PSYCHOPHYSIOLOGICAL ROLE INDUCTION OR THE TROJAN HORSE PROCEDURE

It is absolutely essential immediately to move the patient presenting physical complaints without physical findings toward a psychophysiological model and away from a biomedical model (mind–body dichotomy model) of one’s presenting complaints. The psychophysiological model is implemented through a role induction which should be administered within the first three sessions of patient contact, before the window of hope and opportunity, temporarily opened by a new therapy context, closes in the patient’s head. The psychophysiological role induction is an effort to challenge and change the patient’s perception of the possible origins of one’s somatic complaint. This is done by challenging the patient’s prior beliefs about the extent to which one’s thoughts can influence or do in fact inaccurately reflect one’s biological functions. This is accomplished through a psychophysiological role induction, which uses what I call a Trojan Horse Procedure. This procedure has at least four components, which start on the outside with somatic symptoms and work their way upward into the patient’s head. (See Table 7.)

For the patient who presents somatic complaints without physical findings and who is skeptical about a referral to a psychologist, the initial interview can be conducted in the psychophysiological laboratory rather than in a consulting room. The psychologist should meet the patient in a white laboratory coat and confine his initial questions to very objective and quantitative questions. For example, “What physical complaints do you have today? When did these symptoms start and how long do they last, etc., etc.?” When the psychologist knows the nature, location, duration, and intensity of the patient’s physical symptoms he
Table 7. Example of Physiological Role Induction

<table>
<thead>
<tr>
<th>Session</th>
<th>Session activity</th>
<th>Time (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Initial interview to evaluate candidacy for therapy</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Testing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Paper-and-pencil tests</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Harvard Hypnotic Scale</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Psychophysiological stress profile</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Behavioral EEG</td>
<td>1½</td>
</tr>
<tr>
<td>3</td>
<td>Feedback on interview and test results</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Therapy formally begins</td>
<td></td>
</tr>
</tbody>
</table>

or she is ready to proceed to component one (psychophysiological demonstration) of the Trojan Horse Procedure.

Psychophysiological Demonstrations

The first component is in essence a high credibility psychophysiological demonstration of the mind–body interaction model. Three types of psychophysiological demonstrations obviously challenge the mind–body dichotomy. The first psychophysiological demonstration works by directly demonstrating on the patient’s own physical body that cognitions can alter biological functions. If prior hypnotic testing indicates that the patient has good hypnotic ability (e.g., Harvard score 9–12), then a reversible anesthesia, a catalepsy, a muscular inhibition, or an involuntary movement can be induced in an area of the patient’s body unrelated to his presenting symptom. This procedure, because it is counterexpectational, startles the patient and captures his or her attention for several weeks.

A second psychophysiological demonstration is appropriate for the patient of moderate–hypnotic ability. If the patient has only moderate- or low-hypnotic ability (Harvard score 7–0), one or more of several other psychophysiological demonstrations can be arranged to induce faith in mind–body interactions. For example, a variety of physiological functions can be monitored (e.g., heart rate, blood pressure, EMG, skin conductance, temperature, EEG-alpha density) under conditions of habituation. At the end of the habituation period the patient should be shown the stable baselines. Next, the patient should be unexpectedly and briefly (one minute) stressed with perhaps mental arithmetic or
personally sensitive questions. Immediately after the cognitive stress period, the patient’s attention should be drawn to his or her physiological reactivity tracked on the strip chart. The patient’s attention should particularly be focused on that physiological system that is most reactive (either in terms of increased elevation or variability) and the one that takes the longest to return to the prior baseline after the brief cognitive stressor is terminated. The patient should be encouraged to ponder these physiological tracings and their implications for how the patient responds to transient psychosocial stressors in everyday life. The patient has now seen that a particular biological system in his or her own body is particularly reactive to psychological stress. The patient has seen that certain biological systems go on red-alert too easily and stay there long after the cognitive stressor is removed. The patient should recognize that chronic intermittent triggering of the red-alert system by transient or enduring psychosocial conflicts (e.g., a problem child, an unhappy marriage) has something to do with why the patient is in your office today. This little psychophysiological stress demonstration provides a credible face-saving biological rationale for the patient’s physical complaints and demonstrates that psychosocial stress can profoundly alter biological functions. It should be noted that chronic functional activation may eventually lead to structural breakdown or erosion of organ systems and clinical complaints.

A third cogent method of demonstrating the inaccuracy or incompleteness of the patient’s awareness of mind–body interaction is through a strip chart recording of a 10-minute baseline of frontal EMG. This strip chart can be used cogently to demonstrate how incomplete and/or inaccurate a patient’s verbal-subjective estimate of muscle tension is when compared to an objective quantitative baseline EMG measure of muscle tension. For example, before a frontal EMG baseline is made the patient can be asked to estimate the extent of his or her muscle tension in the upper portion of the body, on a subjectively anchored scale (SUD scale, or subjective units of disturbance) ranging from zero (totally relaxed muscles) to 50 (extremely tense, an unbearable level of muscle tension requiring escape from laboratory setting and therapist) on the strip chart. Typically, even the anxious patient underestimates the level of EMG with, for example, a verbal rating of 25 or 30 on the chart. A 10-minute frontal EMG baseline recording is then made (5 minutes eyes open, 5 minutes eyes closed). Nearly always the objective measure of EMG is much higher than the subjective estimate and is often around 35 or 50 on the chart. The patient is directly and clearly confronted with the discrepancy between his verbal-subjective estimate and the objective EMG recording. This discrepancy is usually so large that the patient is startled and taken aback by the extent of insensitivity
to his or her own body. In high hypnotizables one must dilute this demonstration and use it cautiously lest it trigger an exacerbation of the pain by suggesting that the patient should be having more pain than the patient is currently reporting. The patient is told that he or she has psychologically habituated to an abnormal physiological state of muscular bracing and that as progress occurs in psychophysiological therapy, the recognition of the level of muscle tension will become less blunted and more accurate. This increased sensitivity will enable the patient to identify early and defuse acute episodes of muscular bracing. Hypertension is another example of a psychologically silent, but physiologically important, change that has health consequences. I have found that this verbal-subjective versus EMG (frontal) discrepancy is nearly always quite large in patients with chronic functional disorders. (See Figures 13a, 13b.)

The procedures cited usually have a startling and credibility-building effect on the patient. It often induces a shift in the manner in which the patient perceives physical symptoms that is similar to opening an entirely new sunroof in the patient's head. It also provides a credible face-saving biological rationale for the physical symptoms that may, in fact, be the final common pathway for multiple psychosocial conflicts in the patient's life.
Figure 13b. Pretherapy low-hypnotic-ability (female patient, age 41 years).

Educational Model

The second component of the role induction is the shaping of the patient’s cognitions into an educational model of illness, as opposed to a biomedical model in which the patient is the passive recipient of treat-
ments. The psychophysiological demonstration is essentially a learning, or educational experience, about personal mind–body interaction. There are at least three important events that need to occur during this shift in perception of the therapy process from the passive patient role in biomedicine to the active participating student role in health education.

The first event is that the patient should not be pressured to give up the symptoms but rather to track, measure, and monitor them daily for educational and scientific purposes (i.e., the patient will collect baseline data on the frequency and intensity of his or her own symptoms). This psychologically turns the tables on the patient who, for the first time in the course of therapy, is paradoxically told not only to keep the symptoms for a while longer but also to monitor and record their frequency and intensity before they fade. Psychologically, this defuses a weapon the patient could have used to intimidate the therapist. There is also the confident, implicit suggestion that the symptom will fade in intensity. Under these conditions of reduced pressure to stop using or experimenting with the role of sickness (Parsons, 1965), some patients improve dramatically, at least temporarily. This invitation to the patient to continue to experiment for a while longer with the role of sickness occupies the patient’s ground, forcing the patient out of a well-practiced and entrenched turf. This procedure is called “spitting in the patient’s soup,” making it distasteful for consumption. The second event is that the patient is told that his or her candidacy for entrance into the therapy program is being carefully evaluated, based on the patient’s performance on a battery of tests (see Chapter 1 on the high-risk model). Because of the large behavioral component in chronic diseases or disorders (unlike acute active disease), the patient has to earn admission to therapy. The patient needs to take these tests in order to be evaluated for therapy at our clinic. The patient is told that we have limited resources, skills, and time, and that we cannot help everybody. We are looking for a few good patients who are willing to work hard in therapy to improve their symptoms. We believe that only those who will work hard deserve our help, because only they will improve fairly soon. The initiation rites involve taking a tedious battery of seven tests in our office that will consume about two sessions (3 hours) of patient contact time. This battery of tests is like a set of hurdles that forces the patient up front to make a decision to mobilize, and it operates as a screen for patient-generated motivation. Successful completion of each consecutive hurdle on the course increases the probability of admission to what may appear to the patient to be an exclusive private school or club. The fact is that this empirical procedure, for whatever private reasons, appears to motivate over 90% of the new intakes, and promotes a commitment up front to unpleasant and hard therapeutic work. It is rare to have a patient
drop out after the admission procedure is outlined and even more rare after the test battery and role induction is completed. A third event in shifting to an educational model is to disable secondary gain or the rewards of the “sick role” and physical symptoms. To begin with, commitment to therapeutic work and rehabilitation makes acceptance of the rewards of the patient role ego-alien. Secondary gain also can be reduced by instructing significant others to withdraw attention, sympathy, etc., from the patient whenever the patient is expressing complaints and to be very alert, attentive, and gradually more empathic with the patient at the slightest indication that the patient’s complaints or symptoms are reducing in frequency or intensity. Significant others are also told to inform the patient that they will gradually be escalating their expectations about what the patient can do for him or herself and others. Pain and other minor psychotropic medications are shifted from a PRN schedule to a fixed interval schedule during phase out.

Co-Investigator

The third component in the psychophysiological role induction is to move the patient from an educational model of the therapy process in which the role of student passes into that of co-investigator. The patient now graduates into an analytic, objective, scientific co-investigator of his or her own symptoms. This third component of the Trojan Horse procedure begins as usual on the periphery of the patient’s body, and specifically with a focus on the symptoms. This can occur only after the patient can feel some self-control over the symptoms (frequency and intensity are reduced), which can tremendously increase the patient’s self-esteem. I may enter the patient’s body at the point of his low backache but eventually I need to work my way into his head and his central processes. This symptomatic focus is not without risk because as the patient starts to collect objective and quantitative (frequency or intensity counts) data on the symptoms, the patient could temporarily get worse even for some reason unrelated to data collection, and the personal data will make that relapse abundantly clear. The patient is prepared for these relapses by being shown up front the normal, individual learning curve, which is marked by erratic and slow acquisition. This means that first the patient may have to get worse before he or she can get better. Because the patient has to take risks and experiment with more effective coping behaviors, the course of learning real control of symptoms is not a short, positively accelerating course for which there is a “quick fix.” Rather, it is an uneven course with gradual elevation interrupted by regression as physiological self-regulatory competencies develop.
He is shown that regressions are particularly likely during transition points in therapy as new tasks are encountered. Often this self-analytic, self-monitoring approach identifies some maintaining causative factors, in the environment or in the patient, that are associated with at least a temporary reduction in frequency or intensity of symptoms. Instructing the patient to practice an audio tape of deep muscle relaxation laced with positive, ego-strengthening suggestions increases the probability of at least temporary clinical improvement. Temporary placebo effects can also be generated by the quantitative scientific approach, the use of biomedical monitoring instruments in therapy (Wickramasekera, 1977b), and the verbal suggestions on the tape. It is important reliably to get this short-term, temporary reduction in clinical symptoms early in therapy, because it increases the patient’s confidence in the therapist and makes the patient more willing later to risk exploring deeper underlying causes and more complex psychosocial issues maintaining the symptoms. Hence, our short-term goal is to put out the fire first, and to reserve looking for the matches until we have fully entered the patient’s head through his or her backache or headache.

During this Trojan Horse phase of therapy, while the patient collects data on the symptoms, the patient may serendipitously stumble over or discover several subtle contingencies between thoughts, attitudes, and environmental events and symptoms. These discoveries can increase the patient’s curiosity about larger issues in his or her life. It is very important to reinforce and support this curiosity. These findings are discussed analytically in therapy and can be used by the patient to expand a sense of self-regulation, within the limits of the symptoms. This early sense of even sporadic and modest self-control of previously immobilizing symptoms increases the patient’s self-esteem, further motivating the patient to continue the painful process of exploration of self, as it interfaces with the interpersonal and physical environment.

Out of the Closet—The Psychotherapy Candidate

The fourth and final component in the psychophysiological role induction is directly and openly to investigate the psychosocial antecedents and consequences of the patient’s symptoms. Now that the patient is no longer an imposter, he or she is out of the closet and is a psychotherapy candidate. The patient can now be approached just as one would do in traditional intensive psychotherapy with a patient presenting psychological symptoms (e.g., anxiety, guilt, depression, etc.) The difference is that there is often concurrent physiological monitoring (heart rate, EMG, blood pressure, skin conductance, peripheral skin temperature, etc.) to explore, identify, or confirm suspected sensitive topics. This
physiological information is shared concurrently with the patient, so that the patient becomes a co-investigator in the exploration of the headwaters of the disorders and symptoms. At this fourth step, the patient’s symptoms have typically shifted from predominantly somatic (pain, dizziness, etc.) to predominately psychological complaints (e.g., phobias, anxiety, depression, etc.) The polygraph is used in these sessions as a truth detector because the patient’s body may be closer to the patient’s unconscious mind. Often the most significant personal beliefs or mythologies are unconscious or “unattended” (Bowers, 1984) and need to be identified, examined, and then reframed or falsified.

The patient now shares with the therapist the sense of excitement of a co-investigator using all available tools to narrow down and corner the prey (dysfunctional beliefs or perceptions). The patient’s body now has become a good friend and ally, who deserves more respectful attention because it is a mirror that is less easily distorted by ego defenses like denial, projection, repression, etc. This attitudinal shift often leads to important and durable life-style choices and changes (decisions to stop smoking, lose weight, do regular physical exercise, etc.) intended to protect and enhance one’s body. These are a reflection of the growing recognition by the patient that, as one might put it, “this is the only body I will ever have.” This body deserves care and respect, because although one can change one’s home or residence, one is stuck with the same physical body.

If the unconscious perceptions, fantasies, and beliefs that cause and sustain physical symptoms have not been identified by psychophysiological monitoring during psychotherapy, then a variety of procedures that inhibit critical-analytic brain functions (ego defenses) and enable the patient to access and process present, past, or future information in a fresh way, may be used. For example, techniques that range from live role playing, the gestalt empty-chair technique, to in vitro or in vivo desensitization, can be used to access new perspectives on old problems. These techniques enable the patient to look at chronic problematic areas from multiple viewpoints that have been previously unattended but are potentially within the sphere of consciousness. In using these techniques, it is important also to emphasize the physiological habituation or extinction value of these procedures and to use concurrent physiological monitoring to give the patient highly credible sources of information (biomedical instruments) that extinction of fear and avoidance is occurring. In using these procedures, it is equally important to attend to any fresh information or new ways in which old problems can be conceptually represented in consciousness with new labels or frames. This reframing in language can have new physiological and behavioral consequences for the ways in which old problems are viewed and ap-
approached. For example, a patient may recognize that when he cannot fight or flee from a problematic situation, he can creatively search for new ways to flow with the situation until a more satisfactory remedy is available.

Hetero- or self-hypnosis is another technique of accessing a fresh perspective on old problems. A procedure like low arousal physiological training or self-hypnosis can often enable a patient to view an existing life problem from a fresh perspective. There is some evidence that the mind is more creative in the low arousal or self-hypnotic state (Bowers & Bowers, 1979; Fromm et al., 1981). Also, in the low arousal state the patient may be more responsive to new information and fresh ways of looking at old problems that the therapist might suggest (heterohypnosis). These fresh reformulations of old problems can be repeatedly rehearsed for desensitization in the low arousal state with posthypnotic suggestions for more confident implementation and creative problem solving in the waking pedestrian world. The low arousal state and sensory deprivation have been shown (Wickramasekera, 1977a) temporarily to increase even the suggestibility of people of moderate- or low-hypnotic ability (Harvard 0–8). It may be possible to use these conditions to enhance suggestions that the patient will have night dreams that will clarify or resolve the meaning of waking conflicts.

The enhanced suggestibility of the low arousal state and the growing positive transference situation can be used to challenge the patient's dysfunctional attributions (“My pain is due to something I ate”; “It is important to look for scapegoats.”) and irrational beliefs, and to encourage the patient to act experimentally (take a risk) on new assumptions or hypotheses about human relationships, etc. It is crucial on this final step explicitly to encourage risk taking that may involve confronting the prospect of failure, pain, and defeat. New and more effective coping strategies can then be developed even in the face of anticipated fear and pain, and new support systems (friends, social groups, church, athletic clubs, professional groups, etc.) can be found.

In the final analysis, it is the patient's growing personal competencies that will provide the best defense against further symptomatic regressions, and not a mere freedom from symptoms. All of the previously cited procedures will amplify the placebo effect (CR), which is known (Wickramasekera, 1980) to be stronger with intermittent reinforcement from active ingredients (UCS). These procedures also access central conscious or unconscious processes. These central changes increase the probability of transferring coping skills learned in the psychophysiological laboratory to the natural habitat. By teaching analytic problem solving, interpersonal risk taking, and assertiveness skills, and by increasing role flexibility, we immunize the patient against symp-
tomatic relapses and future sensitization. Preparation for more effective conflict resolution reduces symptomatic relapses by increasing personal competencies. In this final stage of therapy, the psychophysiological therapist is earmarked as a new kind of psychotherapist, who with the patient's permission encourages one to open the city gates to new sources of information (dreams, daydreams, fantasies, role playing, etc.) that would previously have been suspected and rejected as alien invaders at the city walls. Therefore the patient, rather than escaping from psychological pain through defenses like somatization, nomadism or acting out, accepts the responsibility of dealing with psychological conflicts at the appropriate level by using appropriate psychological mechanisms like insight, abreaction, desensitization, reframing, and the like. At this point of psychological maturation the incidence of somatic presentation reduces and the incidence of psychological presentations (anxiety, depression, fear, loneliness, etc.) increase in therapy. The patient is no longer a closet psychotherapy case or a medical imposter and is less likely to be able successfully to use somatization as a method of transducing psychological conflicts into physical presentations in the future.

Data on the Effects of the Psychophysiological Role Induction

The following are data from two equal (5-month) periods (A + B) in which the role induction was used to orient patients to the services of the Behavioral Medicine Clinic and Psychophysiology Laboratory (see Figure 14). Period A represents a phase when the role induction procedure was used nonsystematically by the present therapist in the early years of the clinic and laboratory. Period B is based on a recent patient sample when the present therapist was systematically using the role induction procedure. The number and type of patients (age, sex, diagnosis, chronicity, presenting problems, etc.) was very comparable in Periods A and B. The present author did the role induction in both cases, A and B.

During Period A (N=20), 60% of the referrals were retained after the psychophysiological role induction and 40% of the referrals dropped out. This 40% dropout rate is based on those patients who dropped out after the initial interview, after testing, and who did not come back for therapy after the feedback session. The feedback session presents the results of the clinical interview and all the psychological and psychophysiological tests. In this session the patient is essentially told the results of his or her application for candidacy for psychophysiological therapy. Sixty percent of the initial patient pool survived the evaluation procedure and started therapy. Based on a survey of 600 community
mental health centers, Phillips (1985) concluded that of those patients who present themselves for psychotherapy only 50% return after the initial interview. It is well known that the dropout rate is much higher for the patient who presents somatic complaints without physical findings.

During Period B the role induction was used systematically with all patients screened. Eighty-three percent of the patients returned for therapy after the feedback session and 17% of the patients had dropped out after the feedback session. This dropout rate of 17% is particularly impressive because included in it are patients who the evaluation indicated were inappropriate for our services and who were referred elsewhere.

References


