Hypnosis: Myth and Reality

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Probably no sphere within the psychosociobiological universe has been hampered by so many myth-encumbered misconceptions and so much complacent ignorance than the domain of hypnosis. And yet, the ubiquitous manifestations of hypnotic phenomena occur so often without knowing recognition by clinicians or even subsumed under some other behavioral label. It is as if many clinicians and behavioral scientists not only reject Mesmer's "fluid" concept, but also reject the observable data as well. By simply substituing the concept "imagination" for "fluid," the observed behavior of Mesmerism becomes understandable in modern behavioral terms. In fact, the French Royal Commission (whose members included Benjamin Franklin, Lavoisier and Guillotin) studied Mesmerism then intensively dismissed it with the astute critique that it was nothing but "overheated imaginations."[1]

At that time, scientific scrutiny of imagination was not possible since there were no known instruments for measurement. Now we do have standardized techniques to measure imagination, concentration and compliance (voluntary and nonvoluntary). They may still be unrefined, but nevertheless, do indicate a capacity for disciplined scientific inquiry—especially when the measurements are made with full appreciation of context issues.

As we further develop adequate measurement capacity for the biological substrate of imagination, concentration, focal attention, amnesia, motivation and even aroused concentration, we shall be able to also identify the biological components of hypnosis. There are hints already that the right-left brain interactions with each other and with the limbic system are also related to hypnotic capacities.

THE PAST

Why has hypnosis been ignored for so long? Medicine itself has struggled over the past century to replace the taint of charlatanism and the use of anecdotal data for a more scientifically disciplined approach for treating disease. Indeed, this shift has been impressive but not without fault. For example, the emphasis upon fighting disease has distracted many clinicians from the relevance of knowing the *person* with the disease in order to effect therapeutic change. Without too much exaggeration, it can be said that the main thrust of medical care in the United States during the past half centry has been largely reductionist and engineer oriented. The preferred focus has been upon the pill, the surgical technique, or the gadget that will fight the disease, rather than educating the person to prevent disease and training the person to participate in re-aligning his resources to live more healthily. To put it bluntly, the patient has been lead to expect the doctor to "fix me up"—like taking a car to the mechanic to be repaired.

Occasionally, this is exactly what does happen. If appendicitis is accurately diagnosed, all the patient need do is to make his body available and the doctor does all the essential work to solve the problem. But so often, in the medical domain of therapy and even with the surgical specialities, this neat model is not enough. Unless the patient is informed about living well and actively participates in his own health care, the relief is not impressive or effective. With some dramatic exceptions such as the judicious use of antibiotics, the success of general medical care depends upon appropriate patient involvement and commitment.

The bias in favor of the engineer model for medical care was entirely consistent with the unreceptive and indifferent atmosphere for the re-emergence of hypnosis and its psychological implications in the 1930s, largely because of the influence of the late Milton Erickson.[2]

Another concurrent development tended to trivialize the relevance of hypnosis in therapy: the emerging influence of the psychoanalytic movement, which emphasized the critical importance of psychodynamic insight *before* behavioral change was desirable or possible. Clinical experience over the past half-century does not confirm that belief.

Obviously, Erickson's reintroduction of hypnosis did not stir up the medical and political world as did Mesmerism in the latter part of the 18th centry. The cultural context was quite different in mid-20th century America.

In Mesmer's France, a growing discontent with the Age of Reason establishment and a protect against cold rationalism was emerging that eventually led to the Revolution and transformation into the Age of Romanticism. By coincidence, Mesmer's fluid hypothesis resonated well with other discoveries of the invisible world—Newton's breakthrough on the laws governing gravity, Lavoisier's caloric concept, Franklin's discovery of the power of electricity and various experiments with heated gases making possible those popular and amusing balloon flights.

The popularity of Mesmer's tubs and treatment sessions became innocent and safe ways for expressing discontent with the academic and political establishment. In a sense, Mesmerism was used along with other science to bring about change culminating in the French Revolution. After the Revolution, however, the Mesmerism movement fell apart.[1]

No such social-political swell engulfed Erickson's work. Instead, during the last half century more modest issues have accounted for the survival and gradual growth and reluctant acceptance of hypnosis. On the positive side, Erickson's machismo approach to hypnotic induction, conveying the notion that the hypnotist is "doing something to the patient" synchronized well with the medical engineer mentality of his time.

In a sense, this macho approach served to bridge with the establishment. It also added some animation and zest to the dull treatment atmosphere where most clinical attention in psychiatry was given to classification of diseases and predicting the course of the disease. Effective therapeutic intervention was not a frequent occurrence. The leverage effect of hypnosis brought about quick and dramatic change. Anecdotal case reports using hypnosis gradually appeared. Professional societies and journals devoted to hypnosis evolved. World War II spurred interest in quick treatment procedures using hypnosis. By 1960, the American Psychiatric Association and the American Medical Association had formally accepted hypnosis as a legitimate therapeutic mode.

On the negative side of the emerging clinical applications of hypnosis, induction procedures, conveying the erroneous notion of "going to sleep," and imitation of the many vaudevillean rituals, tainted the reputation of hypnosis because of their earlier associations with "black magic" and charlatanism. No systematic critical follow-up studies involving a significant number of cases were reported. Hypotheses about hypnosis were not formulated in such a way as to be testable. Treatment strategies and hypnotizability were fused and regarded as one and the same. Attributions to the power of hypnosis were exaggerated and other factors accounting for treatment change were ignored.

All of this was compounded by the big fact, in the eyes of the reductionist medical mind, that hypnotism was only "in the mind, not real." As a consequence, hypnosis remained essentially outside the mainstream of the medical and psychiatric establishment. Meetings and training workshops occurred mostly in homes or hotels and varied greatly in quality. Unfortunately, this led to the formation of many subgroups, some of which lack the sobriety of a profession and have the aura of cultism.

Despite this, some secure medical schools encouraged the study and disciplined use of hypnosis in medicine. Among these few, the College of Physicians and Surgeons at Columbia University has had continuous annual courses on hypnosis since 1962 and has always been open to peer scrutiny. Other universities and medical centers have occasional courses and several have on-going research programs.

Quite apart from the clinical and medical scene, a simultaneous laboratory development was going on in experimental psychology. Weitzenhoffer and Hilgard[3] were refining a method for measuring hypnotic capacity in college students. In addition to demonstrating that grading trance capacity on a continuum was possible, they discovered that this same capacity was relatively stable when measured over time.

Several limitations, however, hampered the scales' usefulness in the clinic. First, it took too long to administer (one hour or more). Second, some of the questions were inappropriate in a clinical context, e.g. "listen to a (hallucinated) mosquito that has been buzzing." Third, it conveyed the erroneous notion that going into trance was similar to falling asleep. Fourth, it implied that being hypnotizable was a weakness, e.g. a "susceptibility" test. Fifth, the test was standardized on college students in a laboratory setting, which is quite different from basing it on results obtained from persons of all ages seeking help in real life. Sixth, it did not account for the presence of mental illness in the population.

In essence, the project showed that measurement of trance is possible. But the next step needed was a testing procedure that was clinically feasible, esthetically appropriate and standardized with a population sampling for which treatment application could be used. In other words, more contextual rigor was needed.

HYPNOTISM TODAY

Could this challenge be met? Was it possible to bring these extremes together? Instead of opposing each other or ignoring each other, could they help each other? Could they enrich each other? Could the measurement potential developed in the laboratory be adapted for the clinic and thus serve to bring more discipline to clinical applications of hypnosis? Was there enough convergence of knowledge and circumstance to expect this to ensue? Was there a middle-way?

If such a middle way were to be reached, agreement about the premises and definition of hypnosis would be needed. First, many prevalent misconceptions required clarification, including the following:

It conveyed the erroneous notion that going into a trance was similar to falling asleep

Hypnosis is sleep. Hypnosis is not sleep, it is the opposite of sleep. It is a form of intense receptive integrated concentration. None of the electroencephalographic findings of sleep are present in hypnosis. Those tracings typical of alert concentration are found in the hypnotic state.

Hypnosis is projected upon the patient. The hypnotist projects nothing whatsoever. Instead, he taps the natural trance capacity inherent in the patient. Trance capacity is a relatively fixed phenomenon in each adult. The range from light- to middle-range and deep trance states is usually consistent throughout the adult years. The physician simply activates this capacity—a capacity that a patient uses spontaneously any time he is engaged in motivated concentration.

Only mentally weak or sick people are hypnotizable. It is the mentally healthy persons that are hypnotizable. Schizophrenics, the depressed, those with severe character disorders, the mentally retarded, and people with neurological deficits that interfere with concentration all have difficulty in concentrating enough to shift into a trance state.

Hypnosis occurs only when the doctor decides to use it. It can occur when the doctor decides to use it if the patient cooperates, but it often occurs spontaneously, especially under duress or highly motivated challenge situations.

Symptom-removal means a new symptom will develop. This is not necessarily true, but if the doctor predicts that a new symptom will occur or if the patient directly or

indirectly learns that one is expected, then it may indeed occur as a fullfillment of that prophecy. There is no evidence that a new symptom will occur if it is not expected and the symptom removal is done noncoercively.

Hypnosis is dangerous. Hypnosis itself is not dangerous, but the trance state can be usedmischievously. The hypnotic state itself is a neutral state of attentive concentration. If the therapist introduces a therapeutically wrong proposal of if he unethically exploits the patient, then, of course, harm may result. But the mistake or harm is the result of the quality of the intrusion rather than hypnosis itself.

Hypnosis is therapy. Not at all. At most, hypnosis creates a receptive matrix in which a treatment strategy can be used with a high leverage effect. The state of hypnosis without an appropriate therapeutic strategy leads to no therapeutic effect at all unless the patient chooses to use the ceremony of being in a trance to bring about spontaneous corrective change.

The hypnotist must be a charismatic, unique or weird sort of person. Not so. Of course, if the patient senses the doctor as being charismatic or if the patient responds to the uniqueness of the doctor, this may well enhance the trance transition. But any sound, sober clinician can learn the techniques of induction and application of hypnosis today. The demeanor and conduct of the doctor is no different from any other proper clinical approach. Trance induction is teachable and learnable. In many instances, recent learners are as fully effective as experienced practitioners in utilizing hypnosis.

Women are more hypnotizable than men. This is not so. All objective studies indicate that about 70 percent of both men and women are hypnotizable to one degree or another and the distribution of this trance capacity does not differ significantly with sex.

Hypnosis is only a psychological phenomenon. The neuropsychological pathways and mechanisms of concentration, focal attention, motivation and amnesia are still poorly understood. Until we have a clear physiology of these phenomena we will not have a clear physiology of hypnotizability. The hints that we get, however, suggest strongly that hypnotizability is essentially a neurophysiological capacity that has psychological manifestations. The measurements of the physiological phenomena are simply the indices of as yet poorly understood alterations of physiological circuitry.

Definition: In an operational sense, hypnosis can be defined as a psychophysiological set characterized by a complex perceptual capacity for attentive, receptive concentration with parallel awareness. That is, the subject can be aware of a perceptual set and, at the same time, feel along side the set. Perhaps to highlight this feature, a more accurate label for the hypnotic phenomenon would be "paragnosis."

Resolution: It then becomes possible to find a middle way to converge the extremes, together with the extravagances of the cultism, by the guidance of three major propositions:

1. *Hypnosis is not sleep.* It is the opposite—an alertness, a capacity for attentive, receptive concentration—perhaps poetic sleep, but certainly not physiological sleep.

2. *The somatic metaphor can be powerful and versatile.* Ortega y Gasset asserted that "metaphor is probably the most fertile of man's resources, its effectiveness verging on the miraculous....[It] aids our escape and creates among real things imaginary reefs, islands pregnant with allusion."[5] Vivid, integrated and even poetic imagination is often associated with hypnotizability. Understanding the rational place of hypnosis in the medical domain requires a diligent awareness that somatic metaphors can be experienced and reported with such clarity, dramatic impact and conviction that they can seduce a naive conscientious clinician to ascribe physical causation without adequate evidence, or, on the contrary, can provoke the clinician to acclaim that "there is nothing wrong." In both instances, the clinician is seriously wrong by failing to identify the covert message of the somatic metaphor. Of equal importance is the clinical skill to rule out the subjective report as a metaphor and appreciate it as an accurate report of a sensation in order to focus upon the possible underlying pathophysiological dysfunction. Probably nothing tests the fine skill of differential diagnosis more critically than the ability to sense the subtle, chameleon-like presence of the somatic metaphorical statements.

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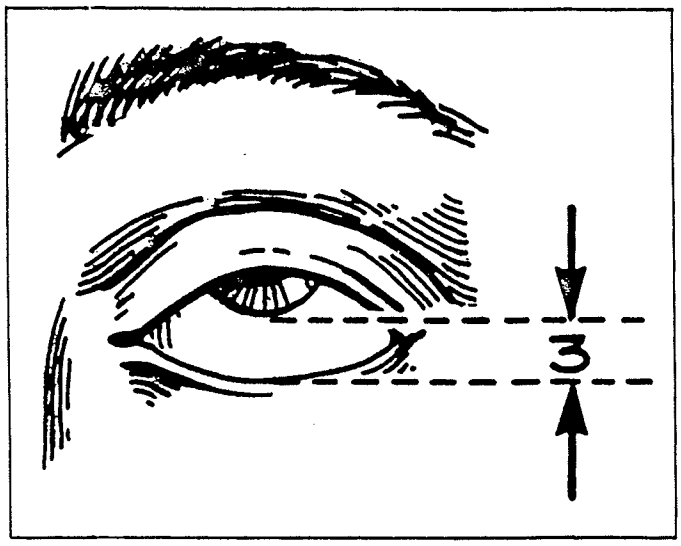

Figure 1. Grade 3 eye roll.

3. *Hypnosis has a biological substrate.* The hypnotic experience, like concentration and attention, is embedded in a complex psychophysiological matrix that is subject to the imbalances, aberrancies, dysfunctions and impairments of other complex systems. Thus, a biological potential can exist, but the ultimate expression can be blocked by a variety of pathological contingencies. This sequence or break in sequence can be identified clinically.

Shakow's segmental set theory[6] is the model that epitomizes this phenomenon. The intact ribbon of concentration identified as hypnotizability under the umbrella "generalized set" is both an indicator of potential capacity and an expression of this capacity to adapt to a barrage of input signals. When, instead, the person abandons the major generalized set and responds to a lesser and segmental set, the ribbon of concentration is broken revealing an impairment in expressing the normal commitment that is fundamental for normal adaptive behavior. This veering toward the segmental set is typical of the schizophrenic person. Also typical of the schizophrenic is a clinical sign of biological potential for hypnotic concentration but an inability to express it, resulting in no operational trance capacity.

Eye-roll sign and the hypnotic-induction profile. An exciting new discovery that the relative mobility of the eyes serves as a presumptive sign of trance capacity places the further study of hypnosis at the body-mind interface. The ability to look upward while closing the eyelids, the eye-roll sign (ERS) (Figure 1), varies on a 0-4 scale (Figure 2) with a normal distribution curve in a general adult population.[4] If there is no impediment in the ability to maintain an instructed ribbon of concentration, the

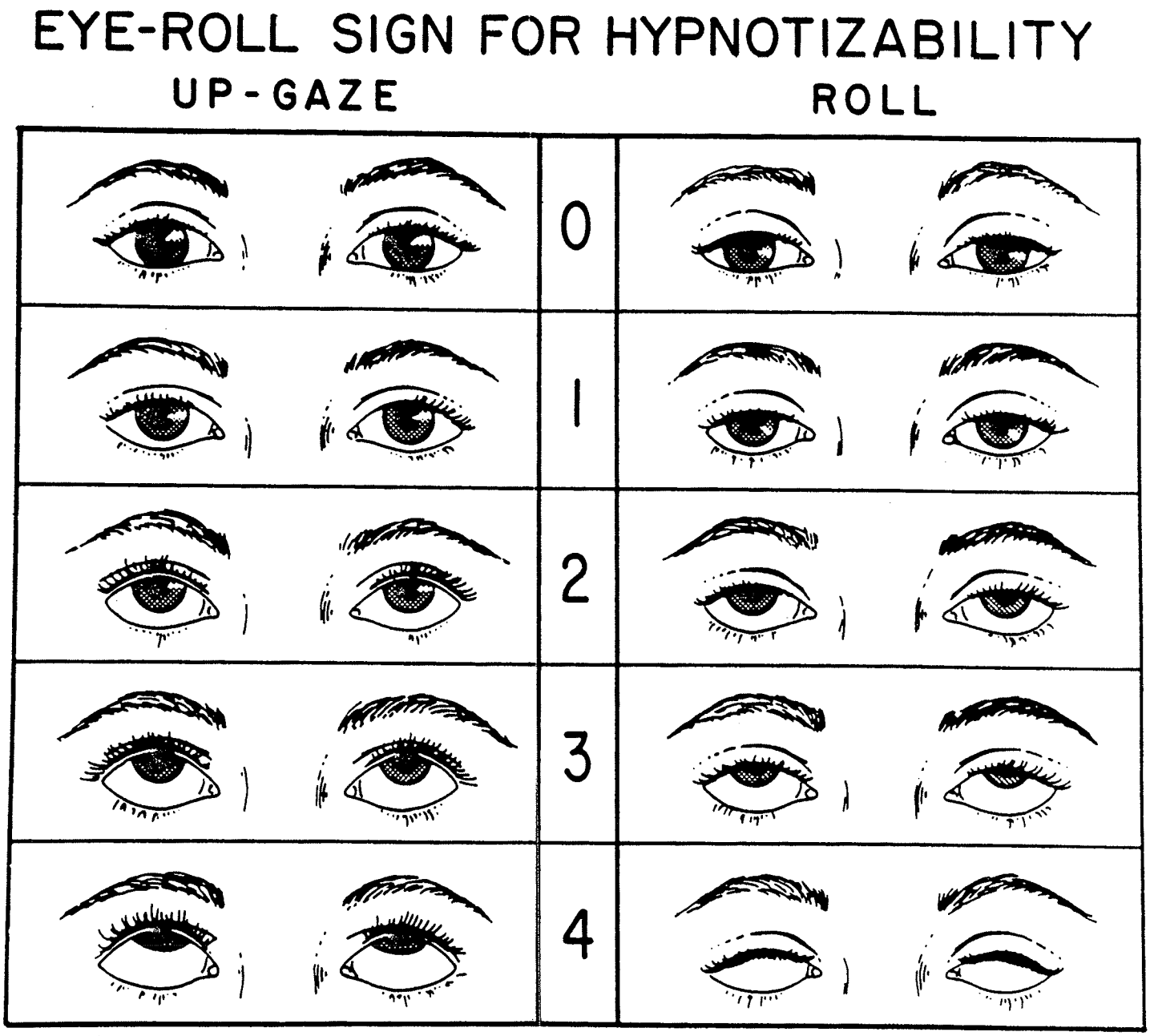

Figure 2. The eye-roll sign varies on a 0-4 scale. If the person is able to look upward so high that practically nothing but sclera is visible, he is probably hypnotizable.

ERS generally reflects hypnotic capacity. For example, if the ERS is so high that practically nothing but sclera is visible, the likelihood is that the person is highly hypnotizable. If little or no sclera is seen between the lower eyelid and the lower border of the iris, the odds are that hypnotizability is on the low side. Further, this feature is relatively stable with a minimal learning effect.

Since about 25 percent of a general population sample has a positive ERS to one degree or another, but no operational capacity for going into a trance, a test had to be devised to assess the capacity to express trance capacity as well as showing biological potential. This lead to the development of the Hypnotic Induction Profile (HIP) which measures the ERS plus the ability to experience three different arm levitations (LEV) under instructed and monitored conditions.

During this 5-10 minute test period, the patient enters and exits from the trance experience and reports

subjective sensations while the examiner records overt behavior. Two scoring systems record a Profile Configuration and an actuarial summation. Usually the arm levitation relates directly with the ERS and is identified as an intact Profile. If the LEV response collapses to zero, this indicates a break in concentration and no hypnotizability. It is called a non-intact (or decrement) profile grade.

Thus, a biological baseline and a sensorimotor response pattern are measured to indicate trance capacity on a 0-5 profile configuration scale and on a 0-10 summation score of 5 items (but not the ERS). In general, the HIP response is stable over time and has good interrater reliability. It is clinically appropriate, quick (5-10 minutes) and standardized on actual clinical populations.

Once the HIP is recorded, the patient is immediately taught how to initiate self-hypnosis. Self-induction procedures vary from 5-10 seconds. The primary treatment strategy varies with the nature of the problem and the trance capacity of the person.

The HIP assessment offers initial information at three different levels:

1: The degree of hypnotizability; low, mid-range, high or none.

2: On a psychiatric health-illness continuum, where does a person fit? An intact profile implies probably good health. A nonintact profile signals probability of significant degree of concentration impairment due to psychopathology, neurological deficit or chemical toxicity.

3: The probable personality style. The high grades usually have Dionysian "heart" features with rich imagination, a trusting stance, an easy flow of intuitive sensing and deep absorption. The low grades are likely to be Apollonian "head" persons with high priority given to logic, reason, orderliness, and impulse to control. The mid-range grade reflects varying combinations of the above polarities with trends toward oscillating between periods of relative action and inaction. Or to put it another way, an Odyssean quest for the middle way.

FUTURE DIRECTIONS

Revising and refining clinical tests for hypnotizability are ongoing, and more work needs to be done. Comparative studies with a variety of tests can enhance our understanding of hypnosis and consequently stimulate more clinicians to measure in the clinic.

Validation of the assessed hypnosis values can be enriched by studying correlations with other domains. For example, in determining the health-illness continuum and its relfection in measured hypnotizability, personality features can be studied, with emphasis upon time sense, absorption capacity, space orientation, beliefs, metaphors, learning style and processing techniques.

The predictive ability of the Hypnotic Induction Profile configuration for treatment responsivity needs to be studied further. Both short and long-term follow-up studies are needed.

The ultimate goal of future studies is to validate or disprove the hypothesis that quick assessment of hypnotizability can become a diagnostic probe that can clarify diagnosis and aid in the treatment choice. If the hypothesis is correct, such an assessment might make possible:

1. Identification of those patients capable of internalized change with commitment and self-mastery for whom the various psychotherapies would be the preferred treatment; that is, the cognitive analytic therapies for the Apollonian to the more persuasive affect-laden guidance therapies for Dionysians.

2. Identify those patients with limited capacity for internalized change, who need psychotherapy with the additional help from the extensive psychoactive drug repertory.

3. Identify those with no discernible capacity for internal change or commitment, who therefore will require total dependency upon medication and/or social-network support and supervision.

This triage model puts a disciplined emphasis upon the patients' needs, rather than on the therapists' preferred school of treatment. Further, it allows for a more systematic study of treatment effectiveness.

CONCLUSION

Somebody once said, "If you can measure it, it is science; everything else is poetry." It is ironic that a clinical phenomenon that was once dismissed as nothing but imagination is now being subjected to the discipline of measurement and shows promise of becoming a useful clinical instrument to sharpen differential diagnosis, aid in selecting appropriate treatment strategy and accelerate treatment responsivity for selected patients. □

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