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Circumplex-balance model of personal adaptation and psychopathology

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A Circumplex-Balance Model
of Personal Adaptation and Psychopathology

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Abstract

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The historical antecedents to a phenomenological model of human experience are presented and discussed. The model is comprised of two dimensions, objectivity - subjectivity, and internality - externality. Internality - externality is similar to Jung's introversion - extroversion. Objectivity is defined as an experience wherein an individual tends to be rational, pragmatic, empirical, inductive, and characterized by the sequentially linear processing of percepts. Subjectivity is defined as an experience wherein an individual tends to be rhetorical, intuitive, impressionistic, deductive, and characterized by parallel processing. The dimensions of internality - externality and objectivity - subjectivity are crossed and presented in the form of a coordinate system. It is thought that persons can be described as to their most frequent style of experience within this coordinate system. A number of authors have suggested that as one experiences in a disproportionate fashion along either of these dimensions that one will experience a decreased sense of well being, and will manifest psychopathological symptoms that are but exaggerations of their normal process of experience. The notion of a healthy balance of experience is posited.

230 college students were administered the Millon Clinical Multiaxial Inventory, Index of Psychosomatic Symptoms, Life Events Checklist, Eysenck Personality Inventory, and the Myers-Briggs Type Indicator, in a counter-balanced order. Objectivity - subjectivity and internality - externality scores were derived from the EPI and MBTI. Multiple regressions were completed using objectivity - subjectivity and internality - externality scores to predict distress on the IPS. Quadrant classification and MCMI scale elevations were examined via multiple range tests in regards to specific predictions.

Results did not support the existence of a healthy balance range. Instead subjectivity was related to greater distress, and internality - externality was not consistently related to distress. Quadrant classification was predictive of a number of particular psychopathological manifestations.
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Introduction

The purpose of this study was to assess a phenomenological model of mental health. This model has been implicitly and explicitly conceptualized by many authors over a period of a great many years (see figures 1 and 2). It consists mainly of two dimensions and four quadrants (the end result of crossing the two dimensions). One dimension is that of objectivity-subjectivity, while the other is called internality-externality. These dimensions are thought to be fundamental in human personalities, and in the various psychtherapies. In personality it is thought that people can be classified as to the degree to which they tend to use their subjective or objective experience as their predominant mode, and the degree to which that experience has an internal or external emphasis. It is also thought that psychotherapies may be classified as to whether they tend to consider the objective or subjective and the internal or external as the proper arena for assessment and intervention. If one were able to place individuals along the dimensions of objectivity-subjectivity and internality-externality, then one would be in a real position to choose a psychotherapy appropriate to their placement in these dimensions. This study was a step in developing a devise to measure an individual's preferred mode of experience along the
dimensions of objectivity-subjectivity and internality-externality. Specifically it was predicted that as one tends towards a disproportionate preference of experience along these dimensions that one will experience distress, and manifest greater psychopathology compared with those with a relative balance between the modes of experience.

It is put forward in this paper that neurosis and psychosis might be but extreme imbalances of experience. That is, the person experiences in a too objective or subjective fashion and/or a too internal or external manner. This is thought to result in a disproportionate experience such that basic human needs (that can only be met through the neglected forms of experience) are not met. An example might be the case of an obsessive compulsive (extreme in the internal-objective quadrant). In functioning in this way the feeling function is neglected, and thus the basic human needs of being emotionally stimulated and close to others are left unmet. As such it is thought that the individual would experience and report greater stress, and display various incompetencies.

If it were to be demonstrated that as individuals move towards an imbalance of experience that they are increasingly distressed, a plausible explanation might be that neurosis and psychosis are but extreme imbalances of
Before defining the dimensions of objectivity-subjectivity and internality-externality in greater detail, a discussion of the relationship of these dimensions to psychotherapy is now presented.

Numerous psychological theories have emphasized either thought, feelings, or behaviors, often to the exclusion of each other. Cognitive psychology emphasizes the rationality of thoughts and therapy concentrates on repairing maladaptive assumptions. Behavior therapy objectifies one's world such that manipulation of their milieu becomes possible. Phenomenological therapies encourage the patient to make use of their personal, subjective experience of their world in order to obtain change. In the strictest theoretical sense there does not appear to be room for differential treatment as per differential diagnosis. Of course this does not always hold true in practice, as differential treatment may be meted out without the conscious awareness or purpose of the clinician. At other times a clinician tied to one theoretical orientation may just abandon that orientation for a particular client. Still other clinicians call themselves eclectic. The multimodel therapy of Lazarus seems a notable example of a theory and practice of psychotherapy that does emphasize many spheres of
experience, and does provide for differential treatment. The point is that psychotherapy might gain efficiency and unity if a theory were able to systematically provide distinctly different treatments for different presenting problems.

It seems apparent that many psychotherapies could be divided into roughly two categories, 1) those that emphasize one's objective experience, and 2) those that emphasize one's subjective experience (for example one's phenomenological experience). Furthermore various psychotherapies could be organized according to the extent to which they allow for or emphasize internal action (e.g. introspection) or external action (e.g. observable behavior) on the part of the individual. It should be noted that the term "subjective" as used in this paper does not refer exclusively to internal action, and likewise "objective" does not refer exclusively to external action.

It is sometimes the case that certain theoretical assumptions disqualify the consideration of one type of experience over the other, after one has established the "proper" arena for observation. This way of theorizing often has reactionary roots. According Jung (1923): As a rule, the partisans of either side attack each other externally, always seeking out the joints in their opponents individual armour. Such a dispute, as a rule, bears little fruit. It would be of considerably greater value if the contest were
transferred to the psychological realm, where it actually originates. Such a transposition would soon reveal the fact that many different kinds of psychological attitudes exist, each of which has a right to existence, although necessarily leading to the setting up of incompatable theories.... It is my conviction that a basis for the adjustment of conflicting views could be found in the recognition of the fact that every man is also imprisoned in his type that he is simply incapable of a complete understanding of another standpoint. (pp 620, 621)

Jung was speaking specifically about introversion-extroversion, and the function types (feeling, intuiting, sensing, and thinking). Introversion-extroversion (extroversion has also been spelled 'extraversion', but for the purposes of simplicity it will be spelled 'extroversion', except when spelled differently within quotations) is related to the dimensions of internality-externality and objectivity-subjectivity (the specific relationship to be delineated in a later section of this paper). As such one's objectivity or subjectivity and internality or externality affect both clinician and client alike in their respective pathologies and theories (not to mention the whole of their personalities).

The phenomenological model that is examined in this paper is essentially a model for eclecticism. That is, if one were able to place clients along these dimensions as to their experiential preference, one might be able to tailor therapy so that the person would begin to experience in the
relatively ignored modes. For example one might emphasize freer associations and the expression of one's emotions in the obsessive-compulsive (Kaplan & Saddok, 1985) that the neglected feeling function might be used. Cliented centered or Gestalt therapy might be the means of achieving this effect. In this particular case cognitive therapy, which would emphasize the obsessive-compulsive's preferred mode of experience—thinking, would be contra-indicated. If this intervention was successful, a more balanced proportion of experience should result.

For the hysteric (who favors experiences in the subjective-external quadrant) one might try to get the person to experience the world in a more objective and internal fashion. This might be achieved by behavior or cognitive therapy, while psychoanalysis (which would tend to dwell on one's subjective and internal experience) would not be indicated. This would be contrary to Freud's thinking.

Humility therapy (Means, Wilson, Sturm, Biron, & Bach, 1985) may be an example of an intervention based on these underlying processes (specifically providing for a subjective experience when one has tended towards overobjectivication) appear consistent with the dimensions of the present model.
Before these sorts of interventions based on this model would be possible (or for that matter assessed), it must be determined whether the dimensions objectivity-subjectivity and internality-externality can be measured and the extent to which persons can be described as to their preferred experiential mode. It must also be established that as one tends toward an experience imbalance that one will indeed experience greater distress and psychopathology. It was these two preliminary steps that this study undertook.

The dimensions of internality-externality and objectivity-subjectivity will now be examined in greater detail. Each will be defined and described by their historical antecedants. Research examining the existence of each dimension will also be presented. Following the discussion of the dimensions, the coordinate system resulting from the crossing of the two dimensions will be similarly examined. Following this discussion will be a section on the phenomenological model, distress, and mental health.
Internality-Externality

Jung. Carl Jung (1923) presented the concepts of introversion and extroversion as general attitude types. For Jung each of these types had a predominately internal or external orientation, and a predominately subjective or objective emphasis, respectively. However these two types as presented by Jung are different than our modern understandings of introversion and extroversion. The modern understanding was propogated by Eysenck (1970) and is mostly descriptive of internality and externality as it appears in behavior. Eysenck's contribution will be discussed in greater detail later in this paper.

According to Jung these psychological types are not discrete categories, but rather a continuous dimension, along which individuals can be placed in accord with their proportion of preference for one of these types. "But every individual possesses both mechanisms-extraversion as well as introversion, and only the relative predominance of the one or the other determines the type." (1923, p 10). Furthermore Jung and others (Hinkle, 1923; Kretschmer, 1925; and Shapiro, 1965) believe that these tendencies are not so much a matter of choice, or experience, as they are bio-genetically predetermined. Shapiro believes that a child will have his needs sated or denied as a function of
innate psychological equipment that include various sensory
and tension thresholds, and cognitive appartuses. Jung
recognizes external influences on the phenotypic expression
of the general type but says, "As a rule, whenever such a
falsification of type takes place as a result of external
influence, the individual becomes neurotic later, and a
cure can successfully be sought only in a development of
that attitude which corresponds with the individual's
natural way" (p. 416). Neurosis for Shapiro is but an
accentuation of normal functioning. Neurosis and psychosis
for Kretschmer are also but extreme forms of stylistic
experience. In a sense they may be thought of as habit.
The present author maintains an interactionist position,
whereby learning and biogenetic influences are both
considered to be active. This author would further
maintain that shifts along these dimensions are possible,
albeit difficult. Theoretically it would be possible to
switch psychological types. This, however, would be
difficult due to genetic fixing and the fairly entrenched
patterns of learned behavior.

Jung distinguishes between the general attitudes of
consciousness and unconsciousness in his discussion of the
general types of introversion-extroversion. The following
summarizes Jung's views on the conscious attitude of
extroversion.
Everyone is, admittedly, oriented by the data with which the outer world provides him; yet we see that this may be the case in a way that is only relatively decisive.... When the orientation to the object and to objective facts is so predominant that the most frequent and essential decisions and actions are determined, not by subjective values but by objective relations, one speaks of an extraverted attitude. When this is habitual, one speaks of an extraverted type. If a man so thinks and acts, in a word so lives, as to correspond directly with objective conditions and their claims, whether in a good sense or ill, he is extraverted.... Extraverted action is recognizably related to objective conditions. In so far as it is not purely reactive to environmental stimuli, its character is constantly applicable to the actual circumstances, and it finds adequate and appropriate play within the limits of the objective situation. (pp. 416-418)

For Jung the attitude of the extrovert's unconscious is such that it emphasizes subjective factors in order to create a balance so that those needs which are ignored by the extroverted conscious attitude are not neglected.

In short extroversion, for the most part, involves an objective orientation and externality. In fact a cogent understanding of this concept is lacking because Jung includes elements of internality and subjectivity in his description. For example Jung considers hysteria to be the most frequent neurosis of the extroverted type. Specifically Jung says that "the 'hysterical' character is an exaggeration of the normal attitude; it is complicated by compensatory reactions from the side of the unconscious, which manifests its opposition to the extravagant
extraversion in the form of physical disorders, where upon an introversion of psychic energy becomes unavoidable." (p. 421). Hysteria, while an externalization, seems to favor a subjectively based manner of experience. According to Shapiro (1965), "...hysterical cognition in general is global, relatively diffuse, and lacking in sharp detail... in a word it is impressionistic." (p. 111). Perhaps a clearer understanding of Jung's introversion-extroversion concept is made possible if one rotates the introversion-extroversion dimension 45 degrees counter-clock-wise from an internality-externality axis (see figure 3). This makes the concept of hysteria more comprehensible. It clearly involves externalization, in that acting out and frantic displays are both parts of the common picture. It also involves subjectivity in that the elements of experience are colored by impressions, and affective associations from the objective situation. This conceptual treatment of introversion-extroversion is also shared by Welsh (1975).

The following is Jung's description of the conscious attitude of introversion.

Introverted consciousness doubtless views the external conditions, but it selects the subjective determinants as the decisive ones. The type is guided, therefore, by that factor of perception and cognition which represents the receiving subjective disposition to the same sense stimulus. ...the object always possesses a lower value; it has secondary importance; occasionally it even represents merely an outward
objective token of a subjective content, the embodiment of an idea in other words, in which, however, the idea is the essential factor; or it is the object of a feeling, where, however the feeling experience is the chief thing, and not the object in its own individuality. (p. 12)

The unconscious attitude gives the object greater value, sometimes untenable, in an attempt to reduce the effect that the conscious undervaluation may have.

In a sense for the introvert the world is as one sees it, and for the extrovert one sees the world as it is. None of this discussion presupposes the possibility of absolute cognition, or perception. The major assumption is that there is some reality which is able to be perceived in various degrees of accuracy. This is thought to be a function of the degree to which one can or will maintain their attention to the task of the accurate perception of reality, and to limit their personal associations to some set of stimuli.

Introversion consists primarily of an emphasis on one's subjective experience and internality. Once again Jung describes introversion in a way that does not place it entirely within the boundaries of internality and subjectivity. One can easily imagine a person thinking about events or things in a manner which retains objectivity. In fact Jung states that psychoasthenia is the typical neurosis of the introverted type. Part of this
now outdated term includes the obsessive-compulsive neurosis. This neurosis is associated with an over-emphasis on experiencing the world as it objectively exists (although it may appear to be otherwise to the outside observer). According to Shapiro the obsessive-compulsive has a mode of attention that is acute, intense and narrowly focused, with an emphasis on technical detail, and inattention to anything unexpected. It again appears that Jung's presentation of the general two types is hampered through a confound of the dimensions of internality-externality and objectivity-subjectivity. Jung's discourse also suggests that some introverted persons are prone to externalize their subjective experience in works of art and social intercourse. These people would be described as subjective-externals in the present study. These examples provide preliminary support for the 45 degree rotation across the internality-externality and objectivity-subjectivity dimensions as illustrated in figure 4. It is this author's position that Jung's terms and descriptions become more coherant and potentially usefull if reframed into this two factor system.

Kretschmer. Kretschmer's theory is similarly rotated, that is, it is a crosscut of the dimensions of objectivity-subjectivity and internality-externality. His
terms schizothymic and cyclothymic appear to correspond with Jung's terms of introverted and extroverted, respectively. The terms schizoid and cycloid refer to the extremes in the proportions of schizothymic and cyclothymic characteristics. The schizoids are prone to disorders of thought and sometimes become schizophrenic. This suggests a derivative notion that as one comes to experience the world in a more or less exclusively subjective fashion, without a motivation to perceive of its objective reality, that one will be predisposed to thought disorders and related maladies. Likewise the cycloid is prone to manic-depressive disorders, according to Kretschmer. Another derivation becomes apparent. As one moves from a balance between objective and subjective experience and from a balance between internality and externality, one becomes more likely to be a victim of mental disorder, and thus to experience greater distress.

Both Jung's and Kretschmer's concepts are not either exclusive descriptions of objectivity-subjectivity nor internality-externality. Undue confusion has been created by the fact that Jung and Kretschmer do not exclusively refer to internality-externality or objectivity-subjectivity in their conceptual descriptions of extroversion-introversion and cyclothymic-schizothymic, respectively.
What the current author refers to as internality-externality does not exclusively, nor necessarily refer to the process by which the individual integrates elements of their experience. Instead these terms describe where the "action" takes place. Internality refers to reflectiveness, whereas externality refers to rather spontaneous action in the environment. Actions are not thought to be exclusive, but may precede, coincide, or follow an action in the opposite direction. The work of engineers and artists provides examples of external action that involve a great deal of internal mediation.

The dimension of introversion-extroversion as currently understood corresponds to the dimension of internality-externality as presented in this study. Various authors (e.g. Cattell, 1946; Eysenck, 1970; and Guilford, 1959) have described introversion and extroversion in this fashion. The terms internality and externality are used in their place in order that the confusion with Jung's introversion-extroversion be eliminated. This will be necessary as the other dimension of interest in this study is that of objectivity-subjectivity.
Eysenck. Eysenck's (Eysenck, 1970; Eysenck & Eysenck, 1969) conceptualization of the dimension of introversion-extroversion is representative of the modern understanding of the same concept. Eysenck's introversion-extroversion captures much of the meaning of the present author's dimension of internality-externality. Eysenck's dimension is neglect in considering the cognitive aspects of Jung's introversion-extroversion, and thus internality-externality. In fact the primary factors of impulsiveness and sociability account for much of the variance in Eysenck's extroversion (Eysenck & Eysenck, 1969). Eysenck considers second order factors, such as introversion-extroversion, to be of greater reliability and more informative than primary factors. Eysenck (1970) provides many examples from his research and others that establish extroversion as a valid and fundamental entity.

In order to further define the meaning of the current study's internality-externality dimension, Eysenck's descriptive framing of the concept of introversion-extroversion is now presented. While introversion-extroversion was established from factor analytic studies, Eysenck (Eysenck & Eysenck, 1968) has provided the profiles of the typical "introvert" and the typical "extrovert". Once again the descriptions capture the behavioral aspects (sociability, and impulsivity)
sufficiently well, but neglect the cognitive emphases of the current study's internality-externality dimension. It is also maintained by the present author that the objective and subjective manifestations of the introversion-extroversion dimension will differ.

The typical extravert is sociable, likes parties, has many friends, needs to have people to talk to, and does not like reading or studying by himself. He craves excitement, takes chances, often sticks his neck out, acts on the spur of the moment and is generally an impulsive individual. He is fond of practical jokes, always has a ready answer, and generally likes change. He is carefree, easy going, optimistic and likes to "laugh and be merry." He prefers to keep moving and doing things, tends to be aggressive and to lose his temper quickly. His feelings are not kept under tight control, and he is not always a reliable person.

The typical introvert is a quiet, retiring sort of person, introspective, fond of books rather than people; he is reserved and distant except to intimate friends. He tends to plan ahead, "looks before he leaps", and distrusts the impulse of the moment. He does not like excitement, takes matters of everyday life with proper seriousness, and likes a well ordered mode of life. He keeps his feelings under close control, seldom behaves in an aggressive manner, and does not lose his temper easily. He is reliable, somewhat pessimistic, and places great value on ethical standards. (p.6).

Eysenck relates the melancholic and phlegmatic temperament types to the introvert. As such they may be roughly understood as representing the objective or subjective preference of the introvert, respectively. He also relates the chorleric and sanguine temperaments to the extrovert. They may describe the objective or subjective preference of the extrovert, respectively.
Cattell. Cattell (1946) described typologies that have face validity, but only at a clinical experiential level. He states:

By reason of converging observations independently pointing to the existence of some underlying reality, the following types can be set aside from the mass as the best representatives of what can be considered established at the clinical level among "normal" people. (p. 24)

Cattell then goes on and describes the extrovert-introvert of Jung and the cyclothyme-schizothyme of Kretschmer.

The extrovert is interested in the outer world and in details (once again confounding objectivity and externality); has an easy expression of emotions; is sociable, hasty, frank, natural, realistic, confident, orthodox, dresses well; and has orthodox emotional responses. The cyclothyme correspondingly has an oscillating emotional mood; is sociable, responsive, good natured, warm, humorous, objective, realistic, natural, energetic and tough.

The introvert is interested in inner experience, not in ordinary affairs of life; has inhibited emotions; is unsociable, introspective, secretive, formal, hypersensitive, shy, anxious, independant, careless about his appearance; and has individual or individual emotional responses. The schizothyme, correspondingly is of steady
mood, varying excitability, unsociable, reclusive, unresponsive, cold, earnest, extreme, subjective, autistic, formal, inert, hypersensitive, and idealistic.

It readily becomes apparent through Cattell's listing that, at this level of description, introversion-extroversion and schizothymia-cyclothymia are but confused mixes of the dimensions of internality-externality and objectivity-subjectivity.

Cattell (1950) further suggests that introversion-extroversion is described by the surface traits of 1) sociability, adventurousness, heartiness vs. shyness, timidity, and reserve (essentially sociability); and 2) sociability, Personal attractiveness, and pleasure seeking vs. earnestness, asceticism, and mirthlessness (this surface trait is said to capture introspectiveness). Cyclothymia-schizothymia is said to be a source trait. A source trait differs from a surface trait in that a source trait is thought to be caused by either biogenetic factors or socio-environmental factors exclusively. A surface trait is a correlation cluster of various source traits. Cattell considers source traits to be more informationally practicable than surface traits (Cattell, 1950; Eysenck, 1972). Apparently this is what the Eysencks (Eysenck & Eysenck, , 1969) mean when they state that Cattell and Guilford are interested in primary factors (trait level) as
opposed to secondary factors (type level).

According to the Eysencks (Eysenck & Eysenck, 1969), Cattell's fifteen factors are not independent, and that the inter-correlations should be factor analyzed. Indeed when this was done by Cattell in 1957, Eysenck reports that two secondary factors became apparent. Extroversion was defined by the factors of surgency, autia, dominance, cyclothymia, and parmia. Eysenck's neuroticism dimension was described by the ego strength, protension, dominance, and parmia factors. Cattell called the extroversion-introversion dimension exvia-invia, and the neuroticism dimension was termed "anxiety".

This further the case for the use of more than one dimension, and underlies Eysenck's adamance for his use of the two dimensions of extroversion and stability. The use of the two dimensions, besides having a long history, also provides an economy (without the loss of too much information) that is not present when primary factors (traits) are used (Eysenck 1972).

Guilford. Guilford used factor analysis as the foundation for several personality inventories. He used a refined cluster analysis of item types that are commonly found in personality inventories (Diamond, 1957). The general personality factor of alertness vs.
inattentiveness describes characteristics of Jung's introversion-extroversion, respectively (Guilford, 1959). Accordingly it describes a tendency to maintain a rapport with the environment as opposed to general inattentiveness or absent mindedness. Also related to the introversion-extroversion dimension is the factor of impulsiveness vs. deliberateness. This factor describes the tendency to react promptly without thinking. The restraint vs. rhathymia factor is also related to introversion-extroversion. This factor is defined as a self controlled, serious, conscientious disposition (introversion), in opposition to a happy go lucky, carefree, unconcerned disposition (extroversion). This factor appears related to the dimension of sociability. It would be safe to say that Guilford considers these more specific factors to be more useful and predictive than the more general dimension of introversion-extroversion.

On Guilford's "An Inventory of Factors STDCR", three types of introversion-extroversion are measured: 1) social introversion (seclusiveness), 2) thinking introversion (reflectiveness), and 3) rhathymia (carefreeness, happy go lucky disposition). In a later inventory that combined correlated factors from three earlier inventories the traits that best describe introversion-extroversion appear to be: 1) "G", general activity, 2) "R", restraint vs.
rhathymia, 3) "S", sociability, and 4) "T", thoughtfullness (or thinking introversion).

**Field Independence - Field Dependence.** The notion Field independence-dependence (Witkin & Goodenough 1977) is descriptively similar to the internality-externality dimension, (and seems to contain) some of the cognitive aspects of the dimension. This suggests that introversion-extroversion may also be related at some conceptual level. Field independence seems to correspond to the internal end of the internality-externality dimension. One who is field independent is said to be impersonal, cold, concerned with solitary situations, preferring of solitary situations, and possessing a greater skill in cognitive analysis and structuring. Likewise field dependence appears similar to the external end of the internality-externality continuum. One said to be field dependant is described as interpersonal, attending to social cues, getting along well with people, socially outgoing, having a preference for being close with other people (including physical closeness), and emotionally open.
Objectivity-Subjectivity

This dimension is rather more difficult to describe, in comparison with the internality-externality dimension. It has been variously described by a number of authors (see figure 1). The objective pole is similar to Eysenck's (1970) stability, Welsh's (1975) low origence, Jordan's (from Eysenck 1969) unimpassioned, and Kant and Wundt's (also from Eysenck 1969) non-emotional dimensional endpoint. The subjective pole is described by Eysenck's neuroticism, Welsh's high origence, Jordan's impassioned, and Kant and Wundt's emotional poles.

To experience objectively is to analyze, organize, compartmentalize, make impersonal, and to set elements of experience apart from oneself. The experiential elements of the objective have a discrete quality, relative to those of the subjective. This is so because thoughts, words, and objects describe the language of the objective. Furthermore objective experiencing tends to be rational, empirical, inductive, and sequentially linear. Pirsig's (1974) "technical orientation" is also descriptive of the objective end of this continuum.
To experience subjectively is to strive towards wholeness, derive personalized meanings from elements of experience, and to experience the environment as part of oneself. Also subjective experiencing tends to be rhetorical, intuitive, alogical, and often diffuse. It tends to be diffuse as images, impressions, and feelings are the language of the subjective. Pirsig's "aesthetic orientation" is also descriptive of subjectivity.

Forisha (1983) used the dimension of subjectivity-objectivity in a study examining creativity and the control of imagery. She described subjectivity as a global orientation, a resistance to structure, a person orientation, intuitive, and deductive. The person orientation is probably most descriptive of the subjective-external, while the intuitive and deductive aspects of subjectivity is probably most true of the subjective-internal. Forisha suggests that subjectivity is characteristic of right brain functioning.

Objectivity is described by Forisha as having an analytic orientation, a preference for structure, a task orientation, logical, and inductive. The task orientation is more descriptive of the objective-external, while the logical and inductive aspects are more descriptive of the objective-internal. Left brain functioning is associated with objectivity.
Eysenck's (1970; Eysenck & Eysenck, 1968, 1969) stability-neuroticism dimension is also similar (despite his obvious semantic bias) to the dimension of objectivity-subjectivity, respectively. The current author differs from Eysenck in that neurosis is not thought to be limited to only subjectivity. That is, it is thought that an individual may suffer from too great a stability, such their that efforts towards controlling and dissecting the environment results in the denial of basic human needs (such as being physically or emotionally close to others, or being otherwise stimulated by sensual pleasures without the burden of maintaining cognitive controls). Eysenck provides a description of the neuroticism dimension in the manual of the Eysenck Personality Inventory (Eysenck & Eysenck, 1968).

High N scores are indicative of emotional lability and overreactivity. High scoring individuals tend to be emotionally overresponsive and have difficulties in returning to a normal state after emotional experiences. Such individuals frequently complain of vague somatic upsets of a minor kind, such as headaches, digestive troubles, insomnia, backaches, etc., and also report many worries, anxieties, and other disagreeable emotional feelings. Such individuals are predisposed to develop neurotic disorders under stress, but such predispositions should not be confused with actual neurotic breakdown; a person may have high scores on N while yet functioning adequately in work, sex, family, and society spheres. (p. 6)

As mentioned earlier, Cattell's primary factors of ego-strength, protension, dominance, and parmia are
related to the neuroticism dimension, and thus by extension to objectivity-subjectivity.

Self monitoring (Gangestad & Snyder, 1985) is described in similar terms as is objectivity-subjectivity. High self monitoring individuals tend to be objectively inclined, while the low self monitoring individuals would be of a subjective orientation.

According to this view, the interactions of high self monitoring individuals are guided by pragmatic organizing structures that lead one to consider the self's performances and the strategic appearances they generate. The interactions of low self monitoring individuals, on the other hand, are purported to be guided by principled organizing structures that lead one to consider the consistency of the self's deeds with one's private world of beliefs and feelings. (p. 323)

This concept does have some elements of internality-externality involved in it (high self monitors being more external, while low self monitors being more internal). In this way self monitoring may be conceptually rotated in a manner similar to Jung's introversion-extroversion. The authors also consider self monitoring to be a class variable, in which case it would be genetically fixed. This would support the position of Jung and others (e.g. Hinkle, Kretschmer, and Shapiro) on the subject of biological predisposition.
The Coordinate System

Forisha. Employing the two dimensions of objectivity-subjectivity and internality-externality as x and y coordinates, four quadrants result. Forisha (1983) used a similar arrangement in a study that examined creativity, imagery, and cognitive style for different subgroups of college students. She found that creativity and control of imagery for engineering students tended to be objective and introverted. Psychology, business, and education students tended to have creativity and imagery control that was subjective and extroverted (with the exception of the education students who had a more objective control of imagery). Male creativity was found to be objective and introverted, the engineering students and males in general preferred a more structured environment, while females tended towards an external, intuitive, nonstructured orientation. One's cognitive style, and more generally the way they experience the world, is an important framework for understanding one's personality, according to Forisha.

Welsh. Welsh's (1975) dimension of origence roughly corresponds to this study's dimension of objectivity-subjectivity, where high origence is similar to the subjective pole. Likewise Welsh's dimension of
intelligence corresponds to the internality-externality dimension where high intelligence describes the internal pole. Four quadrants become apparent: 1) low origence-high intelligence, 2) low origence-low intelligence, 3) high intelligence-high origence, and 4) high origence-low intelligence. Each of these quadrants will be described in some detail as they do provide good descriptions of what the quadrants in this present study represent, especially with respect to cognitive style. These descriptions, however, are incomplete for the quadrants of the present study. As such the present study has not simply re-labeled Welsh's dimensions. Also included are possible Rorschach indicators that are not included in Welsh's work. They are included here as illustrations of how these constructs could possibly be measured on another instrument.

Low Origence - High Intelligence. This quadrant is represented by the internal-objective quadrant in the present study. One's intrapersonal orientation in this quadrant is said by Welsh to be introverive. Accordingly one would be inward directed and speculative. On the Rorschach one whom is introverive tends to use one's inner life for the satisfaction of one's important needs (Exner 1974). It describes one who may experience a loss of distance from the blot which in the extreme, may result in
perseverations (Schuldberg & Boster, 1985). This style captures the objective and internal orientation of the obsessive-compulsive. That Welsh chooses to call this quadrant "introversive" is interesting, in so far as it is consistent with the practice of distinguishing introversive from Jung's introversion. It appears to be just a difference in emphasis, a 90 degree counter-clockwise rotation of the introversion pole, as represented in figure 4. In short introversive describes an objectively oriented introvert.

The interpersonal conduct of one in this quadrant is asocial, the individual is shy, impersonal, and has few friends. They are active and independent. Welsh describes the self concept as egotistic. Their attitudes and beliefs are conventional and rule governed. The cognitive style is said to be rational with an emphasis on logic, deliberation and analogy. Cognitive development involves differentiation with integration. This involves the process of analysis, specification, and resolution. Welsh, in accord with the findings of Forisha, states that their vocational preferences tend to be scientific.

Low Origence - Low Intelligence. This corresponds to the external-objective quadrant of the present study. The intrapersonal orientation of persons of this sort is extroverted according to Welsh. They are said to be
outward directed, and responsive. Their interpersonal orientation is said to be social, and they tend towards being friendly, indiscriminate, benevolent, dependent, and a follower. One of low origence and low intelligence is called reactive, that is the environment (and not deliberation) is most fundamental in precipitating changes in their behavior. Self effacing and allocentricity describe their self concept. Their attitudes and beliefs are orthodox with a preference for playing it safe. The cognitive style of such individuals is customary with an emphasis on industry and persistence. Allegory is their chosen mode of analysis and understanding. This makes sense as persons displaying a preference for this type of experience are also "out there in the world", and would best gain knowledge if it were framed in concrete terms.

Welsh suggests that persons in this quadrant have a cognitive development that employs proto-differentation without integration. This development is further described as emphasizing the fragmented, detailed, and unrelated. The environment is experienced as fairly close to as it really is, in some objective sense, and sorted, not analyzed, into very rough groupings.
The vocational preference of these people is called pragmatic, with an interest in practical problems, commerce, business, and service occupations.

High Origence - High Intelligence. This category is called internal-subjective in the current work. For Welsh, persons with this tendency have an intapersonal orientation that is introverted, withdrawing, and ruminative. In regards to the earlier discussion concerning the introversive, the introverted person might be best described as experiencing subjective introversion. As such one might expect on the Rorschach to see a rather constricted record, but with very personalized content. The content may seem incoherent, and may include self referential elements. In the extreme such answers may appear as absurd or confabulated. An increase of distance from the blots is also likely (Schulberg & Boster, 1985).

The interpersonal conduct is called asocial, where an isolative, impersonal pattern involving few friends would be present. "Proactive activity" that is autonomous, and which the individual plays the role of detached viewer is said to occur. The detached view of one's actions seems congruent with the idea that such a person would pay too much attention to personal experience, and only indirectly experience the outer world. The self concept is self centered and egotistic. Unorthodox attitudes and beliefs
which involve the unconventional and risk taking characterize this quadrant. Intuitive describes the preferred cognitive style. This involves insight, meditation, and the use of metaphor in the description and attainment of new knowledge. Cognitive development emphasizes integration with differentiation. Synthesis, organization, and composition are the goals of this process. This implies a holistic approach that contrasts with the analytical orientation of the internal objectifiers. Welsh suggests that the vocational preference of these individuals is intellectual. Intellectual vocations involve ideas, and includes those in the arts, humanities, and related fields.

High Origence - Low Intelligence. This category corresponds to the external-subjective quadrant of the present study. According to Welsh the intrapersonal orientation of individuals with these qualities is extroversive. As such they tend to be exhibitionistic and prone to acting out. In a similar sense these people could be called subjective extroverts. The Rorschach term "extratensive" (from the experience balance ratio) appears to refer to the same concept as does the term "extroversive". From the extratensive person one would expect personalized responses to the blots that are characterized by an increase of distance. The responses
will often be affective in tone and content. Color responses may be frequent. This would suggest that the person actively responds to the world, but primarily to its subjective, not objective aspects. The words used in the response reflect the experience of the individual. In that the experience is subjective, the vocabulary for the response is not commonly defined; its components are affective, not linguistic. Consequently the answer may appear loose and arbitrary as the individual struggles for a linguistic expression of an affective experience. As a result the responding may resemble a spontaneous reaction, rather than a contemplated description.

The interpersonal conduct of individuals in this quadrant is called sociable. Hence they are amiable, outgoing, and have many acquaintances. Activity that is interactive, interdependent, and such that it places these individuals in the role of a responder are characteristic. According to Welsh, their self concept is egocentric. Persons of this description have attitudes that are irregular, uncommon, and not conforming. The cognitive style is imaginative: fantasy, improvisation, and simile are frequently employed. The cognitive development is described as proto-integrative without differentiation. It is global, diffuse, and imprecise. As such the elements of experience would be rather impressionistic, not reflected
upon, and thus appear to be primatively holistic. The vocational preference of these persons tends toward histrionics, whereby the performing and dramatic arts, and sales occupations may be preferred.

Welsh used the Strong Vocational Interest Blank, Gough's Adjective Check List, and the MMPI to further define and achieve some degree of convergent validity for his typology. The above presentation is a summary derived from his work. On a speculative summary of polar terms related to his intelligence dimension (roughly similar to the internality-externality dimension of the present study), Welsh seems to confound the dimensions of internality-externality and objectivity-subjectivity. For example, Welsh places the terms objective and pragmatic on the low end of the intelligence dimension, while he places the terms of subjective and spiritual on the end of high intelligence. Objectivity and subjectivity in the present study refer more to the origence dimension. Spiritual orientation might be encountered in the internal subjective quadrant, with a material orientation being descriptive of the external-objective quadrant.

Welsh says that while the constructs of intelligence and origence were developed for the study of intelligence and creativity, that these dimensions have implications for
the study of other aspects of human behavior. It is in this spirit that these concepts are added to the phenomenological model of the present study.

Hinkle. In her 1923 work, The Recreating of the Individual, Beatrice Hinkle presented a typology that divided Jung's introverted and extroverted types into subdivisions of objective, subjective, and simple types. As described by Hinkle these types match surprisingly well with the dimensions of internality-externality and objectivity-subjectivity that are considered in this study.

Hinkle's description of basic introversion-extroversion seem in line with the modern understanding of introversion-extroversion. As such it corresponds to the dimension of internality-externality of the present study. Hinkle does not seem to confound the dimensions of internality-externality and objectivity-subjectivity as Jung (1923) and Kretschmer (1925) do. Hinkle's description of introversion and extroversion is best displayed in her discourse on the simple introvert and the simple extrovert.

For Hinkle the concepts of introversion and extroversion refer to definite psychological types, and not just to a description of libido movement. She states, however, that all normal persons have the capacity for both
of these forms of experience. Persons classified as simple are said to have a balance between objectivity and subjectivity. Hinkle says, however, that introverts in general are more subjective. The simple introvert is described by Hinkle in the following passage.

The introvert, ..., possesses the tendency to withdraw from the external object, quite independent of the specific outer condition acting as an exciting cause. The cause with him is found in an endo-psychic state, in which the libido is occupied with thought creations or phantasies; although, following the general tendency of mankind, he may blame his environment for lack of interest. However a certain quality of reserve and withdrawal is recognized as more or less characteristic of this type. The definite introversion, therefore, can assume much wider limits than for the opposite type and still be regarded as normal, for it is merely an increase of a natural psychic tendency. When a painful situation of difficulty in the external world arises for this type, instead of throwing it from him as quickly as possible, he takes it to himself and, holding it close, retires to brood and meditate over it. Thus the stimulus continues and accumulates energy, finally forcing action. Therefore when he does overcome and detach himself from the situation, and is able to come out to the world again, he is generally freer and more able to find another object of interest or satisfactory adjustment than is the extravert. (p. 177)

According to Hinkle the simple extrovert:

..feels more at home in the external world; he has many interests and goes out to meet the object. He is immediately responsive to situations as they arise and he deals with the facts of life as they exist, rather than with theories about life as it should be. He is the natural fighting man who generally acts first and thinks afterwards, and he is at home in the tumult and struggle of life. The stimulus to action appears to arise within the organism itself and does not depend upon the external object. His feelings are the immediate guide for his judgement and through outgoing movement he comes into direct contact with the object,
so that the ego and the object become identified. He is aware of the object directly, as it were, his thought processes following and being shaped by the facts as his senses report them. Because there is no obstruction to the outflow of his libido he can meet without difficulty the movement and change of life as it arises. His comparatively successful management of external conditions and people is not due to any thought-out plan, but to his differentiated feeling for the situation, which becomes directly translatable into suitable action. Thus the libido or interest is played directly upon the object and the minimum of loss is sustained. The external world and its objects were made for him, or he for them, and he feels himself their equal, or master. (p. 178)

In terms of the present study, the simple introverts and extroverts are persons who have a relatively balanced experiential world between the objective and the subjective. The simple extrovert would also favor the psychological functions of sensing and feeling, in a balanced fashion. The simple introvert would favor the psychological functions of thinking and intuiting in a balanced fashion.

Objective Types. According to Hinkle the objective types differ from the subjective types in that the objective types emphasize the reduction of all things to their simplest forms, devoid of complexities and subtleties.

Hinkle describes the objective extrovert as follows:

He is generally conscious of a vague longing and dissatisfaction and becomes aware that something is lacking in his relation to life, although he has no means for grasping the lack. He futilely attempts to
appease this by searching in the external world for more and different objective sensations, more power or things, through which he vainly thinks satisfaction can be obtained, but the only result is a more impregnable blindness than before. (p. 194)

Persons who might be described as objective extroverts tend towards concrete mindedness with direct aggressive action and a focus on the external object. The sensing function, followed by the thinking function (the objective functions), play the greatest part in the person's experience. The least used functions are intuition and feeling (the subjective functions), in that order. Indeed, Hinkle states that:

"...the mechanism of repression has operated to the greatest degree, robbing them of all use of the subjective functions, in the service of an overwhelming determination to conquer and dominate, either through thought creations or through the shaping of the external reality by sheer force. (p.193)"

Hinkle seems to imply that an imbalance in psychological function will lead to feelings of emptiness and distress. The objective extrovert of Hinkle corresponds to the external-objective quadrant of the present study.

The objective introvert is described by Hinkle in the following paragraph.

Satisfaction can only be reached through gaining possession of the inner world, the realm of the ideal; for the introvert's real values lie in the unconscious, in the depths, and must be sought there, and not in the world of sense. The very real need and difficulty of the introverted person to find an adequate means adapted to deal with objective reality,
instead of merely thinking or reflecting about it, produce at the same time the danger of the overcompensation in which sensation or thought alone becomes the sole function, to the great loss of the personality. This approximation of the organism to the character of a machine can proceed to an almost unbelievable extent, with the corresponding absence of those qualities which we call human, and which are manifested through feelings and intuitions. These people command attention and regard through their ability and power, but they do not gain love and affection. (p. 194)

These individuals might be further categorized as materialists, positivists, and empiricists. They are pragmatic, value facts more than principles. Their theoretical systems are descriptive of natural fact, and as such are constantly being contradicted by other empirical data. The thinking function, followed by the sensing function, usually plays the greatest part in the person's experience. The least used functions are intuition and feeling, in that order. In terms of the present study the objective-introvert is called an objective-internal.

Subjective Types. Hinkle terms the subjective introvert the emotional introvert type.

Closer study and comparison with the quality of the feeling reactions of the extravert, however, will soon reveal a marked difference in the character of the emotional introvert. A certain lack in differentiation, a too great intensity and overemphasis, insufficient discrimination, an uncertainty in its expression, and a tendency to one extreme or another serve to distinguish its character for that of the extravert type. Further, the feeling is never steady and dependable, for it is constantly interfered with in its relation to the object by the subject which always presses in between, and by
accompanying thought function even though this may be quite undeveloped in any capacity for directed and logical thinking. (pp. 202, 203)

The emotional introvert of Hinkle corresponds to the subjective-internal of the present study. These concepts seem to vary in their area of emphasis, however. The subjective-internal seems to have many characteristics of Hinkle's simple introvert, which she compares to Jame's tender-minded.

..[T]hey are characterized by rationalism [not perhaps entirely descriptive of the subjective-internal of the present study], they are men of principles and of systems, they aspire to dominate experience and to transcend it by abstract reasoning, by their logical deductions and purely rational conceptions. They care little for facts and the multiplicity of phenomena hardly embarrass them at all. They forcibly fit data into their ideal constructions and reduce everything to their a priori premises [most notable in the case of the paranoid]. He further speaks of the tender-minded individual as "idealistic, intellectual, optimistic, religious in spirit, partizan of free will, a monist, and a dogmatist". (p. 181)

Hinkle states that intuition is the predominant psychological function of the emotional introverts. She says that they tend towards the use of all the functions to a greater degree than the other types, but that all of the functions are colored by a subjective attitude. Indeed Hinkle asserts that the intuitive powers of the emotional introvert tend to distort rather than reveal the external reality and often result in judgements that are misleading and unreliable. It is the assertion of the present author.
that the subjective introvert uses intuition, followed by feeling as their favored functions. Less frequently used are the functions of thinking and sensing, in that order. As for their choice of logical systems it seems that deductive logic, followed by inductive logic is characteristic of the subjective-internals (from Forshia 1983). When dealing with the abstract the subjective introvert might tend to use deductions from non-empirical premises, while using data collection in a rather selective manner to support those premises. This might be contrasted with the logical style of the objective introvert whose empirical nature leads him/her to prefer inductive logic, followed by deductive logic, as the preferred methods. Furthermore the subjective-externals would be characterized as having an irrational-alogical style, due in part to their tendency to not reflect or analyze, but to learn by trial and error while doing. These differences in logical style become important as one comes to consider how certain pathologies may differ as a function of these various processes.

The following is Hinkle's description of the subjective extrovert.

They are generally most attractive, possessing a warm, sympathetic attitude and appeal, when they want to please; they are responsive to and greatly affected by their environment, and at the same time are always defending themselves against the too easy identification with their surroundings and with
others. They are generally refined, artistic, and unstable; frequently moody and uncertain; highly moral on one side and as completely unmoral on the other; great sticklers for truth and candor, and yet frequently, quite unknown to themselves, incapable of actually telling the truth; often inclined to neatness and order and with a great regard for detail, although many are just as disorderly. In their love relations they are possessive and jealous; the most devoted lovers, and the most supremely selfish; unable to adapt easily to the desires of others, and at other times, surrendering completely, according to what possesses them at the moment, and under what symbol they are functioning. (p. 206)

This type is distinguished from the emotional introvert and their emphasis on the hard angular bones. The subjective-extrovert is said to overemphasize the flesh with its coloring, curves, and texture. This analogy supposes a world in which reality is a combination of both flesh and bones.

One can easily see a rather histrionic and/or hysterical character in the subjective extrovert. In the present study the subjective-extrovert is termed the subjective-external. The feeling function, followed by the intuiting function, are the preferences of the subjective-external. The least used functions are the sensing and thinking functions, in that order. Their logic could be described as alogical, or irrational.
Roback (1952) suggests that the major difference between Hinkle's and Jung's presentation of the psychological types is Hinkle's preferential treatment of the extrovert, and Jung's favoring of the introvert.

**Jung's Function Types.** Jung's (1923) own exposition on the function types (sensing, thinking, feeling, and intuiting) was originally presented within the context of introversion-extroversion. Jung, for example, discussed the intuitive type in terms of the main type, and so spoke of the introverted intuitive type, and the extroverted intuitive type. As such these descriptions are conceptually confounded by the dimensions of internality-externality, and objectivity-subjectivity, and are not useful in terms of the present study.

Jung (1968) provided a brief, and concise description of what the functions mean. "Sensation tells us that a thing is. Thinking tells us what a thing is, feeling tells us what it is worth to us." (p. 13). Intuition is but a feeling perception according to Jung.

Jung further classifies the four functions as to whether they are rational or irrational, and whether they are perceiving or judging functions. Marshall (1968) provides a clear and concise discussion of these distinctions.
The irrational functions are concerned with experience itself rather than with rational responses to experience. Conscious experience, in either the inner or the outer world is the result of two factors: elements (sense data) and organizing principles. It is already partly structured into wholes. It may be restructured either in the direction of greater organization at the expense of detail or in the complementary direction of greater attention to detail at the expense of the whole. It is suggested that these two directions correspond to the use of intuition and of sensation respectively. Neither extreme can be reached; both factors necessarily remain in any experience, though the proportions vary.

The rational functions are concerned with methods of handling experiences according to already given norms. Experiences themselves may be vaguer or clearer, and may also be more or less desirable. Efforts to clarify one's experience result in modifying it by action. These two kinds of response, description and interaction, are efforts to resolve the problems experience poses to the individual. They occur spontaneously and unreflectively, and are the pre-rational bases of the rational and feeling functions. They can be mutually helpful, but also they tend to be mutually inhibitory, since some detachment and interaction requires some involvement.

Rational activity is a judging of actual and possible responses to experience according to objective norms. It is introverted or extroverted according to whether these norms are derived from the inner world or the outer culture. The original descriptions and interactions are made conscious, thus becoming hypotheses and manoeuvres. They are then compared with others and judged as true or false hypotheses and as good or bad manoeuvres. It is suggested that these two rational activities constitute the thinking and feeling functions, respectively. (p. 31)

This rather lengthy quote was included intact because of the amount of information that it summarizes. One relationship that becomes apparent in this passage is that 1) feeling and thinking, and 2) sensing and intuiting
are complementary. For example, one's proportion of preference for thinking when added to the proportion of preference for feeling will equal 1.0. In Jung's system one will have a preferred form of perception, as well as a preferred form of judging, subsumed under their preferred direction of activity, introversion or extroversion.

The current study proposes a variant to this way of conceptualizing. Specifically it is proposed that all of the proportions of the four functions be added together such their sum is 1.0. The result is that all four functions are then related. Thus, the importance of classifying the pairs as rational/irrational and perceiving/judging is diminished. This relationship is built into the proposed summation, in that it recognizes the influence of perceptive functions on judging functions. It seems reasonable to believe that people will in general show a specific preference for perceiving or judging, and that this preference is ignored, or minimized when one uses the Jungian complementary pairs.

Another point of difference between Jung and the present author's conceptualization of the function types concerns the feeling function. Jung (1968) states that feeling refers to valuing. Values exist, but they are not intellectually derived. Jung further states that the feeling function should not be confused with emotion.
Emotion is said to occur as part of each the function types.

The current author asserts that emotion is most characteristic of the feeling function. It is granted that the physiological reactions associated with emotion do occur in each of the function types. These physiological reactions will be experienced differently within each of the function types. According to Shapiro, the hysteric's view of the world is most diffuse. The hysteric is thought to disproportionately favor the feeling function (and in the terms of this present study to experience disproportionately in the subjective-external quadrant). The hysteric's physiological sensations are thus not easily assigned to specific thoughts or sources. They are experienced in their more primitive form, and that is emotion. These sensations may then be labeled and expressed as an emotion, or not labeled at all. A similar physiological sensation might be experienced by the obsessive compulsive as stress, or the paranoid as threat. But neither one of these individuals would express or experience these sensations as emotion. The sensations have been taken to a higher cognitive level (and increasingly processed with the left brain), and interpreted. In summary the present author asserts that the feeling function will be characterized by emotion and
Several authors have attempted to measure the Jungian types (Gray, 1947; Gray & Wheelwright, 1945; Keirsey & Bates 1978; and Myers & McCaulley, 1985). Gorlow, Norman, Simonson, and Kraus (1966) factor analyzed the Q-sort of 100 self-regarding statements. They found evidence for 5 of the 8 Jungian types (the four function types crossed by introversion-extroversion makes a total of eight types). They found evidence for the extroverted feeling type, two types of introverted thinking, extroverted thinking type, extroverted sensing type, and the extroverted intuitive type. These types descriptively correspond to locations within the coordinates formed by the crossing of the dimensions of internality-externality and objectivity-subjectivity. Their extroverted feeling factor is similar to the subjective-external area. The introverted thinking factors are described by the objective-internal quadrant, with one factor being more balanced in terms of internality-externality. The extroverted sensing type appears to lie predominately in the externality half, but with a relative balance between objectivity and subjectivity (this would be called a simple extrovert in Hinkle's terms). The extroverted sensing factor is similar to the external-objective quadrant. The extroverted intuitive factor is in the subjective half of
the coordinate system with a relative balance between internality-externality.

Within the context of the Jungian types Stephenson (1939) notes that the number of types actually found through factor analysis to be a function of the number of traits used in that analysis. Thus empirical support for the types using a Q-sort method may provide somewhat arbitrary results.

Neurotic Styles, David Shapiro. Shapiro (1965) in his book *Neurotic Styles* described various characteristic ways that people function and sometimes fail. He delineates four distinct styles: 1) obsessive-compulsive, 2) paranoid, 3) impulsive, and 4) hysteric. The descriptions of each individual style and their interrelationships appear to also describe the quadrants of the phenomenological model of the present study. The obsessive-compulsive style describes the internal-objective quadrant, while the paranoid style is similar to the internal-subjective quadrant. The external-objective quadrant appears to be Shapiro's impulsive style, while the external-subjective quadrant is the hysteric style.
Shapiro believes that everyone functions more or less in one of these styles (although Shapiro does not suggest that these four styles are the only possibilities). Normal functioning might be described as muted neuroticism. Psychopathology for Shapiro is but an exacerbation of one's characteristic style of normal functioning. As such, when one perceives a threat, they will utilize those mechanisms which they know best. Thus neurosis might be described as an exaggeration, a parody of one's already existing pattern.

Shapiro discusses the paranoid and obsessive-compulsive styles as analogous processes. He emphasizes the fact that paranoid and obsessive-compulsive features often intermingle and shade into one another. In the current author's conceptualization, paranoid and obsessive-compulsive disorders would be considered to be maladies of the internal; that is, they would be characterized by reflective thought. What differentiates the two disorders would be the underlying process. The paranoid's experience is subjectively biased, while the obsessive-compulsive's experience is objectively biased. Insofar as an individual has features of both disorders, their preference for objectivity or subjectivity would be proportional to the display of both the paranoid and the obsessive-compulsive features. In the case of an equal
manifestation of paranoia and obsessive-compulsiveness, the current model would predict a balance between the individual's overall tendency towards objectivity and subjectivity.

Shapiro presents a point by point comparison of the paranoid and obsessive-compulsive. This discussion is instructive as it nicely illustrates how similar (i.e. internal) but distinct disorders reflect different underlying processes. The mode of attention of the obsessive-compulsive is described as acute, intense, and narrowly focused. It is rigid and attention is directed towards technical detail. The paranoid's attention, in contrast, is extremely acute, intense and narrowly focused, but is concerned with not what is, but what is thought to be implied.

The obsessive-compulsive's response to the novel or unexpected is said to be inattention, while the paranoid regards the same event as threatening and thus tries to discern the underlying meaning to that event. According to Shapiro the obsessive-compulsive's experience of reality is a world constructed of technical indicators, where there is a concurrent loss of a sense of conviction and of substantial truth. With an extreme disproportion in this form of experience, logical absurdity is said to occur. The paranoid's world is constructed of clues to hidden
meaning, where apparent substantial reality is distained. In the extreme the result is projective delusion. This nicely illustrates the differences between the obsessive-compulsive's and the paranoid's choice of logical style. Specifically it would be induction (objective) for the obsessive-compulsive with deductive logic playing a secondary role. For the paranoid the primary logical choice is deduction (albeit with questionable premises), with inductive logic performing a secondary, self confirming, role.

Finally, Shapiro discusses affective functioning of these styles. The obsessive-compulsive is characterized by a narrowing of and estrangement from affective experience. There is also a general tenseness, a loss of spontaneity, and an absence of whim. This is consistent with function type preference of thinking, where intuition and feeling play minimal roles.

The paranoid's affect is generally contracted, estranged, and there is probably some loss of sensual experience. There is also a loss of capacity for spontaneity and abandonment. Paranoids are usually extremely tense and antagonistic. Shapiro's paranoid is consistent with the internal-subjective quadrant of this study. Feeling and objective reflection (thinking) are minimally employed, while intuition plays a primary role.
The impulsive and the hysteric are maladies of the external; that is they are characterized by a lack of reflection. The impulsive individual has an objective bias, while the hysteric has a subjective bias. With these external cognitive styles the major difference between them is thought to be the elements of experience. The hysteric's elements of experience are much more diffuse than the impulsive's. They are formed of affects, feelings, and impressions. As such they are less prone to direct, specific manipulation. They are manipulated indirectly through physical symptoms and/or dramatics. Indeed their primary defense mechanism is that of repression. The elements of experience for the impulsive are much more discrete. They tend to be things, material objects, and delineated sensory experiences. The impulsive is much more direct in manipulating the environment, as the manner in which the world is experienced lends itself to manipulation. It is seen as being comprised of objects, over which control can be exerted. Affects and impressions, on the other hand, are not prone to direct, decisive manipulation, unless they are first made objective. This is not meant to suggest that the impulsive is any more reflective than the hysteric, just that their manner of experience leads to the impression that there is more direct action.
Impulsive activity and hysterical activity may shade into each other. Just as in the case of obsessive-compulsive and paranoid the underlying dimension that influences the expression of hysteria and impulsivity is the relative proportion of objectivity and subjectivity. In the case of an equal preference for objective and subjective experience, one would anticipate a relatively balanced display of both impulsive and hysterical patterns. The histrionic probably treads on this middle ground between impulsivity and hysteria.

Just as impulsivity/hysteria and obsessive-compulsiveness/paranoia can be described as to the relative proportion objectivity-subjectivity, so may impulsivity/obsessive-compulsiveness and hysteria/paranoia be described as to the relative proportions of internality-externality. The phenomenological model described in this current paper provides for a descriptive understanding of mixed symptom pictures.

The hysteric typically exaggerates the feeling function and minimally uses the thinking, sensing, or even intuitive functions. The impulsive, on the other hand, excessively favors the sensing function, while the intuition, thinking, and feeling functions are under-used. In general Shapiro suggests that their major deficits involve an inability to reflect. For the hysteric the
problem is their use of repression as a primary defense mechanism. The impulsive is thought to be unable to engage in planning for the future. The impulsive's cognitions are concrete, and thus dominated by present experience. As such, the importance of the future (and thus planning for it, or deferring present action) is diminished.

Closing Remarks

It seems apparent that people need to have experiences from each of the quadrants of the phenomenological model so that basic human needs can be met. The specific human needs will not be rigorously stated in this paper, but roughly they are believed to involve the needs for 1) physical and emotional closeness, as well as appropriate distance at times, 2) reality testing as well as the reliefs of flights of fancy, and 3) reflective problem solving as well as rather spontaneous action. If one were to engage in more or less exclusive activity at any of these extremes one would tend to become rigid. When one becomes rigid, one's coping options become severely limited. Indeed when one becomes threatened one will increasingly emphasize one's already rigid coping mechanisms, as opposed to some alternative coping strategy which would ultimately result in greater success, and a greater sense of well being (Shapiro, 1965). The reason
that the alternative methods of coping and experiencing are not employed is that alternatives are generally perceived as threatening. Indeed it becomes the task of clinicians to facilitate the acceptance of alternative forms of experience, and provide for the transformation.

A relative balance between experiences along the dimensions of internality-externality and objectivity-subjectivity has been thought to be necessary for a sense of well being and mental health. Balance, or at least minimal deviation, has been suggested by many authors as playing a role in mental health (Eysenck, 1970; Hinkle, 1923; Jung, 1923; Kretschmer, 1925; Pirsig, 1974; Shapiro, 1965; and Watkins, 1978).

Kretschmer (1925) subdivided the schizothymes and the cyclothymes into the 1) dystonics, schizoids, and schizophrenes, and 2) the syntonics, cycloids, and the manic-depressives, respectively. Accordingly, as one deviates from a dystonic or a syntonic character, one would be expected to have a greater probability of psychopathology. The dystonics and the syntonics are more or less well adjusted, but display different tendencies for the type of interactions that they have with the world. The schizoids and the cycloids would tend to be more deviant, and more or less neurotic. The schizophrenes and the manic-depressives are the most deviant, and more or
less psychotic. This corresponds well with the notions of the present study (see figure 3).

Watkins (1978) emphasizes the need for both subjectivity and objectivity in peoples' lives.

The notion of balance as described in figure 3 specifically speaks to an balance range. It is to say that one could experience more or less in one quadrant for a given time, but that if one's total set of experiences could be averaged over time that one's position within the coordinate system would be in the vicinity of the origin (if indeed the person is normal, well adjusted). Specifically how far one can deviate from the origin and still be adjusted is an unanswered empirical question. The current study examined if, as one deviates from the origin that one will also display increasing distress and psychopathology. Other variables such as speed of change between experience modes, compartmentalization of one's experiential world, and the relative amplitude of the swings into the various quadrants may also play a role in one's sense of well being. These variables were not examined in the present study, however.

The concept of relative balance would allow for healthy preferences for one form of experience or another. This notion is also held by Shapiro in his discussion of
the neurotic styles. Shapiro says that these normal preferences will be characterized by a sense of volition. Neurotic functioning for Shapiro is but a frantic attempt to create a sense of will. These attempts are not successful according to Shapiro, and the person suffers neurotically.

Thorne and Karni (submitted for publication) using a smallest space analysis of the CPI found an ego strength cluster that resembles the balance range area of the phenomenological coordinate system. This would suggest that, along with a greater sense of well being, healthy people may also have better coping skills.

Various psychopathologies can be described within the coordinate system of the phenomenological model. It is thought, however, that the specific manifestation of pathology is not as important as the underlying processes. Specifically these processes involve the relative proportions of internality-externality and objectivity-subjectivity. Still various psychopathologies are probably more likely to occur in certain quadrants than others. Disorders of the subjective-internal quadrant would include thought disorders, schizophrenias, and paranoias. In the subjective-external quadrant one might find hysteria, mania, and the borderline. Those disorders extreme in externality but lodged in and fluctuating
between objectivity and subjectivity would be the histrionic and the narcissistic. In the objective-external quadrant disorders of impulse and it is here that the antisocial might be found. Finally, in the objective-internal quadrant, one would probably find the obsessive-compulsive, certain depressions, and existential crisis. Depression and anxiety are probably displays of general distress that reflect an inability to cope (or concomitant with coping itself, at times), and might occur in any quadrant. Indeed healthy people will sometimes suffer anxiety or depression. It is thought, however, that their distress will be more transitory as their coping skills are more variable and thus more effective, and that healthy people should report less total distress over time.

It is possible for a certain psychopathology to occur in a quadrant other than it was presented in the previous discussion. This would suggest that a different chain of interventions would possibly be more effective than those interventions used to treat the usual pattern.

In a previous section it was pointed out that the phenomenological model may be useful for understanding mixed symptom pictures.
What all this leads to is the idea that possibly it is more important to base intervention on the underlying process, than the particular manifestation of the psychopathology. The underlying process in this case is one's relative internality or externality and/or one's relative objectivity or subjectivity. The present study undertook a preliminary investigation of the roles of internality-externality and objectivity-subjectivity as fundamental dimensions in human experience.

In that the specific predictions and hypotheses of the present study are closely bound to the measurement instruments employed, this aspect of the study is addressed in the 'Procedures for Analysis' section in 'Methods'. Hopefully this will provide the reader with a better understanding of the hypotheses than if they were presented prior to a description of the instruments, and a discussion of how certain of the instruments will be employed to estimate objectivity-subjectivity and internality-externality.
Methods

Subjects.

230 Introductory psychology students from the University of Montana (Missoula, MT), Umpqua Community College (Roseburg, OR), Lane Community College (Eugene, OR), and Linfield College (McMinnville, OR) were recruited for this study. Subjects were given course credit and/or bonus quiz points (depending upon institutional requirements) for participation. 98 males and 132 females comprised the sample. The average age of the participants was 23.8 years, with an age range of 17 to 66 years. An informed consent was required of all subjects (see appendix C).

Procedure.

The present study was designed to assess the extent to which disproportionate phenomenological experience is associated with increased stress and psychopathology. The Life Events Checklist (appendix A), and the Index of Psychosomatic Symptoms - IPS - (Indik, Seashore, & Slesinger (1964), see appendix B) were given to all subjects to measure stress and situational factors related to stress. The Millon Clinical Multiaxial Inventory - MCMI
- (Millon, 1983) was used in an attempt to assess the presence of psychopathology. The Myers-Briggs Type Indicator - MBTI - (Myers & McCaulley 1985) and the Eysenck Personality Inventory - EPI - (Eysenck & Eysenck 1968) were scored and assessed for objectivity-subjectivity and internality-externality (details to follow).

Standard administration procedures for the MCMI, MBTI, and the EPI were used. The testing instructions for the Life Events Checklist and the Index of Psychosomatic Symptoms were printed at the top of each page (see appendices A and B). In order to control for order effects the five measures were placed in a random order. This order was then varied a total of five times, so that all sequences of the original random order were represented. The five ordered measures were bound into folders. Before each administration of these instruments fresh answer sheets were inserted in the appropriate places within each folder. Subjects were requested to read the instructions for each test carefully, and to complete the tests in order. Questions regarding procedure, but not item content were answered. Subjects were instructed to return the folders to the experimenter when finished, at which time they were checked for completeness. The battery of tests took between 45 minutes and 75 minutes to complete.
Instruments.

Eysenck Personality Inventory. Eysenck (1970) proposes a model that is in many ways similar to the present model (see figure 1). Eysenck maintains that as one increases in distance from the origin in the neuroticism and introversion-extroversion dimensions that one will display various dysfunctions and psychopathologies. Eysenck also proposes a psychoticism dimension. This concept as measured by the Eysenck Personality Questionaire, the EPQ, has not been well recieved by critics (Block, 1978; Kline, 1978; Stricker, 1978; and Tellegen, 1978). The psychoticism dimension was unable to differentiate prisoners, psychopaths, and a psychiatric populations. Nor does the psychoticism dimension have sufficient reliability and construct validity to be useful. The EPI was used in this study to measure the neuroticism-stability and introversion-extroversion factors in Eysenck's model. The EPI is an earlier version of the EPQ. The EPI does not contain the psychoticism dimension, and has had reliability and validity fairly well established for the dimensions of introversion-extroversion and stability-neuroticism (Stricker 1978). Tellegen (1978) suggests that the EPI is most useful as a research tool because of the relative
independence of the two scales, but adds that the limited amount of data supplied by these two measures makes it of limited use in clinical practice.

The EPI manual reports reliabilities between .84 and .94 for the complete test, and between .80 and .97 for separate forms. Concurrent validity was assessed by the Eysencks' using the MMPI, CPI, Multiple Adjective Checklist, and Cattell's neuroticism and anxiety factor scales. In general the Eysencks' neuroticism appears related to distress and anxiety items on the other inventories. As such, it may not be entirely appropriate as a measure of the current study's subjectivity. In the current author's view, subjectively oriented people may or may not be neurotic, just as objectively oriented people may or may not be neurotic.

Extroversion is related to the items from other inventories that deal with overall level of activity. As such it neglects the cognitive aspects of internality-externality. Construct validity for the EPI was established using predictions from criterion groups, via the Eysencks' theory of personality underlying the inventory. Hysterics and psychopaths were found to score higher on extroversion than dysthymics, and all neurotic groups scored higher on neuroticism than did normals. A similar arrangement was found using a dimensional space.
analysis of the MMPI (Wakefield, Yom, Bradley, Doughtie, Cox, & Kraft, 1974). The EPI was used primarily to examine the constructs of internality-externality and objectivity-subjectivity in the light of an already established instrument. It was also used to compare and assess the concurrent validity for the novel scoring of internality-externality and objectivity-subjectivity using the MBTI. It is acknowledged that there are severe limitations in using the EPI to measure the constructs of the present study. Perhaps the greatest limitation is using neuroticism to measure subjectivity.

**Myers-Briggs Type Indicator.** The MBTI is a forced choice inventory designed to measure a modification of Jungian type theory. Various forms of the MBTI have been reviewed by a number of authors (Carlson 1985; Carlyn 1977; Coan 1978; Mendelsohn 1965; Siegel 1965; Stricker & Ross 1964; and Sundberg 1965). Sundberg suggests that the MBTI shows potential for getting at differences in cognitive preferences. It is in this spirit that the MBTI was applied to the task of assessing the constructs of the phenomenological model.
A brief description of the function types on the MBTI from an article by Carlson (1985) is now presented.

In sensation, data takes the form of acts or sense impression, that is information from the five senses. In intuition, one's perceptions are indirect, distorted by the unconscious, and sources that are not very clear, as in "hunches" or the "sixth sense". The intuitive dominant personality will tend to rely more upon the latter mode for receipt of significant data; just as the sensation dominant individual prefers to utilize the basic senses for receipt of information and not to go beyond the objective world for facts.... The thinking dominant type prefers to analyze, synthesize, and determine the truth or falseness of information in an impersonal fashion. By contrast the feeling dominant type evaluates incoming data in terms of their goodness or badness, a process that is personal, subjective, and nonanalytical. (pp. 356-357)

The current study did not use the judging-perceiving function that appears on the MBTI. The judging-perceiving dimension has been found to correlate consistently with the intuiting-sensing dimension, and somewhat with the thinking-feeling dimension. As such the judging-perceiving dimension cannot be meaningfully integrated into the present quadrant model. The dimensions of introversion-extroversion, intuition-sensing, and thinking-feeling are sufficiently independent (Mendelsohn 1965).

The introversion-extroversion dimension correlates highly with the EPI extroversion scores (Carlson 1985). The introversion-extroversion dimension is also related to sociability, gregariousness, and talkiveness. As such the
MBTI is also somewhat neglectful in considering the cognitive aspects of the dimension.

The dimensions of introversion-extroversion, thinking-feeling, and intuiting-sensing were be scored in the standard fashion. The scores for each function type were not analyzed in terms of type or continuous scores, however. The specific details regarding the use of MBTI scores is presented in the 'Description of Analyses' section of this paper.

The most recent form (form G, Myers & McCaulley 1985) of the MBTI was administered to all subjects. Much of the research on the reliability and validity on the MBTI is presented in a summary fashion in the administration and scoring manual.

Split half reliability data is presented in a number of tables, but no estimate or range of estimates as to its approximate value is given in the summary. It is described by the authors as being acceptable for most adult samples, but somewhat lower for younger samples, and those performing at lower levels of achievement. This should not be problematic given that a college population was employed in the present study. Test-retest reliability is also presented in table form, and not estimated in the summary. The authors state that the MBTI shows consistency over
time. When a subject reports a change in type, it was most likely to occur only in one preference, and in scales where the original preference was low. The thinking-feeling scale had the lowest test-retest reliability of all the scales.

MBTI validity was assessed by comparing the type scores with scales from other inventories that are conceptually similar, or would be predicted from the theory underlying the MBTI, given a certain type scoring. A summary of the content from those scales that were significantly related to the MBTI types is presented by the authors.

Extroversion as measured by the MBTI is characterized by a sense of comfort in the environment, action in the environment, action on the environment, a quick response to energy from the environment, an overreliance on the environment, freedom of expression, sociability, and relatedness to other people. Introversion was found to be related to reflective observation, lack of comfort in the environment, autonomy, aloofness, independence, and a solitary attitude. It becomes apparent from these summaries that for the introversion-extroversion dimension the behavioral aspects of the construct are favored over the cognitive aspects.
Sensing items measured a practical outlook, a managing and accepting of reality, and an interest in economic gain. Intuition was related to other scales that propose to measure complexity, creativity, artistic sensitivity, the theoretical, the aesthetic, inner directedness, liberalness, and existentiality. Thinking items involved abstract conceptualization, dominance, the theoretical, assertiveness, autonomy, achievement, and aggression. The feeling items appear to measure nurturance, succorance, affiliation, sociability, adaptability of feelings to others demands (including deference and abasement), a difficulty in seeing aspects of situations that conflict with their values, and a tendency to avoid the unpleasant. For the most part the function types as measured by the MBTI do represent those aspects of the quadrants to which they have been individually associated. Specifically feeling is associated with the subjective-external quadrant, thinking with the objective-internal quadrant, intuiting with the subjective-internal quadrant, and sensing with the objective-external quadrant.

The MBTI was chosen to measure the constructs (objectivity-subjectivity, and internality-externality) of the present study because of the rough surface similarity of the MBTI types to these constructs, the MBTI's somewhat cognitive and phenomenological flavor, and the MBTI and
this study's phenomenological models' similar theoretical-historical roots (i.e., Jung).

**Millon Clinical Multiaxial Inventory.** The MCMI was used to assess whether specific pathological manifestations as predicted to occur (i.e., with some frequency) within a particular quadrant, and not in other quadrants, do indeed occur within that quadrant (as defined by MCMI scale elevations). Millon reports test-retest reliabilities of about .80. The MCMI scales were developed, in part, by criterion group analysis. The present study predicts that individuals within certain quadrants will be similar to certain criterion groups. As such the MCMI would be valid for the use intended in the present study. There is, however, some difficulty in interpreting scores beneath the baserate critical scores. This might have been problematic for the present study in that the it is possible for subjects in a given quadrant to show average elevations that were below the critical baserate score, but yet display a significantly higher average score than the subjects in the other quadrants.
Index of Psychosomatic Symptoms. In a 16 item variation of the IPS - Index of Psychosomatic Symptoms (Indik, Seashore, & Sleisinger, 1964) subjects' scores ranged from 16 (low strain) to 60 (high strain), with a mean of 28.2. The following is the report from the previously mentioned authors in regards to the index.

Again as in the cases of the other indexes, item intercorrelations and item-index correlations were inspected for the presence of a satisfactory degree of homogeneity, using the random sample of 166 cases. All item intercorrelations are positive and 90% of them are significant at the 10% level. Each item correlates with the summary index to a degree substantially greater than would any other single item. There is no apparent clustering that would lead one to suspect the presence of factors sufficiently independent to prevent the use of a summation procedure to represent an individual's general tendency toward presenting few or many symptoms. The reliability of the index is estimated (split-half method) to be +.85. (p. 29)

Factor analysis on the index yielded only one interpretable factor. Intercorrelations between the IPS and 1) the Index of Job Related Strain, and 2) the Index of Economic Strain were .36 and .29, respectively. According to the authors, "[t]here is a tendency for individuals high on one index to be high also on the others, but the three indexes are clearly more than an arbitrary and meaningless division of a homogenous domain of items." (p. 29)
Life Events Checklist. The Life Events Checklist (as adapted from Holmes & Rahe, 1967) was critically examined in an article by Barbara and Bruce Dohrenwend (1980). Their basic argument is that different individuals will respond to given life's event with varying degrees and types of stress reactions. There will be some culturally programmed similarity in the ways in which people will react to "stressful" life events, but that people will in general variously interpret that event, and given their available coping strategies will display a wide range of qualitatively and quantitatively different reactions. The authors assert that measures such as the Life Events Checklist do not take these individual factors into account. This is precisely the position of the present author. It is predicted that persons within some balance range of experience will cope better (i.e., exhibit fewer extreme stress reactions) than those with an extreme experience imbalance, given equal and relatively moderate levels of external stressors (as so defined in the ordinal and weighted manner on the Life Events Checklist). Those within the balance range should be able to better utilize a variety of coping strategies, such that stressor events are made non-threatening in a faster and more efficient fashion when compared with those outside the balance range. This is posited to be due to their ability to variously control, act, reflect, and express emotion; thus neutralizing potentially stressful...
events. It might be expected that with greater numbers of external stressor events that a person within the balance range would also exhibit extreme stress reactions, but that they may be able to regain a sense of control faster and more efficiently than those with an experience imbalance. That which was fielded as a criticism of the Life Events Checklist by the Dohrenwends makes the same instrument especially suited for the task of aiding in the assessment of the phenomenological model.
Description of Analyses

Presented in this section is a discussion of the procedures for deriving the dimensions of internality-externality and objectivity-subjectivity from the EPI and the MBTI.

Calculation of Objectivity - Subjectivity and Internality - Externality Scores. The specific procedures for scoring the MBTI and the EPI for objectivity-subjectivity and internality-externality are now presented.

All subscales on the MBTI were converted to standard scores. This conversion allowed for the combination and comparison of the scale scores without the influence of heterogeneous variances. Objectivity-subjectivity is defined by the sum of the feeling and intuiting standard scores subtracted from the sum of the thinking and sensing standard scores, with this quantity being divided by the sum of the thinking, sensing, feeling, and intuiting standard scores for each individual. This calculation is presented in mathematical form below.

\[ \frac{((T+S) - (F+I))}{(T+S+F+I)} \]
Individual subscales are examined relative to the other persons in the sample, the subscales are described in terms of standard scores. These standard scores are then combined in a form that describes their relative balance for the individual. Thinking and sensing standard scores (objectivity) are compared to feeling and intuiting standard scores (subjectivity). The objectivity-subjectivity score that results describes an individual's relative preference for subjective or objective experiences. This score is thought to roughly reflect the magnitude of one's relative preference for objectivity or subjectivity, describing an approximate average of one's summed experiences over some unspecified period of time. This score describes the entire range of the objectivity-subjectivity axis. A score of zero expresses an equal preference for objective and subjective ways of experiencing.

The use of the function types to describe objectivity and subjectivity has been suggested by Hinkle (1923) and Welsh (1975). In terms of the present quadrant classification system the thinking function represents the objective-internal quadrant, the sensing function represents the objective-external quadrant, the intuition function represents the subjective-internal quadrant, and the feeling function represents the subjective-external
quadrant.

Introversion and extroversion raw scores were also converted into standard scores, and then examined for relative preference within the individual. Internality-externality on the MBTI is defined as the introversion standard score subtracted from the extroversion standard score, with this quantity divided by the sum of the introversion and extroversion standard scores for an individual. The mathematical calculation is presented below.

\[
\frac{(E-In)}{(E+In)}
\]

This score can describe the entire range of the internality-externality axis. Once again a score of zero would represent a roughly equal preference for internal and external experiencing.

Introversion-extroversion on the MBTI tends to neglect the cognitive aspects, and emphasize general sociability (or lack thereof) of both preferences (Carlyn 1977). As such, using one's introversion-extroversion score to represent this study's internality-externality is not entirely sufficient. Introversion-extroversion is used as a rough estimate of internality-externality, given the lack of an suitable alternative.
Using the EPI, one's relative objectivity-subjectivity will be estimated from the stability-neuroticism score. Stability is treated as roughly equivalent to objectivity, with neuroticism describing subjectivity. The stability-neuroticism score is expressed in terms of percentile norms, where high scores are indicative of neuroticism. In order to make the neuroticism-stability centile score compatible with relative preference scoring the following procedure is implemented. 50 is subtracted from each score. This re-scaled neuroticism-stability score is converted to a standard score, relative to the sample values. These scores are then multiplied by -1 in order that stability (objectivity) is now represented by positive scores (as is the case in MBTI scoring). The result is an estimation of one's relative objectivity-subjectivity, where negative scores represent a subjective preference, and positive scores represent an objective preference.

Neuroticism is not exactly equal to subjectivity, however. The present author supposes that there are also a number of objective disorders that are possible and should be distinguished. Using Eysenck's term it would seem possible that an individual could be too stable, rigid in one's manner of coping to a pathological degree. Whether objectivity-subjectivity as measured on the MBTI will sort
these individuals out is an open question. If this study finds a significant number of individuals who score high on objectivity who also report greater distress, there would be tentative support for this notion. Objective pathology may fall on the neurotic (subjective) end of the EPI stability-neuroticism dimension, and thus may not be distinguishable. Neuroticism may actually represent a general maladjustment and anxiety factor.

Eysenck's introversion-extroversion score was used to estimate one's relative internality-externality. Introversion-extroversion is also expressed in centile scores, with high scores representing a more extroverted attitude. One's relative internality-externality is calculated by taking one's extroversion centile score, subtracting 50 from it, and converting it into a standard score relative to the sample. In this case a positive score represents an external preference, and a negative score represents an internal preference.

For those persons, using either scoring scheme, who fall on the axis that separates two quadrants, a random assignment to one of the two adjacent quadrants was done.
Procedures for Analysis.

This section presents the specific predictions and hypotheses in regards to the measurement instruments employed. The order in which these sections are presented will be paralleled in the 'Results/Discussion' section.

Assessment of Order Effects. To assess the extent to which the different orders of instrument presentation may have differentially influenced subjects' responses, ANOVAs were calculated for the raw score totals of each inventory's scales and subscales, using order (with a total of 5 orders) as the between groups variable. Likewise, ANOVAs were also calculated for objectivity-subjectivity and internality-externality scorings by both EPI and MBTI scorings to look for order effects.

Assessment of Sex Differences. In order to examine whether males and females differed in their manner of response, ANOVAs (using sex as the between groups variable) were calculated for the raw score totals of each inventory's scales and subscales, and objectivity-subjectivity / internality-externality as scored by the EPI and MBTI. No specific predictions are made for sex differences. While some sex differences are
expected, sex differences in and of themselves are not particularly important in regards to the propositions of the study. As such, sex differences are presented in the methods section of this paper for the reader's information, and are not commented on extensively.

Comparison of MBTI and EPI Coordinate Scorings It should be possible to assess convergent validity for this study's novel use of the MBTI scores from the EPI. Because of the conceptual similarities between the dimensions of 1) objectivity-subjectivity and stability-neuroticism, and 2) internality-externality and introversion-extroversion, it is expected that persons in a particular quadrant as per the scoring of one inventory, should be placed in the same quadrant using the other inventory. This was assessed using a Z test and an examination of the proportion of like placements by the two instruments. The extent of convergence may be contaminated by equating neuroticism with subjectivity. The convergence between the two measures in their ability to similarly place subjects into quadrants could be diminished.
Analysis of Deviation from the Origin. In the multiple regression equation objectivity-subjectivity and internality-externality are the two predictor variables. Overall level of stress, as measured by the Index of Psychosomatic Stress is the dependent variable. Multiple regressions were done for both of these predictor variables as measured by the MBTI and the EPI. In that these predictor variables reflect varying degrees of deviation from some balance point (i.e., the origin), then the larger absolute deviation scores are predicted to be associated with higher stress scores. Multiple regressions examining directional deviation were also calculated. Additionally internality-externality and objectivity-subjectivity were individually regressed on the overall level of stress for both scoring methods.

LEC and Deviation from the Origin In additional multiple regressions a third predictor variable was added into the calculation. This third variable is the Life Events Checklist. If the Life Event Checklist adds to prediction, then those in the balance range of the coordinate system would report fewer outside stressors (if the relationship is found to be positive). This would imply that as one is confronted by threats from situational happenings that one may emphasize their already existing
pattern of functioning in an attempt to cope with that stressor. But one would also experience stress as a result of one's coping attempt. This state of affairs would be predicted by Shapiro. If the Life Events Checklist does not add to prediction then those near the origin of the coordinate system (i.e., those within some balance range) would be experiencing roughly equal numbers of life stressors as those more extreme in the dimensions of internality-externality and/or objectivity-subjectivity. This would also suggest that those persons within proximity to the origin would be experiencing less stress, and are probably coping with the situational stressors more efficiently. This second result is predicted by the phenomenological model. If the model functions as it has been described, then the Life Events Checklist should not add to the prediction of overall level of stress. This is in partial opposition to what Shapiro might predict. Shapiro's hypothesis involving the accentuation of one's already existing pathology in response to threat may hold more for those having an experience imbalance than those within some experience balance range.

If absolute deviation from the origin of the coordinate system is not significantly related to greater distress, then the notion of a healthy balance range would not be supported. Should the idea of healthy balance range
not be supported, then the implications just stated in regards to the LEC cannot be assessed, as they are made on the assumption of the existence of a healthy balance range.

**Quadrant Analysis.** The forementioned multiple regressions were calculated individually for each quadrant, in terms of absolute deviation from the origin, and objectivity-subjectivity and internality-externality coordinate scorings (using both EPI and MBTI scorings). These regressions were included to examine the extent to which individual quadrants may uniquely relate to stress and distress. No specific predictions are made in regard to these regressions.

**Analysis of Inner 50% vs Outer 50% of Coordinate System.** Given the exploratory nature of this study a number of other regressions were also completed. A multiple regression was calculated for the inner and outer 50% of each quadrant, in reference to the origin. The inner and outer 50% of the scores in reference to the origin in terms of absolute deviation were also calculated.

The analysis of the inner/outer 50% of the coordinate system served as another check on the viability of the healthy balance range notion. That is, if the subjects
scoring in the inner 50% are significantly better adjusted than those scoring in the outer 50%, then there would be some support for the balance range notion. This calculation was included as the analysis of absolute deviation through the multiple regressions may not have picked up on the same qualities of the balance range (as defined by the college sample), as would the analysis of the inner/outer 50%.

**Quadrants and the MCMI.** In order to assess the extent to which various specific pathological indicators are associated with individual quadrants, an unequal-N ANOVA was done for each of the MCMI scales for each quadrant. For the scales that are significant as per quadrant membership a Newman-Keuls multiple range test was calculated to determine the extent to which certain quadrants are distinctly related to that indicator of pathology.

Scales 1-Schizoid (asocial) and 2-Avoidant are predicted to be most associated with persons in the internal objective and subjective quadrants. Scales 3-Dependant, C-Borderline, and N-Hypomania are predicted to show elevations in the subjective-external quadrant. Scales 4-Histrionic and 5-Narcissistic are predicted to be associated with the external objective and subjective
quadrants. Scales 6-Antisocial (aggressive), 7-Compulsive, and 8-Passive Aggressive should be related to those scoring in the objective-external quadrant. Scales S-Schizotypal (Schizoid), P-Paranoid, SS-Psychotic Thinking, CC-Psychotic Depression, and PP-Psychotic Delusions should be associated with the internal-subjective quadrant.

Scales A-Anxiety, and D-Dysthymia are predicted to relate to overall level of experience imbalance, and should be equally represented in the individual quadrants. No predictions are made in regards to scales H-Somatoform, B-Alcohol Abuse, and T-Drug Abuse. The extent to which these predicted relationships are established by the data will help to determine the degree of construct validity of the phenomenological model as currently measured and formulated.

The EPI and the MBTI were both used to assign subjects to quadrants as per scorings for objectivity-subjectivity and internality-externality, in the assessment of the relationship of quadrant membership to MCMI scale elevations.
Results/Discussion

Order Effects.

The counterbalanced orders of inventory and scale presentations did not differ significantly. Only one scale showed an effect of order (EPI Neuroticism-stability, $F(4, 222) = 3.31, p < .05$). Given a large number of such assessments it is not unusual for a small number of tests of significance to prove significant due to chance. The order effect noted on the EPI is treated as such an event. All orders of presentation are combined in the subsequent analyses.

Sex Differences.

Several sex differences between scale scores and inventories were present. Females had significantly higher scores on the IPS ($F(1, 228) = 15.6, p < .01$), EPI neuroticism-stability ($F(1, 228) = 8.16, p < .01$), MBTI relative subjectivity ($F(1, 228) = 23.73, p < .01$), MBTI relative externality ($F(1, 228) = 5.62, p < .05$), MBTI feeling ($F(1, 228) = 29.13, p < .01$), and MBTI extroversion ($F(1, 228) = 5.71, p < .05$). Males had significantly higher scores on MBTI thinking ($F(1, 228) = 48.46, p < .01$), and MBTI introversion ($F(1, 228) = 5.11, p < .05$).
On the MCMI scales females scored significantly higher on Anxiety ($F(1, 228) = 6.62, p < .05$), Somatoform ($F(1, 228) = 14.79, p < .01$), Borderline ($F(1, 228) = 6.39, p < .05$), and Narcissistic ($F(1, 228) = 4.78, p < .05$).

In general the women in this sample reported being somewhat more outward oriented, and subjectively attuned than men. The women admitted more freely to distress, and were slightly more egotistical than the men. No specific sex differences were predicted in this study. The sex differences that were found are presented to further describe the sample. As they do not systematically relate to the purposes of this study sex differences will not be commented on extensively.

Comparison of MBTI and EPI Coordinate Scoring.

For 40% of the subjects the MBTI and the EPI placed subjects in the same quadrant. If quadrant placement were a random event, 25% of the subjects would be placed in the same quadrant. Like quadrant placement was 15% better than chance. When compared with the chance event the MBTI and the EPI significantly placed subjects in the same quadrant better than chance ($Z = 5.219, p < .001$). 72% of MBTI and EPI scorings were the same for internality vs externality ($Z = 6.6293, p < .001$), while only 43% of quadrant
placements were the same for objectivity vs subjectivity (Z = -2.1093, ns). This last finding is also reflected in the correlations between the objectivity and subjectivity coordinates as calculated by the two instruments (Table 1). The correlation between the internality-externality coordinates for MBTI and EPI scorings was 0.599 (df=226, p<.005, r-squared = .36). The correlation between the objectivity-subjectivity scorings for MBTI and EPI scorings was 0.142 (df=226, p<.025, r-squared = .02). Thus there was significant similarity between the way that the EPI and MBTI placed persons along the internality-externality dimension, and somewhat less similarity of placement along the objectivity-subjectivity dimension.

Less than 50% of the placements in the individual quadrants were the same for both MBTI and EPI quadrant placements (internal-subjective - 42%, internal-objective - 44%, external-subjective - 38%, external-objective - 40%). The EPI coordinate scorings placed roughly equal numbers of people in each quadrant, while MBTI scorings did not (see Tables 2 and 3 for quadrant sizes for the EPI, and MBTI quadrant scorings). The subjective-external quadrant was disproportionately represented by MBTI scoring (90 subjects for MBTI scoring, and 65 subjects in the same quadrant using EPI scoring). The disproportionate placement would certainly account for some of the dissimilarity in quadrant
placement overall.

As predicted the EPI objectivity-subjectivity scores (as calculated from the EPI neuroticism-stability score) were correlated to a greater extent to measures of distress than were the MBTI derived objectivity-subjectivity scores (with the IPS $r = -0.492$ ($df = 229$, $p < 0.005$) for EPI objectivity-subjectivity, and $r = -0.211$ ($df = 226$, $p < 0.005$) for the MBTI objectivity-subjectivity). The EPI objectivity-subjectivity appears to be measuring something different than the MBTI objectivity-subjectivity, and part of what the EPI measures that the MBTI does not is general distress.

Deviation From the Origin.

Increasing absolute deviation from the origin was not associated with increased stress for either the MBTI coordinate scorings ($F(2, 227) = 0.66$, ns), or EPI coordinate scorings ($F(2, 224) = 0.43$, ns). The relationship between stress and the dimensions of internality-externality, and objectivity-subjectivity appears to be a unidirectional function (see appendix D for the regression equations). Subjectivity and externality are both associated with higher distress (as defined by the IPS) in the multiple regressions for both the MBTI.
coordinate scorings \( F(2, 227) = 5.66, \ p < .01, \ r^2 = .047 \), and the EPI coordinate scorings \( F(2, 224) = 38.23, \ p < .01, \ r^2 = .255 \). Although both significant, the EPI coordinate scorings account for more total variance than the MBTI coordinate scorings.

Analyses did indicate minor differences in the functional relationships for men and women in regards to objectivity-subjectivity, internality-externality, and distress. In general extroversion was associated with less distress for men and introversion was associated with less distress for women in the regression equations for the separate sexes (see appendix D). Differences in magnitude of the relationships appear to be mainly a function of more women clustering in the subjective quadrants, the subjective-external quadrant in particular. Subjectivity in general was related to a greater tendency to report distress, regardless of sex. For men the correlation of the IPS was \(-.409 \) (df = 95, \( p < .005 \)) for EPI scoring of objectivity-subjectivity, and was \(-.156 \) (df = 96, ns) for MBTI scoring of the same dimension. For women the correlation of the IPS with objectivity-subjectivity using EPI scoring was \(-.516 \) (df = 127, \( p < .005 \)), and using MBTI scoring was \(-.138 \) (df = 129, ns). The correlation of the IPS with internality-externality was not significant for men using either scoring system (EPI: \( r = 0.00 \), MBTI: \( r \)
For women internality-externality was significantly correlated with the IPS using EPI scoring \((r = 0.231, \text{df} = 127, p<.025)\), but not for MBTI scoring \((r = 0.073, \text{df} = 129, \text{ns})\).

The basic hypothesis that balance is related to well being is not supported by this data. Instead it was found that introversion for women (albeit for EPI scoring only), extroversion for men (extroversion was functionally but not significantly related to distress, however), and objectivity for men and women were associated with greater well being. The notion that a healthy balance range exists is not supported by these results.

Objectivity-subjectivity from both the MBTI and EPI scorings were more predictive of distress on the IPS than was internality-externality on either instrument. When EPI objectivity-subjectivity was individually regressed on IPS scores it accounted for 24.4% of the variance \((F(1, 225) = 72.49, p < .01)\), whereas EPI internality-externality only accounted for 1.7% of the variance \((F(1, 225) = 3.89, \text{ns})\).

Individually regressed on IPS scores MBTI objectivity-subjectivity accounted for 4.4% of total variance \((F(1, 228) = 10.60, p < .01)\), whereas MBTI internality-externality accounted for only 0.6% of the variance \((F(1, 225) = 1.29, \text{ns})\). Given that the MBTI and EPI objectivity-subjectivity dimensions had a lower
correlation ($r = 0.142, df=226, p<.025$), it is interesting that this dimension on both instruments was most effective in predicting distress. The EPI objectivity-subjectivity's better predictive ability is in part explainable by its correlation with general distress, as the neuroticism-stability scale from which it was derived was developed to get at general dysfunction (i.e. neuroticism). MBTI and EPI scorings of objectivity-subjectivity do appear to be measuring something in common. At the very least they might tap the response styles of people with certain cognitive styles. That is to say that perhaps persons with a subjective cognitive style are more willing to admit distress and pathology than are persons with an objective cognitive style (who probably engage in more denial). If, though, the responses of subjects do reflect their experience of the world, then it might be posited that subjective persons do experience more distress, and that their subjective style is in some sense dysfunctional. The subjective style might be relatively more incompatible with a sense of well being than for those with an objective style, in that subjective people possibibly have less control over their circumstances due to the quality of their percepts - percepts that are less discrete and not as amenable to prospective manipulation. As such, subjective individuals would be not as able to remediate troubling aspects in
their experience as would objective individuals. If this latter state of affairs is true, then one might wish to instill objectivity into the repertoire of one's disturbed clients. If the former possibility is true, then there might be disorders of the objective that are not as apparent as the disorders of the subjective, due to defensive disguise. It is not possible to determine or deny the existence of objective disorders within the context of the present study.

**LEC and Deviation from the Origin.**

The correlation of the IPS distress measure and the LEC measure of situational concomitants of stress was 0.331 (df=227, p<.005). When the LEC was added to the prediction equation with EPI objectivity-subjectivity and EPI internality-externality more variance was accounted for when compared with its absence (r-squared = .308, F(3, 222) = 32.87, p < .01). The LEC also added to prediction when included in the regression equation with MBTI objectivity-subjectivity and internality-externality (r-squared = .144, F(3, 224) = 12.5, p < .01). See appendix D for the regression equations. It was predicted that the LEC would not add to the prediction of distress if distress were a function of absolute deviation from some balance of experience (as defined by absolute deviation
form the origin). If the LEC added to the prediction of distress, and distress was related to disproportionate use of defensive style, then it was stated that the results would be supportive of Shapiro's accentuation hypothesis. As it turns out distress was not related to experience imbalance, or a disproportionate use of stylistic defense (as defined by absolute deviation from the origin). These notions are thus difficult to compare for veracity. It is possible that as one becomes threatened one becomes more subjective in style, or that as one's objective defenses break down that one tends to become more subjective, or will resort to using subjective defenses. Neither of the predictions involving the influence of situational concomitants to stress were born out in the data, and the possible relationships outlined concerning situational concomitants are speculative.

**Quadrant Analysis.**

The subjective quadrants as measured by the EPI were significantly more predictive of distress than were the objective quadrants ($F(3, 223) = 14.71, p < .01$, mean internal-subjective (IS) = 32.4, mean external-subjective (ES) = 34.5, mean internal-objective (IO) = 26.6, mean external-objective (EO) = 27.1). Quadrants as measured by the MBTI were not differentially related to distress as
measured by the IPS ($F(3, 226) = 2.02$, ns, mean IS = 30.4, mean ES = 31.6, mean IO = 27.9, mean EO = 29.4). In order that subsequent analyses not be confounded by the EPI's objectivity-subjectivity correlation with general distress, the EPI coordinate scorings are excluded from the rest of the quadrant analyses.

None of the quadrants were significantly predictive of the IPS when the objectivity-subjectivity and internality-externality scores (or the absolute values of these scores) were multiply-regressed on this measure of general distress (for the sake of simplicity these $F$-ratios are not reproduced in this paper). That would suggest that the quadrants themselves do not individually or differentially relate to general distress, and that the experiential styles represented by these individual quadrants are not linearly related to distress. This non-finding may be related to the relatively low relationship that is present when the combined quadrants are analyzed. It also indicates that certain quadrants are not disproportionately influencing the relationship between the dimensions and distress.
Inner 50% vs. Outer 50%.

Once again only the MBTI was used to assess whether the inner half of the coordinate system was different than the more deviate half of the coordinate in terms of reported distress. The inner 50% of the coordinate system was not significantly less distressed than the outer 50% of the coordinate system (mean IPS inner 50% = 30.3, mean IPS outer 50% = 30.1). Thus the prediction that the outer 50% should report greater distress due to disproportionate stylistic preference than the inner 50% (who should have a greater range of coping styles available to them to dissipate distress more efficiently), was not supported by the data. Again the notion of a healthy experiential balance was not supported. Additionally, the inner and outer 50% of each individual quadrant were not significantly different.

The Quadrants and the MCMI.

Both EPI and MBTI coordinate scorings were used in the analyses that examined the relationship between quadrant membership and mean MCMI scale elevation. A Newman-Keuls multiple range test was done for each of the mean MCMI scale scores to determine the extent to which one quadrant was significantly associated with a particular measure of
psychopathology or duress (see Tables 2 and 3 for the means, standard deviations, F-ratios, and Newman-Keuls multiple range tests for the EPI and MBTI coordinate scorings, respectively). A prediction was said to be confirmed if the relevant quadrant mean was significantly higher than all the other scales, or was significantly higher than all scales not predicted to be similarly elevated (represented by '+' in Tables 2 and 3). A prediction was said to be partially confirmed if a quadrant was predicted to be highest on a particular MCMI scale was second highest but higher than the other quadrants on that scale, or was not significantly different than another quadrant that was not predicted to be highly related, but where both of these quadrants were significantly higher than the other quadrants on that scale (represented by '+/-' in Tables 2 and 3). A prediction was said to be disconfirmed if it did not meet the criteria for either whole confirmation or partial confirmation. (represented by '-' in Tables 2 and 3).

For the EPI coordinate scorings 8 predictions were confirmed, 4 partially confirmed, and 10 were disconfirmed. For MBTI coordinate scorings 9 predictions were confirmed, 3 were partially confirmed, and 9 were disconfirmed. There was a high degree of similarity between the patterns of confirmation, disconfirmation, and partial confirmation for
EPI and MBTI coordinate scorings. For only six of the scales did the confirmation of prediction differ, with three of these differences involving the case where one scale was partially confirmed, and three of these differences involving the situation where one prediction was clearly confirmed, and the other clearly disconfirmed. This correspondence between scoring systems provides some evidence for the phenomenological model as currently formulated, and provides valuable information for modifications.

MCMI scales differed significantly by quadrants for 75% of the scales (30 of 40 scales (20 MCMI scales X 2 scoring methods)) had F-ratios significant at .05, .01, or less).

The following paragraphs summarize the results of the quadrant/MCMI analyses. Refer to Tables 2 and 3 for a presentation of the relevant means, F-ratios, and significant differences among means.

There is some evidence for objective disorders from the analysis of the MCMI scales by quadrants. Compulsiveness (obsessive-compulsive personality disorder) was associated with the internal-objective quadrant (EPI scoring), and anti-social (antisocial personality disorder) was associated with the external-objective quadrant (using
MBTI coordinate scoring). These findings would be consistent with the phenomenological model's conceptualization of Shapiro's neurotic styles. The current model's conceptual treatment of Shapiro's paranoid is not as clearly confirmed. Only one scale for one coordinate scoring was significantly related to quadrants for the paranoid. The paranoid scale (paranoid personality disorder) using MBTI coordinate scoring was significantly related to the internal and external subjective quadrants (the current model predicted that paranoia would be associated with the internal-subjective quadrant only). Shapiro's hysteric style (as defined by the histrionic scale on the MCMI) was significantly related to the external subjective and objective quadrants. This relationship was predicted for the histrionic scale as measured by the MCMI, but theoretically was predicted to be only associated with the external-subjective quadrant in a conceptualization of Shapiro's hysteric style. Thus it seems reasonable to incorporate Shapiro's constructs into the present model as was previously in this paper.

Schizoid, avoidant, schizotypal, and psychotic thinking scales were related to internality on the MBTI. Histrionic, narcissistic, mania, and drug abuse were related to externality using MBTI coordinate scoring. Anxiety, and dysthymia scales were significantly lower for
persons in the external-objective quadrant (MBTI scoring).

Histrionic, narcissistic, and drug abuse scales were related to the external quadrants for EPI coordinate scoring. Passive-aggressive, schizotypal, borderline, anxiety, dysthymia, psychotic thinking, and psychotic depression were associated with subjective classification on the EPI. Paranoid, mania, and alcohol abuse scales were significantly elevated for the EPI quadrant classification of external-subjective.

Once again it can be seen that the use of the EPI neuroticism-stability scale to estimate objectivity-subjectivity is related to a greater extent to indicators of psychopathology than is objectivity-subjectivity as defined by the MBTI.

There is an apparent lack of the thought disorder scales falling specifically in the subjective-internal quadrant. This might be related in general to the relative normality of the population sampled, in that the extremes of disproportionate phenomenological experience were probably not tapped and may not be proportionally present in those persons who are less extreme. Subjectivity was generally related to paranoia, and thought disorder - like scale elevations on the MCMI (especially using EPI scoring). Thus there appears to be some tentative, but not
overwhelming, support for the present conceptualization of the internal-subjective quadrant (or subjectivity in general) and its relationship to thought and perceptual disorganization.

There was some concern that the MCMI would not be appropriate for use with college students in that it was designed for use with a clinical population. Low baserate scores have not been extensively empirically investigated, and thus interpretation is risky. Many of the average baserate scores for individual quadrants on the MCMI were at or near the level of clinical presence of the syndrome, or personality disorder. This is not to suggest that the subjects in this study are indeed all diagnosable on DSM III as a function of their specific significant elevations. That the elevations made sense in the context of the phenomenological model adds some validity (albeit somewhat circular) for this use of the MCMI. Indeed the results of using a non-clinical population within framework of the phenomenological model may provide some interpretive direction for lower elevations on the MCMI, and/or suggest some possible understanding of the profiles of non-deviates. Specifically such interpretations might involve descriptions of cognitive styles related to certain scale(s) elevations, and might suggest what form a normal individual's psychopathology would take if that
individual's defenses were to be stressed or otherwise broken down. It should be emphasized, however, that these usages are just speculative at this time.
Summary

This study has demonstrated tentative confirmation for certain aspects of the phenomenological model in its current formulation. The use of the MBTI to define objectivity-subjectivity was shown to be coherent and reasonable when compared with its measurement on another instrument (EPI). It appears to measure a dimension that has features descriptive of what objectivity-subjectivity was said to include. The measurement of objectivity-subjectivity using MBTI subscales (thinking, sensing, feeling, and intuiting) is predictive of distress (with subjectivity being positively related to distress), but only in a statistical sense. The measurement of objectivity-subjectivity should be refined before further research on the phenomenological model is undertaken. One major difficulty in devising a measure for objectivity-subjectivity is the finding of an appropriate standard from which one could assess construct validity (not to mention the difficulty of finding other methods of measuring objectivity-subjectivity in a multitrait-multimethod analysis). The use of the EPI to assess the concurrent validity of MBTI scorings was shown to be inadequate due to the EPI's neuroticism-stability association with general distress. Perhaps a scale that
were to be developed independently of these two instruments would be the best approach.

Related to the problem of measuring objectivity-subjectivity is the possibility that persons of either an objective or subjective bias may have different response bias tendencies. It seems a plausible explanation that the objective persons report less distress because they generally try to feel as though they have control, and would thus deny the existence of the more obvious manifestations of malaise when asked. A question such as "When trying to complete your tasks in a given day do you ever get 'stressed-out'?", seems to be a query that an objective person might feel comfortable answering in the affirmative. Such a question does not take control away from the person by making them admit defeat, but might enable them to relate the phenomenological discomforts that trying real hard might encompass. The IPS used in the current study, using this argument, did not allow objective persons to safely admit the distress related to their objective style, in that it would have required that these subjects admit to ineffectual control of their circumstances. This might account for the negative relationship that was found between objectivity and stress. A measure of distress that assesses possible objective manifestations of malaise should included in future
research in this area to examine this possibility. Hopefully such a measure could be found or otherwise developed without fallaciously establishing the relationship between objectivity and distress.

Internality-externality was similarly measured by both the EPI, and the MBTI. This dimension does not pose the same problems as was the case with objectivity-subjectivity. Its status as a coherent construct seems fairly well established. Yet objectivity-subjectivity (as measured by the EPI and the MBTI) was significantly related to a measure of distress, and internality-externality was not. It might be possible to collapse across internality-externality in examining the relationship between phenomenological experience and adjustment in future research.

Internality-externality becomes a meaningful part of the phenomenological model when looking at particular manifestations of psychopathology. Many of the MCMI scales were cogently related to internality-externality and objectivity-subjectivity when the dimensions are crossed and treated as categories. As such the categories of internal-objective, internal-subjective, external-objective, and external-subjective appear to be descriptive of normal stylistic processes and of pathological functioning. Various manifestations of
pathological functioning were significantly related to
certain of the stylistic processes described by the
quadrants. Thus it seems reasonable to speculate that
normal functioning and pathological functioning share
similar phenomenological processes in many instances. It
may indeed be the case that people will manifest the
pathology that is most similar to their normal stylistic
experience when they decompensate. That is to say that
people may accentuate their already existing pattern when
trying to cope with difficult to manage situations. Once
again this is but a speculation that was extrapolated from
the findings of this study. Many of the MCMI scales were
related to particular categories of experience, and about
half of the predictions derived from theory were confirmed.
This is an interesting finding that needs to be refined in
future research. Valuable information was obtained even in
the instances where predictions from theory were not born
out, but where consistencies in the data were apparent.
Findings such as these may help to uncover the related
stylistic processes for these unpredicted consistent
relationships (see Tables 2 and 3). This information
combined with the predicted theoretical relationships that
were confirmed might be useful in beginning eclectic
psychotherapy with an individual (e.g. the multimodal
psychotherapy of Lazarus). The therapist could establish
the stylistic mode that the client is currently comfortable
with, and then tailor interventions so as to best facilitate the transformation to the stylistic mode thought to be therapeutic for the client.

In short, the model as currently developed seems to make some sense in terms of organizing normal and pathological experience. The MCMI results provided some construct validity in this regard.

The notion of experience balance was not born out in the data. Once again this might have been due in part to a differential response bias on the part of those with either an objective or subjective style, and/or the relative normalcy of the population sampled. The latter possibility could have resulted in a restricted range such that persons of extreme experience balance were under-represented. The current study was not able to assess these possibilities, but suggests them as plausible explanations. Further research is necessary to determine the relationship between phenomenological experience and distress, and balance conceptions.

Even if the notion of a healthy experience balance was to not be supported by subsequent research, the phenomenological model as currently developed could possibly identify certain experience styles that are associated with reports of greater well being. Once this
were done, one could assess (given more highly refined tools to measure objectivity-subjectivity) one's approximate experiential style, and then try to facilitate the 'healthier' style of experience. This might be done by subtly manipulating the processes by which the client currently experiences the world to closer and closer approximations of the 'healthier' processes. This sort of logic supposes that the 'healthy' modes of experience that might be established were not an artifact of response style (i.e., reflective of defensive postures such as denial, suppression, or repression).

Some closing remarks seem in order. First of all the current study was correlational, and as such has not intended causal explanations to be implied. An experimental situation exploring causal questions might involve measuring the pre and post distress of persons of either a primarily objective or subjective orientation, when either an objective or subjective treatment were proctered. Before this type of study would be feasible various measurement issues would first have to be addressed (as stated previously).

Finally, that while there does seem to be some preliminary support for the phenomenological model as currently formulated, it should be emphasized that it is by no means firmly established. The details of how the model
may function and its practicability will require further work.
References


Forisha, B. L. (1983). Relationship between creativity and mental imagery: A question of cognitive styles?. In A. A. Sheikh (Ed.), Imagery current theory, research and application (pp. 310-339), New York: John Wiley and Sons.


Table 1

<table>
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Correlations between EPI and MBTI Coordinate Scorings, a Measure of Distress (IPS), and a Measure of Concomitants of Stress (LEC).

(** : p<.005,  * : p<.025)
Table 2

MCMI Scales by Quadrants as Defined by EPI Scoring.
(different letters in columns denote means significant at .05, F(3, 223))
Table 2 (continued)

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MCMH Scales by Quadrants as Defined by EPI Scoring.
(different letters in columns denote means significant at .05, F(3, 223))
Table 3

<table>
<thead>
<tr>
<th>Labels</th>
<th>1-Schizoid</th>
<th>2-Avoidant</th>
<th>3-Dependent</th>
<th>4-Histr</th>
<th>5-Narc</th>
<th>6-Anti</th>
<th>7-Compul</th>
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<th>9-Schizotypal</th>
<th>10-C-Border-</th>
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<tr>
<td>1</td>
<td>X=45.50 a</td>
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<td>56.58</td>
<td>63.73 a</td>
<td>62.77 a</td>
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<td>59.07 a</td>
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<td>62.04 a</td>
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<td>-</td>
<td>+,</td>
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<td>-</td>
<td>+,</td>
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MCMl Scales by Quadrants as Defined by MBTI Scoring.
(different letters in columns denote means significant at .05, F(3, 226))
Table 3 (continued)

<table>
<thead>
<tr>
<th>A-Anxiety</th>
<th>H-Somatic</th>
<th>N-Mania</th>
<th>D-Dysthymia</th>
<th>B-Alcohol</th>
<th>T-Drug</th>
<th>SS-Psychotic</th>
<th>CC-Psychotic</th>
<th>PP-Psychotic</th>
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<tr>
<td>X=66.33 a</td>
<td>62.10 ab</td>
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<td>52.62</td>
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<td>27.35</td>
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<td>11.62</td>
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| X=62.30 a | 56.87 b | 36.91 b | 56.80 a     | 51.46 b   | 50.41 a| 52.65 a      | 44.83        | 51.85        |
| n=46      |         |         |             |           |        |              |              |              |

| X=64.96 a | 66.78 a | 64.08 a | 55.04 a     | 58.62 ab  | 67.10 b| 46.94 b      | 43.68        | 48.67        |
| S=24.96   | 16.93   | 23.50   | 25.72       | 17.49     | 14.43  | 10.03        | 13.65        | 20.35        |
| n=90      |         |         |             |           |        |              |              |              |

| X=53.40 b | 57.71 b | 58.93 a | 42.34 b     | 61.98 a   | 70.60 b| 46.88 b      | 41.29        | 56.69        |
| S=24.01   | 16.60   | 24.21   | 24.34       | 15.43     | 14.69  | 9.88         | 12.47        | 21.22        |
| n=42      |         |         |             |           |        |              |              |              |

| (p<.05)   | (p<.01) | (p<.01) | (p<.05)     | (p<.05)   | (p<.01)(p<.01) | (NS) | (NS)         |

<table>
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<tr>
<th>Not Related</th>
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</table>

MCMI Scales by Quadrants as Defined by MBTI Scoring.
(different letters in columns denote means significant at .05, F(3, 226))
Figure Captions

Figure 1. Major personality axes.

Figure 2. Historical references within personality construct quadrants.

Figure 3. Balance range representation.

Figure 4. Jungian introversion-extroversion imposed upon the dimensions of internality-externality and objectivity-subjectivity.
Figure 1

[Objectivity]
Stable (Eysenck, 1970)
Non-Emotional (Kant, Wundt)*
Unimpassioned (Jordan)*
Low Creativity (Welsh, 1975)
Objective (Forisha, 1983)

[Integrity]
Introverted (Eysenck & Forisha, 1983)
Unchangeable (Kant, Wundt)*
Reflective (Jordan)*
Deep Narrow (Gross)*
Field Independent (Witkin & Goodenough, 1977)
High Intelligence (Welsh, 1975)
Simple Introvert (Hinkle, 1923)

[Externality]
Extroverted (Eysenck & Forisha, 1983)
Changeable (Kant, Wundt)*
Active (Jordan)*
Shallow Broad (Gross)*
Field Dependent (Witkin & Goodenough, 1977)
Low Intelligence (Welsh, 1975)
Simple Extrovert (Hinkle, 1923)

[Subjectivity]
Neurotic (Eysenck, 1970)
Emotional (Kant, Wundt)*
Impassioned (Jordan)*
High Creativity (Welsh, 1975)
Subjective (Forisha, 1983)

* From Eysenck, 1970.
Figure 2

[Internal-Objective Quadrant]
Introversive (Welsh, 1975)
Thinking Type (Jung, 1923)
Obsessive-Compulsive (Shapiro, 1965)
Phlegmatic (Ancient Greek)
Dependable (Vernon)*
Objective Introvert (Hinkle, 1923)

[External-Objective Quadrant]
Extroverted Type (Jung, 1923; Welsh, 1975)
Sensing Type (Jung, 1923)
Impulsive (Shapiro, 1965)
Sanguine (Ancient Greek)
Cyclothyme (Kretschner, 1925)
Social (Vernon)*
Objective Extrovert (Hinkle, 1923)

[Internal-Subjective Quadrant]
Introverted (Jung, 1923; Welsh, 1975)
Intuiting Type (Jung, 1923)
Paranoid (Shapiro, 1965)
Melancholic (Ancient Greek)
Schizothyme (Kretschner, 1925)
Unsocial (Vernon)*
Emotional Introvert (Hinkle, 1923)

[External-Subjective Quadrant]
Extroatentive (Welsh, 1975)
Feeling Type (Jung, 1923)
Hysterical (Shapiro, 1965)
Choleric (Ancient Greek)
Undependable (Vernon)*
Subjective Extrovert (Hinkle, 1923)

[Objectivity]

[Internal]
Sense of Volition
(Shapiro, 1965)
Ego Strength
(Thorne & Karni)
Average (Kant, Wundt)*
Normal (Eysenck, 1970)

[Externality]

[Subjectivity]

* From Eysenck 1970.
Appendix A

Life Events Checklist

<table>
<thead>
<tr>
<th>Value</th>
<th>Life Event</th>
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<td>1) Death of a spouse</td>
</tr>
<tr>
<td>73</td>
<td>2) Divorce</td>
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<tr>
<td>65</td>
<td>3) Marital separation</td>
</tr>
<tr>
<td>63</td>
<td>4) Jail term</td>
</tr>
<tr>
<td>63</td>
<td>5) Death of a close family member</td>
</tr>
<tr>
<td>53</td>
<td>6) Personal injury or illness</td>
</tr>
<tr>
<td>50</td>
<td>7) Marriage</td>
</tr>
<tr>
<td>47</td>
<td>8) Fired at work</td>
</tr>
<tr>
<td>45</td>
<td>9) Marital reconciliation</td>
</tr>
<tr>
<td>45</td>
<td>10) Retirement</td>
</tr>
<tr>
<td>44</td>
<td>11) Change in health of family member</td>
</tr>
<tr>
<td>40</td>
<td>12) Pregnancy</td>
</tr>
<tr>
<td>39</td>
<td>13) Sex difficulties</td>
</tr>
<tr>
<td>39</td>
<td>14) Gain of new family member</td>
</tr>
<tr>
<td>38</td>
<td>15) Business readjustment</td>
</tr>
<tr>
<td>38</td>
<td>16) Change in financial state</td>
</tr>
<tr>
<td>37</td>
<td>17) Death of close friend</td>
</tr>
<tr>
<td>36</td>
<td>18) Change to a different line of work</td>
</tr>
<tr>
<td>35</td>
<td>19) Change in number of arguments with significant other</td>
</tr>
<tr>
<td>31</td>
<td>20) Mortgage over $40,000</td>
</tr>
<tr>
<td>30</td>
<td>21) Foreclosure of mortgage or loan</td>
</tr>
<tr>
<td>29</td>
<td>22) Change in responsibilities at work</td>
</tr>
<tr>
<td>29</td>
<td>23) Son or daughter leaving home</td>
</tr>
<tr>
<td>29</td>
<td>24) Trouble with parents or in-laws</td>
</tr>
<tr>
<td>28</td>
<td>25) Outstanding personal achievement</td>
</tr>
<tr>
<td>26</td>
<td>26) Spouse begins or stops work</td>
</tr>
<tr>
<td>26</td>
<td>27) Begin or end school</td>
</tr>
<tr>
<td>25</td>
<td>28) Change in living conditions</td>
</tr>
<tr>
<td>24</td>
<td>29) Revisions in personal habits</td>
</tr>
<tr>
<td>23</td>
<td>30) Trouble with boss</td>
</tr>
<tr>
<td>20</td>
<td>31) Change in work hours or conditions</td>
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<tr>
<td>20</td>
<td>32) Change in residence</td>
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<tr>
<td>20</td>
<td>33) Change in schools</td>
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<td>19</td>
<td>34) Change in recreation</td>
</tr>
<tr>
<td>19</td>
<td>35) Change in church activities</td>
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<tr>
<td>19</td>
<td>36) Change in social activities</td>
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<tr>
<td>15</td>
<td>37) Mortgage or loan less than $40,000</td>
</tr>
<tr>
<td>15</td>
<td>38) Change in sleeping habits</td>
</tr>
<tr>
<td>15</td>
<td>39) Change in eating habits</td>
</tr>
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<td>15</td>
<td>40) Change in number of family get togethers</td>
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<td>13</td>
<td>41) Vacation</td>
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<td>11</td>
<td>42) Christmas</td>
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<td>43) Minor violation of the law</td>
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<tr>
<td>10</td>
<td>44) Single person living alone</td>
</tr>
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</table>
Appendix B

Index of Psychosomatic Stress

Many of us have times when things just don't seem right, or we don't feel so well for one reason or another. How often do each of the following happen to you? (Rate each question in terms of frequency)

[Never] 1 --- 2 --- 3 --- 4 --- 5 [Nearly all the time]

1) Do you ever have trouble getting to sleep or staying asleep?

2) Have you ever been bothered by nervousness, feeling fidgety and tense?

3) Are you troubled by headaches or pains in the head?

4) Do you have loss of appetite?

5) How often are you bothered by having an upset stomach?

6) Do you find it difficult getting up in the morning?

Rate questions 7-15 on the following scale:

[Never] 1 ----- 2 ----- 3 ----- 4 ----- 5 [Many times]

7) Has ill health affected the amount of work you do?

8) Have you ever been bothered by shortness of breath when you are not exercising or working hard?

9) Have you ever been bothered by your heart beating hard?

10) Have you ever had spells of dizziness?

11) Are you bothered by nightmares?

12) Do you tend to lose weight when you have something bothering you?

13) Do your hands ever tremble enough to bother you?

14) Are you troubled by your hands sweating so that you feel damp and clammy?

15) Have there ever been times when you just couldn't take care of things because you just couldn't get going?
Appendix C

Informed Consent

I consent to serve as a subject in this research investigation. The nature and general purpose of this experiment have been explained to me by the experimenter. Namely, I have been informed that I will be answering questions regarding my beliefs, attitudes, or behavior on several dimensions associated with my life's experiences. I understand that I may terminate my services as a subject in this research at any time I so desire, and still receive full experimental credit. I understand that my answers to these surveys will be used only for scientific research purposes without the identification of individual participants. I further realize that reasonable safeguards (such as making psychological service phone numbers available, and informing me of the nature of the study after my participation) have been taken to minimize both the known and the potential but unknown risks.

SUBJECT:

WITNESS:

DATE:
Appendix D

Regression Equations

MBTI

**Males**

\[ IPS = 27.8 - 3.32 \text{OS} - 0.51 \text{IE} \]

**Females**

\[ IPS = 31.1 - 3.08 \text{OS} + 1.40 \text{IE} \]

**Sex Combined**

\[ IPS = 30.8 + 1.09 \text{ABS-DEVIATION-OS} - 2.48 \text{ABS-DEVIATION-IE} \]

\[ IPS = 29.6 - 4.36 \text{OS} + 1.03 \text{IE} \]

\[ IPS = 25.6 - 3.64 \text{OS} + 1.01 \text{IE} + 0.0216 \text{LEC} \]

\[ IPS = 29.9 - 4.47 \text{OS} \]

\[ IPS = 30.1 + 1.39 \text{IE} \]
EPI

Males

\[ IPS = 28.4 - 3.22 \text{ OS} - 0.248 \text{ IE} \]

Females

\[ IPS = 31.4 - 4.46 \text{ OS} + 1.76 \text{ IE} \]

Sex Combined

\[ IPS = 30.3 - 0.79 \text{ ABS-DEVIATION-OS} + 0.66 \text{ ABS-DEVIATION-IE} \]

\[ IPS = 30.2 - 4.14 \text{ OS} + 0.893 \text{ IE} \]

\[ IPS = 30.2 - 0.104 \text{ OS} + 0.0819 \text{ IE} + 8.41 \text{ LEC} \]

\[ IPS = 30.2 - 4.18 \text{ OS} \]

\[ IPS = 30.2 + 1.11 \text{ IE} \]