Style in the Perception of Affect and its Relation to Mental Health

by

MICHAEL BERNET

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Date

Harold W Wilensky
Chair of Examining Committee

7/26/95
Date

Executive Officer

Professor Howard Wilensky
Professor Harold Ehrlichman
Professor Glen Hass
Supervisory Committee

THE CITY UNIVERSITY OF NEW YORK

Abstract

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Adviser: Professor Harold Wilensky

A 93-item self-report measure, Styles in Perception of Affect Scale (SIPOAS), was developed to explore the construct "Being in Touch with One's Feelings," within the framework of classical and contemporary theories of emotions. SIPOAS discriminates among preferences for three perceptual styles conceptualized as mediating between bodily feelings and the resultant emotional states: Based on Body (BB) style perceives emotions through integrated awareness of subtle physical changes; Emphasis on Evaluation (EE) interprets feelings by concerned introspection; Looking to Logic (LL) uses reasoning to understand and control feelings.

Scale items reflected face and content validity: internal reliability of the SIPOAS styles ranged from .81 to .86 (*N*=987), mean item-scale correlation was .42.

The BB style correlates with established measures of mental health and with warmth, aesthetics and feelings; EE correlates with neuroticism, vigilance, apprehension and tension; LL shows no correlation with mental health but correlates negatively with feelings and warmth. Ratings of mental health by the participants' practitioners show similar correlations. Participants' self-report of awareness of small changes in bodily feelings correlate positively with BB, and negatively with EE and LL. Self reports of general satisfaction correlate positively with BB, negatively with EE.

Mean EE score decreases significantly with age; BB score rises with age among those reporting extensive therapeutic experience; LL rises absent extensive therapy. The high and consistent correlation of EE with the components of neuroticism and discontent suggests that limited awareness of internal bodily cues as mediators

between feeling and emotion, may be a significant, and hitherto neglected, component of neuroticism.

The commonalties of effective therapies were also explored. BB correlated highly with the personal relevance of various psychotherapies (e.g. Gestalt, Jungian, Rogerian), body modalities (e.g. dance and massage therapies), and spiritual disciplines (e.g. meditation); LL correlated negatively. Combinations of psychotherapies with physical and spiritual modalities significantly enhanced correlations with BB.

The study further suggests that therapies which address physical feelings at the sub-cortical level, and those which increase the ability to perceive subtle feelings, may optimize mental health and personal functioning.

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This study would have been impossible without the inspiration, assistance and encouragement of many. Each, at one time or another, has had a dominant influence; accordingly, names are grouped in either alphabetical or chronological order.

My father, Julius Bernet, was of paramount importance in his abbreviated life; from him I learned to think, to question and to remain curious, to defend my values and my beliefs yet be tolerant of others, to respect authority even while disputing it, and to persevere and remain steadfast against all odds. I have tried to pass on my heritage to Miriam and Ilan; Yoram and Eytan; Matan; Adam, Abigail and Avinoam (whom I have yet to meet); their love enabled me to transcend the anguish of my childhood.

My psychological education started at an early age with books, and books continue to be my delight. Among the giants from whom I have drawn inspiration are Eric Berne, Sigmund Freud, Arnold Lazarus, Abe Maslow, Fritz Perls, Wilhelm Reich, Carl Rogers, and the authors/sages of *Pirkei Avot.*

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This study enlisted the participation of more than 1300 subjects, who laid bare their lives and values in an onerous questionnaire. To them, to those who encouraged their friends to participate, to those who made the SIPOAS questionnaire available to

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1. Introduction

The proposition

This dissertation sets out to develop a measure of the construct "being in touch with one's feelings," and to examine the validity of the common assumption that "being in touch with one's feelings" is a correlate of mental health. A concurrent aim is to determine the extent to which "being in touch with one's feelings" is a factor, direct or incidental, in the success of certain modalities of psychotherapy, and of certain other learning or healing processes.

Being in touch with one's feelings

In popular parlance, "being in touch with one's feelings" is generally viewed as the ability to recognize emotions, to acknowledge them, to express them, and to respond appropriately to events that engage the emotions.

In this study "being in touch with one's feelings" is more specifically defined as the ability to recognize subtle nuances of *bodily feelings and sensation*, to acknowledge them, to be aware of the emotions that they trigger, and to relate them appropriately to events that engage the emotions and that ensue from the emotions.

"Being in touch with one's feelings" is axiomatically a relative concept; only severe deprivation of sensory or cognitive function could explain a total insensitivity to physical feelings such as pain, fear, hunger or grief (see also James 1894/1994, p 209). Aside from these rare cases, one might expect to find Individual differences in various aspects of the awareness of feelings:

- the threshold of sensitivity to small nuances of feelings
- the ability to differentiate among diverse but similar feelings
- the time required to become aware of the onset or change of feelings
- the ability to integrate the continuously varying feeling components
- the ability to associate feelings with appraisals, memories and cognitions
- the ability to give appropriate behavioral response and expression to feelings.

Psychotherapy

"Psychotherapy" is used in this study in the wider definition proposed by Wolberg (1967, p.3): "the treatment, by psychological means, of problems of an emotional nature in which a trained person deliberately establishes a professional relationship with the patient with the object (1) of removing, modifying, or retarding certain symptoms, (2) of mediating disturbed patterns of behavior, and (3) of promoting positive personality growth and development." In this sense it covers a spectrum extending not only from orthodox Freudian psychoanalysis to therapies based on rigid Skinnerian behaviorism, but could include also physical (e.g., dance therapy) or spiritual (e.g., meditation) modalities.

Feelings, emotion, and affect

> Since at least the time of James and Cannon, the interchangeable use of terms referring to "feelings" or "affects" on the one hand, and "emotional behavior" on the other has encouraged endless polemic exchange. (Brady 1967, p. 71).
>
> Within the literature on emotion many terms are employed quite freely. Their usage is inconsistent and they are seldom adequately defined. Not least of these is "emotion" itself. Other words which have high association value but which nevertheless denote little are "feeling," "affect," and "emotionality." (Strongman 1987, p 7)
>
> The word "emotion" as a class name is misleading because it leads us to the untenable conclusion that some set of dimensions can describe the multifarious

> experiences said to be represented in the lexicon of emotion terms. . . . Emotion terms have so many diverse meanings and are already so freighted with reifications, that we ought to try to use another language to speak about the conduct we study (Sarbin, 1989, pp. 79 & 97).

The inconsistencies, the contradictions, and the mutually exclusive terminology in the definitions of "feelings," "affects" and "emotions" can be traced in part to the early concepts of emotions, which emerged from the world of philosophy, not of psychology (Strongman 1987, pp. 4-5), and in part to confused nuances in translating terms from German to English in the early days of psychology (e.g., Wundt and Freud). In larger part, however, they stem from genuine differences in concept and approach, not the least of which is that for much of the time, researchers and scholars have looked at only one particular aspect of these processes but have implied or assumed that they covered the entire territory. "The different approaches and theories of emotion are neither exclusive nor contradictory; they are complimentary and reflect the complexity of the emotional process" (Fonberg, 1986, p. 302). It is only during the last decade or so that research into neuro-endocrinology and psychoneurology has permitted the formulation of a number of schemata of the emotions that comfortably reconcile many earlier concepts that had appeared antagonistic.

William James revisited

Current knowledge of the nature of emotion attests to the prescience of William James. His seminal work "What is an emotion?" (1884), was unquestionably speculative, introspective, and philosophical in nature rather than scientific, and his theory fell into disrepute following Cannon's critiques (1927, 1931). Today, however, James's concept of emotion has been largely vindicated (see also Ellsworth, 1994; Lang, 1994).

It is worth examining the basic components of the Jamesian concept of emotions; except where otherwise noted, all citations in this subsection are from James (1884):

- Emotion is the perception of the complex and subtle changes in the body that follow perception of the stimulus. "Bodily disturbances are the 'manifestation,' . . . 'expression,' or 'natural language'" of emotions.
- Emotion is action potential. "The bodily changes follow directly the PERCEPTION of the exciting fact . . . our feeling of the same changes as they occur IS the emotion." James considered and rejected the possibility that an emotion could be a manifestation of the cognitive intent to engage in action, but concluded that it was the awareness of actual action and change, however subtle. "Moods, affections, and passions [are] . . . made up of those bodily changes we ordinarily call their expression or consequence."

Initially, James excluded certain emotions from his consideration, those relating to aesthetic or ideational stimuli, in which, he wrongly assumed "the degree of the feeling" was insufficient "to quicken the pulse or breathing, or to prompt to movements of either the body or the face" or as "having no obvious bodily expression for their consequence." Nevertheless, he used clearly somatic terms in describing them: "feelings of pleasure and displeasure, interest and excitement," that "charm us" or "tire us" and constitute an "intellectual delight" or "torment." (He appeared to have had a change in mind just a few years later when he wrote "A glow, a pang in the heart, a shudder, a shiver down the back, a moistening of the eyes, a stirring of the hypogastrium, and a thousand unnameable symptoms besides, may be felt the moment the beauty excites us" (1890, as cited in Ellsworth, 1994, p 225).

- Emotions can encompass feedback from the entire body, both the visceral and peripheral. Izard (1977) points up the unfortunate linkage of James's theory with Lange's theory which emphasized the primary importance for emotions of vasomotor disturbances in the visceral and glandular organs. As a result, according to Izard, mainstream psychology virtually ignored the role of the somatic system and of facial feedback for over 70 years.

James acknowledged the relevance of physical changes in the entire body: "the heart, entire circulatory system, blood vessels of the abdomen, bladder, bowels, glands

of the mouth, throat, skin." He incorporated Darwin's views of the relevance of the face for emotions and specifically emphasized "the continuous co-operation of the voluntary muscles in our emotional states. . . . their inward tension alters to suit each varying mood, and is felt as a difference of tone or of strain."

- Emotions can be infinitely complex, and at the same time unique to the emotional event. Given the many possible "permutations and combinations" of voluntary and autonomic responses (the "almost infinitely numerous and subtle" visceral manifestations), "no shade of emotion, however slight, should be without a bodily reverberation as unique . . . as is the mental mood itself."
- Emotions are experienced with near-instantaneous speed. The bodily changes subsequent to perception of stimuli, are initiated "quick as a flash" in signals from the cortex. "Every one of the bodily changes, whatever it be, is felt, acutely or obscurely, the moment it occurs."
- Emotions vary in intensity. The various parts and organs are "affected gravely in certain severe emotions, and are unquestionably affected transiently when the emotions are of a lighter sort."
- Emotional processing takes place on two levels. James discussed whether the emotions are located in "separate and special centers of the brain . . . or else they correspond to processes occurring in the motor and sensory centers." Formulating his theory long before there was an understanding of the complexity of the limbic system and its control function in the modulation of the emotional processes, James limited his thinking to the perceptual-evaluative aspects of the sensory awareness of emotions--and thus opted for the cortex as "seat" for the emotions. As Panskepp notes with obvious regret (1986, p. 119): "the classic James-Lange theory of emotions could have been modified a long time ago to assimilate developing knowledge concerning the existence of a visceral-emotional [i.e. hypothalamic-limbic] nervous system."
- The emotional process is cognitive-evaluative. Having no knowledge of the control functions of the limbic system, James had to limit his vision to part only of the process.

In this formulation, the perception of stimuli on the cortical level directly stimulates changes in the conditions of muscle, skin and viscera; these changes, when perceived in the cortex "combine with it in consciousness and transform it from an object-simply-apprehended into an object-emotionally-felt. . . . The emotional brain-processes not only resemble the ordinary sensorial brain-processes, but in very truth are nothing but such processes variously combined."

- The suppression of emotions is maladaptive. "Every perception must lead to some nervous result. If this be the normal emotional expression, it soon expends itself, and in the natural course of things a calm succeeds. But if the normal issue be blocked from any cause, the currents may under certain circumstances invade other tracts, and there work different and worse effects."

Contemporary definitions

Many contemporary views of emotions are clearly not incompatible with the Jamesian definitions of a century ago. Kleinginna and Kleinginna (1981) surveyed some of the hundreds of definitions of the term "emotion" and attempted a consensual definition:

> Emotion is a complex set of interactions among subjective and objective factors, mediated by neural/hormonal systems, which can (a) give rise to affective experiences such as feelings of arousal, pleasure/displeasure; (b) generate cognitive processes such as emotionally relevant perceptual effects, appraisals, labeling processes; (c) activate widespread physiological adjustments to the arousing conditions; and (d) lead to behaviour that is often, but not always, expressive, goal-directed, and adaptive.

Kleinginna and Kleinginna's definition was critiqued by Strongman (1987): "It embraces all possibilities, it includes too much."

A more subjective and yet generalized definition, one that moreover is accessible to the lay person, is given by Fonberg (1986, p 302):

> Emotion is the nervous process that determines what kind of stimuli coming from the inner and outer environments are desirable for the organism and what are not. The desirable stimuli are pleasant, and it is comfortable to move toward them; the undesirable are unpleasant, and it is more comfortable to move away from them.

Fonberg appears to give emotion an exclusively evaluative function, as did Arnold (1970b) in defining affective memory (i.e. "the revival of an earlier appraisal") as

> the basis on which new situations are appraised . . . Every appraisal induces an impulse toward what is appraised as good, beneficial, and away from what is appraised as bad, harmful . . . . The hope for educating our emotions must rest on the possibility of correcting our present appraisal and through it our affective memory (p. 283).

Izard (1977) gave a succinct explanation that sets boundaries rather than defines: "An emotion is a complex phenomenon having neuro-physiological, motor expressive, and experiential components" (p. 64).

Frijda (1986) explains emotions briefly but loosely as "tendencies to establish, maintain, or disrupt a relationship with the environment" (p. 71). However, he appends defining specifics: "Emotional experience can take three major forms: awareness of situational meaning structure, awareness of autonomic arousal, and awareness of action readiness" which correlate respectively with "information from the environment, autonomic response, and readiness-for/feedback-from behavioral response. . . Emotional experience, first of all, is experience of the situation" (p. 193).

Greenberg and Safran (1990, p. 59) define emotion as:

> a biologically adaptive system that presents people with information about their reactions to situation and that organises them for action. The emotion system integrates information across a variety of information-processing domains and, as such, is the most complex, integrative information-processing system humans possess, providing a constant readout of the person's current state.

Wallbott and Scherer (1989) view emotional experience as a syndrome involving evaluation, physiological change, motor expression, motivational effects and action tendencies, and subjective feeling state. Emotional experience is defined as ". . . the conscious representation of changes in the states of these subsystems that occurs in reaction to an emotion-eliciting situation" (p. 56).

One brief but comprehensive definition, that could be subscribed to by most contemporary theoreticians of emotion, was offered by Lazarus, Kanner and Folkman (1980, p. 198):

> Emotions are complex, organized states . . . consisting of cognitive appraisals, action impulses, and patterned somatic reactions. Each emotion quality (e.g. anger, anxiety, joy) is distinguished by a different pattern of components . . . Moreover, the three components of emotion are subjectively experienced as a whole, that is a single phenomenon as opposed to separate and distinct responses.

Lazarus subsequently (1991, p. 39) elaborated a more complex theory of emotions:

> . . . the emotion process involves an organized configuration of many variables: antecedent, mediating process, and outcome or response. No single variable is sufficient to explain the emotional outcome, and all variables are interdependent

A recent definition of emotion is given by Plutchik (1990, pp. 34-35)

> A complex chain of events containing both feeling states and impulses to action. . . . the feeling of an emotion is often vague, confused, and obscure [and] can be described by a large number of different words and phrases. . . The subjective feeling states of emotion (that is, the labels we give them) are usually more ambiguous and obscure than the impulse to action.

It is the *impulse to action* that the psychotherapist should explore, suggests Plutchik, rather than the emotion label.

Affect was defined by Izard (1977, p. 65) as

> a general non-specific term that includes all the foregoing motivational states and processes [i.e. emotions, patterns of emotions, and drives]. Thus the affective domain includes the fundamental emotions, pattern of emotions, drives, and their interactions. The affective domain also embraces states or processes in which one of the affects (emotions, drives) is linked with or interacting with perception or cognition.

Brady (1967, pp. 71-72) seems to equate feelings and affect:

> . . . Feelings or affective behaviors . . . distinguishable as a generic class of interactions between organism and environment, the primary consequences of which are localizable within the reacting organism rather than in exteroceptive stimulus objects. . . . Perhaps the most salient characteristic of feelings is their intimate association with autonomic-visceral, endocrine, and proprioceptive activities.

By contrast, emotional behavior is only a limited subset of affective and feeling behaviors,

> part of a broad class of effective behaviors primarily directed toward changing some aspect of the organism's exteroceptive stimulus environment. Emotional behavior seems most parsimoniously considered to be only one unique class clearly separated from many other classes of affective and effective interaction patterns. (Brady, 1967, pp. 71-72)

Feeling, emotion and affect: operational definitions

For the purpose of this study, labels are required to describe different aspects in the area of feelings, emotion and affects. Given the difficulty encountered by scholars, over the past century and more, in arriving at unequivocal and consensual definitions of "feelings," "emotion," and "affect"--and the even greater difficulty in differentiating among them--it would be both hazardous and arrogant to select any one of the many definitions and bend it to meet the heuristic needs of this study. Accordingly, for this study only, and without in any way implying that these definitions are the equal of any

previously arrived at by others, the following ad hoc operational definitions have been made.

Feelings

Feelings are physical sensations within the body, such as warmth, tension, pulsation, flow, and motion, occurring at the visceral, muscular, vascular or surface level. In this study we are concerned specifically with feelings as the concomitants of, as stimuli for, or as reactions to, the emotion.

This definition has both historic and linguistic justification. "Feeling" was the word generally used in the early days of psychology to describe physical sensations. "Feelings" was Titchener's translation for Wundt's Gefuhlselemente, and Titchener also used the term in referring to physical sensations in the body, such as "feel hungry," "feel tired," "feel comfortable" (Titchener, 1908, p. 34; cited in Arnold, 1960). Linguistically, Webster's New World Dictionary (1988) offers three groups of definitions for "feeling" in various physical senses before offering "4 a) emotion or sensitivity."

Feelings, according to the above operational definition, are innate; they occur spontaneously within the body, regardless of the level of consciousness, awareness, arousal or intellect. Most feelings are the background "noises" of the body doing its work, coming to foreground awareness only when they deviate from the routine; with only little effort and attention and perhaps practice many may, however, be made conscious. Feelings are essential for homeostasis: they signal departure from homeostasis and they prompt action ("action potential") to correct this.

When feelings are *evaluated and interpreted*, at any level of consciousness, or when they provoke action tendency, the *process* becomes an emotion. Raw feelings (i.e. physical sensations, that may or may not have reached the threshold of cortical awareness) may evoke responses in conscious mental processes (memories, cognitions and evaluations), or in unconscious processes (associations), or they may evoke additional physical feelings; any of these may in turn evoke further physical feelings that evoke more conscious or unconscious mental processes and so on. The

aroused feelings may be action tendencies. In the views of some clinicians (e.g. Janov, 1970, 1972; Reich, 1961), the aroused feelings are often evoked memories and associations to earlier physical stimuli or responses, including action tendencies that remained incomplete in the past; from that viewpoint, therapeutic abreaction may be considered as the process of successfully completing the now-historic action tendency.

Feelings, and their associated emotions, can evoke a complex and interactive combination of feelings, memories, associations, cognitions, labels, interpretations and actions or potential actions, any of which may act on, or be acted upon by, many, many others, in a process dubbed by Tomkins (1979) "psychological magnification."

In this study, the principal application of this meaning of the term "Feelings" is as part of the concept "being in touch with one's feelings." Specifically, then, "being in touch with one's feelings" refers to the ability, the precision, the rapidity, and the frequency with which the individual attends to the feeling components, stimuli and responses, that constitute emotions.

Emotions

Frijda's definition (1986) of emotional experience as "experience of the situation" provides a good starting point for the following ad hoc operational definition:

> **Emotion is the process of experiencing, perceiving and evaluating the situation-specific combination of feelings that is the spontaneous (involuntary) response to a stimulus or a combination of stimuli; these stimuli may be external (perceptual), or internal (visceral or somatic), or mental (cognitive--at the conscious, preconscious or unconscious level). Emotion processes information from the environment, from autonomic response, and from readiness-for and feedback-from behavioral response.**

Emotion therefore refers to the processing, the cognition and the evaluative components of affect. (Popularly and in a more limited sense, "emotion" is used to refer to the *label* that is placed--for convenience in attribution and communication--on each unique and specific combination of feelings that is the concomitant of the emotion.)

In this study, the term emotion will be used in essence for the complicated, spontaneous, and evaluative process of responding to, and interacting with, the physical feelings.

Affect

Affect is a problematic term, a translation from the German Affekt, itself a derivation from the Latin affectus, "state of mind or body." It has been used in psychology with much confusion and little unanimity, generally as if it were fully inter-changeable with "emotion"; or more specifically with pleasant/unpleasant ("valenced") feelings (Lewin, 1935) . *As used for this study*, affect has the following meaning:

> **Affect is a general non-specific term referring to that aspect of human experience that comprises the totality of feelings and emotions and their attendant stimuli and responses.**

Affect includes the ramifications of feelings/emotions in memory and associations, i.e., the feedback loops of feelings→action tendency→ associations→ feelings, the evaluation of evaluations, and the feelings about feelings. In this study, the term affect is used (especially in the concept of the Style in Perception of Affect Scale, SIPOAS) to refer to that realm of human experience that comprises feelings and emotions, and attitudes about feelings and emotions and their relevance to experience.

Psychotherapy and feelings

Outcome studies in psychotherapy have shown that the efficacy of therapy varies with the duration of the therapy (Howard, Kopta, Krause & Orlinsky, 1986), with the patient's presenting problem (Luborsky, Chandler, Auerbach, Cohen & Bachrach, 1971), with the level of training or experience of the therapist (Storrow, 1960; Weiss, 1963) or with the match between patient and therapist (Cartright & Lerner, 1963; Filak & Abeles, 1984; Truax & Carkhuff, 1967; Strupp, Wallach & Morgan, 1964).

In the psychotherapeutic session the psychotherapist (endowed with a particular personality style and with a particular amount of experience) does more, however, than

simply face a patient (with a particular personality style); there is also a psycho-therapeutic transaction based on specific structures, values and behaviors. Each "school" of psychotherapy assumes that the psychotherapeutic transaction associated with its techniques is an important ingredient in effecting change in the patient.

Many differing psychotherapeutic modalities, each with its own structures, values and behaviors, are said to be effective in bringing about improvements in functioning and contentment, the principal constituents of what is generally termed "mental health." If the claims for at least some of these modalities are correct, it is implicit that one or both of the following conjectures is true:

Conjecture 1

> Given that there is a range of efficacious psychotherapeutic modalities that differ substantially among themselves in method and process, there must be a factor (or factors) specific to each of these modalities that, *varying with the personality or the presenting problem of the patient*, is responsible for psychotherapeutic success.

It would be highly desirable to identify the correlates that make a *particular* psychotherapeutic modality successful with a *specific* personality style or a specific presenting problem.

Conjecture 2

> There is a specific facilitating factor, *common to all successful modalities of psychotherapy*, that leads to psychotherapeutic success.

It would then be highly desirable to identify the common factor that underlies *all* psychotherapeutic change.

If success in psychotherapy requires both a match between the modality, and the personality or presenting problem of the patient, and the presence of a facilitating factor that is common to many modalities, it would be highly desirable to identify the correlates that make some psychotherapeutic modalities successful with specific personality styles or specific presenting problems, and to discover the factor or factors

common to a number of psychotherapeutic modalities that effects psychotherapeutic change.

Being in touch with one's feelings, and therapeutic change

The concept that being in touch with one's feelings, or heightened awareness of one's feelings, is a correlate of mental health, gained widespread endorsement in the "human potential" or "Humanistic Psychology" movement of the 1960's and 1970's (see: Burton, 1968, 1970; Gaylin, 1979; Maslow, 1968; Perls, 1969; Perls, Hefferline & Goodman, 1951; Rogers, 1961, 1965; Schutz, 1967, 1973; Truax & Carkhuff, 1964, 1967).

It had been suggested, implicitly or explicitly, by the innovators and practitioners of a variety of these modalities, such as Bioenergetics Analysis (Lowen, 1958, 1967, 1975), Encounter Groups (Schutz 1967, 1973), Focusing (Gendlin 1981), Gestalt therapy (Perls, 1969), Multimodal therapy (A. Lazarus, 1981, 1985, 1986), and Primal Therapy (Janov, 1970, 1972; Janov & Holden, 1975), that "being in touch with one's feelings" was a desirable state and a function of mental health, yet they offered at best only sketchy evidence (most of it of an anecdotal nature) that the psychotherapeutic change produced by these therapies resulted from the patient's increasing skill at being in touch with feelings.

Burton (1972, p. 24), however, suggested that for at least some patients, the opposite may be true: "the task of psychotherapy is to make some over-conscious clients less painfully conscious, . . . it is an error to correlate awareness with health in a univocal way."

Direct connections between mental health or therapeutic outcome on the one hand and, and awareness of feelings (or of the body) on the other, were explored by Friis and Skatteboe (Friis, Skatteboe, Hope & Vaglum, 1989; Skatteboe, Friis, Hope & Vaglum, 1989). Building on theories and techniques of Wilhelm Reich, they developed a form of group therapy for day patients in a psychiatric hospital, that combined

structured exercises in body awareness (essentially of movement, balance, breathing and voice) with social interaction and awareness of emotions. Change, as measured on their two-factor (body-and-emotions awareness, and psychomotor-functioning) Body Awareness Rating Scale (BARS) correlated positively with the duration of therapy; those who showed the greatest increase in BARS score also showed the greatest improvement in functioning (by established measures) at discharge from the hospital. Others who explored the relationship of mental health or therapeutic change and body awareness included Goertzel, May, Salkin & Schoop (1965) and Kurtz (1984).

Similar relationships of mental health or therapeutic change with awareness of the feelings have been proposed by Gellhorn, 1964; Ikemi, Tomita, Kuroda, Hayashida & Ikemi, 1986), and with awareness of the emotions (Savitsky & Eby, 1979). Specific psychotherapeutic systems in which emphasis is placed on the greater awareness of the emotions and their physical and cognitive components have been proposed by Greenberg and Safran (1987, 1989, 1990), Izard (1971), Lane and Schwartz (1987), Lang (1971), Lang and Cuthbert (1984), R. Schachter (1984), and Schefft and Lehr (1985).

2. The Development of Feelings and Emotions

Development of the "language" of emotions

The experience and perception of the feeling components of emotion (whether based on general arousal, action-tendency, or association to past memories) is often subtle, and it is often complexly patterned. The ability to sense the subtleties of patterns of sensations, and to interpret them as emotions, is apparently learned, not innate.

The neonate does not require cortical functioning to start learning the basics of emotional response. As proposed by LeDoux (1986; see also Iwata & LeDoux, 1988; Iwata, LeDoux & Reis, 1986) a rapid, powerful, but primitive system for affective evaluation utilizes thalamo-amygdala pathways and by-passes the cortex. Learning that takes place through the thalamo-amygdala system in the limbic brain, furthermore appears to be highly resistant to extinction.

The infant, which initially responds only to simple basic sensations such as startle, hunger, warmth-cold, comfort-discomfort, rapidly develops associations between specific feelings and those behaviors that will ameliorate them (unpleasant feelings) or sustain them (pleasant feelings). A more complex system of emotional response and communication develops gradually (Brazelton, 1983; Buck, 1983; Dunn, Bretherton & Munn, 1987; Haviland & Lelwica, 1987; Hoffman, 1978; Klinnert et al, 1983; Murphy, 1983; Spitz, 1965; Spitz & Wolf, 1946; Thompson & Lamb, 1983). Already in infancy there are marked individual differences in the emotional pattern: in

hedonic tone, in the range and lability of emotional expression, in the latency between stimulus and response, in the time taken to peak intensity, in the time taken for recovery to pre-stimulus baseline, and in the capacity to regulate (cope with) states of emotional arousal (Thompson & Lamb, 1983).

Learning the complexities of the "language" of emotion is a life-long process (Averill, 1984b; de Rivera 1984; Halberstadt, 1984; Zivin, 1986). With emotional maturation comes the ability to perceive combinations of feelings and to differentiate among similar feeling patterns. The child learns to give names to certain patterns of these feelings and is guided by parents, teachers or peers toward labeling and discriminating emotions such as "hurt," "angry," "happy," "jealous," much as it learns to recognize and discriminate among colors. The labeled emotions may be attached to inner perceptions (e.g. to pain, joy, and fear), to spontaneous behavior (e.g. sobbing= sad, laughing=funny), or to extraneous events (e.g. birthday= happy, noise=fear).

A cognitive-developmental theory of emotional awareness developed by Lane and Schwartz (1987) postulates five levels of emotional awareness starting at birth with the sensorimotor reflexive level, followed in infancy and childhood by the sensorimotor enactive, and the preoperational, and subsequently by the concrete operational and the formal operational levels that may be attained in adulthood.

At the sensorimotor reflexive level, as described by Lane & Schwartz (1987), the neonate (or the adult with delays in emotional development) is aware only of global bodily sensation, and of undifferentiated arousal; these are, however, accompanied by involuntary motor phenomena including autonomic and neuroendocrine changes and facial expression. While the individual who has not progressed beyond this stage can report nothing beyond global bodily sensation, "an outside observer could observe the individual's facial expression and begin to identify the quality of the emotion activated; i.e. emotional information is conveyed outward" (p. 137).

At the second stage, the sensorimotor enactive (Lane & Schwartz 1987), the individual learns also to perceive and to describe action tendencies in addition to global

hedonic states. By the third stage, the preoperational stage, the individual has acquired a repertoire of unblended emotions of an either/or quality so that emotions can be described in unidimensional form; the emotions now have both a somatic and a psychological quality. At the concrete operational stage, feelings (even when attenuated) can be experienced in a differentiated manner, emotions (even opposing emotions) can be experienced in a blended manner, and described in differentiated terms.

At the highest level, the formal operational stage, there is a richer ability for differentiating the quality and intensity of emotions (including the "awareness of blends of blends of feelings"), and a rich and complex vocabulary of emotions becomes available.

> It is now possible to perceive the differentiated, multidimensional experience of others, unbiased by one's own emotional state, which includes the capacity to see a situation involving oneself through the eyes of others. The capacity to fully experience how one will feel at some future time under certain circumstances increases the likelihood that the decisions one makes in one's occupational or personal life will bring the satisfaction one is seeking. By anticipating the needs and reactions of others, one is better able to find courses of action that meet the needs of all involved (pp. 138-139).

This description of the individual at the formal operational stage suggests a person who is socially and emotionally mature and adept.

As children and adults differ in their language ability, they also differ in their ability to master the "vocabulary" of emotions. These differences may be in part innate; in large part they are learned within the family and from the ambient society. Parents and caregivers are of primary significance in shaping the learning of the experience and expression of emotions (Buck, 1983; Dunn, Bretherton & Munn, 1987; Frijda, 1986; Halberstadt, 1984; Hodgins & Koestner, 1993; Hoffman, 1978; Klinnert et al, 1983; Murphy; 1983; Zivin, 1986). Parents who are aware of the wide range and subtlety of their inner patterns of feelings will generally be able to impart to their

children a richer awareness of feelings. It seems unlikely that parents who are themselves puzzled by, or uncomfortable with, feelings can impart to their children an appreciation for the full awareness and expression of feelings.

The ambient society sets its own rules for what is desirable, permissible, unacceptable, or reprehensible in the experience and the expression of emotions (Aristotle, 1941, as cited in Walbot & Scherer; Averill, 1984; de Rivera, 1989; Elias, 1977; McGuire & Troisi, 1990; Sommers, 1984; Tomkins 1979, 1980). By adulthood, the individual will have developed a complex and idiosyncratic style for the awareness, experience, and expression or repression of the range of emotions.

Levels of emotional processing

Probably most thinking adults are aware of the dual pattern of emotional response to stimuli that emanate both from within the body and from the environment, and of the concomitant behaviors and cognitions: the responses may be finely nuanced and perfectly attuned to the circumstances, or they may be of compelling intensity, quite ineffectual, and even harmful to the interests, desires and physical health of the individual. This duality, and the compelling power of certain emotional responses, have been explored or researched by practitioners, theoreticians and researchers since the early history of psychology and psychoanalysis.

Furst (1967), summarizing the views of Freud and other classic psychoanalytic theorists, discussed the unconscious memory traces of traumas in childhood and infancy (or at birth, or even *in uterus*) that become powerfully activated by association with events in later years. Greenacre (1967) viewed early trauma as becoming manifested in later life in a more than ordinarily intensified form that she compared with imprinting. Because this response pattern operates independently of the ego forces and controls, "it may seem, as Freud said, like a demonic force at work. It would appear also that the force of this demon may be rearoused by relatively tenuous and seemingly fortuitous stimulus connections" (p. 148). Freud (1936/1959), though holding that emotions, feelings and affects could be experienced only in conscious-

ness, implicitly acknowledged the dual emotional system by labeling compelling emotions as the "ideational representation of an emotion" that is suppressed in the unconscious. Half a century later, Fonberg, a neurophysiologist researching the amygdalar and hypothalamic pathways of emotions, confirmed the general Freudian concepts: "Subjective conscious feelings are not the indispensable condition for activity of this complex system. Emotional processes may be going on subconsciously, and what is more, develop, deviate, and finally explode on a subconscious level" (Fonberg, 1986 p. 304).

What is the source of the "demonic" or "explosive" nature of compelling emotions, that are so often maladaptive and resistant to extinction? Childhood trauma has been implicated by Furst (1967), Greenacre (1967) and Greenberg and Safran (1990); trauma in the adult years has been implicated by Frijda (1986); and genetically programmed response to the threat of interpersonal abandonment has been implicated by Greenberg and Safran (1990). Livesey (1986) has suggested that classical conditioning creates a "preparatory anticipation" of reward or escape from punishment, and when that is thwarted "a strong emotional reaction" ensues." Against that, classical conditioning studies (with sheep) persuaded Liddell (1962, cited by Izard, 1977), to stress that "seemingly innocuous coincidences" could produce emotional experiences of compelling power that lead to highly ineffectual response behaviors.

With recent advances in neuroanatomy and neuropsychology, scholars are more and more tending to assume a multi-level *system* for emotional processing in humans, that, in effect, provides explanations for the observed duality of emotional *response*.

A three-level system of emotional processing was proposed by Lindsley (1970): cortical, diencephalic and brainstem, corresponding to the three evolutionary levels of the human brain. He also suggested the various levels at which certain emotions or emotional behaviors are processed (e.g. "thought, worry and anxiety" at the cortical level; "weeping, sweating, intestinal and other visceral activities regulated by the autonomic nervous system" at the cortical, diencephalic and brain-stem level.)

Livesey (1986) proposes a three-stage pattern of the expression of emotion that also parallels the evolutionary stages and functions in the brain. In the first stage, "primary affects" generated by the reward/punishment mechanism of the brain emanate from genetically established neural systems that relate to direct sensory stimuli by or within the body; "these feelings are immediate perceptual correlates of the particular stimuli and constitute affects without cognitive interaction." In the second stage, associations link external cues to the reward/punishment mechanism, leading to "associated affect with minimal cognitive participation." The third stage presents the "evolution of the full emotional response" with cognitive interaction at the perceptual, associational and instrumental levels (pp. 251-252).

Panskepp (1982) explored the emotion-processing systems in the brain from a different perspective, based on the nature of basic emotional *responses* rather than on the form of the emotional *processing*. He postulated that emotional processes are structured in the brain as sensory-motor command systems, with the underlying circuits "genetically prewired" to respond unconditionally to stimuli arising from major "life-challenging circumstances." At the same time, however, Panskepp acknowledged an evolutionally higher level of emotional functioning as the emotive circuits come under the control of emotionally-neutral environmental stimuli, or through the reciprocal interaction of emotive circuits with brain mechanisms that elaborate higher decision-making processes.

Panskepp's further elaboration on this concept (1986) postulates that emotive systems "collect key information from various sensory systems, and they transmit information, not only to behavior pattern subroutines in brain-stem and basal ganglia, but reciprocally pass the influence of releasing-stimuli for emotions, up to higher zones to interact with more sophisticated decision-making processes" including perceptions and beliefs. "These circuits have spheres of influence throughout the neuroaxis, elaborating emotional perceptions and affective consciousness in higher regions of the brain and basic bodily adjustments at lower levels" (p. 98). Panskepp contrasts the

visceral-emotional or hypothalamic-limbic system (which, being evolutionally more primitive, follows fixed action patterns and rules of classic conditioning) with the somatic-cognitive or thalamic-neocortical system that involves subtle cognitive conceptualizations, using "representational schemata" generated in the brain to guide selection among behavioral alternatives (p. 119).

LeDoux (1986; see also Iwata & LeDoux, 1988; Iwata, LeDoux & Reis, 1986) makes a similar distinction, contrasting subcortical emotional processing with the emotional processing that involves the sensory neocortex and the cortical association areas. In the subcortical system, the stimuli (generally those that are in some way perceived as threatening to survival) are modulated by the thalamo-amygdala pathways of the limbic system, without passing through cortical pathways, and they evoke responses that are rapid, powerful, often imprecise or inappropriate, and generally highly resistant to extinction. In the cortical system the memories and associations, that both give rise to feelings and that are evoked by feelings, are modulated by cortico-amygdala pathways; the resultant physical, behavioral and cognitive responses are likely to be flexible, modifiable, and readily subject to rational evaluation for amplitude, relevance, and significance.

In his comprehensive study of the emotions, Frijda (1986) has summarized research and theories from a functional rather than from an anatomical perspective. Immediacy and response of emotional processing appear to vary with the intensity of the current experience and of the associated past experiences. Under stress, processing and evaluation are bypassed and replaced with "emergency provisions" that are faster, and often stereotypic, processes. An appraisal process, if it occurs, would be subsequent to this rapid emotional response; it tends to be unconscious and any awareness of the components of the emotion is probably a retroactive hypothesis. Under circumstances not involving stress, emotions are mediated by high-level cognitive evaluation; the emotional components tend to be highly complex, highly specific, and often context-dependent and multiply determined.

Frijda attributes intense response to intense experiences: one-trial learning may readily occur under traumatic circumstances, additional reinforcing encounters further enhance the intensity and persistence-over-time of highly-charged emotional responses. Traumatic events may carry their aftereffects for years, and emotional response to intense aversive stimuli often does not appear to extinguish at all.

Variety and specificity in emotional experience

By adulthood, highly complex agglomerations of memories, feelings and responses have developed, whether or not the adult has mastered the subtleties of emotional recognition and expression. Skill and ease in the perception and expression of emotions (or in the identification of the underlying feelings) are not a necessity. Feelings will occur in the body whether or not they are perceived or interpreted (as emotions); the impulse (action tendency) to respond to those feelings will occur; and there will be complicated patterns of association between current feelings, current cognitions and associations, and archaic (learned) responses to feelings. Emotion begets memory and memory begets emotion. "Every emotion is associated with memory recall, and emotion is usually generated by memories" (Heath, 1986, p. 8).

"Through memory, thought, and imagination, scenes experienced before can be coassembled with scenes presently experienced, together with scenes which are anticipated in the future. . . . the consequence of any experience is not singular but plural" according to Tomkins (1979), who labeled this process "psychological magnification." Frijda (1986) concurs: "Emotions are rarely, if ever, elicited by an isolated stimulus. Rather, the emotional effectiveness of sensory stimuli depends on the spatial, temporal, and meaning context in which they occur, the adaptation level upon which they impinge, and the expectations with which they clash or correspond" (p. 267).

At the simplest level, an event takes place in the environment (e.g. a bear crashes through the trees) or within the body (e.g. a sense of weakness or instability is felt in the legs) and immediate feelings are evoked in the body. The sight of the bear

will arouse the autonomic nervous system and initiate potential movements toward flight and self-defense, which can be observed as muscular changes in limbs, face, neck, chest and elsewhere, together with altered breathing, heartbeat, perspiration and so on. A feeling of weakness in the legs ideally leads directly to adjustments for the restoration of equilibrium; these adjustments are not always limited to legs and hips but may occasion changes in head, arms and shoulders. The same feeling of weakness may prepare the whole body for a safe collapse--and, depending on many variables, it may precipitate a generalized anxiety reaction. This process is the "secondary appraisal" of Lazarus (1991, p 133) who defined it as "coping options--that is, whether any given action might prevent harm, ameliorate it, or produce additional harm or benefit."

The spontaneous adjustments made by the body in response to perceptions or feelings give rise to their own feelings and these evoke their own responses or response-arousal. At the same time, the feelings give rise to cognitive memories on the conscious, preconscious or unconscious levels, each of which can trigger a spate of feeling responses with attendant responses and response-arousal; this is the process that Tomkins labels as "psychological magnification."

The resulting combination of feeling patterns is highly specific and highly idiosyncratic. "There is no single effect but rather there are many effects which change in time" (Tomkins 1979, p. 219). Tomkins labeled this "the principle of pluridetermancy." Some of the reasons for the great variability in physiological response patterns can be learned from Frijda (1986): individual response specificity (differences in the sensitivity and responsiveness of the various autonomic, hormonal and somatic variables); learning processes (emotion patterns can be learned, inter alia, through instrumental learning, through modeling, or from the culture); variability in action tendency (an emotion generally corresponds to specific action tendencies and these vary considerably by individual and by circumstances).

Early basic feeling states (such as hunger) may be unaffected by memory and association, and thus their pattern would remain simple and virtually universal. The general expression of many basic feeling states such as anger, grief, joy, amusement, disgust, also appears to be universal across individuals and across cultures (Darwin, 1872; Ekman, 1982; Ekman, Friesen & Ellsworth, 1972; Izard, 1971, 1977); indeed, Darwin (1872) showed that many of these expressions occurred across species. Darwin (1872), Izard (1971, 1977) and Plutchik (1962, 1970, 1980, 1990) emphasized the adaptive and hence evolutionary value for the basic universality of the basic emotions in inter- and intra-species communication. Since the full emotional pattern incorporates feedback from the entire body, including that from the face (Ekman, Levenson & Friesen, 1983; Greenwald, Cook & Lang, 1989; Izard, 1971, 1977; Laird, 1984; Orr & Lanzetta, 1980; Sirota, Schwartz & Kristeller, 1987; Tomkins, 1962, 1979, 1980; Zajonc, 1985), the cross-individual similarity of expression for each of these basic emotions would also result in a measure of cross-individual similarity in the experienced emotional pattern--were it not for the influence of psychological magnification and of pluridetermancy. Even so basic an emotion as anger can show considerable variability, drawing as it does on a variety of neurosystems each with its own pattern and timing; moreover, anger can build up rapidly or slowly, it can be fleeting or persistent, continuous or intermittent (McGuire & Troisi, 1990).

The pattern of sensations constituting an emotion, having evolved out of the individual's own complex experiences, is of necessity highly idiosyncratic; it is also likely to be situation-specific. While hunger may have the same pattern morning or evening, Sunday or Monday, the pattern associated with jealousy would vary as to whether it is related to sex, love, power or popularity, further complicated by the extent to which it involves self-esteem, need-to-belong, or trust, and further modified according to current experiences of social support and disappointments. Thus, while one might be able to experience only one hunger (or a few very closely related hungers, such as immediate hunger, appetite-evoked hunger, starvation-hunger,

hunger for carbohydrates or for proteins), there might be a considerable variety of feeling patterns, all labeled "love" or "guilt" or "jealousy" (Frijda, 1986).

Awareness of the feeling component in emotions

While the potential ability to interpret and to label feelings appears likely to increase with age and experience, the conscious awareness of the physical sensations that underlie many emotions may become attenuated for a variety of reasons:

1. the feelings are too subtle or too everyday to emerge from the background "noise"
2. unnecessary attention to familiar feelings distracts attention from currently important or less familiar feelings
3. the feelings are repressed because they are too painful or too frightening
4. the feelings (e.g. sexual arousal) are repressed because of societal disapproval
5. the feelings are repressed because of admonitions by parents or other teachers (e.g. "don't pay attention and the hurt will go away" or "you shouldn't feel that way about . . .").

Experience of the full emotional response tends to have a salutary effect, and repression of emotional response tends to have a deleterious effect, on physical health (Gellhorn & Loofbourrow, 1963; Tomkins, 1980; see also Pennebaker, 1980, on the relationship between emotion and the perception and labeling of disease), on mental health (Goertzel, May, Salkin & Schoop, 1965; Morrison & Header, 1984-85), on behavior (Greenberg & Safran, 1990; Izard, 1971, 1977), and on social functioning (Izard, 1971, 1977; M. Greenberg & Beck, 1990).

Even when the emotion, or the response, is not accessible to conscious awareness, the pattern of physical sensations for each emotion persists, together with attendant general arousal patterns and with action potential; this is so whether the emotional processes are mediated by the subcortical or the cortical-neocortical pathways (LeDoux, 1986). Unless there is a direct and implicit inhibition, the emotion

will still be both expressed and acted upon, quite possibly in a distorted, maladaptive or attenuated manner.

In subcortical processing, there is initially a direct progression from feelings to action without intervening awareness of emotional state, though *subsequent* cortical-neocortical processing may quite rapidly provide modulation to the emotional processing, and to the responses. Slow, impaired or cognitively impoverished cortical-neocortical modulation would result in maladaptive responses.

Similarly, when the processing occurs in the cortical-neocortical system, the awareness of feelings can be effectively repressed. This could occasion a direct progression to action without conscious awareness and without cognitive evaluation of the feelings and the action tendencies (thus giving us the impulsive starter of fights or the compulsive avoider). It could also occasion the awareness of specific but unexplained action potential or of unexplained diffused arousal (or diffused discomfort or even pleasure); under these circumstances, lacking awareness of the specific feelings that have been experienced, a person may seek cues in the environment, or through self-scrutiny, so that the arousal and sensations may be comfortably categorized as labeled emotions. This would create a high likelihood for misattribution and inappropriate behaviors (see Schachter & Singer, 1962; Valins, 1966; White & Knight, 1984; also Bem, 1972; Cotton, 1981; Erdman & Janke, 1978; Lazarus, 1984; Marshall & Zimbardo, 1979; Maslach, 1979a, 1979b; Reisenzein, 1983; Ross, Rodin & Zimbardo, 1969; Schachter, 1964; Schachter & Singer, 1979.) Not that misattribution is universally maladaptive; occasionally, certainly in the laboratory (e.g. Valins & Ray, 1967) and with medical placebos in general, misattribution can have salutary value.

The psychological magnification effect is prone to be powerful especially when there is only limited or confused awareness of the onset and the meaning of the subtle physical feeling-concomitants of emotion. Suboptimal evaluations of the emotional process may lead to a variety of dysfunctions (Frijda, 1986, p. 476; Greenberg & Beck,

1990, p. 185). In the absence of appropriately modifying awareness and cognitions, the system of cognitions, sensations, associations, and actions is likely to develop with an intense feedback effect, in which feelings, emotions and actions assume overwhelming proportions, totally inappropriate to the original stimuli.

The progression of suboptimal evaluation, misattribution, incorrect cognitions and maladaptive responses may take place with great rapidity. "This series of thoughts may occur in split-second time, usually without full awareness . . . and have an immediate impact on the level of dysphoria [that] may lead to other automatic thoughts [which] can also include negative affective components"-- resulting in an increasingly maladaptive spiral of thoughts and affect (Greenberg & Beck, 1990, p. 185).

Learning to direct attention to the gradual spiraling effect of psychological magnification (i.e. the total emotional process, from perception through arousal, evaluation, cognitions, action potential and response) could help bring more of the emotional process into consciousness, either while it is being experienced, or later in the form of retroactive observation and investigation. While it is unlikely that subcortical processes can be modified by awareness, it may be possible to sharpen the perceptions, so that emotional stimuli will be processed by the subcortical system in true emergency situation only. It is clearly possible to learn better functioning of the cortical-neocortical system so as to modulate the outcome of subcortical processing with greater accuracy and greater rapidity, and to process emotions that are mediated in the cortical-neocortical system in an optimal manner.

The most appropriate point at which to improve emotional processing may be at the very outset; this would help improve the rapidity with which the feeling components of the emotion come to awareness, and the precision of their evaluation, and it might obviate, or at least reduce, the psychological magnification effect.

3. Feelings and Dysfunction in Emotion and Behavior

Interpretation of, and response to, feelings

Greenberg and Safran (1990; also 1984a, 1984b, 1987, 1989; also Safran & Greenberg, 1982) developing a psychotherapeutic modality based solidly on the full awareness and integration of the constituents of emotion, describe emotions as

> . . . constituted associative linkages between motor, autonomic, memorial, imaginal, and conceptual components. . . . Eliciting any one of the components or some of their features can evoke other parts of the network. In this view, activation of one of the components automatically spreads to the other components of the network, increasing their probability of becoming conscious or producing a conscious emotional experience" (1990, p. 62).

Any suboptimal functioning at any level of the reverberating feedback pattern of feelings, action potentials, associations, emotions, evaluations and interpretations, and the subsequent loops, axiomatically results in inappropriate functioning in emotions and behaviors, and may also lead to disease symptoms. Thus, it is likely that many patterns of emotional or social distress (i.e. psychopathology), perhaps also certain physical disease, could be reinterpreted as variations or combinations of one or another of these malfunctionings.

1. The perception of physical sensations is repressed or distorted, thus failing to trigger appropriate cognitions and the action patterns that would relieve them.

Physical sensations may enter a feedback pattern that is limited preponderantly to other physical sensations or action potentials, but the body remains under stress since no corrective actions are executed. The stress leads directly to disease (Selye, 1976); according to Lowen (1958, 1967, 1975) and his mentor, Reich (1961), the chronic stress in muscles and organs that develops from the repression of feelings, manifests itself also as emotional distress and is eventually experienced as physical disease. This could be a partial explanation for the strong association between psychosomatic component and Alexithymia, a syndrome defined as the inability to verbally express feelings (see Martin & Pihl, 1986; Martin, Pihl, Young, Ervin & Tourjman, 1986; Taylor, 1984. Also Apfel & Sifneos, 1979; Bagby, Taylor & Ryan, 1986; Krystal, 1979; Lesser, 1985; Warnes, 1986; Warnes & Harris, 1986).

2. Physical sensations are inappropriately interpreted on the level of action-potential or cognitive labeling.

Many individuals describe the physical sensations of hunger and of loneliness in similar terms (a plausible explanation for the close association is that both developed in tandem in the neonate's anxiety at the absence of the breast). Those who confuse the feelings of loneliness with those of hunger will thus continue eating (or bingeing), long after the body is sated, as an ineffective antidote to what is actually loneliness.

A major area of emotional confusion and misattribution that frequently leads to misunderstanding, unhappiness or tragedy is that of sex (Cantor, Zillmann & Bryant, 1975; Malamuth, Check & Briere, 1986). Excitation transfer is one underlying cause of misattribution in sexual areas in particular, and of emotional misattribution in general (Zillmann, Johnson & Day, 1974; Zillmann, Katcher & Milavsky, 1972). The confusion of power or aggression with sexual arousal may additionally be related (especially in the male) to the physical proximity of brain areas and neural pathways that control aggression and sexual behaviors (Freund, 1980; Whalen, 1976). The confusion of the need for love and attention with sexual arousal may be further related to associations in early childhood, reinforced by modeling and societal cues in the contemporary media.

3. The cognitive interpretation of feelings is delayed or inappropriate, prompting inappropriate associations, inappropriate action potentials, inappropriate somatic (spontaneous) responses, and inappropriate behaviors.

Speedy perception, *and* correct and speedy interpretation of the perception and of the accompanying feelings, permit speedy and appropriate responses. Correct and timely response becomes impossible if perception and the consequent interpretation are delayed; delayed responses are likely to be stressful or inadequate. If James (1890) delays interpreting the heavy footfall until the bear is upon him, he will experience excessive stress as he flees--if he is able to flee. If, because of previous stressful events, he habitually misinterprets the footfalls of his neighbors' pets as those of a bear, he will develop chronic stress. (He may also engage in such inappropriate social behaviors as hunting down the neighborhood pets, quarreling with his neighbors, or abandoning his home.) In general, delayed or inappropriate interpretations and associations may lead to increased patterns of suspicion, helplessness, fear, inadequacy, pain or rage . . . the whole range of patterns that comprise emotional and behavioral maladjustment.

4. Physical sensations and attendant associations enter a feedback loop.

The "charge" of the emotion, both on the sensation level and the action-potential level, reaches critical dimensions whereupon measured response becomes inadequate and excessive, or highly inappropriate, actions and reactions result. For example, a person subjected to repeated painful experiences who ignores the physical signals of discomfort until the "charge" has become unbearable, may feel himself compelled into violent action against self or others (hence the reports of the hitherto "mild" person who hurtles himself and his automobile into an abutment, or picks off his co-workers with an assault rifle).

5. A person incapable of perceiving true emotional responses will give inappropriate messages in voice, posture, verbal expression or words.

The resultant misperception and misinterpretation are likely to be damaging both to the individual and to the interaction or relationship. In the normal course of a conversation--or of any other inter-personal interaction--each partner regularly monitors the other's reaction, subtly modifying the components of his or her communication to sustain the interaction in the desired manner.

> . . . the expressive component of emotion is a source of signals of considerable importance in social interactions. Many emotion signals have specific and reliably interpretable meanings, but many are complex and difficult to understand . . . Emotion experiences influence individual and social development and play a critical role in the formation of interpersonal ties" (Izard, 1977, p.128; see also Buck, 1984; de Rivera, 1984; Orr & Lanzetta, 1980; Savitsky & Eby, 1979).

Improper signal transmission (or reception) impairs timely and proper modification and correction. This could constitute a serious component in marital stress, in poor parent-child or employer-employee relations, and in ineffectual dating skills. Although there is a near-universal uniformity in the facial communication of a number of the basic emotions (Darwin, 1872; Ekman 1982; Ekman, Friesen & Ellsworth, 1972; Izard, 1971, 1977; Plutchik, 1962, 1970, 1980) there is much less uniformity in the transmission of non-verbal cues *via* voice or body and in the facial communication of more complex emotions. Much skill is required to properly transmit and decode the nuances, the double-messages, and the subtleties of these expressions. Such skills are learned; parents who do not model good transmission and decoding of emotional cues are unlikely to transmit these skills to their children.

Mental Health and the awareness of feelings

The ideal person who has achieved the formal operational stage of emotional development (Lane & Schwartz, 1987) is "in touch with feelings" and has an awareness of minute somatic changes that is rapid, precise, effortless, and well integrated with behavioral and cognitive responses.

This "ideal person" would have the potential to be rapidly aware of the fine nuances of changes in physical feelings, of their action potential, and of their emotional charge, and thus to make appropriate fine adjustments in cognitions or actions to prevent the potentially damaging build-up of feedback loops, of inappropriate cognitive interpretations, and of inappropriate response-action patterns.

The "ideal person" would have the potential to assess emotional situations optimally, and respond appropriately in all situations. (Even where perceptions are inaccurate, the response to the misperception would still be better than that of a person who misperceives *and* lacks the skills for optimal emotional response.) Such a person would have the potential to be free of anxiety or depression, of impulsivity and compulsivity, of hostility and self deprecation.

The "ideal person," sensitive to his/her finely nuanced feelings and expressions, aware, too of the fine nuances in the feelings and nuances of a partner, would have the potential to become rapidly and accurately aware of his/her own spontaneous and subtle feelings as the expressions of the partner change, and the ability for making subtle adjustments of direction, of pause and of tempo, in any kind of "transaction" with the partner, so as to keep the relationship "on course"--much as one would make subtle adjustments to wheel, clutch and accelerator in driving a car.

This "ideal person" has the potential to be successful in friendships, successful in the family, and successful in work and negotiation.

These qualities, the ability to process and express emotions appropriately, to reduce tension and conflict, to avoid inappropriate behaviors or reactions, to evaluate feelings and emotions, to optimally develop accurate empathy and conflict-free interpersonal interactions, all add up to mental health. The more attenuated these qualities, the greater the likelihood of social, emotional and physical discomfort or dysfunction.

According to the above schema, many mental and emotional disorders could be functionally defined as the frequent manifestation of inappropriate emotional, somatic

or behavioral responses resulting from imperfectly interpreted internal cues, and from the feeling responses evoked by memories. According to the same schema mental health could be viewed in part as a function of the ability to rapidly recognize the feelings (somatic changes) that constitute emotions, the ability to trace feelings to their associated stimuli, the ability to differentiate among closely similar clusters of feelings, and the ability for optimal cognitive evaluation of the self, of the environment, of one's needs and desires, and of probable outcomes. This pattern of abilities would help to interrupt inappropriate feedback loops, would reduce the number and intensity of incorrect appraisals and inappropriate behavioral responses, and reduce unnecessary physical stress (e.g. inappropriate and habituated visceral, endocrine, skeletal, and vascular responses) that would lead to disease and dysfunction.

Using the same concepts, hallucinations and psychotic reactions could be redefined as responses to grossly misperceived internal cues resulting from toxic conditions (e.g. the delusion of crawling insects in drug or alcohol abuse that is a misattribution of heightened skin sensations), or from dysfunction of neural pathways (e.g. auditory hallucination where internal dialogue is perceived as a "heard" voice and attributed to outside sources).

Feelings and psychotherapy

The reduction of inappropriate behavioral responses and a reduction in unnecessary emotional and physical stress are both intrinsically desirable; the acquisition of at least one of these two skills is the implicit goal in virtually all the diverse modalities of psychotherapy. Nevertheless, none of the major psychotherapeutic modalities currently has as its stated goal or methodology the systematic heightening of the awareness of the subtle physical concomitants of emotion. It is in the laboratory rather than in the clinic that this direction is gradually being explored (Gellhorn, 1964, Greenberg & Safran, 1984a, 1987, 1989, 1990; Izard, 1971; Lane & Schwartz, 1987; Lang, 1971; Schefft, Moses & Schmidt, 1985).

Of the major psychotherapeutic modalities, only biofeedback therapy trains patients directly to attend to subtle changes in body feelings; nevertheless, it has not been shown to be an effective adjunct to psychotherapy (Rickles, Onoda, and Doyle, 1982). It is possible that the specificity of the biofeedback training (generally limited to a specific muscle group, digit, or visceral function), does not generalize to focused awareness of other parts of the organism; the training generally takes place in contextual isolation, with limited opportunity to associate the specific biofeedback-induced body awareness with other, more peripheral, emotion components.

Certain other psychotherapeutic modalities tend to involve the patient in the incidental heightening of the awareness of feelings; these include Bioenergetic Analysis (Lowen, 1958, 1967, 1975); Gestalt Therapy (Perls, 1969; Perls, Hefferline & Goodman, 1951); Primal Therapy (Janov, 1970, 1972; Janov & Holden, 1975); visualizations and Psychosynthesis.

Mindfulness meditation (Forte, Brown & Dysart, 1984; Greene & Hiebert, 1988; Kabat-Zinn, 1984, 1990; Kurtz, 1984, 1985; Kutz, 1985; Kutz, Borysenko & Benson, 1985) and many other forms of meditation (Ikemi, Tomita, Kuroda, Hayashida & Ikemi, 1986) teach focused attention to internal physical sensations. While in many forms of meditation the attention is focused on inhalation and exhalation, this appears to generalize into heightened awareness of other bodily and cognitive processes (Goleman, 1988; Naranjo & Ornstein, 1971). These studies support the 1977 position statement of the American Psychiatric Association, that meditation may facilitate psychotherapeutic process (Morgan, Shafii, Shapiro & Dean, 1977).

Other practices that may help to focus attention toward bodily sensations, and hence also to feelings, include yoga and massage, and Feldenkrais, Alexander, Rolf and Trager training. Certain practices that heighten perceptions--sensory deprivation or overload, flotation tanks, psychedelic experiences--may also generalize to a heightened awareness of feelings on a habitual or temporary basis. It is possible that the psycho-dynamic therapies (by emphasizing insight into thoughts, behavior and motivation, and

by exploring in depth the unconscious and the processes of free association), will incidentally stimulate a greater awareness of all of the components of the feeling-emotion-physical association process. Cognitive therapies (by emphasizing the examination of cognitions), and behavior therapies (by emphasizing the components of behaviors), may incidentally teach greater attention to one's feelings.

If the above concepts of the interplay of awareness of feelings, emotion, and mental health hold true, a patient who in the course of psychotherapy in any modality develops the skills and habits of careful attention to feelings, would display greater mental health or more rapid progress in psychotherapy than a comparable patient who does not. Should that, indeed, be the case, should the process of psychotherapy generally lead to incidental learning of focused attention to one's feelings, it would be instructive to explore the extent to which the modalities vary in their tendency to heighten the awareness of feelings, and to establish which modalities consequently guide patients to the greatest gains toward mental health.

Health, mental health and the awareness of emotions

Comparatively little research has been done to explore the concept of "Being in Touch with One's Feelings," to measure it, or to study its relevance to psychotherapy or to mental health. The closest area of inquiry has been that of Alexithymia (from the Greek, meaning "lacking words to describe emotions"); extensive research has been carried out over the past twenty-odd years into the construct of Alexithymia since it was first described by Sifneos (1972). The concept of Alexithymia grew out of hospital-based observations that many patients suffering from psychosomatic disorders had difficulty finding words to describe their emotions. As research developed and the construct expanded, it was found that alexithymics also tended to a paucity of dreams and fantasies, to preoccupation with concrete details, to inordinate focus on body sensations, to poor interpersonal relationships, to rigid posture, and to a lack of "psychological mindedness"; they were generally considered poor candidates for psychotherapy.

The measures that have been devised to measure Alexithymia include the Beth-Israel Hospital Scale (Apfel & Sifneos, 1979); the Alexithymia Provoked Response technique (Krystal, Giller & Cichetti, 1986); the Alexithymia subscale of the MMPI (Kleiger & Kinsman, 1980); the Schalling-Sifneos Personality Scale (Sifneos, 1986); the Toronto Alexithymia Scale (TAS) (Taylor, Ryan & Bagby, 1985) and its 1992 revision as TAS-20 (Bagby, Taylor, Parker, 1992a). With the exception of the TAS, the measures have shown moderately low reliability coefficients and low correlations with each other.

Alexithymia, researchers largely agree, is a syndrome rather than a unitary condition. It has been described as an accompaniment to a variety of phenomena, including left-handedness (Rodenhauser, Khamis & Faryna, 1986), post-traumatic stress disorder, depression (Haviland, Shaw, Cummings & MacMurray, 1988), masked depression (Fisch, 1988), low back pain (Julkunen, Hurri & Kanainen, 1989; Kinder & Curtiss, 1990), sympathetic activity (Martin & Pihl, 1986), and dissociation between subjective and physiological stress responses (Martin, Pihl, Young, Ervin & Tourjman, 1986). Given the non-specificity of the Alexithymia concept, it is entirely possible that it could also result at times from impoverishment in learning how to label emotions, or from holding social values that question the propriety of discussing emotions.

The research on Alexithymia has so far met with insufficient interest in the worlds of clinical and counseling psychology, and of psychotherapy in general. This could lie with Alexithymia's medically-based approach (initially, the phenomenon was discovered in hospital settings and those involved in the research were mostly physicians); it could lie with the formulators' concern with the *absence* of expression of emotion rather than with positive awareness; it could lie with the lack until recently of adequate measures; or it could lie with the still somewhat amorphous definition of the construct.

Alexithymia is more than the absence of a lexicon of emotion-relevant words; it reflects a difficulty with perceiving, expressing and responding to feelings and emotions. It subsumes limited awareness of being in touch with feelings but includes

many other conceptual, emotional and physical deficits. A high inverse correlation between Alexithymia measures and any measure of the construct "being in touch with one's feelings" could reasonable be expected, yet the two are far from being mirror images. The absence of a finding of Alexithymia can confirm that the subject has the capacity to find words for emotions, but would tell us little about *how* feelings are experienced, how well they become integrated as emotions, or how well the emotions are conveyed in voice and in expression. In brief, a low score on an Alexithymia scale will show that a subject has some understanding of emotions but it cannot tell us how relevant the correct perception of feelings and expression of emotions are to the subject's life and interactions.

Alexithymia may have much to contribute to understanding the construct of being in touch with one's feelings, but Alexithymia by itself is an incomplete concept in the definition of that construct.

4. The Measurement of Feeling Styles

An earlier attempt to explore the construct of "being in touch with one's feelings" necessitated the development of the Perception of Affect profile (Bernet, 1985, see Appendix A).

The construct of awareness of, and response to, feelings and emotions in a relaxed and integrated manner was viewed as emerging from and centered on the self, and was thus termed the Propriocentric ("centered on the self") style of perception of affect (P for short); this was contrasted with a global non-Propriocentric style (non-P). Further exploration led to the conceptualization of a Xenocentric ("alien-centered") style (X), in which the subject assumes the guise of a detached stranger to observe the inner processes of feelings, emotions and behavior "from the outside."

Variation in the style of perception of affect was clearly not a simple dichotomy. Similar to, yet contrasted with, the Xenocentric style was the Vigilant (V) style of the person who scans the environment, at times with acute vigilance, to determine from the environment the nature of his/her emotions. The X and the V person, while perhaps not optimally aware of, nor responding to, emotions and feelings in a relaxed and integrated manner, neither habitually reject nor represses emotions and feelings. Accordingly, a fourth group was conceptualized, those with the Repressor (R) style, who prefer to repress or ignore the perception of their inner feelings.

Available measures

At the time the investigations into the correlation between mental health and Propriocentricity were commenced, Alexithymia was already being actively explored by other researchers, but instruments to measure Alexithymia were cumbersome and it was not clear whether these could help in the exploration of Propriocentricity and contrasting constructs.

The Repression-Sensitization Scale (Byrne 1961; Byrne, Barry & Nelson, 1963), derived from the MMPI, does measure some aspects of the perception of emotion, but cannot be considered to measure the Propriocentric style. Furthermore, there is much disputation concerning both what is actually measured by this instrument, and its application to research (Lefcourt 1966; Carlson 1979; Budd & Clopton 1985).

Another instrument related to the perception of feelings, the Autonomic Perception Questionnaire (APQ: Mandler, Mandler & Ulliver, 1958), measures the "degree of subjective awareness of a variety of visceral states" or "variations in . . . ability to detect autonomic events" (Mandler, 1984, p. 32). The APQ comprises three sections (Mandler, Mandler & Ulliver, 1958).

1. self descriptions of the [usual] "feelings and reactions . . .when (*a*) in a state of anxiety and apprehension and (*b*) in a state of pleasure"
2. thirty items on a Likert-type scale that ask subjects about their perception of bodily activity across seven areas: heart rate, perspiration, temperature changes, respiration, gastro-intestinal disturbances, muscle tension and blood pressure. A typical question was "When you feel anxious, how often are you aware of any changes in your heart action?".
3. A combination of seventy items from the MMPI that are found in either the 50-item Manifest Anxiety Scale or the 34-items Body Perception Scale.

On the surface, a substantial contradiction exists between the assumptions of the current study that "being in touch with one's feelings" is related to optimal functioning, and Mandler's report (1984, p.32) that "autonomic perception was inversely related to

quality of performance; individuals with a high degree of perceived *autonomic activity* [italics added] performed more poorly in an intellective task" and that "individuals who show a high degree of *autonomous* [italics added] awareness generally are more reactive to stress stimuli and are more affected by anxiety-producing situations."

This contradiction may be illusory.

- Since the APQ reflects MAS scores, it is to be expected that high scorers would be "more reactive to stress stimuli and . . . more affected by anxiety-producing situations."
- The subjective perception of gross visceral changes is well-known to have a low correlation with emotional change. As Cannon emphasized (1927) in rejecting the theories of James and Lange, "The viscera are relatively insensitive structures . . . Visceral changes are too slow to be a source of emotional feeling." And Mandler himself acknowledges (1984, p. 146) "The human organism is rather ineffective in discriminating autonomic events . . the perception of arousal and its occurrence are not necessarily related."
- The APQ measures reactivity to ANS prompts, not sensitivity to finely nunaced feelings. The ability to monitor or estimate gross visceral changes differs greatly from the ability to detect and respond, in a spontaneous, almost instantaneous manner, to the fine nuances of feeling (or emotional) change implied by the Propriocentric style. High scorers on the APQ, who were reported to display negative emotional, intellective and medical functions, may have scored high either because they lacked the ability to filter out gross ANS events from consciousness or because, like hypochondriacs (and like Alexithymics, by some definitions), they are so preoccupied with the gross feelings associated with routine functioning of the body that they are insensitive to the finely nuanced feelings experienced, combined and interpreted as emotions. While aware of the tension and the pounding heart associated with anxiety, the propriocentric person, by dint of rapid awareness of the feelings, would be less likely to develop anxiety in the first case, and, by attention to the fine nuances of feelings, would have greater capacity to interpret the visceral feelings of anxiety, and thus quieten them.

The Body Awareness Rating Scale (Friis, Skatteboe, Hope & Vaglum, 1989) measures two factors, awareness of body and emotions, and psychomotor functioning; It was developed in a psychiatric setting in Norway, and was shown to correlate positively with improvement in functioning. The complexity of the scale, and the culture and setting in which it was developed, weighed against its potential usefulness as a substitute for the pilot POA scale.

Propriocentricity, self-consciousness and self-awareness

Self consciousness and self awareness are not necessarily "good." Burton (1972, p. 24) holds that "the task of psychotherapy is to make some over-conscious clients less painfully conscious . . . it is an error to correlate awareness with health in a univocal way. The ultimately self-conscious person is apt to become paralyzed by his inner vision and refuse to live in this real and absurd world of ours. This is after all what [mental disturbance] is all about--awareness gone riotous."

The present study posits that Propriocentric self-awareness, or the state of "being in touch with one's feelings" correlates with optimal functioning and emotional well-being. The Propriocentric style of spontaneous, effortless, awareness of the self is in sharp contrast both to what is popularly described as "self centered," and also to what scholars term "self-focused attention," a concept that is frequently associated with negative affect (Ingram, Cruet, Johnson & Wisnicki, 1988; Wood, Saltzberg & Goldamt, 1990), depression (Ingram, Lumry, Cruet & Sieber, 1987; Ingram & Smith, 1984), and clinical disorders (Ingram, 1991). Propriocentricity and self-focused attention are different constructs.

Duval and Wicklund (1972) defined two aspects of the term "self-awareness" as it is used in social psychology: "objective self-awareness" by their definition consists of the directing of attention inwards on the self, while in "subjective self-awareness" consciousness is focused on events external to the self. Objective self-awareness creates a comparison between the subject's current state (or level of performance) and

an ideal state; the greater the perceived discrepancy between the two, the greater the perceived discomfort.

Many studies of "self-awareness" actually employ an intrusive manipulation that detracts from the natural processes of relaxed and spontaneous awareness and forces the subject to divert attention to his/her performance, perception or self-presentation. Frequently these manipulations involve the presence of a real observer or a symbolic one, such as a mirror, a camera or a recording device. Forced attention on the self, and especially forced evaluation of performance in comparison with extraneous standards (even "idealized" standards are essentially extraneous since they are based on comparison with and evaluations by others) are a far cry from the integrated, spontaneous, effortless and rarely fully-conscious self-scanning, that is postulated to be the style of the propriocentrically aware subject.

Self-focused attention, in the sense used by Duval and Wycklund (1972), and by Ingram et al (1988), is an essentially disruptive process; in the sense used by Wood et al (1990) it is a process of rumination. Such processes must inherently cause anguish and discomfort--especially to a subject who is sensitive to changes in emotional, cognitive and physical states. A subject whose basic style is Propriocentric might be strongly affected by the manipulations of attention that accompany most investigations of objective self-awareness. By contrast, a person who habitually represses emotions may be able to block out the accompanying discomfort, and the Xenocentric subject, by definition habitually concerned with the sense of self as observed from the outside, *might* find the experimental situation to be just a further manifestation of, and no more disturbing than, the quotidian experience.

Self-consciousness is conceptualized in the studies of Fenigstein and Buss (Fenigstein 1979, 1987; Fenigstein, Scheier & Buss, 1975; Buss, 1980) as a pattern of traits. The public self-consciousness sub-scale appears to correspond with the conceptualization of the Vigilant style, and the private self-consciousness sub-scale

(self-scrutiny, "trying to figure myself out," the examination of motives) appears to correspond with the Xenocentric style.

"Some persons constantly think about themselves, scrutinize their behavior, and mull over their thoughts--to the point of obsessiveness," according to Fenigstein, Scheier and Buss (1975) who contrast this with, at the other extreme "persons whose absence of self-consciousness is so complete that they have no understanding of either their own motives or of how they appear to others." The former style is that of the Xenocentric; the latter, perhaps, that of the Repressor or of the Alexithymic; no provision was apparently made in that study for the person with an integrated and effortless awareness of the self, such as is associated with the Propriocentric style.

POA, the "Perception of Affect" profile

In order to study the relationship between awareness of feelings and mental health, an experimental self-report questionnaire, the Perception of Affect (POA) profile was developed (Appendix A) to assess the extent to which each of the four styles (P, X, V, R) is used by the individual in perceiving affect or emotion.

The POA Profile consisted of 46 triplets, each containing three alternative responses, each response in each triplet tapping one of the four postulated styles. When analysis of 374 scorable questionnaires failed to show significant discrimination between the V and the X styles, these were merged. The three resulting styles, P, X-V, and R, appeared to correspond respectively with the three self-evident sources for information about the self: from within the body, from sensory perception of the environment, and from cognitive reasoning and interpretation, respectively.

The POA profile discriminated significantly between groups of participants who had been selected as likely to emphasize emotions in their styles (high P scorers) or to emphasize intellect and logic (high R scorers). An additional set of questions that was presented concurrently helped to further define the three styles:

- therapeutic experience (as client *and* as a therapist) in a wide range of modalities including psychotherapies, yoga and meditation, almost consistently correlated positively with P; correlations with X-V and with R were negative or non-significant.
- reported awareness of subtle bodily feelings in daily life (temperature, health, food) correlated positively with P; correlations with X-V and R scales were negative or non-significant.
- women endorsed significantly more P items, men endorsed more R items.
- emphasis on intellective qualities over emotional/creative styles correlated with R; correlations with P were negative
- X-V respondents tended to endorse items that suggest doubt, vulnerability, lack of self-esteem, non-control over the environment, and general unhappiness with life.

Full examination of the POA profile supported the postulate that three different styles in the perception of affect could be measured reliably, and that the POA scores for these styles correlated with predicted experiences and personality characteristics that are generally associated with those styles.

The Styles in Perception of Affect Scale (SIPOAS) was developed from the POA. The original items were rewritten and reordered to clear up ambiguities or inadvertent bias, and to ensure better discrimination between styles. Infelicitous items were dropped. Because the terms "Xeno-Vigilant" and "Repressor" imply an unwarranted judgmental attitude, the three styles were renamed to reflect revised and more appropriate conceptualizations:

- BB (for Based on Body) replaces P

  this style is defined as perceiving emotions largely through the spontaneous and integrated awareness of subtle body feelings. High-BB subjects may be said to be "in touch with their feelings."

- EE (for Emphasis on Evaluation) replaces X-V

  in the process of revision, a significant number of items that had formed part of the X-V scale, were dropped or had to be rewritten. The ensuing items suggested a style of perceiving emotions largely through the process of

concerned introspection (the Xenocentric style--as had been conceptualized originally--more than a Vigilant style). High-EE persons may be seen as tending to self-scrutiny, frequently from the *viewpoint* of an outside observer, at times to meet the imagined *expectations* of the outside observer. Their self awareness may be described as ruminative, quite distinct from the high-BB's relaxed, integrated self awareness

- LL (for Looking to Logic) replaces R.

  this style is defined as using logic and reasoning as a means of understanding, and dealing with, and at times controlling the emotions. High-LL persons are often well-defended and may have little patience with emotionality or sentiment.

Clearly no one style is the correct style. There will always be a wide range of individual differences in styles in the perception of affect, that are grounded in temperament, social and cultural environment, family and religious attitudes. To direct one's life solely on the perception of subtle body feelings would be as absurd as to base it solely on painful self-scrutiny from the viewpoint of a neutral observer, or solely on cold reason.

The demands of employment and social responsibility call for a variety of combination of styles, and the combination that would be desirable in one setting might be totally inappropriate in another. It may be desirable, for success in life, to have access to all three styles, and one way toward emotional development--and one goal of psychotherapy--might be to foster skills in the areas that are found under-represented for the individual on the SIPOAS scale.

5. Hypotheses

The basic purpose of the present study was to investigate the construct of "Being in Touch with One's Feelings," to differentiate this from other styles of perceiving emotions, to establish how these styles correlate with mental health, and to examine the relationship between styles of perceiving feelings and experience in a variety of therapeutic modalities.

These goals required the development and validation of a reliable measure, the Styles in Perception of Affect Scale (SIPOAS), and a study of correlations of SIPOAS with measures of mental health, of personality characteristics, and of therapeutic experiences.

The following hypotheses were tested:

Hypothesis 1

There are measurable differences in the predominant styles employed by individuals in the perception of affect.

Hypothesis 2

The personality style of "being in touch with one's feelings" correlates with mental health.

Hypothesis 3

There is a positive correlation between the personality style of "being in touch with one's feelings" and subjective evaluation of the significance to the individual of experience in a variety of therapeutic modalities.

6. Instruments

SIPOAS, the Style In Perception Of Affect Scale

While it is possible to measure with some accuracy bodily changes that occur at the visceral level, it is difficult, if not impossible, to measure the ability to discern finely nuanced changes in feelings at the peripheral level (Canon, 1927, 1931; Mandler, 1984). The Style in Perception of Affect Scale (SIPOAS), was designed therefore as a measure not of the *ability* to perceive these fine nuances of feelings but rather of the *style* that marks preference for a particular style of perceiving affect.

Development

SIPOAS a pencil-and-paper measure of 93 items arranged in 31 triplets, is a refinement of the Perception of Affect Profile (POA), whose reliability and validity were partially determined in prior research (Bernet, 1985, see Appendix A). SIPOAS differs from the POA in the reduction of "triplets" from 46 to 31, in the ordering of triplets within the measure, in the ordering of items within the triplets, and in the wording of some of the items within the triplets. These changes were made variously to improve clarity, to lessen bias stemming from the order of presentation, and to ensure a more powerful discrimination among the items in each triplet. This constituted the interim version of SIPOAS.

Responses from the interim version of SIPOAS were subjected to continuous scrutiny as response data became available. Where suggested by statistical evidence (Cronbach's Coefficient Alpha, and item-scale correlations) and by the "eyeballing" of response patterns, some of the question stubs and some of the response items were

further reworded to ensure greater discrimination and clarity, or to lessen the number of excessively popular or unpopular responses. This constituted the revised SIPOAS questionnaire as used for this study (for the full text of SIPOAS, see Table B-1, Appendix B.); the 226 completed interim-version questionnaires have not been included in the current analysis.

Presentation

Sets of supplementary questions relating to experience in psychotherapy and other therapies (both as patient/client and as practitioner), alertness to subtle changes in bodily feelings, and personal attitudes and values, were bound into the SIPOAS questionnaires, together with instructions and free return mail privileges. Also included with the SIPOAS questionnaires was a cover letter explaining the issues of confidentiality and of informed consent, and a reply-paid postcard by which participants could request (anonymously *via* a unique personal code) to participate in a later stage of the study, to receive additional questionnaires to distribute to friends and acquaintances, or to receive information on the purpose and outcome of this study.

Psychometrics

Scores on the three SIPOAS styles, as now constituted, show internal reliability (Cronbach's alpha) ranging from .81 to .86, and mean item-scale correlations between .39 and .45. The scale was designed to be generally non-transparent but nine of the thirty-one questions (6, 11, 12, 16, 18, 26, 28, 30 and 31) clearly and with little ambiguity explore the three SIPOAS styles; the high item-scale correlations for these nine items constitutes an effective measure of face and content validity.

Scoring

In SIPOAS, participants are required to evaluate and compare their styles in the attention to and perceptions of feelings and emotions, by way of a forced ranking among the three alternative responses to each of the thirty-one questions. Responses on those items that have both a significant and a meaningful correlation with one of the three postulated styles in the perception of affect, are summed to achieve total scores

for each style: BB ("Based on Body"), EE ("Emphasis on Evaluation") and LL ("Leaning to Logic"). A total of exactly three points is allocated to each of the 31 questions; each response item could receive zero, one, two, or three points. Where all items are endorsed equally, the triplet would be scored 1-1-1; where one item is endorsed to the exclusion of the others, the triplet would be scored 3-0-0 (or 0-3-0 or 0-0-3); where there is a gradation of endorsement, the triplet would be scored 2-1-0 (or 2-0-1, 1-2-0, 1-0-2, 0-2-1, or 0-1-2). The three contrasting responses available to each question help establish a context in which meaning and connotation are sharpened. A few of the triplets contained one item that does not properly discriminate and is therefore not scored; it was nevertheless retained to establish a fuller context.

Styles in perception of affect

Based on Body (BB)

The person scoring high in the BB style is assumed to be highly, precisely, rapidly and spontaneously aware of the fine nuances of bodily feelings that are the concomitants of emotion, and thus capable of responding to changes in the person or in the environment with rapidity, flexibility and appropriateness.

Emphasis on Evaluation (EE)

The awareness of the nuances of bodily feelings of the high-scoring EE person is assumed to be neither precise, nor rapid, nor well-integrated; cognitive introspection as if from the outside is a frequent prerequisite before the nature or the intensity of an emotion can be established. Response to changes in feelings, being dependent on cognitive appraisal of norms and rules, is frequently delayed or inappropriate.

Leaning to Logic (LL)

The high-scoring LL style person is assumed to be largely inattentive to the fine nuances of bodily feelings. Awareness of emotional states is delayed: logic is interposed between the bodily feelings and the emotional state in order to understand, control, or repress the emotions and the potential responses.

Self-report

SIPOAS is based entirely on self-report. There is thus no practical means of establishing the veracity of the responses to the SIPOAS questions (nor of the other *ad-hoc* measures). Respondents may not be aware of their true feelings or preferences; their beliefs about themselves may be nothing more than personal wishes; they may try to appear "good" to the tester or the researcher; or they may be affected by social desirability, especially if they believe their therapist may learn the details.

The impossibility of establishing the veracity of responses is no impediment. A high proportion of the most respected tests and measures, including the established tests used to explore the validity of SIPOAS, is also based on unverifiable self-report. According to Costa and McCrae (1992, pp. 41-42), provisions to correct for social desirability, and the use of "elaborate validity scales and corrections," may be counterproductive, actually *detracting* from the validity of an instrument.

SIPOAS is designed, in effect to measures the individual's beliefs and values concerning the *desirability* of different styles in the perception of affect. The perceived social desirability of a response will thus closely reflect the individual's beliefs, preferences and values: those who shape their thinking and responses using intellective approaches will tend to prefer selecting items that endorse intellect, those who believe that answers are to be found by careful self-scrutiny will tend to endorse items that show concerned introspection, those who believe that autonomy is based on feelings and spontaneous self-awareness will tend to select items that endorse the importance of feelings and emotions.

Skills, abilities and preference

SIPOAS is not a measure of skills and abilities but of *preference* among styles. A participant may possess great skills in propriocentric awareness but *prefer* to conduct his or her life on the basis of concerned introspection; another may be highly skilled in

the logical analysis of the feelings that underlie emotions, but will conduct his or her life largely on the basis of spontaneous propriocentricity.

Skills do not necessarily equate with preference. At the formal-operational level of emotional awareness, as conceptualized in the cognitive-developmental theory of emotional awareness (Lane & Schwartz, 1987, p.139), "there is the capacity to make subtle distinctions between nuances of emotion. . . . to perceive the differentiated, multi-dimensional experience of others unbiased by one's own emotional state . . . to see a situation involving oneself through the eyes of others. . . . The capacity to fully experience how one will feel at some future time under certain circumstances increases the likelihood that the decisions one makes in one's occupational or personal life will bring the satisfaction one is seeking." A high-BB person functioning at the formal-operational level, would thus appear to be skilled in self-scrutiny (and in attending to the emotions and desires of others), but would do so within the propriocentric style, that lacks the high-EE's obsessive introspection, and might be more adept than the LL person in utilizing innate logical skills to anticipate and determine response and action.

The 3-item forced-choice structure

By presenting all three responses together and in context, the 3-item forced-choice design impels the participant to become aware of *preference* among styles and attitude in the perception of emotions, and to more clearly define these preferences. A design requesting scores on a zero-to-nine scale separately for each item in each of the triplets, or a set of dichotomous yes-no questions, or of two-item comparisons, would have made for easier and more traditional analyses, but would have measured self-perceived *abilities* and not self-perceived *preferences* in style.

The design is not altogether new. Forced choice and preference among items arranged in a triplet format had been used in the Machiavellian (MACH II) scale (Christie & Merton 1958; Christie & Geis 1970), but subjects frequently reported difficulty and resentment in responding, attributed in part to the apparently arbitrary and unrelated nature of the items in the Machiavellian scale as perceived by the naive

subject. The items in SIPOAS generally have an intrinsic contextual meaning and they differentiate among three styles without necessarily being mutually exclusive; they are thus less likely to engender skepticism or resentment among participants. (Where there were comments on returned SIPOAS questionnaires, these were generally positive).

Additional tests

Established tests

For purposes of validation, some two thousand of the SIPOAS questionnaires had bound into them one or another of six groups of test instruments that had a well-established reputation for reliability and validity. (This required displacing some of the less essential supplementary questions otherwise bound in with the experimental version of SIPOAS). The six validating tests were taken from 3 sources:

- Revised NEO PI-R (Costa & McCrae, 1992)
  - all six facets of the Neuroticism domain (Table 5 in the Results section)
  - facets E1 and E6 of the Extraversion domain, and facets O1, O2 and O3 of the Openness domain (Table 6 in the Results section)
- 16-PF, fifth edition (Cattell, Cattell & Cattell, 1993: Table 7 in the Results section)
  - factors A, C, and N, combined
  - factors F, I, and O, combined
  - factors L, M, and Q4, combined
- Toronto Alexithymia Scale, TAS-20 (Taylor, Bagby & Parker, 1992a)
  - the entire scale (Table 8 in the Results section)

Therapeutic modalities measure

A listing of 22 psychotherapies and 11 physical or spiritual modalities (See Table 10) was bound into every SIPOAS questionnaire. Because the effect of therapy varies by therapist, by patient and by presenting problem, and within individuals according to the current ambient situation, assessing therapeutic experience in terms of number, duration, or frequency of sessions would have been difficult to interpret. Participants

were therefore requested to indicate, on a scale of 0 to 9, which modalities had been subjectively experienced as "truly significant," "important" or had "some impact on you." Additionally, participants were asked to judge, on a scale of 0 ("no experience" or "totally irrelevant") to 9 ("has revolutionized my life"), "the significance of your experience" in *any* form of psychotherapy, in *any* form of physical modality, and in *any* form of spiritual discipline. (A similar questionnaire asking about training and experience *as a practitioner* in the same modalities, was bound into the majority but not all the questionnaires; it has not been analyzed for this study.)

Supplemental questions

To further help define the SIPOAS styles, three sets of supplemental questions were developed as an independent assessment of participants' self perceptions and values. These were bound into the majority of questionnaires but, because of space considerations, not always in their entirety.

Body-awareness scale

(see Table B-3 in Appendix B, also Table 15)

This measure, consisting of 9 items (11 for women), probed into the perceived ability to detect subtle bodily sensations and to control the autonomous system; it was designed as an indicator, not necessarily of actual skills, but of the desirability *for that participant,* of awareness of bodily sensations. Participants checked off "never" (0 points), "at times" (1 point), or "often" (2 points).

It was assumed that even a false claim to a certain skill could be a meaningful indicator of the BB style. To carry this concept to the extreme, three of the items in this measure were written to investigate skills that were held to be "implausible": detecting a shift in blood balance, sensing the growing of hair and nails, and changing the density of urine. Letters were sent to some of the participants who had checked off these "implausible" items (including a number known to the author for their probity), asking them to explain their "uncommon ability." Their replies generally gave plausible explanations for their responses (e.g., two of the responses came from participants

who reported that they were HIV positive and were carefully monitoring their white-cell balance), or satisfactorily explained these as a misreading of the question.

Emphasis on intellect

(see Table 16)

This three-item group was designed to measure the importance attached to intellect in the participant's self image, not to establish a correlation between the SIPOAS styles and actual intelligence. Questions were scored according to the intelligence ranking the participant *claimed* (from "average" to "top 1/10%"); according to whether the participant cited an exact IQ and was able to name the specific test, and according to membership in a high-IQ society.

Personal values and attributes

(see Table B-4 in Appendix B, also Table 17)

The twelve questions in the Personal Values and Attributes inventory, bound into about half of the SIPOAS questionnaires, were designed to further explore the qualities associated with each of the three SIPOAS styles. The Likert-style scoring measured contentment, frustration, self fulfillment, emphasis on intellect *v* emotions, creativity, imagination, body/mind pleasures, personal warmth and interpersonal skills.

Practitioner's Checklist

(see Table B-2, in Appendix B)

To validate the SIPOAS scores with ratings by an observer assumed to be both knowledgeable and objective, and to test the hypothesis that the BB style correlates with greater mental health, an exploratory *ad hoc* measure, the 46-item Practitioner's Checklist, was developed; it was sent to participants who so requested, for submission to their psychotherapist (or trainer, or teacher in physical or spiritual modalities), for completion and return.

The Checklist comprised four panels. The first panel contained instructions for the participant, and a space for him/her to enter a personal code and also a brief

consent form addressed to the practitioner. The participant was instructed to copy the personal code also to the second panel.

The second panel gave instructions to the practitioner; it included a request that the practitioner detach and retain the first panel, to ensure the participant's continuing confidentiality and as evidence of informed consent. (When returned, the Checklists bore only the *practitioner*'s name, together with the participant's code, from which the serial number of the appropriate SIPOAS questionnaire could be determined.)

The other panels of the Practitioner's Checklist requested information on:

- practitioner's university degree, discipline and post-graduate training
- practitioner's training and experience in a variety of therapeutic modalities
- duration of the participant's therapy with the practitioner
- nature and extent of the participant's therapeutic experiences with the practitioner, and with other practitioners.
- a set of 46 items to be scored ("low," "below avrg." "about avrg." "above avrg." and "high"). A number of "exploratory" items were included, and some "distractor" items were added so as not to alert the practitioner to the central nature of this inquiry: the confirmation of the participant's preferred style of perception of affect.

The Checklist sought information in three areas from the viewpoint of an observer assumed to be both knowledgeable and objective:

- Mental health: the sum of eight items (# 6 to #10, #12 to #14).
- Preferred style in perception of affect:

  "Feeling" (BB): the sum of items #16, 17, 23, 25, 29, 34, 38, 41

  "Scrutiny" (EE): the sum of items #22, 26, 31, 32, 33, 37, 44

  "Reasoning" (LL): the sum of items #18, 20, 24,27, 35, 36, 43

- Growth in therapy (evaluated in two ways:

  "Reported Growth": item 11 ("change and growth during therapy")

"Calculated Growth": the difference between the summed scores for items, #1 through #5, "at the start of treatment with you," and for the identical items, #6 through #10, "now."

To make the Checklist as brief and as uncomplicated possible and thus improve the response rate, a Likert-style scale was used, replacing the forced-*preference* SIPOAS design with a measure of *magnitude* of attributes. Furthermore, to avoid alerting Practitioners to the purpose of the study, only oblique questions were used for eliciting responses on style in the perception of affect.

Sample size

To reduce to the minimum the possibility that sampling error would lead to rejection of the "alternative hypotheses" (beta error), minimum sample sizes were established for all tests and subtests (see Table B-5 in Appendix B) .

Calculations, based on Kraemer & Thiemann (1987), suggested that the stated and underlying hypotheses could be reliably sustained with a sample size of 588 valid responses to the SIPOAS itself. A sample size of 378 participants would be required for the Body-awareness scale; 135 for the Emphasis on intellect and the Personal values and attributes scales; 68 for the Practitioner's Checklist; 68 each for the validating tests Neurosis (NEO PI-R) and Alexithymia (TAS-20), and 38 each for individual facets in NEO PI-R and individual factors in 16-PF. A sample size of 387 participants would be required to reliably explore the relationship of SIPOAS styles with the reported personal significance of psychotherapy experiences; the relationship with the other therapeutic domains (physical and spiritual) could be adequately explored with 68 participants, the ten major modality groupings could be explored with 50 participants each, and each specific modality with as few as 30 cases. With 68 cases it would be possible to explore the relationship of SIPOAS style with age, gender and the "source" (e.g. Mensa, AHP) of the response.

7. Participants

Recruitment and provenance of participants

The majority of participants was recruited by mail; a much smaller number was recruited in person--among neighbors, on the job, at social gatherings. The design of the study, entirely correlational, did not demand a randomized sample or a control group. The sample was chosen, however, to present a diversity of participants by gender, age, personality style, and geographic location.

The language in the current version of SIPOAS is finely nuanced, requiring the equivalent of college English, and the item design is based on a North American style of self-scrutiny and self revelation that may not apply to other cultures. Japanese society, for example, makes the assumption that in interpersonal relationships "one is part of a group in which everyone is sensitively attuned to the other" (de Rivera, 1989, p. 15); it is thus reasonable to expect that when a Japanese subject strongly endorses self-scrutiny this may reflect culture and not necessarily an EE personality style. Even in the same language there can be significant differences: a British subject would not necessarily understand the SIPOAS items from the same point of view as an American. Non-college educated and foreign-born participants were therefore neither sought nor encouraged to participate in this study, but their participation was not denied.

Mailing lists were selected for a number of reasons:

- the potential participants were likely to have an education level sufficient to understand the SIPOAS questionnaires
- the recipients represented a wide geographic area

- the lists were readily available
- the recipients reflected, *a priori,* one of the three postulated styles in the perception of affect: Mensans were assumed to strongly reflect the LL style, Association for Humanistic Psychology supporters were assumed to strongly reflect the BB style, and school psychologists were assumed to be positioned neither with those scoring high on LL nor with those scoring high on BB
- the recipients were likely to be cooperative with the study because of common affiliation with the Author

Mailing addresses for mailings came from four major sources

1. the author's personal mailing lists of friends, of business associates, of therapeutic practitioners, and of potential consumers of a variety of therapies
2. the membership list of the National Association of School Psychologists
3. current and former members of the Association for Humanistic Psychology (AHP).

   (AHP, a society founded in the 1960's and inspired by the works of A. Maslow, F. Perls, and I. Rolf, espouses a holistic psychology that stresses self-awareness and body-mind-spirit approaches; it is open to professionals in all fields, and to lay-people.)

1. identifiably active members of North American Mensa, drawn from among published names of office holders at the local or national level, and contributors of letters and articles to Mensa journals.

   (Mensa is a society for those who score in the upper two percent on intelligence tests; its function is mainly social and there are no tenets and no requirements except the I.Q. score.)

Mailings were also sent to

1. the staff of a large New York City public school

   current and former members of the International Primal Association (IPA). (IPA is an association of practitioners and patients in a highly demanding psychotherapeutic discipline based on the theories of A. Janov; the

discipline requires a temporary suspension of the reasoning process and an emphasis on feelings, subtle or intense, that develop from within the body.)

1. current and former students in a graduate psychology program

participants who had responded to postings on computer bulletin boards. (The postings were chiefly on America Online's "Issues in Mental Health" bulletin boards, and dealt with anxiety, courting, depression, divorce, marital infidelity, post-traumatic stress disorder, sexual compatibility, etc.; most were by patients who sought to exchange information; in their e-mail requests or with their returned SIPOAS, many participants elaborated on their treatment, their problems, or their medications. Some were practitioners who also requested SIPOAS questionnaires to display in their waiting rooms.)

Questionnaires were distributed by hand to

1. school psychologists, social workers and educational evaluators in a large-city special education program
2. residents of a multi-ethnic middle-class, largely professional, urban neighborhood
3. participants at Mensa gatherings
4. graduate students in a variety of programs at a university in a major city.

Potential participants received a package containing the SIPOAS questionnaire with reply-paid label, and a cover letter informing them of the option not to respond and that returning a completed questionnaire constituted informed consent. A reply-paid post- card included in the package allowed participants to participate anonymously in a second stage of the study (Practitioner's Checklist), and to obtain information on the study after its completion. Additional SIPOAS questionnaires were sent to participants in the study who indicated on their reply cards that they wished to distribute them to friends, or to display in their waiting rooms.

Distribution of responses

The following geographic distribution, as determined from the zip codes given on questionnaires or reply cards received during the study, excludes those who returned

their questionnaires anonymously and sent no reply card. Because the requirements of confidentiality did not allow for separate scrutiny, the list includes an estimated 150 participants who had responded to the interim version of SIPOAS but whose questionnaires were not included in the current analysis. (Close to one hundred of this group is likely to have come from the New England, New York and New Jersey area, which might account, in part, for the "bulge" in the distribution.) Though somewhat skewed to the Mid-West and Northeast, the distribution was geographically diverse: 92 responses were received from New England states, 207 from New York State, 118 from New Jersey and Pennsylvania, 61 from Mid-Atlantic states; 137 from the South, 207 from the Middle West, and 77 from Mountain and Pacific states. Less than one third of the responses came from large cities.

A large degree of homogeneity obtained, nevertheless: the majority of the sample is college educated, over two thirds reported "therapeutic" experience (which includes modalities such as meditation and yoga) and over one half reported experience in some form of psychotherapy; the results of this study cannot be assumed to generalize to other populations. The return rate from some of the mailings was low (2 percent from display boxes in practitioners' waiting rooms, 5 percent from among those distributed by other participants); return rates from the larger mailings (Association for Humanistic Psychology, Mensa, school psychologists) were in the 25 to 30 percent range, and returns from participants who volunteered *via* computer bulletin boards exceeded 50 percent. Approximately two-thirds of the valid responses came from participant groups where the return rate exceeded 25 percent. The breakdown of sources for the first 987 returned questionnaires (see also Table 4, Results section) was: 259 from Mensa, 238 from the Association for Humanistic Psychology, 123 from the National Association of School Psychologists, 79 from displays in waiting rooms, 40 through computer bulletin boards, 147 from "personal list, distributed by participants, unknown," and 101 "Miscellaneous." Sixty percent of the questionnaires were returned by female participants, forty percent by males (see also Table 3). Over half the participants were

aged between 36 and 55 (see Table 2); with a significantly low representation for young adults under 26 (2.8%).

Practitioner's Checklist

Participants who had reported recent experience in psychotherapy or various other therapeutic modalities, and who had indicated (on either their questionnaire or on a reply card) an interest in participating further, were sent a Practitioner's Checklist to be completed by their practitioner. Return rates ranged from approximately three percent of those who received their Checklist seven months after they had returned a SIPOAS questionnaire, to approximately thirty percent of those who were sent a Checklist within two weeks of receipt of their questionnaires.

8. Procedure

Processing of SIPOAS questionnaires

Over one thousand valid SIPOAS questionnaires (final version) were received by mail. In addition, 226 valid questionnaire (interim version) were received and processed, but were not included in the analyses.

To preserve the participant's anonymity, the page bearing name and address with the participant's chosen code on the reverse, and the relevant pages of the corresponding SIPOAS questionnaire, were stamped with a serial number. The parts were separated, the address page was stored under the direct supervision of the principal investigator, and the code and serial numbers (and the name and address where given) were entered in a computer data file accessible only to the principal investigator. Returned reply cards had their information entered into the same name and address data file.

The questionnaire section was scrutinized for errors and omissions. Wherever possible, the participant was notified of errors and requested to correct them. When this was not possible, and when errors were obviously of a minor nature, the data were corrected according to a prepared algorithm designed to minimize and randomize any minor error. Where the errors could not be corrected, or when comments on or accompanying the questionnaire gave rise to suspicion, or when it was clear that the participant had not properly understood the task, the case was marked as invalid.

Data entry

Responses to the validating tests (16-PF, NEO PI-R and TAS-20) were hand scored (using paper templates), and the resulting totals were entered into one data file.

Responses to the 93 items of SIPOAS were entered directly into another data file. Responses relating to experience in therapeutic modalities, to awareness of the body, and to various attitudes and values, were all entered into a third file. All files were linked by unique serial numbers.

The minimum number of participants had been determined through power analysis (Cohen, J., 1988; Kraemer & Thiemann, 1987) for each established validation test: 68 each for the Neuroticism domain of NEO PI-R and for Alexithymia (TAS-20), and 38 for all facets in NEO PI-R and for all factors in 16-PF. When returns from the initial mailing of validating tests did not reach the required minimum, additional questionnaires bearing these tests were printed up, and distributed randomly: factors A, C, and N of 16-PF (110 copies); Factors F, I, and O of 16-PF (40); Factors L, M, and Q4 of 16-PF (130); Neuroticism domain of NEO PI-R (330); Alexithymia/TAS-20 (330).

Processing of Practitioner's Checklists

A significant majority of participants willingly gave name and address on the returned SIPOAS questionnaire. Those who gave name and address, *and* had indicated experience in one or more of a variety of therapies, *and* had agreed to participate in the second stage of the research, were sent a Practitioner's Checklist. Checklists were sent also to those who, choosing to be anonymous, had requested them on their reply cards.

When Checklists were returned, the personal code was cross-linked with the associated serial number, and the data entered into a separate data file.

Analysis of data

All statistical analysis was done by computer, utilizing the Statistical Package for the Social Sciences (SPSS) and StatMost for Windows, as appropriate.

Factor analysis was considered to be both inappropriate for the SIPOAS scale and unnecessary. Guilford (1952) has argued a strong case *against* factor analysis under certain circumstances (see also Cattell, 1952; Thurstone, 1947), emphasizing the inappropriateness of the factor analytic method when, as in the *Kuder Preference Record,* the forced-choice design results in ipsative measurements. SIPOAS forces a choice between three responses, and an individual's score on one item determines the scores on the other two items. The ipsative design leads to strict interdependence, and when factor analysis is attempted, the component loadings (Variances-Covariances Matrix) for the three items in each triplet of necessity sum up to zero.

"Factor analysis is not necessary when one already knows (1) which variable measures each factor and (2) the variables' relative importance" (Hedderson, 1991, p.172). A more detailed case had been argued earlier by Eysenck (1953/1978, p 298).

> In certain practical situations, the full Thurstonian procedure may not be practicable for various reasons, and when we have available an external criterion which embodies a certain hypothesis which we are interested in testing, the method of "criterion analysis" . . . may serve as a substitute. This method appears particularly apposite in personality research outside the cognitive field.

SIPOAS had been designed specifically to measure three differing personality qualities; the items for each of the styles were refined through five different reviews in the POA stage of the design, and again twice in the SIPOAS stage, so as to load in a discriminatory fashion on one or the other of the three styles. It was inevitable, therefore, that any attempted analysis of SIPOAS would produce the three carefully designed factors that constitute its components. The thirty or so different measures that were used to test the validity of SIPOAS, essentially a criterion analysis, confirmed the inherent differences between the BB style and the EE style, the BB style and the LL style and, to a slightly lessened effect, between the EE and the LL styles.

Factor analysis was nevertheless instituted for exploratory purposes: each style separately to establish whether the style was composed of different sub-factors, and

the full SIPOAS without the items that constitute the BB style, to help further differentiate among non-BB components.

The first task of analysis was to further refine the composition of the SIPOAS scales for each of the styles BB, EE, and LL. Cronbach's Coefficient Alpha was used to establish the reliability of each of the postulated scales. At the same time the corrected item-scale correlations (Pearson's *r*) were examined. Where suggested by scrutiny of Cronbach's Coefficient Alpha, specific items were dropped from a scale. Specific items were dropped or added back where scrutiny of the item-scale correlation failed to show clear discrimination between styles or clear discriminations from each of the other two items in the triplet. This process was reiterated until the three scales for styles BB, EE, and LL were finally determined. The fully-developed BB scale consisted of 29 scored items, the fully-developed EE scale consisted of 30 scored items (for one triplet, the *sum* of two items was entered), the fully-developed LL scale consisted of 30 scored items. Items were not dropped from the SIPOAS questionnaire, only from the scoring. Ultimately, the total score for each participant on each of the three styles was calculated and tabulated. Since the SIPOAS is still in an experimental stage, no attempt was made to establish norms for SIPOAS. Means on the three styles were calculated for various splits of the data: by age, by gender, and by provenance of the test protocol (Mensa, school psychologists etc.; see Tables 3, 4, and 5).

Correlations were calculated between SIPOAS scores and the various validating tests and subtests (16-PF, NEO PI-R, TAS-20); scores in the corresponding Practitioner's Checklist; measures of experience in various therapies (as client and as practitioner); scores on awareness of the body; scores on personal values and attitudes; and age and gender. Analyses were conducted also on the distribution of the scores for the three styles according to age, gender, and provenance.

The statistical analyses were conducted over a period of several weeks. Split-half reliability and item-scale correlations (to establish the final composition of the three styles) were calculated on the first 987 valid cases. Additional cases were subsequently

received and scored, and consequently some of the analyses were conducted on a sample slightly larger than 987.

A variety of investigations of the data were made *post facto*, to further establish the properties of the SIPOAS styles and of the SIPOAS scale, most specifically the changes in style as they correlate with age and with therapeutic experiences, and to explore the components of therapeutic experiences that appear to correspond with personality change.

Provision was made to inform participants and participating practitioners of the purpose and outcome of the study at its conclusion.

9. Results

Statistical qualities of the SIPOAS styles

Over one thousand valid protocols of the final working version of SIPOAS were received. Each protocol contained the full 31 triplets that constitute the SIPOAS, together with a questionnaire about the extent of experiences in various therapeutic modalities. (Some protocols included parallel questions about therapeutic experience *as practitioner;* these were not analyzed for this study). Many contained also *ad hoc* measures of awareness of small changes in bodily feelings, of emphasis on intellect, and of other personal attributes and attitudes. In addition, 401 questionnaires included one of the six sets of established measures that were used to determine validity.

Style (scale) compositions were calculated on 987 protocols[1]; protocols of the interim version were not included in the analysis. (For the text of the SIPOAS scale, together with corrected item/scale correlations, see Table B-1 in Appendix B.)

Internal reliability

Statistical analysis of SIPOAS (*N*=987) showed the internal reliability to be well within accepted guidelines for a personality measure (American Educational Research Association et al, 1985; Briggs, 1989). Split-half reliability, as measured by Cronbach's coefficient alpha (Cronbach, 1951), was .86 for the BB style, .81 for the EE style, and .84 for the LL style.

Item-scale correlations

The corrected correlation between scale items and their respective SIPOAS subscales ("styles") was well within the same guidelines for a personality measure.

[1]Note: analyses were conducted over a period of time; the number of cases varies slightly from one analysis to another.

For BB, corrected item-scale correlations (see table B-1 in Appendix B) varied from .24 to .62, all significant at the .001 level. There were two correlations of between .20 and .29; six between .30 and .39; twelve between .40 and .49; seven between .50 and .59; and two between . 60 and .69. The mean correlation was .45.

For EE, corrected Item-scale correlations varied from .14 to .60, all significant at the .001 level. There were three correlations of between .10 and .19; five between .20 and .29; seven between .30 and .39; seven between .40 and .49; five between .50 and .59; and two between .60 and .69. The mean correlation was .39.

For LL, corrected Item-scale correlations varied from .25 to .63, all significant at the .001 level. There were four correlations of between .20 and .29; twelve between .30 and .39; seven between .40 and .49; six between .50 and .59; and one between .60 and .69. The mean correlation was .42.

The intercorrelations of the BB with the EE style was -.5195; with the LL style -.6225; the intercorrelation of the EE style with the LL style was -.3353.

Factor analysis

As predicted by the item interdependence, the computerized program was unable to factor analyze the *entire* 31-triplet SIPOAS scale. Furthermore, since each style was designed to seek out a very specific quality, it became in effect a largely homogenous factor, and the screes accounted for most of the response itmes *within* each style, i.e. the majority of the "factors" within each style consisted of one or two response items.

Factor analysis (Varimax rotation, Kaiser normalization) of the BB style, produced two principal factors that together accounted for 37.3 percent of the variability: one factor constituted "relies on feelings for awareness"; the other constituted "experiences awareness of feelings and emotions in a relaxed manner."

Factor analysis (Varimax rotation, Kaiser normalization) of the EE style produced three principal factors that together accounted for 50.5 percent of the variability: one factor constituted "experiences social anxiety"; the second, "experiences the need to

seek information about feeling states"; the third, "depends on evaluation by others to understand the self."

Factor analysis (Varimax rotation, Kaiser normalization) of the LL style also produced three principal factors that together accounted for 37.8 percent of the variability: one factor constituted "uses logic for understanding emotions"; one "tends to repress feelings"; the third "attempts to present the self in a controlled manner."

Factor analysis (Varimax rotation, Kaiser normalization) of "Not BB," i.e. the 93 items of SIPOAS less the 29 items that constitute the BB style, produced two principal factors that together accounted for 27.4 percent of the variability: one factor consisted exclusively of items contained in the EE style, the other factor consisted exclusively of items contained in the LL style.

SIPOAS style: age and gender

Age correlated positively with the BB and LL styles, negatively with the EE style. Being female correlated positively with the BB and EE styles, negatively with LL. (See correlations in Table 1; means by age, and by gender, in Tables 2 and 3.) Two-way ANOVA revealed no significant interactions between age and gender for any of the three styles. The rapid straight-line decrease in mean EE scores is unexpected and is explored further in the Discussion section and in Appendix D.

SIPOAS styles and group styles

Certain personality styles and factors are popularly attributed to specific groups; while some of these may be based on prejudice, other popular attributions may be reliably based on accumulated "folk wisdom." As a further aid to criterion validation, SIPOAS questionnaires were therefore marked with source codes to indicate the provenance (mailing lists or other means of distribution, see Table 4) of returned questionnaires. The breakdown by source is unlikely to be completely accurate: some participants may have obtained their questionnaires at second hand from a targeted recipient, and others may have belonged to more than one group (e.g., a school

Table 1: Correlations of SIPOAS scores with age and gender

	BB	EE	LL
Age	.14	-.34	.15
Gender (female)	.13	.11	-.23

All correlations are significant at the .001 level.

Table 2: Mean SIPOAS scores, by age

		Style BB		Style EE		Style LL	
Age range	*N*	Mean	*SD*	Mean	*SD*	Mean	*SD*
16-25	29	32.34	8.69	33.79	10.98	24.55	7.75
26-35	182	32.09	11.92	30.68	11.69	27.90	11.03
36-45	270	32.20	12.41	28.36	10.21	30.08	11.51
46-55	288	36.53	12.63	23.47	9.47	30.70	11.66
56-65	136	39.47	13.38	21.49	8.56	29.73	11.91
66 +	81	34.74	13.79	20.35	8.15	35.72	13.93
TOTAL	997	34.69	12.86	25.87	10.64	30.12	11.81

Table 3: Mean SIPOAS scores, by gender

		Style BB		Style EE		Style LL	
	N	Mean	*SD*	Mean	*SD*	Mean	*SD*
Male	397	32.69	12.57	24.56	9.72	33.40	12.12
Female	595	35.98	12.92	26.80	11.16	27.92	11.08

Table 4-a: Mean SIPOAS scores, by participants' sources

		Style BB		Style EE		Style LL	
	N	Mean	*SD*	Mean	*SD*	Mean	*SD*
0: not determined	147	34.89	12.28	28.17	11.10	27.47	10.29
1: multicultural midl'-class urban neighborhood	25	27.32	9.63	28.48	13.03	35.04	11.96
2: urban special-education school professionals	18	30.22	9.50	29.61	10.22	30.72	8.73
3: on display in practitioners' waiting rooms	79	33.10	13.93	31.05	11.97	26.27	9.74
4: Assoc. for Humanistic Psychology mail list	238	44.14	11.88	21.91	8.39	24.62	9.45
5: Nat. Assoc. for School Psychology mail list	123	31.82	9.39	26.01	8.13	32.87	10.21
6: International Primal Association mail list	32	44.50	13.73	25.56	10.28	20.69	8.82
7: member of Mensa (high IQ society)	259	28.81	9.83	24.15	10.42	37.82	11.89
8: graduate students at large urban university	26	31.65	12.20	29.15	11.14	29.88	10.85
9: computer bulletin boards	40	28.95	11.55	34.33	12.07	27.20	10.77

Table 4-b: Ranking of participants' sources, by mean SIPOAS scores

	BB	EE	LL
1: multicultural middle-class urban neighborhood	9	5	2
2: urban special-education school professionals	6	3=	4
3: on display in practitioners' waiting rooms	3	2	7
4: Assoc. for Humanistic Psychology mail list	1=	9	8
5: Nat. Assoc. for School Psychology mail list	4=	6	3
6: International Primal Association mail list	1=	7	9
7: member of Mensa (high IQ society)	7=	8	1
8: graduate students at large urban university	4=	3=	5
9: computer bulletin boards	7=	1	6

Note: where acores are approximately equal, sources have been given identical ranks; these are marked with an = sign

psychologist-Mensan, or a graduate student-neighbor); 147 protocols could not be allocated to a specific source chiefly because they had been distributed through other participants who had requested them for friends, students or colleagues.

- On BB, members of the Association for Humanistic Psychology (AHP) and of the International Primal Association (IPA) scored highest, about 10 points above the mean; urban middle class/professionals, members of Mensa, and respondents to computer bulletin boards scored about 6 points below the mean (see rankings, Table 5-b).
- On EE, participants recruited from computer bulletin boards scored highest (9 points above the mean) with practitioner's waiting rooms second; AHP members (4 points below the mean) scored lowest, with Mensa second lowest.
- On LL, members of Mensa (8 points above the mean) scored highest with urban middle class professionals second. IPA scored lowest, followed by AHP.

Validation by existing instruments

Four hundred and one SIPOAS protocols were received, each with one of six sets of existing tests and subtests. They were analyzed to establish convergent and discriminant validity (Campbell & Fiske, 1959) for the SIPOAS styles.

NEO PI-R

The BB style shows a high negative correlation with the NEO PI-R Neuroticism domain as a whole and with five of its facets. EE style shows a high positive correlation with the NEO PI-R Neuroticism domain as a whole and with each of its facets. LL shows no significant correlation with the NEO PI-R domain as a whole, nor with any of its facets (see Table 5).

Many of the items in SIPOAS can be seen as measuring self consciousness; accordingly, the correlation of SIPOAS with N *excluding* the Self-consciousness facet was also calculated; that correlation was virtually identical to that with the full N domain. Other aspects of the correlations between SIPOAS scales and the Neuroticism domain are explored in the Discussion section, and in Appendix D.

Table 5

Correlation of SIPOAS styles with Neuroticism Domain and individual facets (NEO PI-R, Costa & McCrae, 1992). *N*=106

Domain & Facet	BB	EE	LL
N1 Anxiety apprehensive, fearful, prone to worry, nervous, tense, jittery *v.* calm, relaxed, do not dwell on things that might go wrong	-.36***	.55***	.02
N2 Angry Hostility tendency to experience anger, frustration and bitterness, expressed or not *v.* easygoing and slow to anger	-.26**	.29**	.10
N3 Depression Feelings of guilt , sadness, hopelessness, loneliness; easily discouraged & dejected *v.* rarely experience these emotions but not necessarily cheerful or lighthearted	-.29**	.51***	-.04
N4 Self-Consciousness shame, embarrassment, sensitive to ridicule, feelings of inferiority *v.* less disturbed by awkward social situations, not necessarily poised, or have good social skills	-.32***	.58***	-.07
N5 Impulsiveness inability to control cravings and urges. Unable to resist desires, though these are regretted later *v.* find it easier to resist these temptations, high tolerance for frustration	-.01	.21*	-.15
N6 Vulnerability unable to cope with stress, dependent, hopeless or panicked when facing emergency situations *v.* perceive themselves as capable of handling themselves in difficult situations	-.28**	.52***	-.06
Neuroticism Domain (sum of N1 to N6) behavioral or emotional maladjustment, may experience fear, sadness, anger, guilt, disgust *v.* calm, adjusted, even-tempered, emotional stability	-.34***	.59***	-.04
N1 + N2 + N3 + N5 + N6 (Neuroticism, excluding Self-Consciousness facet)	-.32**	.56***	-.03

*$p<.05$
**$p<.01$
***$p<.001$
one-tailed

Table 6

Correlation of SIPOAS styles with selected facets from the Extraversion and Openness domains (NEO PI-R, Costa & McCrae, 1992)

Facets (from **E**xtraversion & **O**penness domains)	No of cases	BB	EE	LL
E1 Warmth affectionate and friendly, like people, easily form loose attachments to others *v.* more formal, distant, reserved; not necessarily hostile or lacking compassion	41	.47**	-.23*	-.26*
E6 Positive Emotions tendency to experience happiness, love, joy, excitement; are cheerful & optimistic, laugh easily/ often *v.* less exuberant and high-spirited, not necessarily unhappy	41	.31*	-.28*	-.06
O1 Fantasy vivid imagination, active fantasy life, not as escape but for creating an interesting inner world *v.* more prosaic, prefer to keep their minds on the tasks at hand	41	.36*	0	-.38**
O2 Aesthetics deep appreciation for art and beauty; moved by poetry, music, art; not necessarily talented nor have "good taste" *v.* relatively insensitive to, and uninterested in, art and beauty	41	.25*	-.24*	-.03
O3 Feelings experience deeper and more differentiated emotional states; feel both happiness & unhappiness more intensely than others *v.* somewhat blunted affect, do not believe that feeling states are of much importance	41	.35*	0.07	-.46**

*$p<.05$
**$p<.01$
one-tailed

The BB style correlates, also, with the five tested facets of the Extraversion and Openness domains (see Table 6) of NEO PI-R: warmth, positive emotions, fantasy, aesthetics, and feelings; EE style is seen as more formal, less exuberant, less sensitive to art and beauty; LL style as being more formal, more prosaic and to have a somewhat blunted affect and a belief that feeling states are of not much importance.

Cattell's 16-PF

Analysis of scores on nine factors of Cattell's 16-PF (1993), shows the BB style to correlate with emotional stability, and also with being warm/outgoing, trusting/accepting, imaginative/idea-oriented, self-assured/unworried, and relaxed/patient (see Table 7). The EE style correlated with being emotionally reactive/changeable, self-doubting/ worried, tense/impatient, suspicious/skeptical, and also reserved/distant, and practical/ solution oriented. The LL style showed significant correlation with only two traits: reserved/impersonal/distant, and private/discreet/non-disclosing.

TAS-20, the Toronto Alexithymia Scale

Correlations between SIPOAS styles and TAS-20 (Bagby, Parker, & Taylor, 1993; Bagby, Taylor, & Parker, 1993), were varied (see Table 8). The EE style correlates with the full scale and with two of its factors: difficulty in *identifying* feelings and difficulty in *describing* feelings. The BB style shows no correlation with TAS-20 but correlates negatively with difficulty in *describing* feelings. The LL style shows no correlation with TAS-20 but correlates negatively with difficulty in *identifying* feelings. There are no correlations between SIPOAS styles and externally-oriented thinking. (The similarities and differences of SIPOAS and TAS-20 are discussed further in the Discussion section.)

Ad hoc measures

Practitioner's Checklist

Mental health: Seven of the eight "mental health" items, and the total for the eight items, correlated positively with BB or approached significance; seven (and the

Table 7:

16 PF (Cattell, 1993): correlation of selected factors with SIPOAS styles

Primary factor scale descriptors	no of cases	BB	EE	LL
A Warmth				
warm, outgoing, attentive to others	60	.43	-.24	-.40
v. reserved, impersonal, distant		(.001)	(.07)	(.01)
C Emotional Stability				
emotionally stable, adaptive, mature	60	.28	-.46	.12
v. reactive, emotionally changeable		(.03)	(.001)	NS
F Liveliness				
lively, animated, spontaneous	38	-.06	-.12	.17
v. serious, restrained, careful		NS	NS	NS
I Sensitivity				
sensitive, aesthetic, sentimental	38	.12	-.03	-.16
v. utilitarian, objective, unsentimental		NS	NS	NS
L Vigilance				
vigilant, suspicious, skeptical	53	-.27	.38	-.06
v. trusting, unsuspecting, accepting		(.06)	(.01)	NS
M Abstractedness				
abstracted, imaginative, idea-oriented	53	.33	-.25	-.12
v. grounded, practical. solution-oriented		(.02)	(.08)	NS
N Privateness				
private, discreet, non-disclosing	60	-.13	-.17	.32
v. forthright, genuine, artless		NS	NS	(.02)
O Apprehension				
apprehensive, self-doubting, worried	38	-.30	.58	-.21
v. self-assured, unworried, complacent		(.07)	(.001)	NS
Q4 Tension				
tense, high energy, impatient, driven	53	-.32	.50	-.13
v. relaxed, placid, patient		(.02)	(.001)	NS

Two-tailed. Statistical significance is shown in parentheses, to two digits (except $p<.001$). NS = no significance ($p>.10$).

Table 8:

Correlation of SIPOAS styles with TAS-20 (Toronto Alexithymia Scale), and factors (Taylor, Bagby & Parker, 1993)
(*N*=101)

	BB	EE	LL
Factor 1: Identifying feelings experiences difficulty in identifying feelings	.01	.29**	-.26**
Factor 2: Describing feelings experiences difficulty in describing feelings	- .25*	.32**	.03
Factor 3: Externally-Oriented Thinking thinking is externally oriented	-.08	-.07	.14
Alexithymia (full scale) "lacks words to describe feelings"	-.12	.27**	-.09

*$p<.05$
**$p<.01$
***$p<.001$
two-tailed

total for the eight items) correlated negatively with EE or approached significance; correlations with LL lacked significance (see Table 9a; also Table B-2 in Appendix B).

Preferred style in perception of affect was measured through three groups of items (see Table 9b) that had been designed to correlate with each style respectively:

- "Feeling" (BB): All eight items showed a positive correlation with BB, but only three were at the significance level; all correlations with EE and LL were negative or non-significant. The sum of the eight items correlated positively with BB, and showed only insignificant and negative correlations with the other two styles.
- "Examining" (EE): None of the seven items showed a significant positive correlation with EE, and only one item ("generally determines action on the basis of the opinions of others"), with a correlation of .15, even approached significance. The sum of the seven items showed no significant correlation with any of the three styles.
- "Reasoning" (LL): Only two of the seven items in this group showed a positive correlation with LL ("understands inner processes by relying on logical reasoning," and "generally determines action on the basis of logical judgment"). The sum of the seven items showed no significant correlation with any of the three styles.

Growth in therapy (see Table 9c):

- "Change and growth during therapy," as measured by item #11, showed a positive but non-significant correlation with BB, a similar but negative correlation with EE, and no correlation with LL.

The "calculated growth" score (#47 in Table 9c), is the sum of the five items #1 through #5 "at the start of treatment with you" deducted from the sum of the identical items "now" (#6 through #10); it showed no significant correlation with any of the styles.

Overall, practitioners' ratings tended to correlate strongly with BB. Fourteen of the forty-six items in the Checklist correlated positively ($p<.05$) with BB; another ten approached significance. Five of the forty-six correlated negatively with BB; of these just two ("understands inner processes by relying on logical reasoning," and "generally determines action on the basis of logical judgment"), approached significance.

Table 9a

Practitioner's Checklist: correlation of "mental health" with SIPOAS styles (N=60)

	Checklist items	BB	EE	LL
6	personality integration	.29 (.03)	-.20 (.13)	-.14 NS
7	inter-personal relationships	.35 (.01)	-.29 (.03)	-.12 NS
8	social functioning	.35 (.01)	-.33 (.01)	-.07 NS
9	inner contentment	.29 (.03)	-.32 (.02)	.01 NS
10	self actualizing	.37 (.01)	-.32 (.02)	-.12 NS
12	content, comfortable, relaxed	.15 NS	-.16 NS	-.01 NS
13	has attained good mental health	.28 (.04)	-.26 (.05)	-.06 NS
14	has a well-integrated personality	.31 (.02)	-.24 (.07)	-.13 NS
	Total "Mental Health"	.33 (.01)	-.30 (.02)	-.08 NS

Statistical significance (in parentheses) is shown to two digits, except $p<.001$ two-tailed; NS = no significance ($p>.15$).

Table 9b

Practitioner's Checklist: correlation of SIPOAS styles with practitioners' evaluation of style (N=60)

	Composite scores	BB	EE	LL
49	"Feeling" Sum of items (16 + 17 + 23 + 25 + 29 + 34 + 38 + 41)	.28 (.04)	-.17 NS	-.19 NS
50	"Examining" Sum of items (22 + 26 + 31 + 32 + 33 + 37 + 44)	.14 NS	-.11 NS	-.07 NS
51	"Reasoning 1" Sum of items (18 + 20 + 24 + 27 + 35 + 36 +43)	.03 NS	-.05 NS	.08 NS
52	"Reasoning 2" Sum of items (35 + 36 - 17 -29 - 34)	-.42 (.001)	.16 NS	.38 (.01)

Statistical significance (in parentheses) is shown to two digits, except $p<.001$ two-tailed; NS = no significance ($p>.15$).

Table 9c

Practitioner's Checklist: correlation of SIPOAS styles with "growth & change" (N=60)

	Checklist items	BB	EE	LL
	At the start of treatment with you:			
1	personality integration	.10 NS	-.08 NS	-.04 NS
2	inter-personal relationships	.32 (.02)	-.26 (.05)	-.12 NS
3	social functioning	.32 (.02)	-.25 (.06)	-.14 NS
4	inner contentment	.20 (.13)	-.29 (.03)	.07 NS
5	self actualizing	.31 (.02)	-.24 (.07)	-.14 NS
	Currently:			
6	personality integration	.29 (.03)	-.20 (.13)	-.14 NS
7	inter-personal relationships	.35 (.01)	-.29 (.03)	-.12 NS
8	social functioning	.35 (.01)	-.33 (.01)	-.07 NS
9	inner contentment	.29 (.03)	-.32 (.02)	.01 NS
10	self actualizing	.37 (.01)	-.32 (.02)	-.12 NS
11	change & growth during therapy	.19 NS	-.19 NS	-.02 NS
47	"calculated growth" (items 6 thru 10) - (items 1 thru 5)	.10 NS	-.09 NS	-.01 NS

Statistical significance (in parentheses) is shown to two digits
NS = no significance (p>.15).
two-tailed

Only six of the forty-six items (all variants on styles of learning-from-others, learning-from-examples, learning-from-logical-reasoning) showed *any* positive correlation with EE; none approached significance. Six items showed negative correlation with EE ($p<.05$); seven more approached significance.

Only two items correlated significantly with LL, both *negatively*: "understands inner processes by focusing on 'inner feelings'," and "is open to emotions." Five other items, all suggesting emphasis on logic over emotion, or lack of skills as patient in therapy, approached significance, in the positive direction.

The inability of the Practitioner's Checklist to discriminate among the three styles, is explored in the Discussion section. A *post hoc* exploratory summation, "Reasoning 2" (#52 in Table 9b), based on items that discriminate logically and clearly between the LL and BB concepts, showed positive correlation ($p<.01$) with LL, and negative correlation ($p<.001$) with BB.

Personality styles and therapeutic experience

The generally positive correlations in a pilot study (see Appendix A) between the Propriocentric style (since renamed "BB") and the reported extent of experience in many therapies, led to the formulation of one of the hypotheses in the current study, that there is a correlation between the personality style of "being in touch with one's feelings" and experience in a variety of therapeutic modalities.

The hypothesis was tested by means of a listing of 22 psychotherapies and 11 physical or spiritual modalities (See Table B-3, Appendix B) that were rated by participants, on a scale of 0 to 9, as having been experienced as "truly significant," "important" or had "some impact on you." Additionally, participants were asked to judge, on a scale of 0 ("no experience" or "totally irrelevant") to 9 ("has revolutionized my life"), "the significance of your experience" in *any* form of psychotherapy, in *any* form of physical modality, and in *any* form of spiritual discipline. This set of questions was bound into every SIPOAS questionnaire. (A similar questionnaire, asking for

information *as a practitioner* in the same modalities, was bound into the majority but not all the questionnaires; it has not been subjected to statistical analysis.)

> Participants recruited through mailings to school psychologists, tended to report extensive experience (both as clients and as therapists) in a set of modalities that included Cognitive, Existential, Family and Rogerian therapies; these reports were often incongruent with declared age or specific professional function. Informal inquiry revealed that many school psychologists believe graduate school exposure to reviews of the psychotherapeutic modalities to constitute "training," and counseling children and conferences with parents, to constitute "therapeutic practice." While no doubt many of these school psychologists work at a high professional level, and have had adequate training and adequate therapeutic experience, it was decided to avoid error and bias by eliminating the responses of the entire group from these two specific analyses.

The 864 remaining cases were analyzed: 662 had had some experience in at least one of the listed modalities, 550 reported experience specifically in one of the psychotherapeutic modalities. Six of twenty-two psychotherapeutic modalities (Cognitive/Rational emotive, Encounter groups, Family therapy, Gestalt therapy, Jungian therapy, and Person-centered/Rogerian) and two of eleven physical and spiritual modalities (massage/shiatsu/polarity, and meditation), were checked off by a hundred or more participants; only Ego psychology, Reichian/Radix, and Sensory deprivation had been checked by less than the 30 participants required for reliably calculating correlation with SIPOAS styles. To explore the relationships between specific therapeutic modalities and SIPOAS styles, an Index of Therapeutic Effect ("Method of Differences") was developed, by calculating the mean BB, EE and LL scores of those whose experience in the specific modality was at or above the modality median, and subtracting from this the mean scores of those who had had no experience in that modality (see table 10). A more extensive discussion of the rationale behind the construction of the Index of Therapeutic Effect (and of variant methods, see Table C-2), and of the implications of this index, can be found in Appendix C.

Table 10
Index of therapeutic effect: Method of Differences

	no. of subjects with scores >0	range of scores in the calculation	no. of subjects at/above median	B B at/above mean	B B median difference of means	E E at/above mean	E E median difference of means	L L at/above mean	L L median difference of means
BioEnergetics	30	5-9	18	46.50	11.78	22.61	-3.17	21.44	-8.73
Primal Therapy	46	7-9	26	46.42	11.74	24.04	-1.68	20.12	-10.15
Reichian	14	7-9	7	50.43	15.40	20.14	-5.57	20.57	-9.36
Adlerian	28	5-9	14	34.57	-0.53	21.14	-4.69	34.71	4.96
Behavioral	60	6-8	25	33.24	-2.02	29.04	3.62	28.28	-1.70
BioFeedback	32	4-8	15	32.07	-3.22	26.33	0.76	32.47	2.68
Cognitive/RET	134	6-9	73	32.49	-3.00	30.05	4.95	27.84	-2.28
Encounter Groups	128	6-9	63	40.71	6.52	25.19	-0.54	24.87	-5.87
Existential	69	7-9	29	42.76	8.17	24.93	-0.83	23.66	-6.66
Family Therapy	104	6-9	47	37.32	2.17	26.15	0.56	27.53	-2.39
Gestalt Therapy	137	7-9	64	45.16	11.59	22.50	-3.61	22.98	-8.00
Hypnotherapy	68	6-9	36	39.47	4.73	22.92	-2.98	28.14	-1.90
Jungian	109	7-9	51	44.27	10.28	24.96	-0.75	21.80	-9.14
Multimodal Therapy	70	7-9	37	39.11	4.21	27.68	2.09	24.08	-6.06
Neurolingstics	47	6-9	19	36.95	2.15	23.26	-2.65	30.37	0.40
PersonCentd/Rogern	117	7-9	56	40.77	6.53	25.09	-0.73	24.77	-5.83
Psychodrama	49	6-9	24	42.38	7.60	26.54	0.92	21.28	-9.01
Freudian	75	6-9	38	33.79	-1.31	26.47	0.91	30.21	0.19
Object Relations	34	7-9	18	39.17	4.11	29.89	4.35	21.94	-8.12
Ego Psychology	23	6-9	13	37.23	2.11	26.92	1.34	26.46	-3.50
Transactional Analys.	67	5-9	39	38.92	3.97	22.15	-3.64	29.36	-0.58
Alexander/Trager,etc.	33	6-9	20	39.40	4.45	25.95	0.30	25.40	-4.66
Chiropractic	90	6-9	42	37.71	2.86	26.50	0.72	26.40	-3.61
Art Therapy	62	6-9	32	36.28	1.14	27.28	1.87	26.97	-3.14
Dance Therapy	71	7-9	32	42.25	7.70	24.03	-1.83	24.44	-5.82
Music Therapy	65	7-9	27	34.33	-0.79	26.33	0.75	29.85	-0.12
Massage Therapy	135	6-9	67	40.66	6.54	25.64	0.02	24.45	-6.46
Meditation	182	7-9	91	43.96	10.81	22.44	-3.89	24.23	-6.96
Psychedelics	37	6-9	19	41.00	6.01	20.63	-5.14	29.58	-0.33
Sensory Deprivation	14	4-7	7	37.86	2.81	25.00	-0.76	27.86	-1.98
TaiChi/martial arts	56	6-9	25	45.44	10.66	22.00	-3.84	23.12	-6.93
Yoga	89	6-9	42	42.36	7.93	23.74	-2.07	24.33	-6.09

In five psychotherapeutic modalities (Reichian, bioenergetics, primal, gestalt and Jungian, in that order) and in two physical/spiritual modalities (meditation and tai chi), those with extensive experience scored a mean that was 10 points or more higher on BB compared with those with no experience. Seven psychotherapies (existential, psychodrama, person-centered, encounter groups, hypnotherapy, multi-modal and object-relations) and five physical/spiritual modalities (yoga, dance, massage, psychedelics and Alexander/Trager) showed a difference of between 4 and 10 points. Only five psychotherapies (bio-feedback, cognitive/rational-emotive, behavioral, Freudian and Adlerian), and one physical/spiritual modalitiey (music therapy) showed a *negative* difference in BB mean scores; these were all less than 4 points.

The relationship of mean EE scores with modalities was more moderate. In four modalities (cognitive, object relations, behavioral and multimodal), those with extensive experience in a modality scored between 2 and 4 points higher than those with no experience; those with extensive experience in the other modalities had mean scores that were generally scored moderately *lower* in EE than those with no experience.

Extensive experience in Adlerian and in bio-feedback therapy showed moderately higher means on LL; those with extensive experience in most of the other modalities scored moderately to significantly lower means in LL than those with no experience.

The BB style correlated very highly with reported "personal relevance" of experience in psychotherapies in general, physical modalities in general, and spiritual disciplines in general. The LL style correlated very highly *and negatively* with reported "personal relevance" of experience in psychotherapies in general, physical modalities in general, and spiritual disciplines in general. Correlations of EE with the three domains were not significant (see Table 11).

To study the interaction effect of the three domains, mean SIPOAS scores were calculated and compared (see Tables 12, 13), for those who reported no therapeutic experience in any modality, for those who reported experience in psychotherapy only, and for those who reported experience in psychotherapy *and* either physical modalities

Table 11: Correlations of SIPOAS styles with "personal relevance" of therapeutic domains

	BB	EE	LL
Psychotherapies, in general	.35***	.06	-.45***
Physical modalities, in general	.38***	-.08	-.33***
Spiritual disciplines, in general	.40***	-.10	-.34***

Pearson's *r*; ***$p<.001$

Table 12: Mean SIPOAS scores for combinations of experience in therapeutic domains

	Count	BB	*SD*	EE	*SD*	LL	*SD*
No therapeutic modalities	169	28.02	9.68	25.02	11.52	37.69	11.70
Psychotherapy only	88	29.93	13.67	30.34	12.04	30.19	11.38
Psychotherapy + Physical	58	31.88	11.18	29.62	10.65	29.02	9.50
Psychotherapy + Spiritual	77	35.05	13.11	27.38	12.00	28.00	10.94
Psychotherapy + Physical + Spiritual	324	42.22	12.60	24.59	9.97	23.88	9.41
All participants in the study*	997	34.69	12.86	25.87	8.15	30.12	13.93

* Includes 281 participants who reported experience in physical or spiritual domains but not in psychotherapy, or whose experience in psychotherapy was not available or not calculated

Table 13: Comparison of effect on SIPOAS scores of combinations of experience in therapeutic domains (Kolmogorov-Smirnov Test)

	Min Size	K-S Value for BB	Proba-bility for BB	K-S Value for EE	Proba-bility for EE	K-S Value for LL	Proba-bility for LL
All domains v. Psychotherapy + Spiritual	77	0.3072	0.0001	0.1544	0.1030	0.1813	0.0335
All domains v. Psychotherapy + Physical	58	0.3508	0.0001	0.2065	0.0302	0.2565	0.0031
All domains v. Psychotherapy only	88	0.4534	0.0001	0.2551	0.0002	0.2675	0.0001
All domains v. No therapeutic modalities	169	0.4979	0.0001	0.0672	0.6977	0.5035	0.0001
Psychotherapy + Spiritual v. Psychotherapy + Physical	58	0.1518	0.4308	0.1650	0.3285	0.1263	0.6670
Psychotherapy + Spiritual v. Psychotherapy only	77	0.2256	0.0305	0.1899	0.1033	0.1315	0.4765
Psychotherapy + Spiritual v. No therapeutic modality	77	0.2760	0.0006	0.1104	0.5399	0.3666	0.0001
Psychotherapy + Physical v. Psychotherapy only	58	0.2081	0.0969	0.0866	0.9557	0.1066	0.8220
Psychotherapy + Physical v. No therapeutic modality	58	0.2136	0.0388	0.1988	0.0658	0.3552	0.0001
Psychotherapy only v. No therapeutic modalities	88	0.1184	0.3917	0.2189	0.0078	0.3235	0.0001

or spiritual disciplines, and for those who reported experience in all three. As physical and spiritual domains were added to psychotherapy, there was a significant tendency for BB scores to rise, and for EE scores and LL scores to fall.

There was a pronounced interaction effect of SIPOAS scores with age and with reported "personal relevance" of therapy, in any domain (see Table 14 and Fig. 1).

Among those who reported little therapy experience, there was little change by age in BB score from the lowest to the highest age bracket; there was a 10½-point decrease in EE scores, exactly matched by a 10½-point *in*crease in LL scores. Among those who reported moderate therapy experience, there was a 7½-point decrease in EE scores from the lowest to the highest age bracket, matched by a 3-point increase in BB score and a 4-point increase in LL score. Among those who reported much therapy experience, there was an 11-point decrease in EE scores from the lowest to the highest age bracket, matched by a 9-point increase in BB scores and a 2-point increase in LL scores. There was little change by age in LL score for those who reported much therapy experience. The mean EE score decreases with age; with little or no therapy the LL score rises with age; with much therapy the BB score rises (see Fig. 1).

These results do not necessarily indicate causality: the differences in mean scores are likely to be a function both of the influence of the therapeutic experience on SIPOAS styles, and of the influence of the SIPOAS style on preferences in the choice of modality or practitioner. This issue is explored further in the Discussion section.

Attention to bodily cues

A total of 795 valid protocols contained nine items referring to attention to bodily cues. Some questionnaires included an extra two questions addressed only to women, asking about their awareness of the exact moment of ovulation or of menstruation; 295 of these protocols were returned (see Table B-3 in Appendix B, also Table 15).

- Initially, it had been decided that a score of up to three "implausible" points would be acceptable. Of the 795 participants, 128 (16.1%) checked off 1 point for the "implausible" items, 43 (4.4%) checked off 2 points, 15 (1.9%) checked off 3 points, 4

Table 14: SIPOAS mean scores, effect of age and therapy experience

(i) subjects reporting as little affected by therapeutic experiences
(no therapy value greater than 3 in any domain)

Age Group	No. of Subjects	BB	*SD*	EE	*SD*	LL	*SD*
35 and below	57	29.39	9.47	30.51	11.67	30.68	11.84
36 to 45	68	25.63	9.05	28.74	11.09	36.24	11.00
46 to 55	56	30.63	9.54	21.57	9.63	38.75	10.37
56 and above	54	29.48	10.86	20.02	9.13	41.19	11.50
All subjects	239*	28.66	9.99	25.53	11.38	36.51	11.96

(ii) subjects reporting as moderately affected by therapeutic experiences
(therapy value between 4 and 7, in any domain)

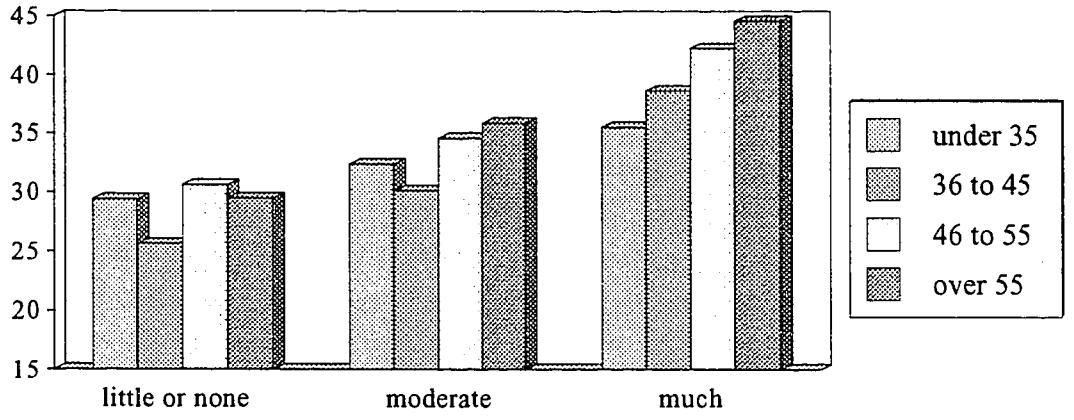
Age Group	No. of Subjects	BB	*SD*	EE	*SD*	LL	*SD*
35 and below	60	32.40	12.31	30.55	12.17	27.68	9.94
36 to 45	77	30.17	11.69	29.66	9.85	30.68	10.66
46 to 55	62	34.60	11.85	23.94	10.51	31.81	12.84
56 and above	65	35.88	12.06	22.85	9.50	31.92	11.63
All subjects	265*	33.26	12.28	26.78	10.98	30.49	11.41

(iii) subjects reporting as highly affected by therapeutic experiences
(therapy value of 8 or 9 in any domain)

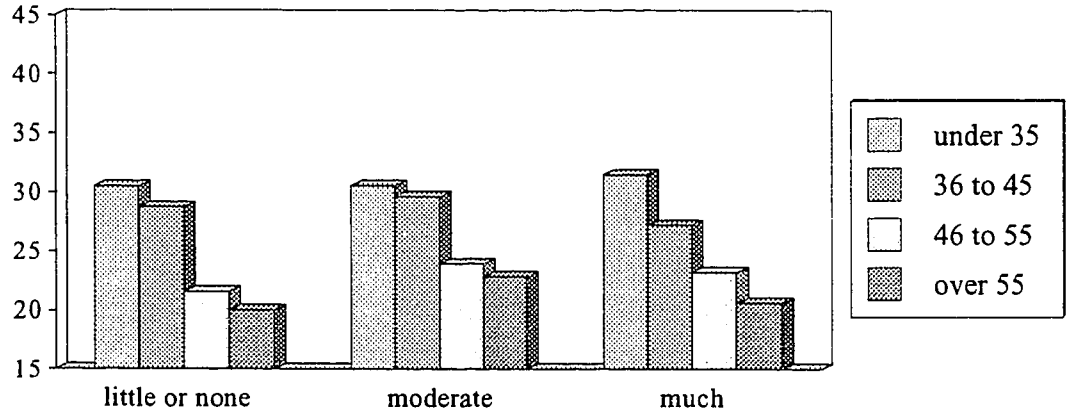
Age Group	No. of Subjects	BB	*SD*	EE	*SD*	LL	*SD*
35 and below	66	35.52	12.08	31.47	12.19	23.7	9.72
36 to 45	94	38.65	12.96	27.22	10.42	24.87	10.87
46 to 55	115	42.24	13.72	23.22	9.44	25.23	9.35
56 and above	86	44.56	12.99	20.65	7.25	25.56	10.24
All subjects	363*	40.63	13.45	25.14	10.5	24.94	10.01

**note:* For some subjects, age could not be determined

BB scores
by therapeutic experience and age



EE scores
by therapeutic experience and age



LL scores
by therapeutic experience and age

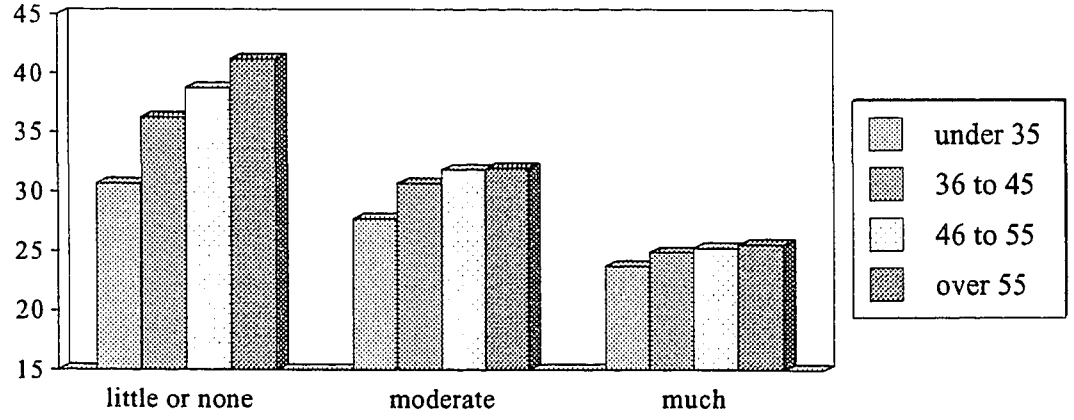


Fig. 1: Effect of age and therapeutic experience on SIPOAS scores.

(0.5%) checked off 4 points, one checked off 5 points and one 6 points. Only 6 participants out of 795 (0.75%) exceeded the 3-point limit; their numbers were not great enough to significantly affect the statistics and their protocols were retained.

- All six "legitimate" items correlated positively with BB and negatively with EE; four correlated negatively with LL.
- Both items addressed to women correlated positively with BB and negatively with LL; one correlated negatively with EE.
- Two of the three implausible items correlated positively with BB, negatively with EE.
- Summations for all four conditions (male/female, with/without implausible items) showed uniformly high positive correlations with BB; negative correlations of the same magnitude with EE, and smaller but still significant negative correlations with LL.

Emphasis on intellect

LL style correlated positively with each of the three items and with their sum; BB correlated negatively. EE had a low but significant positive correlation with the participant's precise knowledge of IQ score and the test on which it was obtained; EE showed *negative* correlations with the other two items and with the overall sum (see Table 16).

Personal values and attributes

About half of the SIPOAS questionnaires included an additional set of eight, or twelve, "personal values and attributes" Items (see Table 17). The full set of responses to twelve items was contained in 523 returned protocols, 27 additional protocols contained only eight of the items, for a total of 550 returned sets. (For the full list, and the correlations with SIPOAS styles, see Appendix B, Table B-4).

Four out of five items that tested contentment *v.* absence of frustration correlated positively with BB, all five correlate negatively with EE , and three correlated negatively with LL.

Seven items tested the feelings v. intellect dichotomy: BB correlated with preferences for emotions over intellect, creativity over intelligence, imagination over

Table 15: Correlation of SIPOAS styles with Awareness of Bodily Cues

	no of cases	BB	EE	LL
Sum of all 9 "Body Sensation" items, men and women	795	.29***	-.22***	-.12***
Sum of 6 "Body Sensation" items, men and women (excluding 3 implausible items)	795	.31***	-.22***	-.14***
women only: Sum of all 11 "Body Sensation" items	295	.37***	-.28***	-.13*
women only: Sum of 8 "Body Sensation" items, (excluding 3 implausible items)	295	.40***	-.30***	-.15**

*p<.05 Spearman's *rho*, two-tailed
**p<.01
***p<.001

Table 16: Correlation of SIPOAS styles with Emphasis on Intellect (N=550)

	BB	EE	LL
How would you place yourself in terms of intelligence (IQ)? *(on a scale of 0 to 4, from average to top one tenth of one percent)*	-.11**	-.15***	.24***
(how much information, on a scale of 0 to 3, does the participant have about his/her IQ, i.e. name of test and precise score)	-.14**	.09*	.23***
Are you a member of a high IQ fraternity, sorority or society? *(yes/no)*	-.31***	-.10*	.43***
Total "Emphasis on Intellect"	-.18***	-.14***	.32***

*p<.05 Spearman's *rho*, two-tailed
**p<.01
***p<.001

Table 17: Correlation of SIPOAS styles with Personal Values and Attributes (N=523)

	BB	EE	LL
"General Contentment"	.24***	-.35***	-.06
"Utilization of Talents"	.24***	-.18***	-.09*
"Overall Satisfaction"	.26***	-.28***	-.03
"Emphasis on Intellect"	-.36***	-.08	.47***
"Emphasis on Fantasy & Creativity"	.30***	.01	-.34***
"Emphasis on Feelings & Emotions"	.27***	.10*	-.39***
"Emphasis on Skills in Relating to Others"	.18***	-.06	-.26***

*p<.05 Pearson's *r*, two-tailed
**p<.01
***p<.001

facts, body over mind, interpersonal skills over intelligence, and with two items on preference for warmth over intelligence. EE showed a low negative correlation with emotions over intellect, but all other correlations with EE in this subsection were non-significant. LL correlated with a preference for intellect over emotions, intelligence over creativity, facts over imagination, mind over body, intelligence over interpersonal skills, and with two items tapping intelligence over warmth.

The correlations by category are shown in Table 17.

Discussion

This dissertation has tested three hypotheses:

Hypothesis 1

The style of Being in Touch with One's Feelings can be reliably contrasted with other styles of perceiving affect.

A new measure, the Styles in Perception of Affect Scale (SIPOAS) was developed. The three items in each of its 31 question triplets were designed with face validity to distinguish among the three hypothesized styles; nine of the triplets explicitly and transparently required the participant to select among the major distinguishing properties attributed to the styles. SIPOAS reliably distinguished between:

- the BB style, viewed as perceiving emotions largely through the spontaneous and integrated awareness of subtle body feelings.
- the EE style, viewed as a concerned striving to perceive emotions largely through introspection, often by observing one's self from the viewpoint of an outsider.
- the LL style, viewed as using logic and reasoning as a means for understanding, and dealing with, and at times controlling the emotions.

Item-scale correlations (see Table B-1, Appendix B) and scale-scale correlations (see Results section) demonstrated the distinctiveness of the three styles.

Correlational studies with twenty-five established scales and scale factors, and with six newly devised measures, demonstrated the properties of the three styles, and the distinctions among them:

- Costa & McCrae's NEO PI-R (Neuroticism domain and 11 sub-scales; summarized in Tables 5 and 6)
- Cattell's 16-PF (9 sub-tests, summarized in Table 7)

- Toronto Alexithymia Test, TAS-20 (summarized in Table 8)
- observer ratings: Practitioner's Checklist (3 sub-scales; summarized in Tables 10a, 10b and 10c; see also Table B-2 in Appendix B)
- self-reports (3 sub-scales, see Tables B-3 and B-4 in Appendix B):

  awareness of bodily cues (summarized in Table 15)

  emphasis on intellect (summarized in Table 16)

  values and attributes (summarized in Table 17).

Hypothesis 2

A positive correlation exists between the personality style of being in touch with one's feelings, and mental health.

This correlation was demonstrated by

- correlations between the BB style and the Neuroticism domain of Costa & McCrae's NEO PR-I (summarized in Table 5; see also further discussion in Appendix D).
- correlations between the BB style and the Emotional Stability factor of Cattell's 16-PF (summarized in Table 7).
- correlations between the BB style and observer information obtained from the Practitioner's Checklist (Table 9a).
- correlations between the BB style and self reports of "general contentment" and "overall satisfaction" (summarized in Table 17, see also Table B-4 in Appendix B).

Hypothesis 3

A positive correlation exists between the personality style of being in touch with one's feelings and the subjective evaluation of the intensity and amount of experience in a variety of therapeutic modalities.

This hypothesis was confirmed by the positive correlations between the BB style and the "personal relevance" to the participant of experience in psychotherapies, in physical modalities and in spiritual disciplines (See Table 11). A synergistic effect was also found: the combination of physical and spiritual domains with psychotherapies correlated significantly with heightened BB scores (see Tables 11, 12, and 13).

The reported "personal relevance" of experience in five of twenty-one modalities of psychotherapy and in two of eleven physical/spiritual modalities was associated with a substantially higher BB score; in seven additional psychotherapeutic modalities and five physical/spiritual modalities it was associated with a moderately higher BB score. Only five psychotherapeutic modalities and one physical modality showed a slight *lessening* in BB score; of these, two at least do not appear to differ from random error (Table 10).

SIPOAS: the three styles

The study of SIPOAS styles originated from an earlier conceptualization of P and non-P, the dichotomous qualities of being, or not being, in touch with one's feelings. The BB construct developed out of P; non-P was further dichotomized into EE, essentially "requiring introspective effort to understand one's own feelings," and LL, "using logic to cope with, or guard against, one's feelings."

The intercorrelation between the three styles reflects this history. BB differs markedly from the two not-in-touch styles, EE (Pearson's $r = -.52$) and LL ($r = -.62$); though EE and LL measure markedly different styles, the difference between EE and LL is less marked ($r = -.34$). BB correlates strongly (either positively or negatively) with virtually every measure in this study, but the correlations of EE and of LL with these measures (which are almost invariably the converse of the BB correlation), tend to be non-significant about as often as they are significant, and they tend to alternate: either the EE correlation is significant or the LL correlation is significant, rarely both. EE correlates negatively with age; the diminution of EE means with age is uniformly steady across all age groups (see Table 2). With maturation, the decrease in EE is matched by an increase in LL means for those who have had little or no therapy (see Table 14 and Fig. 1) or by an increase in BB means for those who have experienced "significant" therapy in any domain (see Table 14 and Fig. 1). The styles, too, differ in accordance with "folk wisdom": women, considered to be the more feeling, tend to score higher on BB while men, considered to be more logical score higher on LL (see Tables 1 and 3).

Those who stress logic in their profession or inclination tend to score more highly on LL, those who stress feelings tend to score more highly on BB, those who seek help with mental or emotional problems tend to score more highly on EE (see Table 4).

Other correlations with established measures, *ad hoc* measures, and observer rating, help to further define the attributes that converge to define each style, and concurrently permit clear discrimination among them. (It is emphasized that the correlations, and especially the attributed qualities, indicate only the *trend* toward those qualities and do not necessarily indicate that the individual, or the group, possess any specific quality to a marked extent.)

Attributes ascribed to BB

The correlational studies converge to create a view of BB as *tending*

- to be "calm, relaxed . . easygoing and slow to anger," to rarely experience "guilt, sadness, loneliness," to be "less disturbed by awkward social situations," to perceive oneself "as capable of handling [oneself] in difficult situations" and to enjoy "emotional stability" (Neuroticism domain of NEO PI-R).
- to be "affectionate and friendly . . . cheerful and optimistic," (Extraversion domain of NEO PI-R).
- to enjoy an "active fantasy life . . . moved by poetry, music and art . . . experience deeper and more differentiated emotional states; feel both happiness and unhappiness more intensely than others" (Openness domain of NEO PI-R).
- to be "warm, outgoing . . . emotionally stable, adaptive, mature . . . trusting . . . accepting . . .abstracted, imaginative . . . self-assured, unworried . . . relaxed . . . patient" (Cattell's 16-PF).
- to enjoy good mental health including inter-personal relationships, social functioning, inner contentment and self-actualization, to have a "well-integrated personality . . . good insights," to be "open to emotions . . . in touch with feelings," and to be able to assess feelings and view oneself "from the viewpoint of a neutral observer" (Practitioner's Checklist).

- to report a heightened ability in sensing small changes in bodily feelings and controlling autonomous body function (Awareness of Bodily Cues).
- to report contentment, satisfaction and ability to utilize talents, with emphasis on emotions, fantasy, creativity and warm relationships (Personal Values & Attributes).

In brief, the BB style person *tends* to be emotionally healthy, aware and in touch with emotions and feelings.

Attributes ascribed to EE

The same correlational studies converge to create a view of EE as *tending*

- to be "apprehensive, fearful . . . tense," to "experience anger, frustration and bitterness . . . feelings of guilt, hopelessness . . easily discouraged . . . shame, embarrassment, feelings of inferiority," to experience "inability to resist cravings and urges," to be "unable to cope with stress, dependent . . . panicked when facing emergency" (Neuroticism domain of NEO PI-R).
- to be "more formal, distant, reserved . . . less exuberant and high-spirited" (Extraversion domain of NEO PI-R).
- "relatively insensitive to, and uninterested in, art and beauty" (Openness domain of NEO PI-R).
- to be "reserved, impersonal, distant . . . reactive, emotionally changeable . . . vigilant, suspicious, skeptical . . . apprehensive, self-doubting, worried . . . tense, high energy, impatient, driven" (Cattell's 16-PF).
- to experience difficulty in "identifying feelings" and "describing feelings" (TAS-20)
- to enjoy lower mental health, with somewhat impaired "interpersonal relationships . . . social functioning . . . inner contentment . . . self-actualizing," to generally not assess "feelings from the viewpoint of a neutral observer" (Practitioner's Checklist).
- to be less sensitive to small changes in bodily feelings (Awareness of Bodily Cues).
- to be discontent with life and unable to utilize talents (Personal Values & Attributes).

In brief, the EE style person *tends* to experience emotional stress and self-doubt, and to be out of touch with emotions and feelings.

Attributes ascribed to LL

The correlational studies converge to create a view of LL as *tending*

- to be "more formal, distant, reserved" (Extraversion domain of NEO PI-R).
- to be "more prosaic, prefer to keep their minds on the tasks at hand" and to have "somewhat blunted affect, do not believe that feeling states are of much importance" (Openness domain of NEO PI-R).
- to be "reserved, impersonal, distant . . . private, discreet, non-disclosing" (Cattell's 16-PF).
- to be "less open to emotions," less likely to focus on "inner feelings," and to use logic for understanding the "inner process," and for determining action (Practitioner's Checklist).
- to report a limited ability to sense small changes in bodily feelings (Awareness of Bodily Cues).
- to emphasize intellect and to underemphasize fantasy and creativity, feelings and emotions, and interpersonal skills (Personal Values & Attributes).

In brief, the LL style person tends to emphasize logic and reasoning over warmth and sentimentality, and to have little interest in emotions and feelings.

SIPOAS style and mental health

Mental health and the BB style

The BB style is a style of mental health. It correlated with

- NEO PI-R: the entire Neuroticism domain and five of its facets, and the Positive Emotions and Feelings facets
- 16-PF: the Emotional Stability, Vigilance, Apprehension and Tension factors.
- Practitioner's Checklist: composite mental health score
- Personal Values & Attributes: contentment and satisfaction with life

As was argued in Section 3: Feelings and Dysfunction in Emotion and Behavior, "The ability to process and express emotions appropriately, to reduce tension and conflict, to avoid inappropriate behaviors or reactions, to evaluate feelings and

emotions, to optimally develop accurate empathy and conflict-free interpersonal interactions, all add up to mental health."

Mental health and the EE style

The EE style is one of mental and emotional discomfort. It correlated with

- NEO PI-R: the entire Neuroticism domain and each of its facets
- 16-PF: the Emotional Stability, Vigilance, Apprehension and Tension factors.
- Practitioner's Checklist: composite mental health score
- Personal Values & Attributes: discontentment and dissatisfaction with life.

By definition, the high-EE person lacks the spontaneous awareness of the feeling component of emotions and generally seeks to understand emotions by concerned introspection. As was argued in Section 3: Feelings and Dysfunction in Emotion and Behavior, "many mental and emotional disorders could be functionally defined as the frequent manifestation of inappropriate emotional, somatic or behavioral responses resulting from imperfectly interpreted internal cues."

Mental health and the LL style

The LL style does not correlate with mental health on *any* measure, but it does correlate with three facets of the NEO PI-R Extraversion and Openness domains: "more formal, distant," "more prosaic," and to have "somewhat blunted affect, do not believe that feeling states are of much importance," and with two factors in 16-PF: "reserved, impersonal," and "discreet, non-disclosing." The high-LL person tends to emphasize logic and reasoning over warmth and sentimentality, to have little interest in emotions and feelings. The "imperfectly interpreted internal cues" may cause emotional distress to some high-LL persons; others, enough to balance out in the correlations, may utilize their logical skills for coping, for denying distress, and for assuming an air of unconcern. For this reason, the high-LL may be much less likely than the high-BB or the high-EE person to be aware of distress, to report distress, or to seek out therapy when distressed. This accords with the generally negative correlations of the LL style with reported personal relevance of therapeutic modalities (Table 10; also Appendix D).

Style and therapies

If, as has been postulated, emotional dis-ease is a function of the inability to correctly and rapidly attend to finely nuanced changes in bodily feelings and to appropriately interpret them and act on them, it is axiomatic that any process that heightens these abilities will enhance emotional well being. The correlation between mental health or therapeutic outcome on the one hand, and awareness of the feelings and of the body on the other, have been explored by others (Friis, Skatteboe, Hope & Vaglum, 1989; Gellhorn, 1964; Goertzel, May, Salkin & Schoop, 1965; Ikemi, Tomita, Kuroda, Hayashida & Ikemi, 1986; Kurtz, 1984; Savitsky & Eby, 1979). Specific psychotherapeutic systems have been proposed, in which emphasis is placed on greater awareness of the emotions and their physical and cognitive components (Greenberg & Safran, 1987, 1989, 1990; Izard, 1971; Lane & Schwartz, 1987; Lang, 1971; Lang & Cuthbert, 1984; R. Schachter, 1984; and Schefft & Lehr, 1985).

One purpose of this study was to investigate whether certain therapeutic processes or components may be particularly effective in heightening Propriocentric "Self-centered") skills, as measured by BB scores, and consequently lead to emotional well being. The BB style correlated with the self-reported "personal relevance" of twelve of the twenty-two psychotherapeutic modalities, and of seven of the eleven physical and spiritual modalities. Only three modalities, behavioral, cognitive, and Object Relations therapies, correlated positively with EE: the first two, speaking of cause and effect, of obvious and palpable reality, accord with the high-EE's lack of trust in his/her autonomous feelings, and need to understand what is happening and what is expected. The LL style shows negative correlation with the majority of therapeutic modalities and positive correlation with only one (Adlerian, the most "logical" of the therapies developed by Freud's associates). High-LL individuals, having little interest in emotions or feelings, tend to avoid *all* therapies (Table 10; also Appendices C & D). Each of the three domains, psychotherapies, physical modalities and spiritual disciplines, correlated positively with BB, negatively with LL, and showed no correlation with EE (Table 11).

Therapeutic domains: synergistic effect

There is a high overall correlation between BB scores and the reported measure of significance of experiences in psychotherapy in general (see Table 11); the correlation with the physical domain is slightly higher, and it is higher yet with the spiritual domain. Correspondingly, the negative correlation between LL and the psychotherapy domain is greater than the correlation with the physical or the spiritual domains. The correlations of EE with any domain are not significant.

The mean SIPOAS scores of those who reported some experience in one domain or another, or in a combination of domains, or no experience at all, paints a similar yet somewhat different picture (see Tables 12 and 13). [It should be emphasized that while Table 11 is a *continuous* measure (from 0 to 9) of the "personal relevance" of each domain, tables 12 and 13 report a *binary* measure, of experience/no experience; the tables therefore present different views of the same phenomenon.]

There is no significant difference in mean BB scores for those who had some psychotherapy only (29.93) and those who had no therapeutic experience of any kind (28.02). Adding physical modalities to psychotherapy raises the mean (to 31.88), the addition of spiritual modalities raises it more (to 35.05), and the combination of all three makes for a very considerable jump (to 42.22).

The LL mean scores go in the opposite direction: Those who had psychotherapy only (30.19) had mean LL scores that were significantly lower than those who had no therapeutic experience (37.69). Adding physical modalities to psychotherapy lowered the mean (to 29.02), the addition of spiritual modalities lowered it further (to 28.00), and the combination of all three made for a very considerable drop (to 23.88).

Adding physical modalities to psychotherapy only, lowered the EE mean scores (from 30.34 to 29.62), the addition of spiritual modalities lowered it further (to 27.38), and the combination of all three made for a further drop (to 24.59). However, those who had no therapies of any kind had a mean score (25.02), that was virtually identical with those who had experienced all three domains of therapy.

The data in Tables 12 and 13 can be viewed either as indicating a pattern in *choice* of therapies, or as indicating a pattern in the *effects* of therapies. High-BB subjects have meaningful experience in more domains than just psychotherapy alone and those who score highest have had some experience in all three domains; High-BB, of course, postulates Low-EE and Low-LL. High-LL subjects, by contrast, tend to have no interest in any form of therapy, and the acquisition of some psychotherapy directly points to a measurable lower LL mean score.

EE occupies the therapeutic middle ground. It shows no correlation with any domain (see Table 11) and could be relabeled as "neither BB nor LL." The majority of subjects who have had no therapeutic experience of any kind are high-LLs and therefore score low on EE (and BB); the majority of those who have had therapeutic experience in all three domains are high-BBs and therefore score low on EE (and LL). And those who score highest on EE appear to seek out psychotherapy, but no other therapeutic domain.

Alternatively, it can be argued that therapy, and the combination of therapies, causes personality change. Psychotherapy alone has little effect on BB; it appears that a *combination of domains*--or perhaps of therapeutic *components* (see Appendix C)--is most effective in bringing about heightened BB scores. The specific psychotherapies that have the highest correlations with BB are those that engage also the body and the spirit, and participants appear to have alluded to these components when attributing significanct (or relevant) influence to the physical or spiritual domain, even in the absence of specific modalities in those domains.

SIPOAS style and therapy: cause and effect

It was postulated earlier in this study, that therapies in general--some more than others--will lead to a heightened and integrated style of being in touch with one's feelings [it is improbable that any accepted modality will foster a style of *lessened* self-awareness and *increasing* self-doubt, or of disregard for the importance of feelings]. The wide variation in "therapeutic effect" for different modalities raises two questions:

- Does specific therapeutic experience lead to a change in SIPOAS style, or does the style lead to choice of the therapy?
- What are the specific components in each therapeutic modality that lead to the "therapeutic effect"?

Personality style and choice of therapy

As personality style, in general, leads to choices in life--of occupation, of spouse, of dress and of life-style--it is likely also to lead to choices in therapy. A person bound by logic is likely to have little trust in a therapy based on fantasy and imagery, one who seeks guidance from the outside will be uneasy with a therapist who refuses to provide answers, one who comfortably relies on inner awareness is unlikely to feel comfortable with a therapist who subscribes to a rigid dogma. High-BBs are more likely than low-BB individuals to choose primal therapy, encounter groups, psychodrama and meditation, in preference over more "cerebral" therapies; high-LL individuals are more likely to reject the "humanistic" therapies and more likely to choose those that seek to effect change by logic and reason.

Therapy and development of personality style

Style leading to choice of therapy cannot adequately explain the consistently high correlation between the BB style and the therapeutic modalities and domains. BB style correlates highly with mental health: it is illogical to think that those who most enjoy mental health would be those who most seek therapy, more logical to hold that the therapeutic modality modifies the SIPOAS style by heightening BB. It appears, therefore, that while the initial choice of therapy and of therapist is likely to be influenced by the client's personal style, clients are subsequently likely to learn logic, introspection, and increased awareness of body sensations in almost any therapy. Only longitudinal studies can fully explore the extent to which experience in specific modalities, indeed *any* therapeutic experience, is responsible for inducing change from EE or LL to BB.

The interaction effect of age and therapeutic experience on EE scores (see Table 14 and Fig. 1) permits a further understanding of the style-therapy directionality. EE is

a style of youth and diminishes rapidly and steadily with maturation. With little or no therapeutic experience the progression by age is from EE to LL, from uncertainty about the meaning of one's feelings to logical control of one's feelings. Absent a plausible genetic factor for maturation from EE to LL, a learning process can be assumed.

When there *has* been therapeutic intervention, on the other hand, the diminution in EE is paralleled by an increase in the BB score. To attribute this transformation of personality style to a genetic factor would be difficult without assuming also that the gene for maturation in style varies with therapeutic experiences. (The present data may also be compatible with a universal progression from EE to LL that is independent of therapy, and a progression from LL to BB under the influence of therapy.)

Memory, feelings, and therapeutic change

The duality of emotional process

Memory and emotion have been conceptualized as multi-level (e.g., Freud's "conscious" and "unconscious," and "secondary" and "primary" processes). Lindsley (1970) proposed a three-level system of emotional processing corresponding to the evolutionary levels of the human brain: cortical, diencephalic and brainstem. LeDoux (1988) contrasts the conscious, cognitive, and emotional processing at the neocortex and at the cortical association areas, with subcortical emotional processing in which stimuli are modulated by the thalamo-amygdala pathways of the limbic system without passing through cortical pathways, and often evoke responses that tend to be rapid, powerful, imprecise, inappropriate, and resistant to extinction. Whether the emotional processes are mediated by the subcortical or the cortical-neocortical pathways, the *pattern of physical sensations for each emotion persists*, together with attendant general arousal patterns and with action potential (LeDoux, 1986).

Some therapeutic components, for examples those that involve logic, cognition or insight, address the cortical and neocortical levels predominantly. They would thus be effective in treating the physical, behavioral, feeling and cognitive memories and

responses that are modulated by cortico-amygdala pathways, and that therefore (according to LeDoux, 1988) tend to be flexible, modifiable, and readily subject to rational evaluation for amplitude, relevance, and significance. These modalities would be effective counters to misperceptions, misattributions and misinterpretations.

Some therapeutic components, operating at the cortical or neocortical level, may be effective in inducing a change in SIPOAS style, from EE or LL to BB, by:

- focusing attention to body sensations (the postulated "royal road" to the BB style)
- emphasis on the autonomy and responsibility of the client (reducing the EE characteristic of uncertainty about the experienced feelings of the self)
- improving attention to the nuances of personal interaction (an antidote to the EE quality; this may also generalize into a more focused attention to body sensations)
- physical enactment of emotional states (which would reduce the reliance on words and cognitions, and reinforce the learning process for attention to body sensations).

Purely cognitive and intellective components are, however, effective only for intervention at the cortical levels, with "secondary" but not with "primary" processes. They would be ineffectual in reaching memory traces stored at sub-cortical levels, the maladaptive "compelling emotions" with their "demonic" or "explosive" nature. These memories "resistant to extinction" may have originated as childhood trauma (Furst, 1967; Greenacre, 1967; Greenberg & Safran, 1990) or adult trauma (Frijda, 1986); they may be genetically programmed (Greenberg & Safran, 1990), occasioned by classical conditioning (Livesey, 1986) or result from "seemingly innocuous coincidences" (Liddell, 1962, cited by Izard, 1977).

Unconscious memory traces of traumas in childhood, in infancy, or *in uterus,* can become powerfully activated by association with events in later years, "by relatively tenuous and seemingly fortuitous stimulus connections" (Furst 1967), and in an intensified process similar to imprinting (Greenacre, 1967). Frijda (1986) holds that response patterns to traumatic events may become ingrained through one-trial learning, responses to intense aversive stimuli apparently being resistant to extinction.

Because the pattern of physical sensations for each emotion persists, complete with attendant arousal patterns and with action potential (LeDoux, 1986), therapeutic processes that engage the complex memory-patterns of physical sensations, of arousal patterns and of action potential, can access emotions that originate in the thalamo-amygdala pathways of the limbic system and that are otherwise inaccessible to conscious cognitive processes, or to verbal- or cognitive-based therapies.

The properties and components of therapeutic modalities

Some therapies will be more effective than others in imparting "the ability to process and express emotions appropriately, to reduce tension and conflict, to avoid inappropriate behaviors or reactions, to evaluate feelings and emotions, to optimally develop accurate empathy and conflict-free interpersonal interactions," which, according to the concepts set out in Section 3: Feelings and Dysfunction in Emotion and Behavior, "all add up to mental health." Table 10 suggests that specific therapeutic modalities appear to be more effective than others in inducing such change; they appear to cut across theoretical basis, philosophy or stated methodology.

In the Introduction Section of this study it was conjectured that there is a specific facilitating factor, common to all successful modalities of therapy, that leads to therapeutic success. What is (are) the common factor(s) that underlie therapeutic change? Given the theoretical and experimental correlation between the BB style and the various indicators of mental health, it would be useful to further explore the therapeutic components in those therapies that correlate highly with the BB style.

The weight given to various therapeutic *components* varies with the practitioner, with the patient, with the presenting problem, and with the stage of the therapy, even in the most structured of therapies; it is therefore impossible to accurately define any modality in terms of its components. Solely for heuristic purposes, the author of this study has categorized selected therapies by some of the components believed important in the acquisition of a high-BB style (see Appendix C). [It is stressed that this is a purely exploratory and largely speculative exercise. The categorizations are based

on available information in the literature, on hearsay, and on the Author's personal experiences; they are subjective estimations and are clearly open to debate.]

Seven major components that were considered to be common across many of the modalities appeared to be related to the BB style:

- altered state of consciousness (e.g., trance state)
- focused attention to body sensations
- attention to the nuances of personal interaction
- physical enactment of emotional states
- autonomy and responsibility of the client
- here-and-now re-experience of emotions
- abreaction or catharsis.

The estimated emphasis given in each modality to each of the seven components is indicated by a number of stars, from zero to three (see Table C-2 in Appendix C). As a check on the conjecture that these components correlate with the BB style, the total Component score (the total of "stars") for each modality was correlated with the Therapeutic Effect Index scores. For BB, a high correlation was found between the total Component scores for a modality and the Therapeutic Effect scores for that modality; the correlation was negative for EE and for LL (see Table C-3 in Appendix C), i.e. the higher the Component score, the more effective the modality. *It must be stressed again that correlations between the components of therapies and the effectiveness of those therapies are conjectural at best, and require rigorous scientific exploration.*

Therapeutic effectiveness and location of memory

The Introduction Section postulated that there is a factor (or factors), specific to each therapeutic modality and responsible for therapeutic success, that varies with the personality of the patient or the presenting problem. The therapeutic power of each of the therapies (Table 10) and of its components (Table C-2, in Appendix C) can be conceptualized as related both to the nature of the behavioral/emotional dysfunction, and to the level at which the underlying memories and responses were imprinted: thus,

only therapeutic components that interface with the thalamo-amygdala pathways of the limbic system may be truly effective with the "powerful" or "demonic" memories and emotions that are not otherwise amenable to extinction.

A progressive ordering of therapeutic components might be one effective method of reaching and treating memories and emotions that reside at the subcortical levels:

- focused attention to body sensations
- here-and-now re-experience of emotions
- physical enactment of emotional states
- altered states of consciousness (including fantasy, imagery, metaphor and other trance states, and, of course, dreams--Freud's "royal road to the unconscious")
- abreaction and catharsis, in which change takes place at the deep somatic level.

To effectively close the cycle, it is necessary to re-engage consciousness and cognition at each therapeutic session so as to fully integrate the somatic learning into here-and-now awareness, thoughts and behaviors.

Awareness of feelings: bi-polar or tri-polar?

Early in the pilot study, in line with accepted wisdom, perception of feelings was conceived to be bipolar: Propriocentric or not-Propriocentric, in touch with feelings or not, BB or not-BB. Subsequent theorization led to two markedly different "not-BB" styles: those who do not understand their feelings and engage in concerned introspection (EE), and those who seek to control or deny their feelings (LL).

As shown by the data and the correlations with other measures, EE and LL styles display highly distinct qualities on virtually every attribute, and measure qualities other than simply not "being in touch with feeling." LL is the more clearly delimited of the two; EE appears to be a measure of self-evaluation, of self-examination, of judging one's self on the basis of universal "shoulds" and expectations--*ruminative* self-awareness in distinction to BB's *relaxed* self-awareness. Clearly, those who are not spontaneously aware of their feelings fall into at least two groups, with distinct patterns of personality

traits and of non-awareness of feelings. This calls into question the customary dichotomization of subjects on a bi-polar scale of awareness of feelings.

The Toronto Alexithymia Scale (TAS-20), which was utilized to help define the convergent and discriminant validity for SIPOAS (see Table 8), measures aspects of the awareness of feelings on a bi-polar scale; it is highly effective in measuring Alexithymia, specifically in a population exhibiting pathological levels of restricted emotions. SIPOAS, by contrast, was designed to measure style in the awareness of feelings within a relatively high-functioning, and more homogenous population; at that level, correlations are bound to be attenuated. Only five out of twelve possible correlations of SIPOAS with TAS-20 and its three subscales, are significant.

The correlation of EE with the TAS-20 and its factors are only moderate (between .27 and .32). The two scales measure *similar* qualities but the correlations are far too low for EE to be an adequate predictor of Alexithymia. EE correlates with the full TAS-20, with Factor 1 ("difficulty identifying feelings"), and with Factor 2 ("difficulty describing feelings"). It does not correlate with Factor 3 ("externally-oriented thinking," a mixture of items that might perhaps be better described as "avoiding the emotional aspects of life"). The items in this factor tend to define the high-LL person (correlation .14, non-significant) more than the high-EE person (-.07) who is, after all, trying hard if unsuccessfully to *understand* the meanings of emotions.

LL, though by definition and by correlations a style of avoiding feelings, fails to correlate with the full TAS-20 and with Factor 2 "difficulty describing feelings." A plausible explanation for the *negative* correlation of EE with Factor 1, "difficulty identifying feelings" emerges from the high-LL persons' belief that feeling states are of not much importance (Feelings facet, NEO PI-R, see Table 6): high-LL persons may be fully satisfied with their limited ability to identify or describe what is to them unimportant.

BB is the complement of LL; paradoxically, it shows zero correlation with Factor 1, "difficulty identifying feelings." The high-BB person, aware of feelings and their complex nature, may have become further sensitized to the fine differentiations in

feelings after completing the 93 SIPOAS items, and thus ready, more ready than the high-LL person, to check off a statement such as "I have feelings that I can't quite identify." The negative correlation with Factor 2 (difficulty describing feelings) is as expected. [This paradoxical effect of SIPOAS testing on the correlation of TAT-20 Factor 1 with BB, makes it imperative that the order of presentation be counterbalanced in any future study of the correlations of SIPOAS with other measures.]

SIPOAS: *style, skills,* and *qualities*

SIPOAS is a measure of *preferred* styles of perception, not a measure of *skills* in emotional functioning. Judging by the high correlation of BB with a range of positive qualities, from emotional stability to creativity and fantasy, from personal warmth to contentment with life, the *qualities* associated with the high-BB person appear to be highly desirable. An extremely high BB *score* on SIPOAS may be less desirable: a subject who responds consistently in the BB direction, for whom there is rarely occasion to consider the EE or the LL alternative, is likely to under-appreciate logic, to rarely question the Self or its motives, to be over-dependent on feelings as a source for perceptions, and consequently to be constricted, inflexible, and unimaginative.

The compatability of styles with skills and qualities

Being in touch with feelings is not incompatible with having qualities associated with introspection and occasional self-doubt (EE), or with employing logical skills to move from perception to response (LL). Conversely, the possession of high EE or LL *skills* is not incompatible with high scores in BB *style,* or the possession of highly developed BB skills or qualities. The view that skills in experiencing emotions, and skills in cognition or introspection, are not somehow mutually exclusive, is endorse by Lane and Schwartz (1987), in discussing the formal-operational level of emotional development.

> The major advance at this [fifth] level of structural transformation is greater differentiation and integration in one's appreciation of others in the context of an ongoing differentiated awareness of one's own experience (p. 138). . . . It is now

> possible to perceive the differentiated, multidimensional experience of others unbiased by one's own emotional state, which includes the capacity to see a situation involving oneself through the eyes of others. . . . By anticipating the needs and reactions of others, one is better able to find courses of action that meet the needs of all involved (p. 139). . . . In contrast to the traditionally dominant view of cognition as standing in opposition to emotion . . . an advanced cognitive organization can be associated with a greater rather than a lesser degree of emotional organization (p. 135).

Styles, skills, and qualities: practioner ratings

This inference is confirmed by the responses to the Practitioner's Checklist (see Table 9b, and Table B-2 in Appendix B), where practitioners were required to *quantify* attributes (skills) on a Likert-style scale, rather than assess *preferred* SIPOAS style. Ratings on five of seven items that had been conceptualized as reflecting EE style correlated positively with BB and negatively with EE: the high-BB person and not the high-EE person, so practitioners report, generally assesses feelings from the viewpoint of a neutral observer, readily accepts insights provided by experts, is eager to accept guidance from others, understands inner processes by checking their perceived impact on others, and understands inner processes by viewing the Self from the viewpoint of an outside observer. The negative correlation of these items with EE suggests that the high-EE's fervent attempts to use introspection and information to perceive, understand and interpret feelings and behavior, cannot compete with the high-BB's ability to integrate these same skills with spontaneous perceptions of feelings and emotions.

The EE's search for information is reflected in the very few items (most of them initially conceptualized as LL) that show positive (but non-significant) correlation with the EE style: according to practitioners' ratings, EE tends to determine action on the basis of logical judgment, on the opinions of others, and on impulse (a further indication of the inadequacies of the EE's skills), and tends to lay emphasis on his/her logical reasoning, on learning from others and on learning from examples (but, notably, not on learning from own experience).

According to practitioner ratings, only two of the seven items correlated with the LL style as conceptualized: the high-LL person understands inner processes by relying on logical reasoning, and generally determines action on the basis of logical judgment. By contrast, four of the seven items that had been conceptualized as LL qualities showed positive correlations with BB and negative correlation (or no correlation) with LL; this may be attributed in part to the use in the Checklist of SIPOAS-inspired terminology which was interpreted by the practitioners in terms of its popular and conventional usage. The high-BB person, so practitioners judged, has learned to build appropriate defenses (it had been conceptualized that the high-LL person, repressing, denying or ignoring feelings, would be seen as having stronger defenses; the operational word here is "appropriate"). The practitioners also considered that the high-BB person has learned to control emotions, and has learned not to let emotions control behavior (informal questioning among practitioners and lay persons suggest that "emotion" in the context of the Practitioner's Checklist can be readily misinterpreted as "emotionality"). Practitioners' ratings for "utilizes cognitive skills for understanding/ changing behavior" also correlated positively (but insignificantly) with BB and negatively (but insignificantly) with LL. It appears that the high-LL person's reliance on logic and reasoning in order to understand, control and change emotions and behavior, may meet with only limited success and that the high-BB person may often be more skilled than the high-LL person in the ability to use logic to process feelings and emotions.

Despite its apparent shortcomings in differentiating style according to the specified items, the Practitioner's Checklist showed consistent correlations with basic predictions: high-LL participants were seen as logical, EE as relatively low on mental health, BB as being aware of feelings. The high-BB's ability to utilize the skills attributed to all three avenues of information about feelings and emotions, may account in large part for the consistent findings, in the Checklist and throughout this study, that the BB style correlates highly with mental health; by analogy, the EE style of diminished self-awareness may account for the very high correlations with impaired mental health, and

the LL style of using logic as a coping process may account for its uniform lack of correlation with mental health.

Values and attributes

Awareness of bodily cues

To explore the assumption that BB is a measure of being in touch with one's feelings (feelings being defined as selected body sensations), an additional subtest, "Awareness of Bodily Cues," was constructed, a rough measure of the value placed on the awareness of bodily sensations. It is a measure of attitudes, not of actual skills; even a false claim of body awareness made in good faith is likely to reflect this attitude. BB correlated with each of the six (eight for females) "legitimate" items (and the item totals) on this scale; EE and LL correlated negatively (or in the negative direction). Two of the three "implausible" items also correlated significantly with BB scores, not an indication that BB participants are more likely to lie but rather that those who value being in touch with their feelings also value the skill of being in touch with their bodies, at times *ad absurdum* (see Table 15, also Table B-4 in Appendix B).

Emphasis on intellect

The "emphasis on intellect" subtest was designed not as a measure of intelligence but as a rough measure of attitude and values *about* the importance of intellect. It is not suggested that there are correlations between SIPOAS styles and actual intelligence: a high-BB or high-EE participant may be just as bright as a high-LL, for instance, but would be less likely to join an organization in which IQ is the sole criterion for membership, and would have less need to know his or her precise IQ score or the name of the test by which it was measured. The LL style, as expected, correlated positively with each of the three "intellect" items and with their sum, and the BB style correlated negatively. The high-EE person considers him/herself as less intelligent than does the high-LL (perhaps a function of lower self-esteem), is less likely to be a member of a high-IQ society, *but* apparently has a better knowledge about his/her IQ than the high-BB person (this could be a factor of the high-EE's need to know, or an

artifact of age: high-EE people, tending to be younger, would be more likely than older persons to retain in memory the scores on college admission tests and related information).

SIPOAS: further development

- SIPOAS has adequate internal reliability but test/retest reliability over the brief period has yet to be demonstrated. Since this study postulates that SIPOAS style may be changed by therapies and perhaps by other life experiences, any *long-term* reliability study would require also the exploration of intervening therapeutic experiences and of life-changing events: education, jobs, relationships, births and deaths.
- SIPOAS has not been normed, and it may prove difficult to norm it on a national level. The exploration of scale means on various splits, by age, by gender, and by cultural/occupational/functional groupings, demonstrated significant differences. At the very minimum, it will be necessary to calculate means and ranges of the SIPOAS styles, by these same three splits, on a less homogenous population.
- The Practitioner's Checklist, while useful in exploring some of the qualities of the styles, and the correlations of the styles with mental health, was not adequate for *confirming* styles. A better measure would elicit style *preference*, and not simply an estimation of *skills*. (the precautions taken to keep the practitioners uninformed of the purpose of the study may have been superfluous, and items can probably be rewritten with more transparent reference to SIPOAS styles.)
- The current version of SIPOAS employed a self-report pencil-and-paper test, that was administered to an essentially college-level and psychologically sophisticated population. In order for it to be used also by less sophisticated populations, the language and contents of SIPOAS need adaptation and revision. New versions need to be developed for less sophisticated subjects, with, say, a sixth grade reading level, and additional version(s) for children. A pencil-and-paper self-report test might be adequate for teenagers; younger children may have to be tested individually, perhaps with a test analogous to the LEAS (Lane et al, 1990) that rates responses to fictitious

scenarios. A test appropriate to younger children may also utilize other sense modalities: vision, manipulation, sound, and tactile sensations. (The SIPOAS construct may not be applicable to very young children where differences in temperament may over- shadow SIPOAS differences.)

- other cultures: separate norms from those inherent in the current culture-specific version of SIPOAS will apply to cultures and sub-cultures whose concepts and self-ideals differ significantly, especially those that place different values on logical processes, on social and personal expectations, or on the permissibility of experiencing or displaying emotions.

Further studies

SIPOAS and its correlates

- Correlations with the SIPOAS styles have been calculated for only a few facets of NEO PI-R (and for only a few factors of 16-PF). These suggest, *inter alia,* that BB may also have many of the qualities associated with the Extraversion and Openness domains. To further define the qualities of the SIPOAS styles, it would be helpful to calculate correlations for *all* NEO PI-R and 16-PF factors and facets, and for a wide range of personality measures.
- High BB is conceptualized as being aware of *sensations*, as being in touch with *feelings*, and as embodying an integrated awareness that may be identical with *intuition*; LL is conceptualized as *thinking*. It would be instructive to explore the correlation of the SIPOAS styles with the Sensing, Feeling, Intuition and Thinking personality types proposed by Jung, and measured by the Myers-Briggs Type Indicator (Myers, 1962), together with the Introversion and Extroversion, and Perceiving and Judging aspects. (It might, for instance, be found that the high-EE's concerned self-examination correlates with a combination of Sensing, Introversion and Judging.)
- The present study explored the correlation of SIPOAS styles with measures of the *personality* construct of neuroticism. Additional studies are required to establish

correlations with both the nature (DSM-IV, axes I, II, and III) and intensity (DSM-IV, axes IV and V) of *psychopathological* character and manifestations.

- The high-EE personality, as conceptualized and as confirmed by many of the correlations, is one of dependency. Further studies may show to what extent EE is a function of field dependence and of locus of control.
- The Levels of Emotional Awareness Scale (LEAS), developed by Lane *et al* (1990) and based on the cognitive-developmental model of emotional experience (Lane & Schwartz, 1987) measures the gradual evolution of emotional style, from the sensory-motor to the formal-operational. The description of the formal-operational stage suggests a similarity with the BB style; the concrete-operational stage may share some qualities with both the EE and the LL styles. The similarity and differences of the two scales, and of their two underlying conceptualizations, remain to be explored.

EE: the enigma

The original goal of this study was the quantitative and qualitative definition of the BB style. Even more informative, however, is the resultant (and incidental) quantitative and qualitative definition of the EE style. SIPOAS had been designed as a measure of style of perception of affect and not (except for a few items that tap self consciousness) as a predictor of emotional distress. The consistently high correlation of EE with the Neuroticism domain and its facets, and with other indicators of emotional distress, suggests a hitherto unexplored component of mental and emotional distress: the preference for introspection as the means for understanding one's emotions.

High-EE subjects may *seek* to understand their emotions through self scrutiny or through the eyes of another--but do so, apparently, with limited success, as the Practitioners' ratings suggest. In the language of the Levels of Emotional Development (Lane & Schwartz, 1987), high-EE subjects lack the high-BB's skills. They tend to be less able "to consider all possibilities in a situation . . . to experience many nuances of emotion . . . to perceive the differentiated, multidimensional experience of others . . . the capacity to see a situation involving oneself through the eyes of others." They lack

the skills for "anticipating the needs and reactions of others," and thus are not able "to find courses of action that meet the needs of all involved."

It is postulated that the high-EE scorer, and the high Neuroticism scorer (Costa & McCrae 1992), both lack the awareness of emotional skills, as defined by Lane and Schwartz. High Neuroticism scorers (Costa & McCrae, 1992) are "apprehensive, fearful, prone to worry" (Anxiety facet, NEO PI-R); tend to experience "anger, frustration and bitterness" (Angry hostility facet); are "easily discouraged and dejected" (Depression facet); are "sensitive to ridicule, feelings of inferiority" (Self-consciousness facet); experience an "inability to control cravings and urges" (Impulsiveness facet); and are "unable to cope with stress, dependent, hopeless or panicked when facing emergency situations" (Vulnerability facet). This adds up to "behavioral or emotional maladjustment" (Neuroticism domain). The qualities of the high-Neuroticism scorer appear to flow inexorably from the diminished awareness of emotional skills.

Much of emotional ill-health and distress, and of behavioral deficits, can be redefined and understood as the inability to properly monitor, accept, and respect one's feelings and the diminished ability for optimum response that results. If those, indeed, are the underlying causes of emotional dis-ease and distress, the "cure" for neuroticism and its variants would be to retrain the patient to better perceive bodily feelings, to trust their authenticity, and to use them as valid guides for response and behavior.

EE, neuroticism and maturation

High EE is clearly a characteristic of youth (see Table 2), with a steep *and steady* reduction in mean EE score between age ranges 16-25 (M = 33.79), and 66+ (M = 20.35). Up to the age of around 40, as the mean EE score decreases, the mean LL score increases then holds steady, increasing again only in the 60's. BB holds steady to around 45, increases rapidly to the age of 65, then drops off precipitately after 66. The age/EE correlation of -0.34 in SIPOAS is substantially greater than the -0.12 age/Neuroticsm correlation in NEO PI-R. Costa and McCrae (1992, p.43) hold that, "the levels of personality traits are very stable in adulthood [though] there are significant

changes between adolescence and early adulthood." The *stability* of personality styles after the age of 30 is a concept that runs steadily through their work (well summarized in Costa & McCrae, 1994); they apply this stability specifically to the NEO PI-R in which the age effect for N was essentially confined to the transition from college age to young adulthood. The steady decrease in EE beyond the college years suggest that EE measures a trait that is not fully congruent with the Neuroticism domain of NEO PI-R.

Change in SIPOAS scores with age (Table 2) may be partly an artifact of the population sample (e.g. cognitively inclined retirees may be more likely than emotionally inclined retirees to respond to a complicated questionnaire). There may be a cohort effect: those over 65 are less likely than younger people to have been influenced by the 1960's with their emphasis on experiencing emotions, and thus less likely to have progressed from the LL style to the BB style. The cohort effect could also explain the spurt in BB around age 40 as reflecting the societal change in attitudes toward feelings and emotions that started in the mid-1960's (when these participants were 10 years or older) but it cannot explain away the apparent maturation effect found in EE scores: it is not plausible that the *Zeitgeist* of the 1920's and 1930's would have been more conducive to developing an LL or a BB style and that of the 1970's to developing an EE style. A plausible explanation can be found in Table 14 and Fig. 1: with maturation (or cognitive learning) LL increases as EE lessens, but with therapeutic experience (or emotional learning) it is the BB score that increases. This is compatible with Costa and McCrae (1989, pp 53-54): "It is possible that each individual changes dramatically over the life span . . . the increases in some individuals are matched by decreases in others . . . a direct prediction from the Jungian premise that individuals should develop in later life qualities that they lacked in youth." Helson and Stewart (1994), Pervi (1994), and Weinberger (1994), also make persuasive arguments for the continuity of personality change throughout adulthood, especially in the course of psychotherapy.

Costa and McCrae (1992, p. 50; see also Costa & McCrae, 1980) anticipate one of the findings in this study: "the happiest individuals are high on E [extraversion] and

low on N; the most unhappy are those who are low on E and high on N," which precisely accords with the scores for BB and EE, respectively, in a population not dissimilar in many respects from the norming sample for NEO PI-R. [In the NEO PI-R sample, mean formal education for men was 15.7 years--i.e. the majority of men had experienced college (for women it was only 13.6 years). Male-female ratio was 50:50 (40:60 in SIPOAS); gender/N correlation was .14, (.12). About 18% of the sample was aged 21 to 29 (approximately 12% for SIPOAS); about 45% was 30 to 49 (50%); 19% was 50-64 (28%) and 17% was over 65 (10%)].

That therapeutic experience leads to change in SIPOAS styles was one of the hypotheses in the current study. The participants, selected in large part for intelligence or for psychological awareness, were a far from random group. It is possible that in the absence of therapeutic experience, high intelligence is the factor that induces change from EE to LL, and that in the absence of both therapy and high intelligence there may be only an insignificant maturation effect in the EE style after the age of 30.

To explore whether EE is simply a measure of Neuroticism, a *post hoc* re-analysis was made by eliminating all items in SIPOAS that appear to tap aspects of neuroticism. The resulting 54-item (18-triplets) scale (see Table D-1 in Appendix D) showed item-scale correlations and inter-scale correlations that were virtually identical with those for the full SIPOAS. EE/N correlations for the briefer scale were lower than for the full SIPOAS but still substantial and significant (see Table D-2 in Appendix D). The EE style of emphasis on evaluation, and of concerned contemplation, is thus seen as an intrinsic predictor of neuroticism independent of its neuroticism-related items.

The notion that SIPOAS styles can be *learned* and the significant *genetic* component generally attributed to neuroticism are not incompatible; there is no reason why the "genetic neurotic" should be significantly more (or less) able than a "non-genetic neurotic" to benefit from a restructuring of SIPOAS styles, learning to use cognitive processes to cope with the puzzling bodily feelings, or to further enhance mental health by fully utilizing the awareness of these bodily feelings.

Social and cultural factors cannot be excluded from the development and maturation of emotional styles. This has been the Author's experience, conducting T-groups and encounter groups in other cultures (Bernet, 1995); immigrants who had been in Israel a brief time, and who had grown up in cultures where rigid social rules obtained and where emotional expression was discouraged, tended to be concerned with anticipating expectations, to display emotional uncertainty, and to seek confirmation for their feelings from others, or from "authority." Those who had been in Israel longer and had become grounded in the culture and the economy, tended toward rigidity and reliance on logic. Those who were fully acculturated, were as ready as native-born Israelis (and as immigrants from the US, UK or Argentine) to learn to "be in touch with their feelings."

SIPOAS and mental health

The mental health perspective

Considerably less research has been done on the properties and qualities of emotional health than on those of emotional disturbance. Maslow (1968), exploring the quality of Self Actualization in terms of goals, strivings and ideals, appears to have defined *ipso facto* the qualities that determine emotional well-being. In their formulation of the formal-operational level of emotional development, Lane and Schwartz (1987) effectively made an operational definition of emotional well-being in terms of skills in emotional discernment and integration. Without aspiring to the high levels of scholarship and creativity displayed by these scholars, this study suggests that the BB style in SIPOAS can be used to explore, define, and measure the quality of emotional well-being.

The BB style correlates with measures and ratings of mental health and other attributes generally viewed as desirable. It also correlates with global experience in therapeutic processes and to a varying extent with many therapeutic modalities; this correlation appears to be further enhanced when psychotherapy, body therapy and spiritual modalities are combined. Further exploration of the BB style may afford a new

look at the qualities inherent in mental health, and may show how these qualities (and perhaps the process of self-actualization and of attaining higher levels of emotional development) may be learned directly in therapy, or indirectly through other forms of personal enhancement, especially so when specific spiritual, physical or cognitive processes, not commonly associated with these desired states, are engaged.

Therapeutic experience as a moderator of SIPOAS style

Further studies (longitudinal or experimental) may show the extent to which SIPOAS styles can be learned and taught, within therapeutic or educational frameworks. This could answer three fundamental questions: to what extent do the modality-style correlations reflect *choice of modality*? to what extent does experience in therapeutic modalities *induce change*? and which therapeutic modalities, or components or component-combinations common to various modalities, are *most effective* in inducing change to BB? Even very brief exposure to a technique (meditation), as Goleman and Schwartz showed (1976), can lead to significant changes in mental health functioning.

SIPOAS as an adjunct to diagnosis: psychopathology

A knowledge of style in the perception of affect would make a useful addition to any psychodiagnostic battery, providing additional information on the mental health of the patient (e.g. high-BB v. high-EE). At the same time, it would reveal strengths and deficits that affect the patient's ability to utilize emotional, internal, external and logical cues in the course of the therapeutic process and of daily life.

Lazarus (1981, 1986) and Lane & Schwartz (1987) have separately made a case for applying the specific modality that accords with the patient's needs. Lane and Schwartz, for instance, suggest that treatment modalities should be chosen on the basis of the patient's level of emotional awareness: somatic interventions (medication or muscle relaxation) would be appropriate for patients at Level 1, who manifest somatic symptoms; "behavioral interventions such as operant conditioning, social skills training, physical restraints . . . " for Level 2 patients, and so on.

The change from EE to LL traits and ultimately to BB is a learning process. Patients must start therapy at a level compatible with their level of emotional awareness. Focused awareness of body sensations, autonomy and responsibility of the client, and ability to read the nuances in the other, are qualities that tend to be incompatible with the EE style; attention to body sensations, trance state, and re-experience (physical re-enactment) of emotional states in the here-and-now, tend to be incompatible with the LL style. Initially, therefore, it would be appropriate for high-EE patients to learn to explore their emotional problems using cognitive and logical instruments until they experience more self-trust; high-LL patients who already have these skills must learn to attend to inner cues and bodily feelings; high-BB patients may have to be taught the benefits of logic, of introspection, of viewing themselves from an outsider's viewpoint and of seeking cues from the environment. At the outset, patients with high EE scores might respond best to a therapist who offers rules, explanation, and confirmation; the high-LL might respond best to a therapist who uses a logical, "sensible" approach; the high-BB person might respond best to a therapist who offers autonomy and responsibility, avoiding musts and shoulds.

SIPOAS as an adjunct to diagnosis: medicine

SIPOAS style may be reflected in an attitude toward medical treatment: a high-BB patient might wish to be a full partner in the healing process, to comprehend it and to fully experience it; a high-LL patient might wish the healing to be done virtually *in absentia* so that he/she can get on with life; a high-EE patient might obsess about the disease or surrender all treatment and decision to the physician. Knowledge of SIPOAS style can guide the physician in the amount of medical information that can be shared, the extent to which the patient will comply with a diet or exercise regimen, whether hospitalization is indicated, and how well and how quickly the patient will recover.

> It would be instructive, too, to explore correlations between SIPOAS styles and the incidence of, and prognosis for, ailments such as heart disease, cancer, chronic pain, allergies, insomnia, and so on.

SIPOAS and its application in the therapies

A brief, heuristic description of some therapeutic modalities is given in Appendix C. Certain modalities (see Table 10) correlate more highly than others with the BB style; these may be more effective than others in inducing mental health. Combining psychotherapy with body and spiritual modalitiess significantly enhances the correlation with BB (see Table 12) and hence with mental health; psychotherapy could thus be made more effective, quicker and cheaper when combinedt with relatively low-cost physical or spiritual modalities (many of which are conducted in groups, and by practitioners without advanced academic training), an important consideration under managed care.

A patient may seek, or be guided to, one of the modalities that correlates highly with BB (and thus is conducive to mental health). A therapist may choose to introduce into the therapy a specific therapeutic component (see Table 18, also Tables C-1 and C-2 in Appendix C), for example continuously focusing the patient's attention to the physical feelings and changes that accompany the emotions, thoughts, memories and behaviors. This approach, central to both Bioenergetics analysis and Gestalt therapy, enhances the ability to detect fine nuances of feelings, and is adaptable to almost any therapeutic modality; it can be effective with a wide range of patients, including the multiply-handicapped (e.g. retardation and psychosis; Bernet, 1983). Training in focused attention to feelings rapidly generalizes from the therapist's office into all aspects of daily life. Some examples of applications of this component are given:

- Depressed patients are notoriously reluctant to engage in physical exercises that would enhance the flow of feelings through the body. Their most prominent self-perception is of their unhappiness and, initially, they tend to have little trust in the cognitive restructuring of their beliefs that is the optimum approach for their therapy (Beck, Rush, Shaw, & Emery, 1979). Patients can be taught to focus self-awareness, away from the undifferentiated "depressed" (which continuously recycles the depressive thoughts) and into the continuously varying bodily feelings: "warm here . . . flowing . . . tight . . . tears in my eyes . . . unwilling to move . . . sleepy." This allows

more access to feelings and new self-conceptualizations, away from the self-perpetuating self-designation as "depressed." As patients learn BB skills, they also acquire trust in their perceptions of their feelings; the newly learned skills, and the increased autonomy decrease the "learned helplessness" (so termed by Seligman, 1974) component of their depression, and cognitive restructuring becomes effective.

- Eating disorders are largely manifestations of misperceived bodily feelings. By correctly labeling the physical feelings that precede the urge to binge, the patient can gain more control over the interpretation of the feelings and over the action response ("I feel a nagging pain right here. I usually understand it as hunger but I can't be hungry. I feel empty, drained. I'm alone. I want to cry . . . I don't really want to eat any more. I'll do something better with my life.") The urge to eat is interrupted by an understanding of the precipitating thoughts and replaced by self-enhancing decisions based on heightened awareness of the bodily feelings.
- Impulse control is a function of the ability to respond rapidly to accurately perceived external prompts and the resultant bodily feelings. Through rapid attention to the underlying feeling of anguish, of fear, or of hurt, a potentially violent outburst of anger or of rage may be transmuted into a controllable and acceptable pain or sadness. Rapid awareness of the onset of the gradual build-up of irritation, together with better ability in communicating the changing nuances of emotions through voice, face and posture, can often (at times effortlessly) restructure a potentially serious conflict.
- Substance abuse can be conceptualized as self-medication, either to deaden what is perceived as intolerable pain or anguish, or to heighten sensations that have been dulled or deadened (the deadening or dulling of sensations is often the *spontaneous* response to intolerable pain or anguish). Both instances call for training in the rapid awareness of feelings as they begin to emerge, and in the ability to head them off by timely, low-effort cognitive or behavioral intervention. Increased attention to the authentic self and its authentic feelings eventually induce a higher awareness and higher self-esteem in which the substance is no longer essential, neither to deaden feelings nor to enhance them, until ultimately the substance is no longer desired. The

altered state of consciousness provided by drugs constitutes a powerful reinforcer that inhibits extinction, but yoga, meditation, imagery and various other modalities can provide an "altered" state of consciousness that is life- and personality-enhancing, and that eventually becomes equally rewarding.

Many participants in this study reported the 12-step program under "other" therapeutic experiences; the correlation between 12-step experience and SIPOAS style was not explored in this study.

- Post-traumatic stress disorder (PTSD) can be viewed as a puncturing by recent trauma of the encapsulating membrane in which terror-provoking childhood memories had been safely stored; they subsequently spill out and contaminate feeling, thought, and action in the here and now. When the traumatic event is deliberately re-entered in therapy (through medication, or during altered states of consciousness), catharsis is likely to ensue; this can open up the succession of memories all the way back into early childhood, each stage ready to be defused and rendered harmless. The potentially long and difficult process can be significantly hastened as the patient learns to explore and respond to the fine nuances of the re-experienced bodily feelings from the past.

Implications of this study

Psychological research

Much of the current research in psychology uses young college students as subjects. College-age subjects have a mean EE score that is particularly high (see Table 2). They may thus be less likely than older subjects to base their responses on inner awareness or on logical appraisal, and more likely to base their responses on what they *believe* to be "right" or expected. This effect may be especially salient where attribution and misattribution are being measured. It may be advisable in certain future studies, to use only older subjects, or subjects who score low on EE.

Applications in employment and career

SIPOAS may prove useful in career counseling, in job placement and in improved relations within the workplace. The high-EE style appears to be compatible with

employment where strict adherence to rules is demanded and clear instructions are given; the high-LL style with situations that require the application of logic and intellect; the high-BB style with imagination and some independence of thought. At the lower rungs of the employment ladder, the high-EE style would generally be preferable, and the high-BB style nearer the top. High-BBs often have difficulty in understanding the high-LL's seeming rejection of feelings; high-LLs often have difficulty in understanding the high-EE's seeming obsessive attention to rules or details; high-EEs often have difficulty in understanding the high-BB's seeming unpredictability. SIPOAS testing could help suit style to job, and to create work-teams that are appropriately homogenous or heterogeneous in style.

SIPOAS, family and pre-marriage counseling

An understanding of SIPOAS styles can be used in family counseling (as well as in pre-nuptial counseling), as a guide to help clients understand each family member's preferred way of perceiving emotions (see above). The *techniques* of enhanced awareness of feelings can be applied to develop patterns of communication that are more precise, more finely nuanced, and thus more accessible to all.

From infant to fully feeling person

The three sources of information

There are three sources of information on which to build responses: perceptions "from the world outside"; memories, ideation, and cognitions "from inside the mind"; and feelings and sensations "from inside the body."

Perceptions and learning

Training in perceptions starts almost from birth: parents coo or clap for the child's benefit and sing lullabies; they make faces and hang mobiles over the crib to stimulate vision; they fill the crib with cuddly toys for kinesthetic experiences. Throughout life, at home, in school and out in the world, children are encouraged to sharpen their perceptions: to look and to see, to listen and to hear, to smell, to taste and to touch.

Eyeglasses and hearing aids correct defective perceptions; telescopes and telephones bridge distance; microscopes and microphones make the imperceptible perceptible; radio, movies and television disseminate sounds and images. There are thermometers and transits, barometers and balance scales, countless instruments to measure dimensions, temperature, and sound. From every side, we are encouraged, helped, and educated, to utilize our perceptive senses to the fullest.

Education in cognitions and in memory

Much of formal education is dedicated to improving the workings of the mind: memory, critical thinking, calculations, logic. We are encouraged to think, to remember, to explore, to compare, to contrast and hypothesize. We are surrounded by devices--books and notepads, dictionaries and encyclopedias, times-tables and periodic tables, slide rules and computers--all dedicated to encourage optimal thinking and memory.

Training in the awareness of feelings and emotions

The infant is an emotional *tabula rasa,* aware only of hunger, fear and discomfort. Gradually a repertoire of patterns of feelings develops, some extremely subtle, some seemingly indistinguishable from each other, a *Roget's Thesaurus* of the mind-body, needing only a little help to become powerful, accurate and authentic guides in life. But there is little education for feelings, not in the home, not in school, not in the world at large. Feelings produce emotions. Emotions are infectious. Emotions can raise uncomfortable feelings in others. Society, as a whole, distrusts emotions and those who allow emotions to be a guide to life.

Adults often actively discourage a child's learning about emotions, and even more so *expressing* emotions that might make some adult feel uncomfortable. The crying infant may be ignored: "it's only gas." The child is taught to deny pain, the essential messenger of the body's damage-control system. The closest this culture comes to educating for feelings is to draw up a taxonomy of emotions; in place of the forbidden awareness of feelings and expression of emotions, children are taught a series of empty names: "You're angry . . . jealous . . . unhappy." To know what they feel,

children are forced to question an adult, surrendering the authenticity of their feelings and the autonomy of their emotions.

With feelings long deadened and ignored by the time school and college have been completed, the young person embarking on adult life will have become habituated to checking with parents and teachers, with peers and the media, to make sense of the messages of the feelings. This is life in the EE style, ultimately a life of confusion and unhappiness, relieved only if logic and reason can be acquired as a substitute. For some, therapy or its equivalent may eventually offer a way back to experiencing some of the lost feelings. Many will remain marked throughout their lives by confusion, unhappiness, and repression.

Training in the language of emotions

The change in attitudes and values required to encourage the full experience and expression of feelings, in children and in adults, in public and in private, is probably more than this culture, or any culture, is able to accept. Parents and teachers can, however, encourage the child in their care to become better attuned with feelings and emotions.

Training in the awareness of feelings can start from earliest infancy, even before the infant eyes learn to focus. Parents who make themselves aware of the nuances of the child's non-verbal expression--squeezed eyes, clutching fingers, distended belly, cooing voice--heighten their own Propriocentric abilities as they become sensitized to the feeling needs of the child; concurrently they let the pre-verbal child know that its feelings are not only accepted but responded to. The child receives permission to feel.

The sensitized parent does not tell a child what it is feeling ("you're just jealous" or "you're just angry") but elicits the full range of *bodily* feelings with an open invitation to experience the natures, the amplitudes and the locations of all the then-current feelings. Early training in the perception of feelings may enable some children to attain the fifth stage of emotional awareness long before adulthood; perhaps adults can attain a sixth or seventh stage that has not yet been even hinted at.

Education and the language of emotions

Teachers are well-meaning. Their job is not just to teach, but to wipe noses, collect lunch money, prepare lesson plans, keep silence and order, and ultimately to make principal and parents happy. It may seem difficult for the teacher to remain fully open to emotions and feelings, impossible to teach when each child is free to "emote" and disrupt.

It need not be that way, Teachers can learn not just to tolerate the children's expression of their feelings, but to actively encourage it; the class may even become calmer, happier and more ready to learn. A Rogerian approach of reflecting and validating feelings can be worked into the classroom routine without disrupting discipline. "You're excited? I would be too. Now, please, do it quietly so we can get on with our lesson." "You seem upset that you can't remember. You appear very unhappy. Sit down for a little while and when you're feeling OK you can join us again." "You seem so mad you want to kick him; I bet your feelings are really hurting inside to make you want to do that. It may take a few minutes to deal with those feelings, you may wish to think of the happy you have when you are friends. Tell us when you feel better."

Children can learn that it is acceptable to have feelings, that feelings have personal meanings and often lead to behaviors, and that there are ways of reacting to those feelings in a socially acceptable way. They can be taught, formally or informally, about feelings and emotions and shown how their emotions relate to small changes in body feelings. They can be encouraged to write about feelings, to discuss them, even to create mini-dramas in which they demonstrate their feelings to their friends. They can learn to recognize and understand the emotions expressed by others. When encouraged from their early days to be in touch with their feelings, our children may grow up more confident, more relaxed, more creative, and more joyful.

A society that accepts and fosters the right to experience feelings and to express emotions may become a society of greater happiness and contentment.

Appendix A

The POA profile

The Perception of Affect (POA) Profile, precursor of SIPOAS, was developed from 1982 to 1985 as an independent pre-dissertation project at the Graduate Center of the City University of New York, under the sponsorship of Prof. Samuel Messick, to help explore the construct of "being in touch with one's feelings" and to examine the folk-belief that "being in touch with one's feelings" correlates with mental health (Bernet, 1985).

The initial exploration had been concerned only with the nature of "being in touch with one's feelings," i.e. being aware of, and responding to, one's feelings and emotions in a relaxed and integrated manner. This style was termed the Propriocentric ("centered on the self") style of perception of affect (P), which was contrasted with a global non-Propriocentric style (non-P). At a later stage, the Propriocentric style--viewed as emerging from, and being centered on, the self--was contrasted with a Xenocentric ("alien-centered") style (X), conceptualized as resembling that of a detached stranger who observes from the outside the inner processes of feelings, emotions and behavior.

It soon became apparent that variation in the style of perception of affect was not a simple dichotomy. Similar to, yet contrasted with, the Xenocentric style was the Vigilant style (V) of the person who scans the environment, often with acute vigilance,

to determine from the environment the nature of his/her emotions. The X and the V person may not be aware of, nor be responding to, emotions and feelings in a relaxed and integrated manner, but neither attempts to reject or to suppress emotions and feelings. Accordingly, provision was made for a fourth group, those with the Repressor (R) style, who prefer to repress or ignore the perception of their inner feelings.

Various published measures of self-awareness and of self-consciousness were examined; it became clear that in the literature, these two personality constructs generally relate more to awareness of, or concern with, the perception of the Self *by others* than to a true self-aware perception of the Self. Twenty-two items drawn from self-consciousness and self-awareness inventories were explored, and contrasting items were created, to form a starting point in the quest for an adequate measure of *integrated* self-awareness. Students in a doctoral program in personality psychology were asked to evaluate these items in terms of the four postulated styles, P, X, V and R; they were also invited to suggest additional items that could be used to measure, and to differentiate among, the four styles.

Based on their evaluations of these items, and on their newly proposed items, a pencil-and-paper scale was developed, consisting of 144 items arranged into forty-eight "triplets." Each "triplet" contained three contrasting items which were expected to reflect three of the four POA styles; each style was expected to be the sum of thirty-six items. A forced-choice question format was developed that would allow subjects the opportunity to rank their preferences among the three styles in each triplet.

Many additional modifications were made following the presentation of the test-in-development to other populations, among them clinicians and social workers.

The final POA questionnaires contained 46 triplets (a total of 138 items). They were distributed at meetings and conferences of the Association for Humanistic Psychology, at meetings and conferences of Mensa (a society whose criterion for membership is an intelligence score in the upper two percent), to postgraduate students in behavioral therapy, to a team of school psychologists, social workers and

educational evaluators, to clinical staff at a state mental hospital, at a "New Age" vacation center, and to graduate students in engineering and in accounting at a large university in Ohio. Completed POA questionnaires were returned by post-paid mail or by deposit in specially marked boxes at conference or meeting sites.

The locales and the populations were chosen with some care, in the hope of reaching large numbers of those who are generally believed to accord an important place to emotions, and a large number of those who are generally believed to accord an important place to intellect and logic. They were selected both because their distinctive styles would also serve for estimating and confirming the validity of the POA, and because they appeared to correspond approximately with the projected applications of the POA (in prognosis and treatment in psychotherapy, in mental health counseling, in the selection and training of mental health professionals, in the selection of undergraduate and graduate students, and in the matching of applicants with jobs and promotion).

A total of 374 scorable questionnaires was returned. A number of reiterations of analysis by means of Cronbach's coefficient alpha (to establish internal reliability) and Pearson's *r* to (establish item-scale correlations) failed to show significant discrimination between the V and the X styles, these two groups were therefore merged into an X-V style of effortful self-awareness. Further iterations led to the elimination of seven triplets that failed to show adequate discrimination. A total of 39 triplets was retained for analysis; each triplet appeared to provide acceptable discriminators between at least two of the three styles.

Approximately one hundred of the completed questionnaires could be unambiguously attributed to each of the two target groups. As predicted, the POA profile discriminated in a highly significant manner between the two selected groups of subjects: those who were assumed to emphasize emotions in their styles scored high on P; those who were assumed to emphasize intellect and logic scored high on R. There was no significant correlation of population group with X-V scores.

Subsequent factor analysis revealed four factors for P:

1. "Awareness"--is aware of somatic cues to emotion
2. "Effortless"--is aware and self-assured in an effortless manner
3. "Utilizes"--understands situations and solves problems through attention to body cues
4. "Interprets"--interprets emotions through somatic content.

Four major factors were found for X-V:

1. "Negatively self-conscious"--comparable with the Self-consciousness Scale (Fenigstein, Scheier & Buss, 1975).
2. "Xenocentric"--engages in self scrutiny
3. "Vigilant"--has need to seek information from the environment
4. "Sad"--has difficulty giving up sad moods

Factors 2 and 3 seem to correspond with the X and the V concepts, respectively. Factor 1, self criticism in the context of a judging environment, is common to both X and V, and was thought likely to be a major reason for the finding of a negative correlation of X-V with age. Factor 4 would account--if painful self-scrutiny, ready embarrassment, and dependence on judgment from others were not enough--for the negative correlation with contentment. It would also explain the findings in the literature that self-focused attention correlates with negative affect and depression.

Four factors were found also for the R scale:

1. "Rejection"--rejects self scrutiny
2. "Avoidance"--avoids unpleasant feelings and situations in a self-assured, easy-going manner
3. "Control"--seeks to exert rational control over the self and the environment
4. "Repressor"--actively represses feelings and somatic awareness

Factor 2 seems related to a style that seeks "fun" in order to avoid feelings or intimacy; factor 4 appears to be associated with intellectualization as withdrawal.

Factor Analysis of Non-P items showed two major factors; these were virtually identical with X-V and with R.

Based on the assumption that "being in touch with one's feelings" could be learned in a variety of ways, in psychotherapy or through a wide range of other activities, the questionnaire asked subjects about the extent or intensity of their experience, as clients/patients or as practitioners, in seventeen specific psycho-therapeutic modalities and a variety of other modalities. No attempt was made during the administration or the analysis of the POA profile to measure separately those subjects who had experienced psychotherapy, as client or as practitioner, from those who had not.

- Experience in therapy: For fifteen of seventeen psychotherapeutic modalities, experience as client correlated with propriocentric self-awareness (P); two correlated with X-V; Fifteen of the seventeen modalities correlated *inversely* with R.
- Experience as therapist: In fourteen of the seventeen psychotherapeutic modalities, being a therapist correlated with propriocentric awareness.

Subjects were also asked about their somatic awareness: the declared ability to pinpoint foods responsible for indisposition, to pinpoint the moment of catching cold, to tell from mood or body sensations when the weather is about to change, to have superior self-healing abilities, to have control over sensation of body-temperature, to orgasm without physical stimulation, and (in women) to pinpoint the moment of ovulation and of menstruation. All these correlated positively with P, and correlated inversely or non-significantly with the X-V and R scales.

Demographic Factors, Attitude And Self Concepts

A range of supplementary items bound into the POA questionnaire booklets, dealt with demographic information, with values and with attitudes.

- **Age**: X-V had a high inverse correlation with age; P and R had a positive correlation.

- **Gender**: Women endorsed significantly more P items, men endorsed more R items.
- **Intelligence**: Reported scores or self-estimates of intelligence correlated inversely with X-V, but not with other styles.
- **Intellect and Emotion**: Subjects were asked to rate their preference for intellect v. emotion, intelligence v. creativity, facts v. imagination, mind v. body, intelligence v. warmth, and intelligence v. interpersonal skills. Emphasis on intellective qualities generally correlated with R, on emotional/creative qualities with P, but there was little correlations for these qualities with X-V.
- **Contentment**: general contentment with life, as judged by another set of items, correlated positively with P and to a lesser extent with R; it correlated strongly and *inversely* with V-X.

Style in the Perception of Affect Scale (SIPOAS)

Exploration of the POA and its concepts led to the development of SIPOAS. The accompanying reformulation of the underlying constructs required the renaming of the three styles. P has developed into the BB ("Based on Body") style, X-V has developed into the EE ("Emphasis on Evaluation") style, and R has developed into the LL ("Looking to Logic") style. The 39 POA items have been extensively rewritten and rearranged into the current 31-triplet, 93-item, SIPOAS.

Appendix B

Scales developed for this study:

54-item SIPOAS questionnaire

Practitioner's Checklist

Awareness of bodily cues

Personal values, styles and attributes

Calculating the required number of participants

Table B-1
93-item SIPOAS questionnaire with item/scale correlations (*N*=987)

	BB	EE	LL
1. When I come up against a difficulty I find a solution by			
organizing my thoughts logically	-.38**	.04	**.38****
seeking clues in the environment	-.08	**.17****	-.07
relaxing and seeking a response from inside myself	**.45****	-.18**	-.33**
2. It would be true to say that			
I tend to be aware of myself without making a deliberate effort	**.36****	-.41**	-.02
I usually focus my attention on what i think and do	-.22**	-.02	**.25****
I'm always trying to figure myself out	-.22**	**.54****	-.25**
3. In my personal style of interacting			
I usually worry about making a good impression	-.41**	**.59****	-.09
I make the best impression on others when I'm simply being myself	**.50****	-.48**	-.10**
I have developed skills for making the right impression	-.22**	.00	.25**
4. When I feel frightened			
I am aware of the sensations in my body and use them to guide my actions	**.44****	-.16**	-.35**
I try to figure out why I feel that way	-.12**	**.32****	-.15**
I mobilize my resources to overcome my fears	-.31**	-.14**	**.46****
5. I would say of myself that			
paying attention to inner feelings distracts me when I'm under pressure	-.31**	-.06	**.39****
I'm constantly aware of my feelings	**.45****	-.20**	-.31**
I'm constantly examining my motives	-.19**	**.34****	-.10**
6. As a rule			
I'm concerned about what other people think of me	-.31**	**.53****	-.15**
I 'm guided by common-sense evaluations, logic, and judgments	-.28**	-.24**	**.53****
I'm aware of how I feel about myself	**.56****	-.25**	-.38**
7. In stressful social settings			
I take care not to display anxiety	-.24**	-.20**	**.44****
it takes me time or effort to overcome my anxiety	-.11**	**.33****	-.18**
I can perceive the feelings of anxiety through my face or voice	**.39****	-.12**	-.31**
8. The way I work through a problem is			
to explore my own motives and the attitudes of others	-.07	**.27****	-.17**
to explore the logical alternatives	-.44**	-.09	**.57****
to be in touch with my body and my feelings	**.60****	-.16**	-.52**
9. When I'm with a group of people who seem happy			
it does not always affect my inner feelings and I may even be sad	.07	**.34****	-.34**
I can be easily cheered up, even when I thought I was sad	.00	.10	.00
I am able to retain my common sense without being caught up in their euphoria	-.09	-.27**	**.38****

** $p<.001$
correlation in boldface indicates the item scored for the style in that column

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Table B-1
93-item SIPOAS questionnaire with item/scale correlations (*N*=987)

	BB	EE	LL
10. In a large group			
I can usually control myself so that I am not handicapped by my feelings	-.09**	-.28**	**.37****
I tend to feel nervous	-.26**	**.41****	-.09
I may feel both anxious and comfortable at the same time	**.28****	-.02	-.30**
11. When I feel blue			
I need to understand what makes me feel that way	-.21**	**.43****	-.16**
I allow the inner process to take me through it	**.53****	-.30**	-.31**
I use logic or willpower to get myself out of it	-.40**	-.10**	**.53****
12 I'm generally			
attentive to my inner feelings	**.49****	-.06	-.49**
aware of how I think and why	-.27**	-.26	**.54****
attentive to how others see me	-.27	**.40****	-.08
13 Loneliness			
is often puzzling, especially when I can't find a reason for it	-.18**	**.27****	-.05
is a feeling I can avoid by proper thoughts and attitudes	-.27**	-.16**	**.45****
is a physical sensation that is not always related to the absence of friends or family	**.40****	-.03	-.41
14 . Envy is			
an inappropriate feeling that I try to overcome	-.26**	-.17**	**.44****
results when I am comparing myself with others	-01	**.28****	-.25**
is an unpleasant feeling in my body that gets in the way of warmer thoughts	**.31****	-.13**	-.22**
15. An emotion			
is a set of (often irrational) thoughts	-.30**	.01	**.32****
is accompanied by sensations in my body	**.52****	-.29**	-.30**
can often be puzzling and may be difficult to figure out	-.32	**.33****	.06
16. Scrutinizing myself is			
unnecessary when I allow myself to be aware of my inner feelings	**.57****	-.40**	-.26**
something I engage in frequently	-.35**	**.60****	-.15**
helpful in making rational decisions	-.27**	-.18**	**.47****
17. Sadness			
is not necessarily always an unpleasant feeling	**.49****	-.39**	-.18**
is an unpleasant state that is best avoided	-.36	.05	**.34****
can be especially painful when I can't figure out the reason	-.28**	**.45****	.10**
18. I'm aware of myself			
frequently and it often bothers me	-.34**	**.60****	-.17**
spontaneously and it feels good	**.60****	-.34**	-.34**
but it does not have a high priority in my life	-.38**	-.16**	**.56****

** $p<.001$
correlation in boldface indicates the item scored for the style in that column

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Table B-1
93-item SIPOAS questionnaire with item/scale correlations (*N*=987)

	BB	EE	LL
19. Speaking in front of a group			
comes easiest when I just think about the topic and ignore any anxiety	-.11**	-.30**	**.38****
can prompt me to feel a variety of sensations in my body	**.40****	-.13**	-.32**
provokes anxiety and makes me wonder how I come across to others	-.23**	**.47****	-.17**
20. When introduced to a friend's friends			
I'm self-conscious about the way I look	-.30**	**.60****	-.22**
I am not preoccupied by how I look to others	.06	-.39**	**.30****
I enjoy the feeling of looking good	**.24****	-.15**	-.13**
21. When I'm insulted in a situation where I cannot respond freely			
I ignore the physical feelings of discomfort and concentrate instead on responding effectively	.04	-.36**	**.32****
I find it hard to put the insult out of mind until I know why it happened or what I should do about it	-.15**	**.30****	-.09
unpleasant sensations in my body give rise to feelings of hurt, anger or impotence	.11**	.11**	-.28**
22. Changes in my mood			
can be quite subtle, yet I'm usually aware of them	**.44****	-.43**	-.08
affect me inappropriately when I allow them to rule me	-.31**	**.26****	.09
are uncomfortable when I can't figure out what's happening	-.26**	**.30****	.01
23. The way I present myself			
frequently has me feeling uncomfortable	-.31**	**.52****	-.13**
is less important than how I feel about myself	**.52****	-.39**	-.22**
is something I've learned to control	-.33**	.04	**.34****
24. An unusually brilliant sunset			
can set up sensations of tingling or throbbing in my body	**.36****	-.03	-.36**
is especially pleasing when I know that others feel the same way	-.11	.05	.02
is esthetically pleasing	-.24**	.00	**.30****
25. When I find myself instinctively disliking a stranger			
I tend to be aware of the feelings the stranger has aroused in me	**.38****	-.08	-.34**
I try to act on logic rather than emotions	-.30**	-.08	**.40****
I look to clues in the stranger's behaviors, and interactions with others, to learn why I feel this way	-.13**	.14**	.01
26. Compared to other people,			
I'm aware of myself without having to reflect deeply	**.41****	-.43**	-.06
I reflect about myself a lot	-.03	**.48****	-.40**
I find common sense more rewarding than self-reflection	-.41**	-.11	**.54****

** $p<.001$
correlation in boldface indicates the item scored for the style in that column

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Table B-1
93-item SIPOAS questionnaire with item/scale correlations (*N*=987)

	BB	EE	LL
27. When I am forced to talk in an awkward situation			
I'm often aware of changes in my mouth and throat	**.31****	-.01	-.32**
I'm alert to the impression I make on others	-.08	**.18****	-.08
I do my best to avoid appearing uncomfortable	-.24**	-.15**	**.39****
28. Feelings of embarrassment			
can be avoided by the use of self-control	-.35**	.01	**.36****
rarely bother me when I relax and just accept them	**.48****	-.50**	.07
come to me quite readily	-.26**	**.54****	-.21**
29. When I am face to face with a person who is very sad			
I keep cool and unemotional so that I can be objectively helpful to that person	-.22**	-.11**	**.35****
I try to figure out how the other person would like me to react	-.19**	**.21****	.01
I may find my eyes filling with tears or my throat developing a silent sob	**.39****	-.08	-.38**
30. When I have strong feelings			
I feel uncomfortable until I understand what prompts those feelings	-.21**	**.40****	-.12**
I know how to keep them in check so that I can maintain an even keel	.33**	-.12**	**.47****
I allow myself to "go with the flow"	**.48****	-.23**	-.31**
31. I believe that			
behavior should be based on principles and logic	-.48**	-.12**	**.63****
I become better aware of myself when I examine myself from the viewpoint of an outside observer	-.23**	**.30****	-.02
in order to be more aware of myself, I need to be in touch with my body	**.62****	-.12**	-.57**

** $p<.001$
correlation in boldface indicates the item scored for the style in that column

Table B-2
Practitioner's Checklist: correlation with SIPOAS styles (*N*=60)

	Checklist items	BB	EE	LL
	At the start of treatment with you:			
1	personality integration	.10 NS	-.08 NS	-.04 NS
2	inter-personal relationships	.32 (.02)	-.26 (.05)	-.12 NS
3	social functioning	.32 (.02)	-.25 (.06)	-.14 NS
4	inner contentment	.20 (.13)	-.29 (.03)	.07 NS
5	self actualizing	.31 (.02)	-.24 (.07)	-.14 NS
	Currently:			
6	personality integration	.29 (.03)	-.20 (.13)	-.14 NS
7	inter-personal relationships	.35 (.01)	-.29 (.03)	-.12 NS
8	social functioning	.35 (.01)	-.33 (.01)	-.07 NS
9	inner contentment	.29 (.03)	-.32 (.02)	.01 NS
10	self actualizing	.37 (.01)	-.32 (.02)	-.12 NS
11	change & growth during therapy	.19 NS	-.19 NS	-.02 NS
	How would you best describe the client now?			
12	is content, comfortable, relaxed	.15 NS	-.16 NS	-.01 NS
13	has attained good mental health	.28 (.04)	-.26 (.05)	-.06 NS
14	has a well-integrated personality	.31 (.02)	-.24 (.07)	-.13 NS
15	has good insights	.24 (.07)	-.11 NS	-.19 (.15)
16	is attuned to the feelings of others	.20 (.12)	-.10 NS	-.17 NS
17	is open to emotions	.27 (.04)	-.10 NS	-.27 (.04)
18	has learned to build appropriate defenses	.11 NS	-.14 NS	.02 NS

Statistical significance (in parentheses) is shown to two digits, except p<.001
NS = no significance (*p*>.15).

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Table B-2
Practitioner's Checklist: correlation with SIPOAS styles

	Checklist items	BB	EE	LL
19	has developed self-therapeutic skills	.27 (.04)	-.13 NS	-.21 (.11)
20	has learned to control emotions	.07 NS	-.08 NS	-.02 NS
21	has learned to control behaviors	.14 NS	-.14 NS	-.03 NS
22	generally assesses feelings from the viewpoint of a neutral observer	.25 (.06)	-.27 (.04)	-.01 NS
23	is aware of small changes of feelings as they occur	.12 NS	-.12 NS	-.03 NS
24	has learned not to let emotions control behavior	.18 NS	-.20 (.14)	-.01 NS
25	has learned to evaluate the inner meanings of attitudes or behavior	.22 (.09)	-.24 (.07)	-.01 NS
26	readily accepts insights provided by experts	.19 (.15)	-.19 (.15)	-.02 NS
27	utilizes cognitive skills for understanding/changing behavior	.10 NS	-.09 NS	-.04 NS
28	has learned not to let emotions control behavior	.12 NS	-.15 NS	.01 NS
29	is in touch with feelings	.27 (.04)	-.18 NS	-.18 NS
30	is skilled in utilizing the therapeutic process	.20 (.14)	-.10 NS	-.14 NS
31	is eager to accept guidance from others	.13 NS	.03 NS	-.21 (.11)
	understands inner processes by			
32	checking their perceived impact on others	.08 NS	-.09 NS	-.02 NS
33	viewing the Self from the viewpoint of an outside observer	.23 (.08)	-.22 (.09)	-.06 NS
34	focusing on "inner feelings"	.32 (.02)	-.12 NS	-.30 (.02)
35	relying on logical reasoning	-.22 (.10)	.02 NS	.25 (.06)
	generally determines action on the basis of			
36	logical judgment	-.25 (.06)	.09 NS	.23 (.09)
37	the opinions of others	-.12 NS	.15 NS	-.03 NS

Statistical significance (in parentheses) is shown to two digits, except p<.001
NS = no significance (p>.15).

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Table B-2
Practitioner's Checklist: correlation with SIPOAS styles

	Checklist items	BB	EE	LL
38	interior decisions	.16 NS	-.07 NS	-.14 NS
39	impulse	.01 NS	.05 NS	-.07 NS
	lays emphasis on his/her			
40	physical well-being	.17 NS	-.17 NS	-.01 NS
41	emotional well-being	.20 (.13)	-.13 NS	-.11 NS
42	spiritual well-being	.16 NS	-.09 NS	-.12 NS
43	logical reasoning	-.13 NS	.13 NS	.01 NS
44	learning from others	-.12 NS	.09 NS	.03 NS
45	learning from examples	.01 NS	.06 NS	-.09 NS
46	learning from own experiences	.20 (.14)	-.12 NS	-.12 NS
47	"Calculated Growth" items 6 through 10 - items 1 through 5	.10 NS	-.09 NS	-.01 NS
48	"Mental Health" Sum of items 6 through 14	.33 (.01)	-.30 (.02)	-.08 NS
49	"Feeling": Sum of items (16 + 17 + 23 + 25 + 29 + 34 + 38 + 41)	.28 (.04)	-.17 NS	-.19 NS
50	"Examining": Sum of items (22 + 26 + 31 + 32 + 33 + 37 + 44)	.14 NS	-.11 NS	-.07 NS
51	"Reasoning": Sum of items (18 + 20 + 24 + 27 + 35 + 36 +43)	.03 NS	-.05 NS	.08 NS
52	"Reasoning 2" Sum of items (35 + 36 - 17 -29 - 34)	-.42 (.001)	.16 NS	.38 (.01)

Statistical significance (in parentheses) is shown to two digits, except $p<.001$
NS = no significance ($p>.15$).

Table B-3:
Correlation of awareness of bodily cues with SIPOAS styles

	no. of cases	BB	EE	LL
1. When you feel unwell after eating, can you pinpoint the particular food that made you unwell?	795	14***	-.13***	-.03
~2. Can you tell when the ratio of red cells to white cells in your blood changes?	795	.17***	-.16***	-.06
3. Can you tell the exact moment when you catch a cold?	795	.16***	-.10**	-.10**
~4. Are you aware of the sensations in your body when either your hair or your nails are growing?.	795	.11**	-.07*	.06
5. Can you tell from your mood or body sensations when the weather is about to change?	795	.22***	-.09**	-.14***
6. Do you consider that your self-healing skills are greater than those of four out of five of the population?	795	.31***	-.24***	-.13***
7. Do you have control over your sensations of cold and warmth (e.g. can you feel warm in winter when lightly dressed)?	795	.12***	-.14***	-.02
8. Can you deliberately bring yourself to an orgasm without physical stimulation of the genitalia?	795	.21***	-.16***	-.09*
~9. Can you deliberately increase the density of the urine as it passes into your bladder?	795	.02	-.06	.03
10. **women only:** Can you tell (or could you tell before your menopause) the exact moment that you ovulate?	295	.28***	-.18**	-.14*
11. **women only:** Can you tell (or could you tell before your menopause) the exact moment that you start to menstruate?	295	.29***	-.08	-.25***
Sum of all "Body Sensation" items (except items 10 & 11)	795	.29***	-.22***	-.12***
Sum of all "Body Sensation" items (excl implausible items 2, 4 & 9)	795	.31***	-.22***	-.14***
women only: Sum of all "Body Sensation" items (incl 10 & 11)	295	.37***	-.28***	-.13*
women only: Sum of all "Body Sensation" items (exclude implausible items 2, 4 & 9. include items 10 & 11)	295	.40***	-.30***	-.15**

~implausible item
*p<.05
**p<.01
***p<.001
one-tailed

Table B-4
Personal values, styles and attributes: correlations with SIPOAS styles

	no. of cases	BB	EE	LL
14. How content are you with your current life in general?	550	.23***	-.40***	-.11*
15. How much of your intellectual potential is tapped by your present employment, studies, or activities connected with your retirement or non-employment?	550	.20***	-.17***	-.06*
16. How much of your physical potential is tapped by your present employment etc.?	550	.06	-13**	-.05
17. How much of your interpersonal skill potential (the ability to relate to others) is tapped by your present employment etc.?	550	.25***	-10*	-.18***
18. How satisfied are you with your present employment, studies, retirement etc.?	550	.19***	-.23***	-.01
19. How, relatively, do you assess your personality? *(intellect v. emotions)*	523	-.37***	-.10*	.50***
20. How, relatively, do you assess your talents? *(creativity v. intelligence)*	523	.19***	.02	-.19**
21. In what proportion do you use facts and imagination in your problem solving? *(facts v. imagination)*	523	-.30***	.04	.35***
22. To what extent do your pleasures depend on the stimulation of your body or of your mind? *(body v. mind)*	523	.11**	.04	-.17***
23. To what extent do you value friends and colleagues for their warmth or their intelligence? *(warmth v. intelligence)*	550	.12**	.06	-.20***
24. To what extent do friends and colleagues value you for your warmth or your intelligence? *(warmth v. intelligence)*	550	.12**	.04	-.18***
25. To what extent are intelligence or interpersonal skills (the ability to relate well to others) relevant to your current employment or studies (or to past major employment if you are currently retired or unemployed)? *(intelligence v. interpersonal skills)*	550	-.13**	.00	.14***
Summed Attributes				
"General Contentment" score (sum of #14 + #18)	523	.24***	-.35***	-.06
"Utilization of Talents" score (sum of #15 + #16 + #17)	523	.24***	-.18***	-.09*
"Overall Satisfaction" (sum of #14 + #15 + #16 + #17 + #18)	523	.26***	-.28***	-.03
"Emphasis on Intellect" score (sum of #19 - #20 + #21 - #22 - #23 - #24 + # 25)	523	-.36***	-.08	.47***
"Emphasis on Fantasy & Creativity" (sum of #20 - #21)	523	.30***	.01	-.34***
"Emphasis on Feelings & Emotions" (sum of - #19 + #23 + #24)	523	.27***	.10*	-.39***
"Emphasis on Skills in Relating to Others" (sum of #23 + #24 - #25)	523	.18***	-.06	-.26***

*$p<.05$
**$p<.01$
***$p<.001$
two-tailed

Table B-5: Power calculations to establish number of subjects required

	tails	significance %	power	Δ	ν	N
SIPOAS scale:						
Internal reliability (Cronbach's coefficient alpha)	2	99	99	0.20	586	588
Item/scale correlations	2	99	99	0.20	586	588
SIPOAS & established tests						
Individual facets, NEO PI-R; individual factors, 16-PF	1	95	80	0.40	36	38
Neuroticism domain, NEO PI-R	1	95	90	0.35	66	68
Alexithymia scale (TAS-20)	1	95	90	0.35	66	68
Demographics						
Gender	1	95	90	0.35	66	68
Age	1	95	90	0.35	66	68
Sources (Mensa, AHP, etc.)	1	95	90	0.35	66	68
Values and Attitudes						
Body-awareness scale	1	95	90	0.15	376	378
Emphasis on intellect	1	95	90	0.25	133	135
Personal values and attitudes	1	95	90	0.25	133	135
Practitioner's Checklist						
Evaluation of subject's style	1	95	90	0.35	66	68
Evaluation of subject's mental health	1	95	90	0.35	66	68
Reported relevance of therapeutic experience	1	95	90	0.35	66	68
Domains (psychotherapy/physical/spiritual) --include zero values						
Psychotherapy--include zero values	1	99	95	0.20	385	387
Ten major modality groupings	1	95	80	0.35	48	50
Specific therapeutic modalities	1	95	70	0.45	28	30

Δ = critical size index
ν = calculated number, from "Master Table" (Kraemer & Thiemann, 1987, pp 105-112)
N = minimum number of subjects required
All correlation analyses, except where otherwise stated, refer to Pearson's *r*

Appendix C

Therapeutic modalities and their properties

Even in the most structured of therapies, the weight given to its various therapeutic components must vary with the practitioner, with the patient, with the presenting problem, and with the stage of the therapy, and it is therefore impossible to accurately define any modality in terms of its components. Solely for heuristic purposes, various therapies are briefly explored below. The descriptions emphasize the components believed important in the acquisition of a high-BB style; the descriptions are based on available information in the literature, on hearsay, and on the Author's personal experiences. They are only estimations and invite debate.

Modalities that correlate with BB

- Bioenergetics analysis, an abreactive modality, is a flexible outgrowth of Reichian therapy, more inventive and more eclectic. It trains and encourages patients into continuous awareness of changes in kinesthetic and other bodily feelings. Professional training is generally restricted to qualified mental health practitioners in any discipline.
- Primal therapy, so named by Janov (1970), is an emotionally and physically demanding abreactive therapy that may acquire the nature of a lifestyle. It encourages more intensive and more extensive abreaction than either Reichian or Bioenergetics therapies, through close attention to, and surrender to, the emerging bodily feelings, and attaches less importance to cognitive appraisal. It tends to be something of a "cottage industry" based on self-training, and is practiced by mental health

professionals and by lay people. Only a fraction of the practitioners have had formal training by Janov or his associates.

◆ Reichian therapy utilizes touch, pressure, deep breathing and abreaction to arouse past feelings and traumas "stored" in the musculature as chronic blocking; the feeling components of responses are accessed and reconnected to present feelings, thoughts and emotions. Training is based directly on the theories and practices developed by Reich in the first half of the century, and is generally restricted to physicians.

◆ Encounter groups had their heyday in the mid-60's to mid-70's. Free-form, eclectic group experiences that draw on techniques borrowed from Gestalt, psychodrama, bio-energetics, person-centered therapy, massage, meditation, and dance, art, and music therapies, they set out to sharpen emotions and the awareness of bodily feelings in the here-and-now; many techniques serve to reinforce the responsibility and autonomy of each participant, and to enhance inter-personal skills. Sessions are often cathartic.

> (*Note:* The name encounter group is also given to: *T-groups*, whose function is to improve communication in the workplace--these generally discourage deep feelings or emotions; also to *confrontational groups*, outgrowths of drug rehabilitation programs, that use group pressure to provoke powerful feelings, often at the cost of autonomy and responsibility.)

◆ Existential therapy explores life from a here-and-now perspective, continually drawing the patient's attention to, and reaffirming, the uniqueness and authenticity of his/her feelings (though it does not directly draw attention to the *physical* component of feelings). "The goal of existential therapy is to make the patient more aware of his own potential for choice and growth" (Davidson & Meade, 1978, p.482).

◆ Gestalt therapy utilizes mental and physical interventions to continuously guide the patient away from cognition-as-defense and into physical feelings and the assumption of personal responsibility both for the feelings and for the resultant thoughts and actions. "Calling attention to awareness of bodily sensations and emotions . . . have as their goal the breaking up of the badly organized field of the patient, and allowing him to make a creative adjustment with a new, well-interpreted Gestalt that is his own"

(Watson, 1977, p.175). Among the psychotherapies (excluding only the abreactive therapies), it correlates most highly with BB.

- Hypnotherapy: The hypnotic trance may be used by one client as an *empowering* experience ("my therapist showed me how to effect my own changes in my own way"), that also enhances the ability to discern fine nuances of body sensations. For another it may be a *passive* experience ("my therapist's instructions did it for me"), that contributes nothing to enhance attention to feelings. The eclectic hypnotherapy of Milton Erickson has evolved into a specialized, integrated and powerful therapy of mind and body (e.g., Rossi & Cheek, 1988).
- Jungian therapy (properly, Analytical Psychology) encourages autonomy, and the patient's responsibility for interpreting thoughts, events, and metaphors in the light of their current and personal meaning; it values symbol, fantasy and spirituality. Jung's requirement for a full personality (1958, p 167) essentially describes the components in the fully integrated BB personality: "We must have a function which ascertains that something is there (sensation); a second function which establishes *what* it is (thinking); a third function which states whether it suits us or not . . . (feeling); and a fourth function which indicates where it came from and where it is going (intuition)" [italics and parenthetical descriptors in the original].
- Multimodal therapy is a specific psychotherapeutic modality developed by A. Lazarus (1981), that attends, concurrently, to "excesses and deficits in behavior, affect, sensation, imagery, cognition and interpersonal relationships, as well as in biological and drug-related issues" (p. 9), known by the acronym of BASIC-ID. Among it many techniques it emphasizes imagery, visualization, and relaxation components.
- Neurolinguistic programming, is both a therapy and an instrument for improving communication skills in the workplace and the marketplace. It teaches careful attention to the nuances of face, voice, language, and gesture, to obtain a better understanding (some would claim "control") of the interpersonal interaction.
- Person-centered (Rogerian) therapy accentuates the autonomy and centrality of the client; the therapist's task is to acknowledge the client's here-and-now thoughts and

feelings, to reword them if required, to reflect them back, and, by confirming their legitimacy, encourage the client to accept them and experience them to the fullest.

- Psychodrama, usually conducted in a group setting, brings deeper awareness to the "protagonist" through the physical, here-and-now acting out of his/her thoughts, emotions, dreams, fantasies, and concepts; the protagonist may assume each role in the event (including those of inanimate objects and abstractions), and confront other participants as they assume the assigned roles from their own perspective. Frequently, a non-logical reality develops and the experience may prove to be cathartic.
- Alexander, Trager, & Feldenkrais are three eponymous physical therapies that re-educate body musculature that has become distorted or rigid under the stresses of physical and emotional living. All three gently awaken awareness of subtle physical sensations. Alexander technique, especially, engages the student's participation on a non-cognitive level in which trance states and catharsis may be experienced.
- Chiropractic medicine works with the body structure but the emphasis for most chiropractors is on effecting physical change, not on sensitizing the (usually passive) patient to be aware of fine body sensations.
- Dance & movement therapy encourages students to kinesthetically act out their thoughts and feelings in a state of trance, enhanced by imagery and fantasy. (Neither art nor music therapy appears to engage trance, image, fantasy, or kinesthetic awareness to the same extent as dance and movement therapy; neither shows a correlation with the BB style; art therapy, in fact, shows correlation with the EE style.)
- Massage, shiatsu and polarity therapies draw attention to fine nuances of bodily feelings, but do not expressly engage cognition or emotion. However, when students practice on each other, they learn to increase kinesthetic and other perceptions and thus to heighten their integrated awareness of the nuances of others.
- Meditation is highest among the body and spiritual modalities in its correlation with BB. As long ago as 1977, the American Psychiatric Association postulated that meditation may facilitate the psychotherapeutic process (Morgan, Shafii, Shapiro & Dean, 1977; see also Goleman, 1988; Goleman & Schwartz, 1976). Meditation

induces a trance state where cognitive process are by-passed through focused attention on internal physical sensations or on symbol and metaphor.

- Psychedelics induce a trance state in which familiar patterns of perception are distorted and new pathways may be generated.
- Sensory deprivation eliminates all perception of outside stimuli, and attention becomes limited to intra-body perceptions. Trances develop.
- Tai chi, an oriental discipline combining elements of martial arts and of dance, sets out to heighten kinesthetic awareness in a meditative trance and to instill grace and economy of movement. It has one of the highest correlations with BB. (Other stylized martial arts are more concerned with the gross dynamics of the moving body.)
- Yoga disciplines invoke trance states through structured interaction of acute spiritual and physical awareness in which breathing and bodily feelings are accentuated.

The salient components across these therapies include: an altered state of consciousness, focused attention to body sensations, attention to nuances of personal interaction, physical enactment of emotional states, autonomy and responsibility of the client, here-and-now re-experience of emotions, and abreaction or catharsis. Generally, the greater the magnitude of one or more of these components, the more the modality correlates with BB.

Modalities that correlate with EE

Three modalities correlate positively with EE. This is one case where choice of therapy may be dictated by personal style, in this case the high-EE's search for outside guidance, and the lack of trust in his/her autonomous feelings. These two therapies speak of cause and effect, of obvious and palpable reality; they would appeal to the EE-type person who needs to understand what is happening and know what is expected.

- Behavioral therapy seeks to effect change by restructuring rituals. Its techniques are logical and rational and lay little or no importance on feelings or emotion.

Behavioral therapy also makes use of a number of techniques that may be more related to BB. These include muscular relaxation, which focuses intensely on the here-and-now feelings throughout the entire musculature, and systematic desensitization, in which past events are relived in present time, replete with all their emotions and physical sensations, occasionally accompanied by abreaction.

- Cognitive and Rational Emotive therapies interpose reason to restructure emotional response and subsequent behaviors in the light of reality, without in any way denying the significance of feelings and emotion.
- Object Relations is an anomaly in that it correlates highly with EE *and* moderately with BB. It is a psychodynamic therapy that deals more with the patients' emotions and their interaction with the world outside, unlike Freudian analysis and Ego psychology, which are turned more toward the inside. [Sampling error may be one reason for the double correlation; the correlations for experience in Objects Relation therapy vary widely with the method of calculation.]

Modalities that correlate with LL

The LL style shows negative correlation with the majority of therapeutic modalities (presumably because high-LLs tend to avoid all therapeutic modalities). It shows positive correlation with only two modalities:

- Adlerian therapy, the most "logical" of the therapies developed by Freud's associates. It correlates negatively with EE and has no correlation with BB. This may be a sampling error.
- Biofeedback therapy specifically trains patients to attend to subtle changes in body feelings, but, paradoxically it correlates positively with LL and negatively with BB. (Biofeedback has not been shown to be an effective adjunct to *psycho*therapy, according to Rickles, Onoda, and Doyle, 1982.) It is possible that the specificity of the biofeedback training, limited to a specific muscle, digit, or visceral function, does not generalize to focused attention toward other parts of the organism. Another possibility is that the physical response is elicited unaccompanied by emotional or cognitive effort. It is

possible, also, that the paradoxical correlation with SIPOAS styles lies with the design of this study: high-BB subjects are more likely than low-BBs to effect physical changes without requiring assistance from biofeedback. High-BBs are also likely to require fewer sessions of biofeedback, and in their recollections, the biofeedback component of their wider therapeutic experience may have had relatively limited "personal significance"; this is borne out by the limited above-median range, 4 to 8.

Modalities that show no correlation with any style

A number of modalities show no correlation with any SIPOAS style. This can by no means be taken as an indicator that the modality fails to change style, and should be viewed as the mathematical interaction of the style-leads-to-choice trend with the modality-changes-style trend.

◆ Freudian psychoanalysis and Ego psychology: Some subjects may be dissuaded from these psychodynamic modalities by their seeming lack of "logic" (hence the mostly negative correlations with LL); some high-EE subjects may feel comfortable with the authoritative interpretations offered by the analyst and others feel frustrated by the apparent lack of direction (hence zero correlations with EE). Psychoanalysis focuses on thinking rather than sensation, the past rather than the here-and- now; nevertheless, the encouragement of the reappraisal of thoughts, behavior and motivation, and the explorations into the unconscious, may incidentally stimulate a greater awareness of *all* of the components of the feeling-emotion-physical association process--and thus eventually *enhance* the BB component of the analysand's personality.

The components of therapeutic modalities

The seven components that appear to be common to many therapies, especially to the those that correlate with the BB style, are: altered state of consciousness (e.g., trance state); focused attention to body sensations; attention to the nuances of personal interaction; physical enactment of emotional states; autonomy and responsibility of the client; here-and-now re-experience of emotions, and abreaction or catharsis. The qualities of each of the various modalities is summarized in Table C-1;

the estimated emphasis of each specific therapeutic components is indicated for each therapeutic modality by a number of stars, from zero to three.

Modalities and their correlations with SIPOAS styles

It is difficult to obtain a reliable and meaningful measure of an individual's experiences in psychotherapy. A time/frequency measure would not provide for the many confounding variables, from the therapist's training and experience and the client's personality and defenses, to the therapeutic transference and counter-transference, and untold situational factors. The subjective scale of personal relevance by which therapeutic experience was measured, while far from ideal, is possibly the best gauge under the circumstances, and must serve to calculate the correlations between SIPOAS style and therapeutic modalities.

Data on the personal relevance of therapeutic experiences in 32 modalities was tabulated for more than 800 participants. The number of those reporting experience in a specific modality ranged from 14 (Reichian, and Sensory Deprivation) to 137 (Gestalt) and 182 (Meditation). Obviously, with such a predominance of zero scores, the distribution was highly skewed. A number of rough estimations of the therapy/SIPOAS correlations, or "Indices of Therapeutic Effect," was developed in the hope that they would serve to triangulate toward acceptable approximations.

- **Method 1** was based on Pearson's product moment correlation of the SIPOAS scores for *all* 839 subjects, with the reported relevance of experience in each modality; no corrections were made for the predominance of zeroes in the skewed distributions. The resulting "correlation" was multiplied by 100 to give an integer, positive or negative.
- **Method 2** was also based on Pearson's product moment correlation. A fictitious "experimental situation" was assumed: to the *n* participants, who had reported relevant experience in that modality, a "control" group was added of between 10 and 25 fictitious participants, each of whom was allocated the mean SIPOAS scores of all the participants who had not reported experience in the modality. This introduces a

Table C-1:
Seven therapeutic components, and estimates of
their relative importance, in 32 therapeutic modalities

	altered state of consciousness	focused attention to body sensations	attention to nuances of personal interaction	physical enactment of emotional states	autonomy & responsibility of the client	here-and-now reexperience of emotions	abreaction and catharsis	total * ** *** ****
Bioenergetics	***	***		***	*	***	***	16
Primal	***	***		***		***	***	15
Reichian	***	***		**		**	***	13
Adlerian			*		**			3
Behavioral		*			*			2
Bio-feedback		**						2
Cognitive/Rat'nlEmtive			*		***	*		5
Encounter Groups	**	**	***	**	**	***	*	15
Existential			*		***	***		7
Family therapy			**		*	*		4
Gestalt	**	**	**	**	***	***	*	15
Hypnotherapy	***	*		*		*	*	7
Jungian	***		*		***	**		9
Multimodal		*	*		**	*		5
Neurolinguistic Program		*	***		*	*		6
Rogerian		*	*	*	***	***		9
Psychodrama	**	*	**	***	**	***	*	14
Psychodynamic	*					*	*	3
Transactional Analysis			*		**	**		5
Alexander/Trager etc	*	***			*	*		6
Chiropractic		*						1
Art therapy	*			*	*	*		4
Dance/Movement	**	**		***	*	**		10
Music therapy		*			*	*		3
Massage etc	**	***	**	*	*	**		11
Meditation	***	***			***	*	*	11
Psychedelics	***	**		*		**	***	11
Sensory deprivation	***	**				**	**	9
Tai chi etc.	***	***		**	**			10
Yoga	***	**		**	***			10

* moderately important component; ** important component; *** very important component

distortion in that there is zero variability in the "control group." Here again, the resulting "correlation" was multiplied by 100 to give an integer, positive or negative.

- The **"Difference Method"** avoids the inappropriateness of calculating the product-moment correlation for a skewed distribution, exploring instead SIPOAS *mean* scores. Mean SIPOAS scores were calculated for all participants whose relevant *experience* was at or above the median for that modality, and subtracting from the SIPOAS mean the mean score of those reporting no experience. This Index of therapeutic effect is reported as Table 10, in the Results section, which gives details also of the median cut.
- **Method 3** is a reworking of the Difference Method to make index scores easier to compare. Since the population mean for BB is approximately 10 points higher than for EE, and that of LL is 5 points higher, it is difficult to visually interpret the differences between means across the SIPOAS styles. Calculating the mean SIPOAS scores for all participants reporting experience at or above the median for that modality, and dividing those by the mean score of those reporting no experience is mathematically equivalent. By subtracting 1.00 from the quotient, the index score is made positive or negative according to its correlation with the style score; multiplying the resultant by 100 eliminates decimal points and makes for ready comparisons across styles.

All four calculations for the Indices of Therapeutic Effect are shown in Table C-2. Here the "Component Value," as tabulated in Table C-1, is listed for each modality. This is followed by the number of participants who reported experience in that particular modality, and the number of fictitious "control" subjects that were used for the calculations by Method 2. The N column under "Difference Scores" lists the number of participants who reported experience at or above the mean for that modality; the same participants figured also in the calculations by Method 3.

Intercorrelations were calculated (for the four different ways of calculating the Index of Therapeutic Effect):

- between the Component value and the Therapeutic Effect index BB scores for each modality, by each of the four methods of calculation (see Table C-3).

Table C-2: Therapeutic Components, and indices of Therapeutic Effect.
Relationship between SIPOAS scores and reported experience in each modality
(as determined by the difference-scores method and by 3 alternative methods)

				——Difference Scores——				—Method 1—			—Method 2—			—Method 3—		
	Com-ponent value	No of sub-jects	"con-trol" sub-jects	N	BB	EE	LL	BB	EE	LL	BB	EE	LL	BB	EE	LL
BioEnergetics	16	30	10	18	11.78	-3.17	-8.73	17	-5	-14	33	-9	-43	34	-12	-29
Primal Therapy	15	46	10	26	11.74	-1.68	-10.15	17	-3	-16	42	-10	-45	34	-7	-34
Reichian	13	14	10	7	15.40	-5.57	-9.36	10	-4	-7	47	-26	-45	44	-22	-31
Adlerian	3	28	10	14	-0.53	-4.69	4.96	2	-8	5	-7	-29	26	-1	-18	17
Behavioral	2	60	10	25	-2.02	3.62	-1.70	-3	9	-5	-11	20	-16	-6	14	-6
BioFeedback	2	32	10	15	-3.22	0.76	2.68	-3	2	2	-5	-4	10	-9	3	9
Cognitive/RET	5	134	25	73	-3.00	4.95	-2.28	-6	13	-5	-15	18	-5	-8	20	-8
Encounter Groups	15	128	25	63	6.52	-0.54	-5.87	19	-2	-18	23	-5	-26	21	-2	-21
Existential	7	69	16	29	8.17	-0.83	-6.66	15	-3	-13	26	-6	-24	24	-3	-22
Family Therapy	4	104	20	47	2.17	0.56	-2.39	2	1	-2	6	-1	-4	6	2	-8
Gestalt Therapy	15	137	25	64	11.59	-3.61	-8.00	28	-9	-22	31	-11	-31	35	-14	-26
Hypnotherapy	7	68	12	36	4.73	-2.98	-1.90	10	-7	-5	11	-11	-4	14	-12	-6
Jungian	9	109	20	51	10.28	-0.75	-9.14	23	-2	-23	27	-5	-27	30	-3	-30
Multimodal Therapy	5	70	15	37	4.21	2.09	-6.06	8	3	-10	15	8	-30	12	8	-20
Neurolinguistics	6	47	12	19	2.15	-2.65	0.40	10	-8	-3	7	-13	3	6	-10	1
Persn.Cntd/Rogerian	9	117	25	56	6.53	-0.73	-5.83	17	-3	-16	18	-3	-23	19	-3	-19
Psychodrama	14	49	10	24	7.60	0.92	-9.01	13	1	-15	27	-2	-33	22	4	-30
Freudian	3	75	10	38	-1.31	0.91	0.19	2	2	-4	-1	-1	1	-4	4	1
Object Relations	3	34	10	18	4.11	4.35	-8.12	6	4	-10	19	4	-29	12	17	-27
Ego Psychology	3	23	10	13	2.11	1.34	-3.50	4	3	-7	15	4	-26	6	5	-12
TransactionalAnalys	5	67	12	39	3.97	-3.64	-0.58	7	-6	-3	21	-26	-3	11	-14	-2
Alexander/Trager, etc	6	33	10	20	4.45	0.30	-4.66	8	0	-9	15	4	-21	13	1	-15
Chiropractic	1	90	20	42	2.86	0.72	-3.61	7	-2	-5	9	1	-11	8	3	-12
Art Therapy	4	62	15	32	1.14	1.87	-3.14	1	7	-8	4	9	-13	3	7	-10
Dance Therapy	10	71	15	32	7.70	-1.83	-5.82	16	-6	-12	22	-7	-22	22	-7	-19
Music Therapy	3	65	13	27	-0.79	0.75	-0.12	2	2	-4	5	0	-6	-2	3	0
Massage Therapy	11	135	25	67	6.54	0.02	-6.46	18	-1	-19	18	-5	-19	19	0	-21
Meditation	11	182	25	91	10.81	-3.89	-6.96	30	-12	-22	28	-14	-24	33	-15	-22
Psychedelics	11	37	10	19	6.01	-5.14	-0.33	9	-6	-4	32	-33	-11	17	-20	-1
Sensory Deprivation	9	14	10	7	2.81	-0.76	-1.98	5	-4	-2	12	-4	-12	8	-3	-7
TaiChi/martial arts	10	56	10	25	10.66	-3.84	-6.93	14	-7	-9	42	-15	-30	31	-15	-23
Yoga	10	89	16	42	7.93	-2.07	-6.09	17	-4	-15	23	-6	-25	23	-8	-20

Calculations of Indices of Therapeutic Effect:

Difference Method: Differences between the mean score for all participants reporting experience at or above the median for that modality, and the mean score of those reporting no experience.

Method 1: Pearson's correlation: therapy x SIPOAS scores for all 839 subjects. Decimal points have been dropped.

Method 2: Pearson's correlation: therapy x SIPOAS styles for subjects with actual experience with addition of pseudo "control group" with no experience. Decimal points have been dropped.

Method 3: Ratio of the mean scores for all participants reporting experience at or above the median for that modality, and the mean score of those reporting no experience. 1.00 has been subtracted from the ratios and the decimal points have been dropped.

- between the Therapeutic Effect index scores for each modality and the Therapeutic Effect index scores for the same modality, as obtained by each of the four methods of calculation (see Table C-4)

Inevitably, given the underlying mathematical identity, the Therapeutic Effect index scores as obtained by the Method of Differences and by Method 3, correlate with each other better than .999. Method 3, with its easier readability and more convenient comparison across styles, can legitimately supplant the Difference Method as the preferred method of presenting the data.

The high correlations among the four (really three) methods of deriving the Therapeutic Effect index scores, ranging between .72 and .95 (excluding the Difference Method/Method 3 identity), tends to support the premise that it is possible to develop an accurate measure of the correlations between therapeutic modalities and SIPOAS style (hopefully one with better mathematical rationale than any of the methods used here).

Therapeutic component and therapeutic effect

The high correlation between the Component Value and the Therapeutic Effect index scores, ranging between .76 and .83 according to the method of calculating the Therapeutic Effect index scores, tends to bear out the tentative estimate of the relative importance of each of the seven therapeutic components within each therapeutic modality (Table C-1).

It is an axiom that imprecise measures lead to low correlations. The corollary is not necessarily true: high correlations are no proof of accurate measures. Clearly, when measuring something so ill defined as therapeutic experience, and correlating it with something so subjective and unproven as SIPOAS scores, we would be surprised to find much of a correlation at all. Nevertheless, correlations were found, some on the order of .40, and they were found to be relatively quite consistent, whatever the specific statistical manipulation. An attempt to quantify thirty-two vaguely-defined therapies in terms of their emphasis on various even vaguer components, piles vagueness on vagueness and imprecision on imprecision. Finding *any* correlation between this

Table C-3:
Correlation between the Component value of each modality,
and the Therapeutic Effect index scores (for style BB) for the same modality
(as obtained by each of the four methods of calculation)

	Correlation
Difference Method	.83
Method 1	.76
Method 2	.77
Method 3	.83

Table C-4:
Inter-method correlations between Therapeutic Effect index scores
for each style, for four methods of calculation

BB scores	Method 1	Method 2	Method 3
Difference Method	.84	.95	1.00
Method 1		.74	.85
Method 2			.94

EE scores	Method 1	Method 2	Method 3
Difference Method	.90	.92	1.00
Method 1		.82	.90
Method 2			.92

LL scores	Method 1	Method 2	Method 3
Difference Method	.83	.94	1.00
Method 1		.72	.82
Method 2			.95

roughly composed measure and the highly unproven measure(s) of therapeutic effect, would be a surprise. The unexpectedly high correlation, on the order of .80, can be explained away in its entirety only by assuming that a series of sampling and methodological errors have combined in a cumulative manner, to transcends vagaries of modality, component and statistical method. The alternative, that the obtained correlations are correct, would be more incredible yet: it assumes that a series of sampling and statistical errors have combined in a manner that transcends vagaries of modality, component and statistical method, to miraculously cancel each other.

The truth probably lies in between; it is virtually certain that some degree of error has crept in, and that the true correlations are substantially lower than those presented here. Enough remains, after allowing for these errors, to suggest with high probability that the correlations between the three SIPOAS styles and various modalities of therapy can be measured with a degree of precision. Similarly, a high degree of probability exists that the correlations of the SIPOAS styles with specific components common across therapies can be determined with a degree of precision.

If that proves to be the case, it can be argued at the very least, that those whose responses to the SIPOAS place them in the high-BB range, tend to be experienced in therapies that emphasize trance state, attention to body sensations, the nuances of personal interaction, physical enactment of emotional states, autonomy and responsibility, here-and-now re-experience of emotions, and catharsis. What yet remains to be explored is the extent to which this correlation is the result of choice by those scoring high in the BB style, and the extent to which experience in these seven components enhances the acquisition of the BB style. The ultimate topic for exploration is the extent to which these seven modalities enhance mental health and emotional well-being; whether they are, indeed, the components of effective therapy.

Appendix D

Neuroticism and the EE style

The 0.59 correlation of EE with the Neuroticism domain of NEO PI-R (see Table 5), and similarly high correlations with four of the six Neuroticism facets, raise the possibility that EE may simply measure neuroticism. EE was conceptualized as measuring the personality style associated with the concerned attempt to understand one's feelings but many of the items in SIPOAS, especially those that tap self-consciousness, do appear to touch on aspects of neuroticism, or of mental health.

To resolve the question whether EE is indeed just another measure of Neuroticism, an attenuated 54-item scale was created (see Table D-1), eliminating from the thirty-one triplets of SIPOAS the thirteen that could be viewed as relating to self-consciousness or other aspects of neuroticism or emotional discomfort. This attenuated eighteen-triplet scale shows item-scale correlations that are marginally, and almost consistently, *higher* than those in the full SIPOAS (see Table B-1); it measures the three SIPOAS styles with apparent accuracy and with discrimination very close to that of the full SIPOAS.

The correlations between the attenuated SIPOAS and the facets of the Neuroticism domain of NEO PI-R are somewhat lower than those of the full SIPOAS, but generally remain highly significant (see Table D-2). The correlation between EE and the Neuroticism domain, .59 for the full SIPOAS, is only .37 for the attenuated SIPOAS. While EE overlaps with Neuroticism to some extent (inevitably so, given a correlation of .60) it appears to measure aspects not touched on by N, the specific EE quality of ruminative self-awareness.

Table D-1
Attenuated (54-item) SIPOAS questionnaire with item/scale correlations (*N*=997)

	BB	EE	LL
1. When I come up against a difficulty I find a solution by			
organizing my thoughts logically	-.42	.03	**.44**
seeking clues in the environment	-.09	**.23**	-.09
relaxing and seeking a response from inside myself	**.50**	-.22	-.37
2. It would be true to say that			
I tend to be aware of myself without making a deliberate effort	**.34**	-.38	-.05
I usually focus my attention on what I think and do	-.24	-.04	**.29**
I'm always trying to figure myself out	-.18	**.54**	-.24
4. When I feel frightened			
i am aware of the sensations in my body and use them to guide my actions	**.48**	-.22	-.37
I try to figure out why I feel that way	-.13	**.38**	-.15
I mobilize my resources to overcome my fears	-.34	-.13	**.49**
5. I would say of myself that			
paying attention to inner feelings distracts me when I'm under pressure	-.32	-.06	**.41**
I'm constantly aware of my feelings	**.49**	-.27	-.32
I'm constantly examining my motives	-.22	**.43**	-.11
8. The way I work through a problem is			
to explore my own motives and the attitudes of others	-.08	**.37**	-.21
to explore the logical alternatives	-.47	-12	**.62**
to be in touch with my body and my feelings	**.63**	-.21	-.55
11. When I feel blue			
I need to understand what makes me feel that way	-.20	**.52**	-.19
I allow the inner process to take me through it	**.55**	-.37	-.32
I use logic or willpower to get myself out of it	-.43	-.11	**.57**
12 I'm generally			
attentive to my inner feelings	**.52**	-.12	-.49
aware of how I think and why	-.33	-.19	**.53**
attentive to how others see me	-.23	**.38**	-.06
13 Loneliness			
is often puzzling, especially when I can't find a reason for it	-.19	**.33**	-.06
is a feeling I can avoid by proper thoughts and attitudes	-.34	-.12	**.48**
is a physical sensation that is not always related to the absence of friends or family	**.47**	-.11	-.43
14 . Envy is			
an inappropriate feeling that I try to overcome	-.29	-.16	**.46**
results when I am comparing myself with others	-01	**.29**	-.24
is an unpleasant feeling in my body that gets in the way of warmer thoughts	**.34**	-.15	-.25
15. An emotion			
is a set of (often irrational) thoughts	-.31	.03	**.36**
is accompanied by sensations in my body	**.54**	-.33	-.33
can often be puzzling and may be difficult to figure out	-.34	**.42**	.04

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Table D-1

Attenuated (54-item) SIPOAS questionnaire with item/scale correlations (*N*=997)

	BB	EE	LL
16. Scrutinizing myself is			
unnecessary when I allow myself to be aware of my inner feelings	**.57**	-.40	-.31
something I engage in frequently	-.30	**.55**	-.12
helpful in making rational decisions	-.33	-.14	**.49**
21. When I'm insulted in a situation where I cannot respond freely			
I ignore the physical feelings of discomfort and concentrate instead on responding effectively	.03	-.30	**.34**
I find it hard to put the insult out of mind until I know why it happened or what I should do about it	-.14	**.36**	-.10
unpleasant sensations in my body give rise to feelings of hurt, anger or impotence	.18	-.01	-.31
22. Changes in my mood			
can be quite subtle, yet I'm usually aware of them	**.41**	-.44	-.08
affect me inappropriately when I allow them to rule me	-.28	**.24**	.10
are uncomfortable when I can't figure out what's happening	-.26	**.34**	.01
24. An unusually brilliant sunset			
can set up sensations of tingling or throbbing in my body	**.40**	-.06	-.39
is especially pleasing when I know that others feel the same way	-.13	.08	-.01
is esthetically pleasing	-.27	.00	**.35**
25. When I find myself instinctively disliking a stranger			
I tend to be aware of the feelings the stranger has aroused in me	**.43**	-.19	-.33
I try to act on logic rather than emotions	-.33	-.08	**.44**
I look to clues in the stranger's behaviors, and interactions with others, to learn why I feel this way	-.16	.25	-.03
29. When I am face to face with a person who is very sad			
I keep cool and unemotional so that I can be objectively helpful to that person	-.26	-.11**	**.39**
I try to figure out how the other person would like me to react	-.19	**.28**	.01
I may find my eyes filling with tears or my throat developing a silent sob	**.45**	-.14	-.40
30. When I have strong feelings			
I feel uncomfortable until I understand what prompts those feelings	-.22	**.49**	-.14
I know how to keep them in check so that I can maintain an even keel	.37	-.12	**.51**
I allow myself to "go with the flow"	**.52**	-.31	-.33
31. I believe that			
behavior should be based on principles and logic	-.50	-.13	**.65**
I become better aware of myself when I examine myself from the viewpoint of an outside observer	-.24	**.38**	-.03
in order to be more aware of myself, I need to be in touch with my body	**.64**	-.17	-.58

correlation in boldface indicates the item was scored for the style in that column

Neuroticism and SIPOAS: high and low scorers

The sample of 106 participants who had responded also to the validating Neuroticism domain of NEO PI-R (Costa & McCrae, 1992) showed a mean score of 70.96 on Neuroticism (*SD*=22.69), that was half a *SD* lower than the combined mean for adult Men and Women (79.1, *SD*=21.2) given by Costa & McCrae (1992). This reflects, in part, the skewness of this sample whose mean BB score is approximately 5 points higher than that of the whole population (3 points lower on EE, and 2 points lower on LL), not surprising, given the fact that over half of this sample had been recruited from the AHP mailing list (see Table D-3 and Fig. D-1; see also Table 4). Predictably, AHP subjects scored significantly higher (1.0 *SD*) on BB and school psychologists scored higher on EE and LL. With this pattern of scores, the slightly higher Neuroticism score by school psychologists was to be expected.

A break-down of the Neuroticism scores into percentile ranges (see Table D-4 and Fig. D-2) shows EE means to have a near-linear relationship with Neuroticism scores (appropriately, since they correlate so highly). BB means *rise* from the lowest Neuroticism grouping to the next, then fall steadily with increasing Neuroticism. LL is highest when Neuroticism is lowest (offering the not entirely credible suggestion that high-LL correlates with the absence of neuroticism), falls rapidly at the next level of N, then rises again to hold steady at around the mean for LL.

A parallel breakdown of Neuroticism mean scores by SIPOAS centile groupings (Table D-5 and Fig. D-3), shows the Neuroticism score rising with EE, gradually at first and then more rapidly. The Neuroticism score falls as BB increases (with a slight surge in the 81-100th centile group). Neuroticism scores by LL centiles follow a switch-back pattern, rising with LL then falling, then rising again. The overall zero correlation of LL with Neuroticism (Table D-2) is clearly more complicated than it seems. The apparent discrepancies can be explained by the tri-polar nature of SIPOAS. Very low LL subjects do not axiomatically score high on BB; they are equally likely to score high on EE. Since the mean BB *raw* score is approximately 9 points higher than the mean EE *raw*

Table D-2:
Correlation of Neuroticism facets (NEO PI-R) with SIPOAS,
and with "54-item SIPOAS" (106 subjects)

	Attenuated (54-item) SIPOAS			Full (93-item) SIPOAS		
NEO PI-R factors	BB	EE	LL	BB	EE	LL
N1 Anxiety	-.32***	.38***	.11	-.36***	.55***	.02
N2 Angry Hostility	-.21*	.16	.13	-.26**	.29**	.10
N3 Depression	-.22*	.31**	.02	-.29**	.51***	-.04
N4 Self-Consciousness	-.23*	.34***	.00	-.32***	.58***	-.07
N5 Impulsiveness	.01	.08	-0.11	-.01	.21*	-.15
N6 Vulnerability	-.24*	.39***	-.01	-.28**	.52***	-.06
Neuroticism Domain	-.27**	.37***	.03	-.32**	.56***	-.03

Table D-3:
Comparison of mean SIPOAS and Neuroticism scores,
for AHP, School Psychologists, and full population

	N	BB	*SD*	EE	*SD*	LL	*SD*	Neuro-ticism	*SD*
AHP	56	44.96	12.3	21.02	7.7	24.41	9.7	66.3	18.9
School Psychologists	35	32.63	11.5	25.43	7.9	32.71	11.2	73.3	23.0
Full population	997	34.69	12.86	25.87	10.64	30.12	11.81	-	-

Table D-4:
Mean SIPOAS scores, for low to high scorers on Neuroticism domain (NEO PI-R)

		--BB style--		--EE style--		--LL style--	
Neuroticism low to high	*N*	Mean	SD	Mean	SD	Mean	SD
1-20 %ile	23	42.57	12.87	17.39	6.43	31.13	12.72
21-40 %ile	19	46.89	14.74	19.58	7.14	24.26	12.18
41-60 %ile	22	40.77	11.84	22.59	6.75	27.50	9.45
61-80 %ile	21	35.57	12.21	25.81	6.23	28.62	10.18
81-100 %ile	21	31.95	13.5	30.19	10.36	27.95	12.00
Full N scale	106	39.48	13.78	23.07	8.68	28.02	11.36

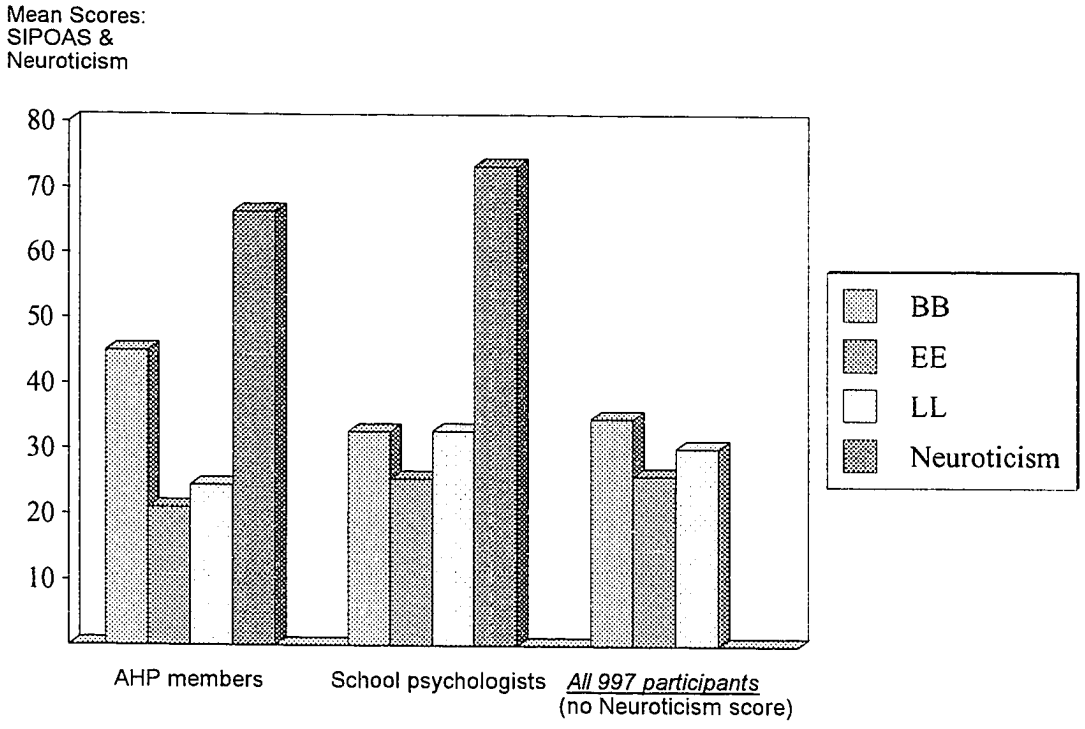

Fig. D-1: Mean SIPOAS & Neuroticism scores for AHP and school psychologists

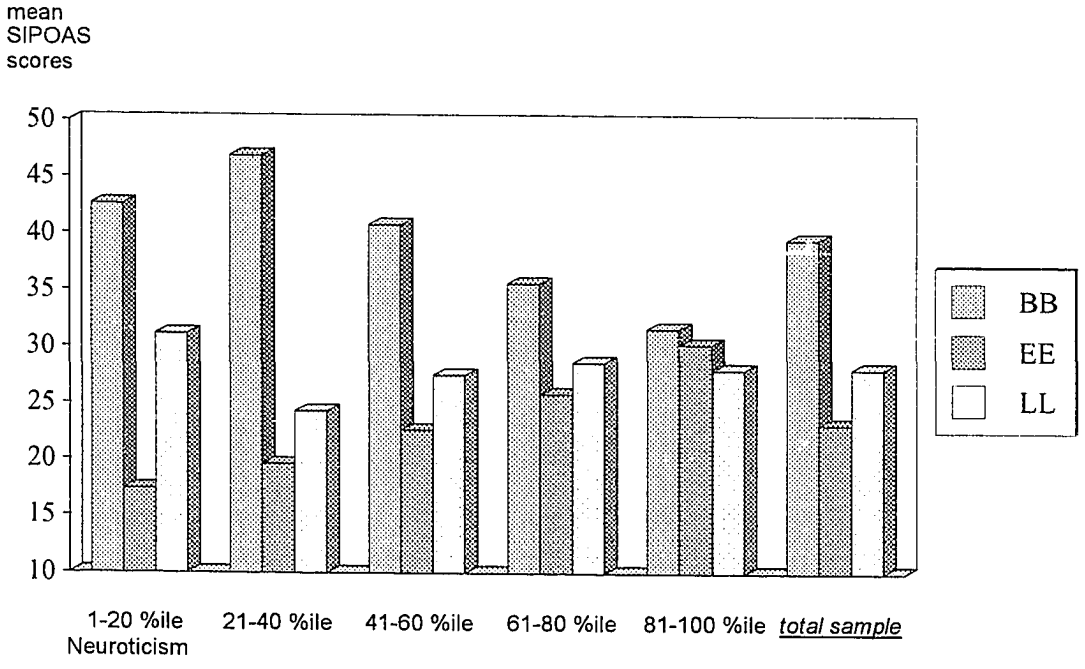

Fig. D-2: Mean SIPOAS scores as a function of Neuroticism centile scores

Table D-5: Mean NEO PI-R Neuroticism scores by SIPOAS centile scores

Neuroticism and BB scores

BB	Mean N score	*SD*
1-20 %ile	82.71	28.37
21-40 %ile	78.10	18.64
41-60 %ile	66.62	18.30
61-80 %ile	62.95	19.51
81-100 %ile	64.43	21.88
Total sample	70.96	22.69
NEO PI-R norm	79.1	21.2

Neuroticism and EE scores

EE	Mean N score	*SD*
1-20 %ile	56.76	20.32
21-40 %ile	62.05	21.01
41-60 %ile	66.48	17.28
61-80 %ile	79.67	12.94
81-100 %ile	89.86	24.20
Total sample	70.96	22.69
NEO PI-R norm	79.1	21.2

Neuroticism and LL scores

LL, centiles	Mean N score	*SD*
1-20 %ile	70.86	20.78
21-40 %ile	75.62	24.47
41-60 %ile	71.33	24.08
61-80 %ile	63.43	19.87
81-100 %ile	73.57	24.12
Total sample	70.96	22.69
NEO PI-R norm	79.1	21.2

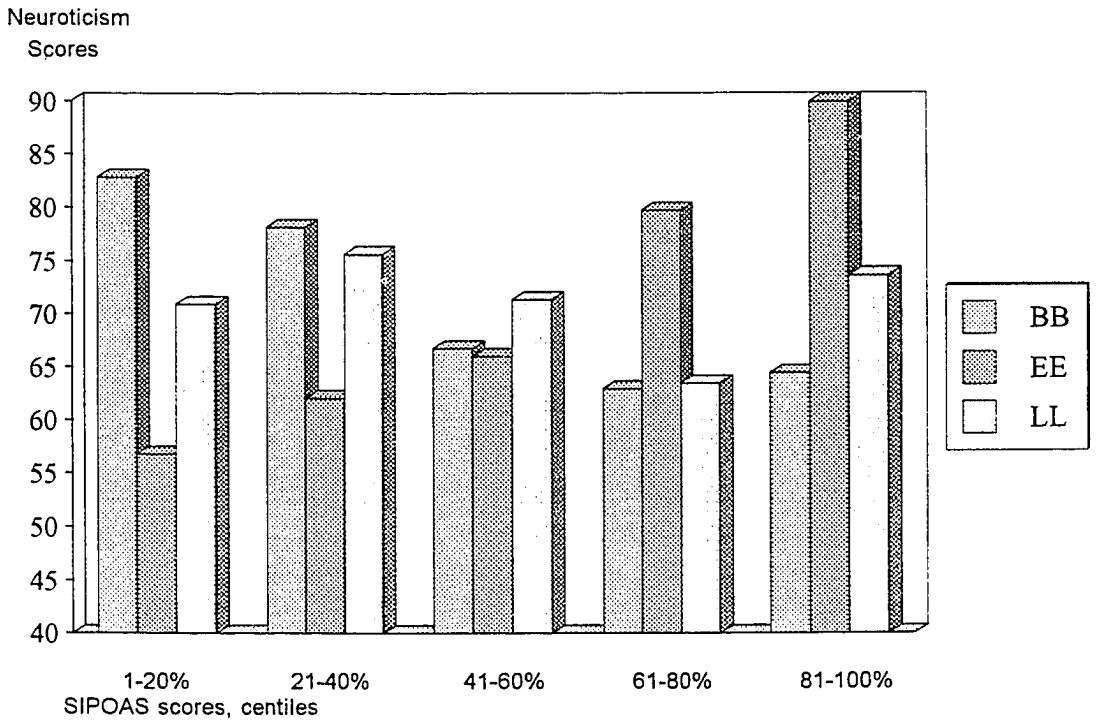

Figure D-3: Mean Neuroticism (NEO PI-R) scores
as a function of SIPOAS centile scores

score, a given *raw* scores on BB would actually signify a much higher *centile* score than an identical EE *raw* score. The very low-LL person is thus more likely to be a very high-EE than a very high-BB. (A very low-BB person is also more likely to be high-EE but not quite to the same extent).

To this must be added the tendency (adumbrated elsewhere in connection with the Toronto Alexithymia Scale, TAS-20) that the high-scoring LLs, placing little value on feelings and emotions, would tend to reject the thoughts, feelings and qualities associated with Neuroticism--and show a low Neuroticism score. Similarly, high-BB's (as also adumbrated in connection with TAS-20) would be much *more* aware of occasional emotional stresses, especially when sensitized by having just responded to the SIPOAS questionnaire, and thus would tend to rate themselves higher on Neuroticism that they would rate objectively.

The apparent zero correlation of LL with Neuroticism, is seen to be complex; high-LL subjects can probably be divided among those who use logic to control uncomfortable emotional problems, those who use logic to deny very real emotional problems, and those who successfully use logic skills to avoid and defuse emotional problems.

It is clearly important when assessing subjects by SIPOAS style to focus more attention to the styles in which the scores are high, than to those in which the scores are low, though both highs and lows should be kept in consideration.

References

American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (1985). *Standards for educational and psychological testing.* Washington, DC: American Psychological Association.

Apfel, R. J., & Sifneos, P. E. (1979) Alexithymia: concept and measurement. *Psychotherapy & Psychosomatics. 32,* 180-190.

Aristotle. (1941). Ethica Nicomachea. In R. McKeon (Ed.), *The basic works of Aristoteles.* New York: Random House.

Arnold, M. B. (1970). Brain function in emotion: A phenomenological analysis. In P. Black (Ed.), *Physiological correlates of emotion.* New York: Academic Press.

Averill, J. R. (1984b). Acqusition of emotions. In C. Z. Malatesta & C. E. Izard (Eds.), *Emotion in Adult Development.* Beverly Hills CA: Sage.

Averill, J. R. (1984a) Emotions and their functions. *Cahiers de Psychologie Cognitive, 4,* 40-43.

Bagby, R. M., Parker, J. D. A., & Taylor, G. J. (1994). The twenty-item Toronto Alexithymia scale-I: Item selection and cross-validation of the factor structure. *Journal of Psychosomatic Research, 38,* 23-32.

Bagby, R. M., Taylor, G. J., & Parker, J. D. A. (1994). The twenty-item Toronto Alexithymia scale-II: Convergent, discriminant and concurrent validity. *Journal of Psychosomatic Research, 38,* 33-40.

Bagby, R. M., Taylor, G. J. & Ryan, D. P. (1986). Toronto Alexithymia scale: relationship with personality and psychopathology measures. *Psychotherapy & Psychosomatics, 45,* 207-215.

Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979) *Cognitive therapy of depression.* New York: Guilford Press.

Bem, D. J. (1972). Self-perception theory. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology, Vol. 6.* New York: Academic Press.

Bernet, M. (1995). *Feeling good, feeling well; feeling more, feeling better.* (Book, in preparation.)

Bernet, M. (1983). *"X,"* (unpublished case history and treatment report). New York: Behavior Therapy Institute/Creedmoor Psychiatric Center/Long Island University.

Bernet, M. (1985). *Perception of Affect profile (POA),* (unpublished research report). New York: Doctoral program in psychology, City University of New York.

Brady, J. V. (1967). Emotion and the sensitivity of psychoendocrine systems. In Glass, D. C. (Ed.), *Neurophysiology and emotion.* New York: Rockefeller University Press/Russell Sage.

Brazelton, T. B. (1983). Precursors for the development of emotions in early infancy. In R. Plutchik & H. Kellerman (Eds.), *Emotion: Theory, research, and experience: Vol. 2. Emotions in early development.* New York: Academic Press.

Briggs, S.R. (1989) The optimal level of measurement for personality constructs. In D.M. Buss & N. Cantor (Eds.), *Personality psychology: Recent trends and emerging directions* (pp. 246-260). New York: Springer.

Buck, R. (1983). Emotional development and emotional education. In R. Plutchik & H. Kellerman (Eds.), *Emotion:Theory, research, and experience: Vol 2, Emotions in Early Development.* New York: Academic Press.

Buck, R. (1984). *Communication of emotion.* New York: Guilford Press.

Budd, E. C., & Clopton, J. R. (1985). Meaning of the repression-sensitization scale: Defensive style or self-report of symptoms of psychopathology. *Journal of Clinical Psychology, 41,* 63-68.

Burton, A. (1968). *Modern humanistic psychotherapy.* San Francisco: Jossey-Bass.

Burton, A. (1970). *Encounter: the theory and practice of encounter groups.* San Francisco: Jossey-Bass.

Burton, A. (1972). *Twelve therapists.* San Francisco: Jossey-Bass.

Buss, A. H. (1980). Self-consciousness and social anxiety. San Francisco: Freeman.

Byrne, D. (1961). The repression-sensitization scale: rationale, reliability and validity. *Journal of Personality, 29,* 334-349.

Byrne, D., Barry, J., & Nelson, D. (1963). Relationship of the revised repression-sensitization scale to measures of self description. *Psychological Reports, 13,* 323-334.

Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, reprinted in Jackson, D.N. & Messick, S. (Eds), *Problems in human assessment,* (1978). Huntington NY: Robert E. Krieger.

Cannon, W. B. (1927). The James-Lange theory of emotion: a critical examination and an alternative theory. *American Journal of Psychology, 39*, 106-124.

Cannon, W. B. (1931). Again the James-Lange and the thalamic theories of emotion. *Psychological Review, 38*, 281-295.

Cantor, J. R., Zillman, D., & Bryant, J. (1975). Enhancement of experienced sexual arousal in response to erotic stimuli through misattribution of unrelated residual excitation. *Journal of Personality and Social Psychology, 32,* 69-75.

Carlson, R. W. (1979). Dimensionality of the repression-sensitization scale. *Journal of Clinical Psychology, 35,* 78-84.

Cartwright, J. R., & Lerner, B. (1963). Empathy, need to change, and improvement with psychotherapy. *Journal of Consulting Psychology, 27,* 138-144.

Cattell, R. B. (1952). The three basic factor analytic research designs--their interrelations and derivatives. *Psychological Bulletin.* In D. N. Jackson, & S. Messick (Eds) , *Problems in human assessment.* Huntington, NY: Krieger Publishing (reprinted edition, 1978) pp. 300-304.

Cattell, R.B., Cattell, A.K., & Cattell H.E. (1993). *Sixteen Personality Factor questionnaire, Fifth edition.* Champaign, IL: Institute for Personality & Ability Testing.

Christie, R. & Geis, F. L. (1970). *Studies in Machiavellianism.* New York: Academic Press 1970.

Christie, R., & Merton, R. K. (1958). Procedures for the sociological study of the values climate of medical schools. *Journal of Medical Education, 33,* 125-153.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences.* Hillsdale, NJ: Erlbaum.

Costa, P. T., & McCrae, R. R. (1980). Influence of extraversion and neuroticism on subjective well-being: Happy and unhappy people. *Journal of Personality and Social Psychology, 38 (4),* 668-678.

Costa, P. T. & McCrae, R. R. (1985). *The NEO Personality Inventory manual.* Odessa FL: Psychological Assessment Resources.

Costa, P. T., & McCrae, R. R. (1989). Personality continuity and the changes of adult life. In M. Storandt & G. R. VandenBos (Eds.) *The adult years: Continuity and change.* Washington, DC: American Psychological Association.

Costa, P. T., & McCrae, R. R. (1992). *NEO PI-R: Professional manual.* Odessa FL: Psychological Assessment Resources.

Costa, P. T., & McCrae, R. R. (1994). Set like plaster? Evidence for the stability of adult personality. In T. F. Heatherton & J. L. Weinberger (Eds.) *Can personality change?* Washington, DC: American Psychological Association.

Cotton, J. L. (1981). A review of research on Schachter's theory of emotion and the misattribution of arousal. *European Journal of Social Psychology, 11,* 365-397.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16,* 297-334.

Darwin, C. (1872). *The expression of the emotions in man and animals.* London: John Murray.

Davidson, G. C. & Neale, J. M. (1978). *Abnormal psychology: An experimental clinical approach.* New York: Wiley.

De Rivera, J. (1984). Development and the full range of emotional experience. In C. Z. Malatesta & C. E. Izard (Eds.), *Emotion in adult development.* Beverly Hills, CA: Sage.

De Rivera, J. (1989) Choice of emotion and ideal development. In L. Cirillo, B. Kaplan, & S. Wapner (Eds.), *Emotions in ideal human development.* Hillsdale, NJ: Erlbaum.

Dunn, J., Bretherton, I., & Munn, P. (1987). Conversations about feeling states between mothers and their young children. *Developmental Psychology, 23,* 132-139.

Duval, S., & Wicklund, R. A. (1972). *A theory of objective self-awareness.* New York: Academic Press.

Ekman, P. (1982). *Emotion in the human face.* New York: Cambridge University Press.

Ekman, P., Friesen, W. V., & Ellsworth, P. (1972). *Emotion in the human face: Guidelines for research and an Integration of findings.* New York: Pergamon.

Ekman, P., Levenson, R. W., & Friesen, W. V. (1983). Autonomic nervous system activity distinguishes among emotions. *Science, 221,* 1208-1210

Elias, N. (1977) *The civilizing process.* New York: Urizen.

Ellsworth, P.C. (1994). William James and emotion: Is a century of fame worth a century of misunderstanding? *Psychological Review, 101,* 222-229.

Erdman, G., & Janke, W. (1978). Interaction between physiological and cognitive determinants of emotion: Experimental studies on Schachter's theory of emotion. *Biological Psychology, 6,* 61-74.

Erikson, E. H. (1963). *Childhood and society.* New York: Norton.

Erikson, E. H. (1970). *Identity: Youth and crisis.* New York: Norton.

Eysenck, H. J. (1953). The logical basis of factor analysis. *American Psychologist.* In D. N. Jackson, & S. Messick (Eds) , *Problems in human assessment.* Huntington, NY: Krieger Publishing (reprinted edition, 1978) pp. 288-299.

Fenigstein, A. (1979). Self-consciousness, self-attention and social interaction. *Journal of Personality and Social Psychology, 37,* 75-86.

Fenigstein, A. (1987). On the nature of public and private self-consciousness. *Journal of Personality, 55,* 543-554.

Fenigstein, A., Scheier, M. F., & Buss, A., H. (1975). Public and private self-consciousness: Assessment and theory. *Journal of Consulting and Clinical Psychology, 43,* 522-527.

Filak, J., & Abeles, N. (1984). Psychotherapy congruence on client symptoms and therapy outcome. *Professional Psychology: Research & Practice,15,* 846-855.

Fisch, R. Z. (1988). Alexithymia, masked depression and loss in a Holocaust survivor. *British Journal of Psychiatry, 151,* 708-710.

Fonberg, E. (1986). Amygdala, emotions, motivation, and depressive states. in R. Plutchik & H. Kellerman (Eds.), *Emotion: Theory, research, and experience: Vol 3, Biological foundations of emotion.* New York: Academic Press.

Forte, M., Brown, D., & Dysart, M. (1984). Through the looking glass: phenomenological reports of advanced meditators at visual threshold. *Imagination, Cognition & Personality, 4,* 323-338.

Freud, S. Inhibitions, symptoms and anxiety. In J. Strachey (Ed.), *The standard edition of the complete psychological works of Sigmund Freud. Vol 20.* London: Hogarth. (Original published 1936.)

Freund, K. (1980). Therapeutic sex drive reduction. *Acta Psychiatrica Scandinavia, Supplement 287,* 5-37.

Friis, S., Skatteboe, U-B., H., Magnhild K. & Vaglum, P. (1989). Body awareness group therapy for patients with personality disorders: Evaluation of the Body Awareness Rating Scale. *Psychotherapy & Psychosomatics, 51,* 18-24.

Frijda, N. H. (1986). *The emotions.* New York: Cambridge University Press.

Furst, S. S. (1967). Psychich trauma: A survey. In S. S. Furst (Ed.), *Psychic trauma.* New York: Basic Books.

Gaylin, W. (1979). *Feelings: Our vital signs.* New York: Harper & Row.

Gellhorn, E. (1964). Motion and emotion: The role of proprioception in the physiology and pathology of the emotions. *Psychological Review, 71,* 457-472.

Gellhorn, E., & Loofbourrow, G. N. (1963). *Emotions and emotional disorders.* New York: Hoeber/Harper & Row.

Gendlin, E. T. (1881). *Focusing (2nd edition: new, revised instructions).* New York: Bernard Geiss/Bantam.

Goertzel, V., May, P. R. A., Salkin, J., & Schoop, T. (1965). Body-ego technique: an approach to the schizophrenic patient. *Journal of Nervous & Mental Disease, 141,* 53-60

Goleman, D. & Schwartz, G. E. (1976). Meditation as an intervention in stress reactivity. *Journal of Clinical and Consulting Psychology, 44,* 456-466

Goleman, D. (1988). The Meditative Mind, Los Angeles: Tarcher.

Greenacre, P. (1967). The influence of infantile trauma on genetic patterns. In S. S. Furst (Ed.), *Psychic trauma.* New York: Basic Books.

Greenberg, L. S., & Safran, J. D. (1984a). Integrating affect and cognition: A perspective on the process of therapeutic change. *Cognitive Therapy and Research, 8,* 559-578.

Greenberg, L. S., & Safran, J. D. (1984b). Hot cognition--emotion coming in from the cold. A reply to Rachman and Mahoney. *Cognitive Therapy and Research, 8,* 591-598.

Greenberg, L. S., & Safran, J. D. (1987). *Emotion in psychotherapy: Affect and cognition in the process of change.* New York: Guilford.

Greenberg, L. S., & Safran, J., D. (1989). Emotion in psychotherapy. *American Psychologst, 44,* 19-29.

Greenberg, L. S., & Safran, J. D. (1990). Emotional change processes in psychotherapy. In R. Plutchik & H. Kellerman (Eds.), *Emotion: Theory, research, and experience. Vol. 5, Emotion, psychopathology and psychotherapy.* New York: Academic Press.

Greenberg, M. S., & Beck, A. T. (1990). Cognitive approaches to psychotherapy. In R. Plutchik & H. Kellerman (Eds.), *Emotion: Theory, research, and experience. Vol. 5, Emotion, psychopathology and psychotherapy.* New York: Academic Press.

Greene, Y. N., & Hiebert, B. (1988). A comparison of mindfulness meditation and cognitive self-observation. *Canadian Journal of Counselling, 22,* 25-34.

Greenwald, M. K., Cook, E. W., & Lang, P. J. (1989). Affective judgment and psychophysiological response: Dimensional covariation in the evaluation of pictorial stimuli. *Journal of Psychophysiology, 3,* 51-64.

Guilford, J. P. (1952). When not to factor analyze. *Psychological Bulletin.* In D. N. Jackson, & S. Messick (Eds) , *Problems in human assessment.* Huntington, NY: Krieger Publishing (reprinted edition, 1978), pp. 309-317.

Halberstadt, A. G. (1984), Family expression of emotion. In C. Z. Malatesta & C. E. Izard (Eds.), *Emotion in adult development.* Beverly Hills, CA: Sage.

Haviland, J. M., & Lelwica, M. (1987). The induced affect response: 10-week-old infants' responses to three emotion expressions. *Developmental Psychology, 23,* 97-104.

Haviland, M. G., Shaw, D. G., Cummings, M. A., & MacMurray, J. P. (1988). Alexithymia: subscales and relationship to depression. *Psychotherapy & Psychosomatics, 50,* 164-170.

Heath, R. G. (1982). Panskepp's psychobiological theory of emotions: Some substantiation. *Behavioral and Brain Sciences, 3,* 432 ff.

Hedderson, J. (1991). *SPSS/PC+ made simple.* Belmont, CA: Wadsworth Publishing.

Helson, R., & Stewart, A. (1994). Personality change in adulthood. In T. F. Heatherton & J. L. Weinberger (Eds.) *Can personality change?* Washington, DC: American Psychological Association.

Hodgins, H. S., & Koestner, R. (1993). The origins of nonverbal sensitivity. *Personality & Social Psychology Bulletin, 19,* 466-473.

Hoffman, M. L. (1978). Toward a theory of empathic arousal and development. In M. Lewis & L. Rosenblum (Eds.), The development of affect. New York: Plenum.

Howard, K. I., Kopta, S. M., & Orlinsky, D. E. (1986). The dose-effect relationship in psychotherapy. *American Psychologist. [Special issue: Psychotherapy research], 41,* 159-164.

Ikemi, A., Tomita, S., Kuroda, M., Hayashida, Y., & Ikemi, Y. (1986). Self-regulation method: psychological, physiological and clinical considerations. *Psychotherapy and Psychosomatics, 46,*184-195.

Ingram, R. E. (1991). Self-focused attention in clinical disorders. *Psychological Bulletin, 107,* 156-161.

Ingram, R. E., Cruet, D., Johnson, B. R., & Wisnicki, K. S. (1988). Self-focused attention, gender, gender role, and vulnerability to negative affect. *Journal of Personality and Social Psychology, 55,* 967-978.

Ingram, R. E., Lumry, A. E., Cruet, D., & Sieber, W. (1987). Attentional processes in depressive disorders. *Cognitive Therapy and Research, 11,* 351-360.

Ingram, R. E., & Smith, T. W. (1984). Depression and internal versus external focus of attentio. *Cognitive Therapy and Research, 8* (2), 139-151.

Iwata, J., & LeDoux, J. E. (1988). Dissociation of associative and nonassociative concomitants of classical fear conditioning in the freely behaving rat. *Behavioral Neuroscience,102,* 66-76

Iwata, J., LeDoux, J. E. & Reis, D. J. (1986). Destruction of neurons in the lateral hypothalamus disrupts the classical conditioning of autonomic but not behavioral emotional responses in the rat. *Brain Research, 368,* 161-166.

Izard, C. E. (1971). *The face of emotion.* New York: Appleton-Century-Crofts.

Izard, C. E. (1977). *Human Emotions.* New York: Plenum.

James, W. (1884). What is an emotion? *Mind, 9,* 188-205.

James, W. (1890). *The principles of psychology.* New York: Holt.

James, W. (1994). The physical basis of emotion. *Psychological Review, 101* (2) 205-210. [Originally published: 1894. *Psychological Review, 1,* 516-529.]

Janov, A. *Primal scream: The cure for neurosis.* (1970). New York: Putnam.

Janov, A. *The Primal revolution: Toward a real world.* (1972). New York: Simon & Schuster.

Janov, A., & Holden, E. M. Primal man: The new consciousness. (1975). New York: Crowell.

Julkunen, J., Hurri, H., & Kanainen, J. (1989). Psychological factors in the treatment of low back pain: Follow-up study of a back school intervention. *Psychotherapy and Psychosomatics, 50,* 173-181.

Jung, C. G. (1958). Psychology and religion. In H. Read, M. Fordham, & G. Adler (Eds.), *The collected works of C. G. Jung, Vol. 11.* New York: Pantheon.

Kabat-Zinn, J. (1984). An outpatient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation: Theoretical considerations and preliminary resuts. *ReVISION, 7,* 71-72.

Kabat-Zinn, J. (1990). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain and illness.* New York: Delacorte.

Kinder, B. N., & Curtiss, G. (1990). Alexithymia among empirically derived subgroups of chronic back pain patients. *Journal of Personality Assessment, 54,* 351-362.

Kleiger, J. H., & Kinsman, R. A. (1980). The development of an MMPI Alexythimia scale. *Psychotherapy & Psychosomatics, 34* (4), 17-24.

Kleinginna, P. R. Jr., & Kleinginna, A. M. (1981). A categorised list of emotional definitions, with suggestions for a concensual definition. *Motivation and Emotion, 5,* 345-379.

Klinnert, M.D., Campos, J.J., Sorce, J. F., Emde, R. N., & Svejda, M. (1983). Emotions as behavior regulators: Social referencing in infancy. In R. Plutchik & H. Kellerman (Eds.), *Emotion: Theory, Research, and Experience. Vol 2, Emotions in Early Development.* New York: Academic Press.

Kraemer, H. & Thiemann, S. (1987). *How many subjects? Statistical power analysis and research.* Newbury Park, CA: Sage.

Krystal, J. H., Giller, E. L., & Cicchetti, D. V. (1986). Assessment of Alexithymia in posttraumatic stress disorder and somatic illness: Introduction of a reliable measure. *Psychosomatic Medicine, 48,* 84-94.

Krystal, H. (1979). Alexithymia and psychotherapy. *American Journal of Psychotherapy, 33,* 17-31.

Kurtz, R. (1984). Introduction to the process. *Hakomi Forum.* (Summmer), 6-12.

Kutz, I. (1985). Meditation as an adjunct to psychotherapy: an outcome study. *Psychotherapy & Psychosomatics, 43* (4), 209-218.

Kutz, I., Borysenko, J. Z. & Benson, H. (1985). Meditation and psychotherapy: A rationale for the integration of dynamic psychotherapy, the relaxation response, and mindfulness meditation. *American Journal of Psychiatry, 142,* 1-8.

Laird, J. D. (1984). The real role of facial response in the experienc of emotion: A reply to Tourangeau and Ellsworth and others. *Journal of Personality and Social Psychology, 47,* 909-917.

Lane, R. D., Quinlan, D. M., Schwartz, G. E., Walker, P. A. & Zeitlin, S. B. (1990). The levels of emotional awareness scale: a cognitive-developmental measure of emotion. *Journal of Personality Assessment,* 55, 124-134.

Lane, R. D. & Schwartz, G. E. (1987). Levels of emotional awareness: A cognitive-developmental theory and its application to psychopathology. *American Journal of Psychiatry, 144* (2), 133-143.

Lang, P. J. (1971). The application of psychophysiological methods to the study of psychotherapy and behavior change. In A. E. Bergin & S. L. Garfield (Eds.), *Handbook of Psychotherapy and Behavior Change.* New York: Wiley, 75-125.

Lang, P. J., & Cuthbert, B. N. (1984). Affective information processing and the assessment of anxiety. *Journal of Behavioral Assessment, 6* (4), 369-395.

Lang. P. J. (1994). The varieties of emotional experience: A meditation on James-Lange theory. *Psychological Review, 101* (2), 211-221.

Lazarus, A. A. (1981). *The practice of Multimodal therapy.* New York: McGraw-Hill.

Lazarus, A. A. (Ed.) (1985). Casebook of Multimodal therapy. New York: Guilford Press.

Lazarus, R. S. (1984). On the primacy of cognition. *American Psychologist, 39* (2), 124-129.

Lazarus, R. S. (1991). *Emotion and adaptation.* New York: Oxford University Press.

Lazarus, R. S., Kanner, A. D., & Folkman, S. (1980). Emotions: A cognitive-phenomenological analysis. In R. Plutchik & H. Kellerman (Eds.), *Emotion: Theory, research, and experience. Vol 1, Theories of emotion.* New York: Academic Press.

Lazarus, A. A. (1986). Multimodal therapy. In J. C. Norcross (Ed.), Handbook of eclectic psychotherapy. New York: Brunner/Mazel.

LeDoux, J. E. (1986). Sensory systems and emotion: A model of affective processing. *Integrative Psychiatry, 4* (4), 237-243.

Lefcourt, H. M. (1966). Repression-sensitization: A measure of the evaluation of emotional expression. *Journal of Consulting Psychology, 30*, 444-449.

Lesser, I. M. (1985). Current concepts in psychiatry: Alexithymia. *New England Journal of Medicine, 312* (11), 690-692.

Lewin, K. A. (1935). *A dynamic theory of personality* (K. E. Zener & D. K. Adams, Trans.). New York: McGraw-Hill.

Liddell, H. (1962). The biology of the "prejudiced" mind. In J. M. Scher (Ed.), *Theories of the mind.* New York: Free Press of Glencoe.

Lindsley, D. B. (1970). The role of nonspecific reticulo-thalamo-cortical systems in emotion. In P. Black (Ed.), *Physiological correlates of emotion.* New York: Academic Press.

Livesey, Peter J. (1986). *Learning and emotion: A bilogical synthesis. Vol 1: Evolutionary processes.* Hillsdale NJ: Erlbaum.

Lowen, A. (1958). *Physical dynamics of character structure.* New York: Grune & Stratton.

Lowen, A. (1967). *The Betrayal of the Body.* New York: Macmillan.

Lowen, A. (1975). *Bioenergetics.* New York: Coward, McCann & Geoghegan.

Luborsky, L., Chandler, M., Auerbach, A., Cohen, J., & Bachrach H. (1971). Factors influencing the outcome of psychotherapy. *Psychological Bulletin, 75,* 145-185.

Malamuth, N. M., Check, J. V. P., & Briere, J. (1986). Sexual arousal in response to aggression: Ideological, aggressive and sexual correlates. *Journal of Personality & Social Psychology, 50* (2), 330-340.

Mandler, G., Mandler, J. M., & Uviller, E T. (1958). Autonomic feedback: The perception of autonomic activity. *Journal of Abnormal Social Psychology, 58,* 367-373.

Mandler, G. (1984). *Mind and body: Psychology of emotion and stress.* New York: Norton.

Marshall, G D., & Zimbardo, P. G. (1979). Affective consequences of inadequately explained physiological arousal. *Journal of Personality and Social Psychology, 37,* 970-988.

Martin, J. B. & Pihl, R. O. (1986). Influence of alexithymic characteristics on physiological and subjective stress responses in normal individuals. *Psychotherapy & Psychosomatics, 45,* 66-77.

Martin, J. B., Pihl, R. O., Young, S. N., Ervin, F. R., & Tourjman S. V. (1986). Prediction of alexithymic characteristics from physiological, personality and subjective measures. *Psychotherapy & Psychosomatics, 45,* 133-140.

Maslach, C. (1979). Negative emotional biasing of unexplained arousal. *Journal of Personality and Social Psychology, 37,* 953-969.

Maslach, C. (1979). The emotional consequences of arousal without reason. In C.E. Izard (Ed.), *Emotions in personality and psychopathology.* New York: Plenum, 565-590.

Maslow, A. H. (1968). Toward a psychology of being (2nd ed.). New York: Van Nostrand Reinhold.

McGuire, M. T., & Troisi, A. (1990). Anger: an evolutionary view. In R. Plutchik & H. Kellerman (Eds.), *Emotion: Theory, research, and experience. Vol 4, Emotion, psychopathology and psychotherapy.* New York: Academic Press.

Morgan, J., Shafii, M., Shapiro, A.D., & Dean, S. R. (1977). Position statement on meditation. *American Journal of Psychiatry, 134,* 720.

Morrison, J. K., & Header, R. (1984-85). Feeling-expression ratings by psychotherapist as predictive of imagery therapy outcome: A pilot study. *Imagination Cognition and Personality, 4* (2), 219-223.

Murphy, L. B. (1983). Issues in the development of emotion in infancy. In R. Plutchik & H. Kellerman (Eds.), *Emotion: Theory, research, and experience. Vol 2, Emotions in early development.* New York: Academic Press.

Myers, I. B. (1962). *The Myers-Briggs Type Indicator manual.* Princeton: Educational Testing Service.

Naranjo, C., & Ornstein, R. E. (1971). *On the Psychology of Meditation.* New York: Viking.

Orr, S. P., & Lanzetta, J. T. (1980). Facial expressions of emotion as conditioned stimuli for human autonomic responses. *Journal of Personality and Social Psychology, 38* (2), 278-282.

Panskepp, J. (1982). Toward a general psychological theory of emotions. *Behavior and Brain Science, 5,* 407-467.

Panskepp, J.. The anatomy of emotion. (1986). In R. Plutchik & H. Kellerman (Eds.), *Emotion: Theory, research, and experience. Vol 3, Biological foundations of Emotion.* New York: Academic Press.

Pennebaker, J. W. (1980). Self-perception of emotion and internal sensation. In D. M. Wegner & R. R. Vallacher (Eds.), *The Self in social psychology.* New York: Oxford University Press.

Perls, F.S. (1969). *Gestalt therapy verbatim.* Moab (Utah): Real People Press.

Perls, F.S., Hefferline, R.F., & Goodman, P. (1951). *Gestalt therapy: Excitement and growth in the human personality.* New York: Dell.

Pervin, L. A.. (1994). Personality stability, personality change, and the question of process. In T. F. Heatherton & J. L. Weinberger (Eds.) *Can personality change?* Washington, DC: American Psychological Association.

Plutchik, R. (1990). Emotions and psychotherapy: A psychoevolutionary perspective. In R. Plutchik & H. Kellerman (Eds.), *Emotion: Theory, Research, and Experience. Vol. 5, Emotion, Psychopathology and Psychotherapy.* New York: Academic Press.

Plutchik, R. (1980). Emotion: A psychoevolutionary synthesis. New York: Harper & Row.

Plutchik, R. (1970). Emotions, evolution and adaptive processes. In M. B. Arnold (Ed.), *Feelings and emotions.* New York: Academic Press.

Plutchik, R. (1962). *The emotions: Facts, theories and a new model.* New York: Random House.

Reich, W. (1961). *Character Analysis.* New York: Farrar, Straus & Giroux.

Reisenzein, R. (1983). The Schachter theory of emotion: Two decades later. *Psychological Bulletin, 94,* 239-264.

Rickles, W. H., Onoda, L., & Doyle, C. C. (1982). Task force study section: Biofeedback as an adjunct to psychotherapy. *Biofeedback & Self-Regulation, 7,* 1-33.

Rodenhauser, P., Khamis, H. J., & Faryna, A. (1986). Alexithymia and handedness: A pilot study. *Psychotherapy & Psychosomatics, 45,* 169-173.

Rogers, C. R. (1961). *On becoming a person, a therapist's view of psychotherapy.* Boston: Houghton Mifflin.

Rogers, C. R. (1965). *Client-centered therapy, its current practice implications and theory.* Boston: Houghton Mifflin.

Ross, L., Rodin, J., & Zimbardo, P. G. (1969). Toward an attribution therapy: The reduction of fear through induced cognitive-emotional misattribution. *Journal of Personality and Social Psychology, 12,* 279-288.

Safran, J. D., & Greenberg, L.S. (1982). Eliciting "hot cognitions" in cognitive behaviour therapy: Rationale and procedural guidelines. *Canadian Psychology, 23* (2), 83-87.

Sarbin, T. R. (1989). Emotions as situated actions. In L. Cirillo, B. Kaplan, & S. Wapner (Eds.) *Emotions in ideal human development* (pp.77-95). Hillsdale, NJ: Erlbaum.

Savitsky, J. C., & Eby, T. (1979). Emotion, awareness and antisocial behavior. In C. E. Izard (Ed.), *Emotions in Personality and Psychopathology.* New York: Plenum.

Schachter, R. S. (1984). Kinetic psychotherapy in the treatment of depression in latency age children. *International Journal of Group Psychotherapy, 34,* 83-91.

Schachter, S., & Singer, J. E. (1962). Cognitive, social and physiological determinants of emotional state. *Psychological Review, 69,* 379-399.

Schachter, S., & Singer, J. E. (1979). Comments on the Maslach and Marshall-Zimbardo experiments.*Journal of Personality and Social Psychology, 37,* 989-995.

Schachter, S. (1964). The interactions of cognitive and physiological determinants of emotional state. *Advances in Experimental Social Psychology, 1,* 49-80.

Schefft, B. K., & Lehr, B. K. (1985). A self regulatory model of adjunctive behavior change. *Behavior Modification, 9,* 458-476.

Schefft, B. K., Moses, J. A., & Schmidt, G. L. (1985). Neuropsychology and emotion: A self-regulatory model. *International Journal of Clinical Neuropsychology, 7* (4), 207-213.

Schutz, W. (1967). *Joy.* New York: Grove Press.

Schutz, W. (1973). *Elements of encounter.* New York: Bantam.

Seligman, M. E. P. (1974). Depression and learned helplessness. In R. J. Friedman & M. M. Katz (Eds.), *The psychology of depression: Contemporary theory and research.* Washington, DC: Winston-Wiley, 83-113.

Sifneos, P. E. (1986). The Schalling-Sifneos personality scale revised. *Psychotherapy & Psychosomatics, 45,* 161-165.

Sifneos, P. E. (1972). Short-term Psychotherapy and Emotional Crisis. Cambridge, MA: Harvard University Press.

Sirota, A. D., Schwartz, G. E., & Kristeller, J. L. (1987). Facial Muscle activity during induced mood states: Differential growth and carry-over of elated versus depressed patterns. *Psychophysiology, 24*, 691-699.

Skatteboe, U., Friis, S., Hope, M. K., & Vaglum, P. (1989). Body awareness group therapy for patients with personality disorders. *Psychotherapy & Psychosomatics, 51,* 11-17.

Sommers, S. (1984). Adults evaluating their emotions. In C. Z. Malatesta & C. E. Izard (Eds.), *Emotion in Adult Development.* Beverly Hills, CA: Sage,

Spitz, R. A., & Wolf, K.M. (1946). The smiling response: a contribution to the ontogenesis of social relations. *Genetic Psychology Monographs, 34,* 57-125.

Spitz, R. A. (1965). *The first year of life.* New York: International Universities.

Storrow, H. (1960). A measurement of outcome in psychotherapy. *Archives of General Psychiatry, 2,* 142-146.

Strongman, K. T. (1987). *The Psychology of Emotion (3rd Edition).* New York: Wiley.

Strupp, H., Wallach, M., & Wogan, M. (1964). Psychotherapy experiences in retrospect: Questionnaire survey of former patients and their therapists. *Psychological Monographs: General & Applied, 78* (11).

Strupp, H. & Bloxom, A. (1975). Therapist's assessment of outcome. In I Waskow & M. Parloff (eds) Psychotherapy change measures. Washington DC HEW Publications No 74-120.

Taylor, G. J. (1987). Alexithymia: history and validation of the concept. *Transcultural Psychiatric Research Review.* 24. 85-95

Taylor, G. J. (1984). Alexithymia: Concepts, measurement and implication for treatment. *American Journal of Psychiatry, 141,* 725-732.

Taylor, G. J., Bagby, R. M., & Parker, J.D.A. (1992a). Toronto Alexithymia Scale. Toronto: Mount Sinai Hospital.

Taylor, G. J., Bagby, R. M., & Parker, J.D.A. (1992b). The revised Toronto Alexithymia Scale: Some reliability, validity, and normative data. *Psychotherapy and Psychosomatics, 57* (1-2), 34-41.

Taylor, G. J., Ryan, D. P., & Bagby, R. M. (1985) Toward the development of a new self-report Alexithymia scale. *Psychotherapy & Psychosomatics, 44,* 191-199.

Thompson, R. A., & Lamb, M.I E. (1983). Individual differences in dimensions of socio-emotional development in infancy. In R. Plutchik & H. Kellerman (Eds.), *Emotion: Theory, Research, and Experience. Vol 2, Emotions in Early Development.* New York: Academic Press.

Thurstone, L. L. (1947). The factor problem. *Multiple factor analysis.* Chicago: Univ of Chicago Press. In D. N. Jackson, & S. Messick (Eds) , *Problems in human assessment.* Huntington, NY: Krieger Publishing (reprinted edition, 1978), pp. 279-287.

Titchener, E. B. (1908). *Lectures on the elementary psychology of feeling and attention.* New York, Macmillan.

Tomkins, S. S. (1979). Script theory: Differential magnification of affects. in H. E. Howe & R. A. Dienstbier (Eds.). *Nebraska symposium on motivation, (Vol 26).* Lincoln, NE: University of Nebraska Press.

Tomkins, S. S. (1980). Affect as amplification: Some modifications in theory. In R. Plutchik & H. Kellerman (Eds.), *Emotion: Theory, Research, and Experience. Vol 1, Theories of Emotion.* New York: Academic Press.

Tomkins, S. S. (1962-1963). *Affect, imagery, and consciousness (Vols 1-2).* New York: Springer.

Truax, C. B. (1961). The process of group psychotherapy. *Psychological Monographs, 75* (whole no 511).

Truax, C. B., & Carkhuff, R. R. (1964). Significant developments in psychotherapy research. In L. E. Abt & B.F. Reiss, (Eds.), *Progress in Clinical Psychology, vol. VI.*

Truax, C. B., & Carkhuff, R.R. (1967). *Towards effective counseling and psychotherapy: training and practice,* (Ch. 5.) Chicago: Aldine.

Valins, S. (1966). Cognitive effects of false heartrate feedback. *Journal of Personality and Social Psychology, 4,* 400-408.

Valins, S., & Ray, A. A. (1967). Effects of cognitive desensitization on avoidance behavior. *Journal of Personality and Social Psychology, 7,* 345-350.

Wallbott, H. G. & Scherer, K. R. (1989). Assessing emotion by questionnaire. In R. Plutchik & H. Kellerman (Eds.), Emotion, research, and experience: Vol. 4, The measurement of emotions, New York: Academic Press.

Warnes, H. (1986). Alexithymia, clinical and therapeutic aspects. *Psychotherapy & Psychosomatics, 46,* 96-104.

Warnes, H. & Harris, J. E. (1986). The mind-body problem from a medical perspective. *Psychotherapy & Psychosomatics, 46,* 138-146.

Watson, R. I. (1977). An introduction to humanistic psychotherapy. In S. J. Morse & R. I. Watson (Eds), *Psychotherapies: A comparative casebook.* New York: Holt, Rinehart & Winston.

Webster's New World Dictionary, Third College Edition. (1988). New York: Simon & Schuster.

Weinberger, J. L. (1994). Can personality change? T. F. Heatherton & J. L. Weinberger (Eds.) *Can personality change?* Washington, DC: American Psychological Association.

Weiss, J. H. (1963). Effects of professional training and amount and accuracy of information on behavioral prediction. *Journal of Consulting Psychology, 27,* 257-262.

Whalen, R. E., (1976). Brain mechanisms controlling sexual behavior. In F. A. Beach (Ed.), *Human Sexuality in Four Perspectives.* Baltimore: Johns Hopkins, 215-246.

White, G. L., & Knight, T. D. (1984). Misattribution of aroussal and attraction: effects of salience of explanations for arousal. *Journal of Experiemental Social Psychology, 20,* 55-64.

Wolberg, L. R. (1967). *The technique of psychotherapy, Vol. 1, 2nd Ed.* New York: Grune & Stratton.

Wood, J. V., Saltzberg, J. A., & Goldsamt, L. A. (1990). Does affect induce self-focused attention? *Journal of Personality and Social Psychology, 58,* 899-908.

Zajonc, R. B. (1985). Emotion and facial efference: A theory reclaimed. *Science, 228,* 15-21.

Zillmann, D., Katcher, A.H., & Milavsky, B. (1972). Excitation transfer from physical exercise to subsequent aggressive behavior. *Journal of Personality and Social Psychology, 8,* 247-259.

Zillmann, D., Johnson, R., & Day, K. (1974). Attribution of apparent arousal and proficiency of recovery from sympathetic activation affecting excitation transfer to aggressive behavior. *Journal of Experimental Social Psychology, 10,* 503-515.

Zivin, G. (1986). Processes of expressive behavior development. *Merrill-Palmer Quarterly, 32* (2), 103-140.