10] The interaction of

the provocative factors with the biopsychosocial features of the individual manifest as predictable Clinical Syndromes (Axis I) or Personality Disorders (Axis II) using the nosology of the DSM-III-R.[16]

There is an accumulating body of evidence to support the theory that characteristic coping skills and psychopathology correspond with the different degrees of hypnotizability as assessed by the HIP. Pettinati[17,18] found that patients diagnosed with anorexia nervosa and schizophrenic disorders scored low on the HIP while patients with bulimia scored high. Pettinati[17,18] also reports that low scores on the HIP are associated with cognitive psychopathology and high scores with affective psychopathology. D. Spiegel et al[19] found that in a sample of psychiatric patients compared to normal control subjects, patients with PTSD scored significantly higher on the HIP than patients diagnosed with schizophrenia, generalized anxiety disorder, affective disorders and normals. Frischholz and Braun[20] found the degree of hypnotizability and the ER sign, a biological marker, to be critical factors in making a diagnosis of Dissociative Disorders, including Multiple Personality Disorder (higher scores on the HIP) and Schizophrenic Disorders (lower scores on the HIP).[21]

Considering hypnotizability as a reflection of personality style, the "cerebral" Apollonian type may develop cognitive impairments, with avoidant interpersonal styles and proneness to despair, e.g. Obsessive Compulsive Disorder, Anorexia, Generalized Anxiety and Schizophrenia (Axis I) and Schizoid, Paranoid and Avoidant Personality Disorders (Axis II).

The "oscillating" Odyssean type may develop problems of intimacy, fluctuating assumptions and beliefs with resultant confusion and is subject to mood swings, e.g. Bipolar Disorder, Reactive Depression, Bulimia (Axis I) and Borderline, Passive-Aggressive and Anti-social Personality Disorders (Axis II).

The "ecologically sensitive" Dionysian is prone to experience disruptions of self-integration, dependency to the point of helplessness and is vulnerable toward major depression, e.g. Multiple Personality Disorder, Fugue, Amnesia, Somatization, Conversion, Depersonalization, Post-Traumatic Stress Disorder (Axis I) and Histrionic Personality, Dependent Personality Disorders (Axis II). Figure 2 illustrates the over-all features of psychopathology.[2]

THE THERAPEUTIC CHALLENGE

There are many diverse therapeutic approaches ranging from psychoanalysis to psychotherapy, from psychopharmacology to the placebo effect and from behavioral medicine to supportive therapy.

For the patient who has no hypnotic capacity or expression as indicated by the HIP, it may be more relevant to use medication, social containment and supportive care because there is little or no psychological resiliency to tap in order

FIGURE 2
Characteristic Psychopathology

	APOLLONIAN	ODYSSEAN	DIONYSIAN
PRIMARY CONFLICT AREA	Cognition (Intrusions)	Interpersonal Space (Intimacy)	Self-Concept (Ego Integration)
INTERPERSONAL STYLE	Avoidant	Oscillating	Dependent
AFFECT			
Anger	Diffuse	Other-directed	Self-directed
Depression	Despair	Bipolar Dysthymic Major Depression	Major Depression

From a series of diagrams compiled by H. Spiegel, D. Spiegel and M. Greenleaf

to alter and master a new perspective. The combination of personality style, hypnotic ability and motivation mediated by contextual factors (i.e., psychological secondary gain/loss issues or the acute or chronic nature of a medical or psychological problem) will determine to what extent the hypnotic modality can be used to facilitate change.

The therapeutic challenge is to balance individual biopsychosocial attributes with biopsychosocial factors that are environmental, situational and familial. This is a multi-level series of conceptualizations, with each aspect of information interacting with the others and the whole—an interactive-systems approach.[22]

The spectrum theory of hypnotizability and personality style assumes a fix-flex continuum which provides a guide and predictor of how the person negotiates experience. A person who is more fixed in his private system of myths and beliefs, reacts to what happens to him with an internally driven compulsivity. A person who is more moderate is most likely to respond with a combination of internal and external processing. A person at the extreme end of flexibility is usually so malleable that process is a form of externally driven compliance.[23]

At both ends of the spectrum, there appears to be a narrowing of individual choice. However, at the fixed end of the spectrum, it is by definition of the person's attachment to content and lack of flexibility in process that makes

therapeutic intervention difficult. It is at the most flexible end of the spectrum that we find the most promise and plasticity for treatment responsivity.

CONCLUSION

As our clinical thinking becomes more disciplined, we can enhance the art of the intuitive with the science of measurement. Shifting from the reductionistic paradigm of classical science to a new interactive-systems paradigm,[22] enables clinicians and researchers, to find clarification and balance. The task is to identify which aspects of the person are relatively fixed (ecologically insensitive) and which aspects are relatively malleable (ecologically sensitive. With the HIP, we have the technology to identify these different features and to observe where the person places on the fix-flex continuum. This mix of attributes exists whether or not we observe or measure and whether or not we knowingly enhance, ignore or act in conflict with them.

By assaying the components of hypnotizability and identifying personality style, we can point in the direction of predicting treatment responsivity and sharpen our judgement in deciding upon the most effective treatment strategy for the person in the given clinical context.

REFERENCES

1. Darnton R: Mesmerism and the End of Enlightenment in France. Cambridge, MA, Harvard University Press, 1968
2. Ellenberger HF: The Discovery of the Unconscious. New York, Basic Books, 1970
3. LeShan L: The Mechanic and the Gardener. New York, Holt, Rinehart and Winston, 1982
4. Spiegel H: The Hypnotic Induction Profile (HIP): a review of its development. Ann NY Acad Sci 296:129–142, 1977
5. Frankel FH: Significant developments in medical hypnosis. Int J Clin Exper Hypn 35:231–247, 1987
6. Spiegel H: Biopsychosocial spectrum theory of hypnosis. Invited address presented at the 99th Annual Meeting of the American Psychological Association, Division 30, San Francisco, 1991
7. Greenleaf M: Application of hypnosis in consultation liaison care for medical patients. Invited address presented at the 99th Annual Meeting of the American Psychological Association, Division 30, San Francisco, 1991
8. Braid J: Neurypnology. London, 1843. New York, Arno Press, (Reprint) 1976
9. Spiegel H: Biopsychosocial theory of hypnosis. Plenary Address, 32nd Annual Scientific Meeting of the American Society of Clinical Hypnosis, Orlando, 1990
10. Spiegel H, Spiegel D: Trance and Treatment: Clinical uses of Hypnosis. New York, Basic Books, 1978 (Reprinted, Washington, DC, American Psychiatric Press, 1987)
11. Spiegel H, Fleiss JL, Bridger AA, et al: Hypnotizability and mental health. In Arieti

S(ed): New Dimensions in Psychiatry: A World View. New York, John Wiley & Sons, pp. 314–365, 1975
12. Hilgard ER: The SHSS as related to other measures of hypnotic responsiveness. Am J Clin Hypn 21:68–83, 1978/79
13. DeBetz B, Stern DB: Factor analysis and score distributions of the HIP—replications by a second examiner. Amer J Clin Hypn 22:95–102, 1979
14. Frischholz E: Standardization, reliability and validity of the Hypnotic Induction Profile. Paper presented at the 33rd Annual Scientific Meeting of the American Society of Clinical Hypnosis, St. Louis, 1991
15. Srole L, Langer TS, Opler ML et al: Mental Health in the Metropolis. New York, McGraw-Hill, 1962
16. American Psychiatric Assoc: Diagnostic and Statistical Manual of Mental Disorders, 3rd Ed. Washington, DC, Am Psych Assoc, 1987
17. Pettinati HM, Kogan LG, Evans F et al: Hypnotizability of psychiatric inpatients according to two different scales. Am J Psych 147:69–75, 1990
18. Pettinati HM, Horne RL, Staats JM: Hypnotizability in patients with anorexia and bulimia. Arch Gen Psychiatr 42:1014–16, 1985
19. Spiegel D, Hunt T, Dondershine HE: Dissociation and hypnotizability in post-traumatic stress disorder. Am J Psychiatr 145:301–305, 1988
20. Frischholz E, Braun B: Diagnosing dissociative disorders: new methods. Best clinical paper award, presented at the 99th Annual Meeting of the American Psychological Association, Division 30, San Francisco, 1991
21. Frischholz E, Spiegel D, Spiegel H et al: Hypnotizability and psychopathology. Submitted for publication, 1991
22. Foss L, Rothenberg K: The Second Medical Revolution. Boston, New Science Library, 1988
23. Spiegel H: The grade 5 syndrome:the highly hypnotizable person. Int J Clin Hypn 22:303–319, 1974