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RELATIONSHIPS BETWEEN A MEASURE OF EGO DEVELOPMENT AND SYMPTOM PATTERNS IN ADOLESCENTS

By

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ABSTRACT

RELATIONSHIPS BETWEEN A MEASURE OF EGO DEVELOPMENT AND SYMPTOM PATTERNS IN ADOLESCENTS

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The present study was designed to assess the relationship between Loevinger's hierarchy of ego development stages, measured by the Washington University Sentence Completion Test (SCT) and symptom patterns as measured by the Minnesota Multiphasic Personality Inventory (MMPI). A total of 250 high school students between the ages of 14 and 15, 125 boys and 125 girls, served as subjects. It was hypothesized that certain symptom patterns were more prevalent at certain points of the ego development hierarchy than at others, specifically: (1) hypochondriasis and psychopathic deviance at the ego stages below conformity; (2) hysteria at the conformist ego level; and (3) obsessive-compulsiveness and paranoia at the ego stages above conformity. The existence of all these parallels except that regarding psychopathic deviance were supported by the data. One unpredicted relationship, a tendency for depression to be most characteristic of the conformist ego group, was found.

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INTRODUCTION AND REVIEW OF RELATED LITERATURE

The relationship between psychopathology and normal psychological development has played a central role in numerous psychodynamically oriented personality theories, be they psychoanalytic (Freud, 1953), neo-Freudian (e.g., Erikson, 1963; Horney, 1937; Sullivan, 1953) or ego psychological (e.g., Hartmann, 1958; Jacobson, 1964; Mahler, 1968). This conceptualization, stated in its broadest terms, is that the manner in which an individual's psychological development proceeds is intimately related to how, and how successfully, he will adjust to his social environment. The concept has proven itself to be a fertile one for theory building, as well as having many implications for the evolution and application of diagnostic and therapeutic techniques in clinical practice (Blanck & Blanck, 1974).

Loevinger's (1966) hierarchical model of ego development possesses several qualities which make an exploration of its relationship to psychopathology particularly intriguing and practical. Firstly, the primary function of ego presented in this model is a synthetic one, "the

integration of observations into a coherent frame of reference" (Loevinger & Wessler, 1970, p. 8). Ego development, therefore, represents the intersection of various aspects of psychological development, such as cognition, interpersonal relations, impulse control and character development. It is a "master trait" (Loevinger, 1966, p. 205).

Secondly, this model is the product not of a single theorist, nor of theory building alone, but of a test construction project spanning almost ten years (Loevinger & Wessler, 1970). Building upon the common elements of the models of several theorists of personality development, most notably C. Sullivan, Grant and Grant (1957), Isaacs (1956) and H. S. Sullivan (1953), a preliminary hierarchy was formulated. This hierarchy was then continuously revised, refined and expanded in light of the data collected in the process of constructing a test of ego development, the Washington University Sentence Completion Test (Loevinger & Wessler, 1970). The present version of the hierarchy (Loevinger, 1976), outlined in Table 1, is summarized below. The synopsis of each stage is followed by representative responses to the sentence completion test selected from the scoring manual (Loevinger, Wessler & Redmore, 1970).

Presocial/Symbiotic (code I-1), the first level in the hierarchy, is prelinguistic and therefore not scorable

Table 1

Some Milestones of Ego Development

Stage	Code	Impulse Control, Character Development	Interpersonal Style	Conscious Preoccupations	Cognitive Style
Presocial			Autistic		
Symbiotic	I-1		Symbiotic	Self vs. nonself	
Impulsive	I-2	Impulsive, fear of retaliation	Receiving, dependent, exploitative	Bodily feelings, especially sexual and aggressive	Stereotyping, conceptual confusion
Self-Protective	Δ	Fear of being caught, externalizing blame, opportunistic	Wary, manipulative, exploitative	Self-protection, trouble, wishes things, advantages, control	
Conformist	I-3	Conformity to external rules, shame, guilt for breaking rules	Belonging, superficial niceness	Appearance, social acceptability, banal feelings, behavior	Conceptual simplicity, stereotypes, cliches
Conscientious-Conformist	I-3/4	Differentiation of norms, goals	Aware of self in relation to group, helping	Adjustment, problems, reasons, opportunities (vague)	Multiplicity

Table 1 (continued)

Stage	Code	Impulse Control, Character Development	Interpersonal Style	Conscious Preoccupations	Cognitive Style
Conscientious	I-4	Self-evaluated standards, self-criticism, guilt for consequences, long-term goals and ideals	Intensive, responsible, mutual, concern for communication	Differentiated feelings, motives for behavior, self-respect, achievements, traits, expression	Conceptual complexity, idea of patterning
Individualistic	I-4/5	Add: Respect for individuality	Add: Dependence as an emotional problem	Add: Development, social problems, differentiation of inner life from outer	Add: Distinction of process from outcome
Autonomous	I-5	Add: Coping with conflicting inner needs, toleration	Add: Respect for autonomy, interdependence	Vividly conveyed feelings, integration of physiological and psychological, psychological causation of behavior, role conception, self-fulfillment, self in social context	Increased conceptual complexity, complex pattern toleration for ambiguity, broad scope, objectivity

Table 1 (continued)

Stage	Code	Impulse Control, Character Development	Interpersonal Style	Conscious Preoccupations	Cognitive Style
Integrated	I-6	Add: Reconciling inner conflicts, renunciation of unattainable	Add: Cherishing of individuality	Add: Identity	

Note: "Add" means in addition to the description applying to the previous level.

Note: From Ego development: conceptions and theories by J. Loevinger; copyright by Jossey-Bass, 1976.

on the sentence completion test. Divided into two phases, autistic and symbiotic, this stage involves the differentiation of self from nonself.

Impulsive (code I-2), the second stage, is so called because of the relative lack of impulse control manifested by individuals at this level, as well as a preoccupation with bodily, especially sexual and aggressive, feelings. Impulses are controlled primarily by immediate rewards and punishments in the environment, and interpersonal relations are characterized by exploitiveness, receiving and dependency.

> When they avoided me--I went home and cried.
>
> I feel sorry--for myself when I cannot get something I want.
>
> When I am with a man--I get hot.
>
> If my mother--had any money I would like to see it once in a while.

Self-Protective (code Δ) persons are capable of greater impulse control than impulsive ones, but institute this control only when it is to their immediate advantage. While people at this stage do fear being caught for transgressions, they tend to externalize blame, attributing it to others, to the situation, or even to parts of the body. Dealings with others are colored by a preoccupation with control, domination and advantage, and tend to be exploitive and manipulative in nature.

When they avoided me--I turned the tables.

What gets me into trouble is--running around with the wrong group.

When people are helpless--they expect everyone to wait on them.

Women are lucky because--they don't have to work as hard as a man.

Conformist (code I-3) individuals are characterized by an absolutistic cognitive style; issues are perceived in terms of polar opposites. Obedience to rules, superficial niceness, emphasis on the need to belong and concern with appearances rather than intentions are descriptive of the conformist's social interactions.

Raising a family--is the best thing that can happen to a girl.

When people are helpless--I like to be of assistance if possible.

My father--is a dear.

A wife should--be loving and cheerful and a good homemaker.

Self-Aware (code I-3/4) people, as the name implies, manifest a growing sense of self fundamental to the transition from group (I-3) to self (I-4) determined standards. The absolutism of the previous level is replaced by a multiplistic outlook (the ability to see alternative aspects of a situation) and feelings are more differentiated than at previous stages.

When they avoided me--I felt I had offended them.

Being with other people--is good sometimes but at other times it's not.

My main problem is--I'm too self-centered and can't settle down.

The worst thing about being a woman--is bending to public opinion.

Conscientious (code I-4) individuals are distinguished by their preoccupation with achievement, concern for responsibility, formulation of long-term goals and capacity for reflexivity. True mutuality and concern for communication color their relations with others.

The thing I like about myself is--that I always like a challenge.

I feel sorry--for people who have no real drive.

A woman feels good when--she can truly communicate with her husband.

My conscience bothers me if--I know I've done something against my standards.

Individualistic (code I-4/5) persons evince consciousness of the distinction between inner reality and external appearances. The accent placed by conscientious individuals upon moralism, responsibility and achievement is partially tempered by a growing concern with interpersonal relations and awareness of inner conflict.

Education--is a terrific experience but does not always represent what it seems to.

My father--is not easy to understand but yearns for love and companionship.

I feel sorry--for people who have hollow and mechanical relationships.

My main problem is--that I need to resolve some "strings" that hold over from childhood.

Autonomous (code I-5) people continue to relinquish the conscientious achievement orientation, supplanting it with an emphasis on self-fulfillment. The name of this level reflects the autonomous individual's respect for the independence of other people as well as an awareness of the balance between trends towards independence and interdependence in his own life. Cognitive functioning at this stage is marked by relativity and toleration for ambiguity.

> The thing I like about myself is--that I am an individual and am liked for that reason above all else.
>
> A woman feels good when--she has given of her unique self.
>
> A good mother--loves her children but gives them freedom.
>
> A woman should always--try to understand her husband's moods as best she can.

Integrative (code I-6), the final stage in the hierarchy, is probably reached by less than one out of one hundred individuals in the general population, and coincides with Maslow's (1968) concept of self-actualization.

> My father--has greatly enriched and influenced my life by his immense common sense logic and faith in the person.
>
> I feel sorry--that I can't do more for people and places and things, but refuse to try when I know it is futile.
>
> At times she worried about--money, health, the state of the world, and whether her son needed new shoes right now.
>
> The worst thing about being a woman--cannot be generalized, as one woman makes an asset of the same situation decried by another.

Note that the code designations are solely a shorthand method for referring to the ego stages. Attributing too much meaning to the numbers and symbols themselves can lead to confusion, for they were not chosen ad hoc (Loevinger & Wessler, 1970). The codes I-2, I-3, I-4 and I-5 were originally used for the impulsive, conformist, conscientious and autonomous levels. As new data were collected suggesting the existence of levels between these four, new codes had to be invented. Codes I-3/4 and I-4/5 for the self-aware and individualistic stages were chosen to indicate their position in relation to the other stages, and with the tentative supposition that they may be conceptualized as transitional stages. The code Δ (delta) for the self-protective level was borrowed from a similar stage in Isaacs' (1956) interpersonal relatability hierarchy, in which Greek letters served as labels for the stages.

A final consideration which makes the exploration of ego development's relationship to pathology particularly appropriate is that the two concepts are often confused. This tendency is so prevalent in fact that it has been repeatedly stressed by Loevinger (1966, 1968, 1973, 1976) that whatever the relationship between them may be, level of ego development and degree of adjustment are conceptually distinct.

In recent years, the propensity has been for the absence of psychopathology to be confused with the highest

level of ego development, integrative. Maslow (1968), for instance, states that "healthy people . . . are motivated primarily by trends towards self-actualization" (p. 25). He also seems to associate poor adjustment with conformity: "Certainly it seems more and more clear that what we call 'normal' is really a psychopathology of the average, so undramatic and widely spread that we don't even notice it ordinarily" (Maslow, 1968, p. 16).

This bias is probably a reaction against an earlier inclination among psychologists to equate adjustment with conformity; this misunderstanding was partly due, according to Loevinger (1966), to mistaking the latter for a polar trait rather than a milestone in a developmental sequence. This view is typified by Heilbrun's (1964) declaration that "Psychopathology represents a deviation from socially desirable standards of behavior and . . . the greater the psychopathology, the greater the deviation" (p. 385).

Regarded within the context of the ego developmental hierarchy, neither conformity (I-3) nor self-actualization (I-6) could logically serve as a criterion of mental health. If self-actualization served as a standard, then the majority of adults would be labeled pathological. Accepting conformity as a criterion of adjustment would mean that the farther an individual's development proceeds beyond that developmental level, the more pathological he becomes. A definition based on either

of these criteria would preclude the possibility of mental health in childhood.

It stands to reason that this tendency to confound ego development and adjustment would not be as prevalent unless some type of meaningful relationship did exist between them. The question naturally arises, then, of how they are related. Part of the bewilderment surrounding this problem is that the relation is usually thought of in quantitative terms. As the discussion of the arguments concerning conformity and self-actualization above illustrates, the belief that pathology universally increases or decreases at certain points on the ego development continuum is the source of the confounding. It is much more likely that "there are . . . well adjusted people at all stages" (Loevinger & Wessler, 1970, p. 7). The exception, of course, would be the adult at the presocial/symbiotic or impulsive level (Loevinger, 1968). The self-protective level presents a more difficult case, for as Loevinger (1968) notes, "These are talented and aggressive persons who come into a situation and rise in a short time to be head of the organization . . . . There is something faintly presumptuous of those of us whose success in life is much more modest to call them poorly adjusted" (p. 168). Perhaps it would be safest to say that although the probability of psychopathology may be greater among those below the conformist level, at the conformist level and beyond

the relationship between adjustment and ego development is not primarily quantitative.

An alternative possibility is that the relationship is a qualitative one, i.e., that ego level is associated with the type rather than the degree of pathology manifested by an individual. Loevinger (1976) has suggested that "there may be differences in the kind of pathology or presenting symptoms characteristic for different ego levels" (p. 427). This notion is very similar to one presented by Shapiro (1965):

> If, for example, it is possible to identify certain defense mechanisms and specific symptomatic characteristics of an obsessional kind in a given style of thinking and perception . . . (and) as is often the case, minor variations of the same style suggest other, sometimes adaptive features and traits as well . . . (then) that mode of thinking might be one factor that determines the shape or form of symptom, defense mechanism and adaptive trait as well (p. 2).

It could be argued that what Shapiro (1965) refers to as "style of thinking and perception . . . forms of functioning--ways of thinking, experiencing, and behaving" (pp. 2-3) is essentially what Loevinger describes as a "coherent frame of reference," i.e., ego level. Loevinger (1976) does, in fact, view Shapiro's conception as being very similar to her model.

One source of support for the idea of a qualitative relation is a point made by Loevinger (1966) pertaining to Meehl and Hathaway's (1946) analysis of the K (correction) factor of the Minnesota Multiphasic Personality Inventory

(MMPI). The K factor, which was developed to improve the ability of the MMPI to distinguish normals from pathological individuals, is thought to measure the proclivity to portray oneself in socially desirable terms. As Loevinger (1966) points out, this tendency is characteristic of the conformist stage of ego development, and progressively diminishes as one approaches the extremes of the developmental continuum.

The K factor, insist Meehl and Hathaway (1946), cannot by itself differentiate normals from abnormals; it functions solely as a suppressor variable, used in conjunction with the scales which measure various types of pathology (i.e., the clinical scales). However, K is not added to all of the clinical scales, and varying proportions of K are combined with the scales to which it is added. This is a reflection of the fact that K correlates to different degrees and in different directions with the clinical scales (Meehl & Hathaway, 1946, p. 548)--evidence that people at each ego level are most likely to score highest on particular scales.

More specific confirmation of this qualitative relation can be gained by comparing particular types of psychopathology, as measured by the clinical scales of the MMPI, with certain stages of ego development. Many of the parallels are striking; in several cases one senses that a

given type of pathology almost parodies a certain section of the ego development hierarchy.

Probably the most easily drawn connection is between scale 4 of the MMPI, psychopathic deviate (Pd), and lower (i.e., pre-conformist) ego levels. In a rare statement relating a given form of psychopathology to a specific ego level, Loevinger (1968) states that many people at the Δ (i.e., self-protective) level "are clearly psychopathic" (p. 169). Research investigating ego development among delinquents (Hezel, 1969) revealed that lower ego levels were associated with psychopathic delinquency factors while higher ones were associated with subcultural factors. In studying the effect of age on MMPI scales, Arronson (1958, 1960) found Pd elevations to be much more common early in life, and conjectured that these patients might "be fixated at . . . an earlier level of development" (Arronson, 1960, p. 64).

Another indication of the preponderance of psychopathic deviance among lower ego levels is that it is often connected with poor impulse control, e.g., the inability to plan ahead, low frustration tolerance, and limited inner controls (Lachar, 1974). The psychopathic style, as a matter of fact, is considered by Shapiro (1965) to be a variant of what he labels the impulsive style of functioning. Furthermore, the fact individuals scoring high on Pd "usually only care about others to the extent that they may

be used to further their personal ends" (Lachar, 1974, p. 20) is reminiscent of the exploitative and manipulative nature of persons at levels I-2 and Δ. Finally, the psychopath, like the self-protective person, tends to disown and project blame for his difficulties (Lachar, 1974).

A second pathological style which appears to be predominant among lower ego levels, hypochondriasis (Hs), is measured by scale 1 of the MMPI. The most striking similarity is between the proneness to somaticize conflict and focus on bodily functions and malfunctions of persons with high scores on scale 1 (Carson, 1969) and the I-2 individual's preoccupations with bodily feelings. For the person at the impulsive stage, "emotions may be intense, but they are almost physiological . . . the vocabulary . . . is limited to terms like mad, upset, sick, high, turned on and hot" (Loevinger, 1976, p. 16). Those with high scores on scale 1 are demanding (Gough, 1953), a trait shared by impulsive individuals (Loevinger & Wessler, 1970), for whom "people are seen as sources of supply" (p. 57). Other signs of a low level of ego development exhibited by these patients include egocentricity (Carson, 1969; Lachar, 1974) and immaturity (Lachar, 1974). Moreover, they often use their somatic complaints as a means of controlling others (Carson, 1969) and seeking sympathy (Lachar, 1974). This strategic approach to social interactions exemplifies the receptive, dependent, exploitative and manipulative

style of impulsive and self-protective persons in their interpersonal relations. It is interesting to note the apparent equation of illness with psychological discomfort in the responses of impulsive subjects to the sentence completion test. The following examples are contained in the scoring manual as categories of response:

When I am nervous, I--get sick.

When people are helpless--they feel sick.

When they talked about sex, I--get sick.

When I am with a man--I feel sick.

In many respects, scale 3 of the MMPI, hysteria (Hy), is an indicator of a form of pathology suggestive of the conformist level of ego development. Scale 3 was the only clinical scale found to consistently correlate positively with the K (i.e., correction) factor of the MMPI by Meehl and Hathaway (1946). As noted above, K is often conceptualized as the tendency to describe oneself in socially desirable terms, a trait intrinsic to the conformist's manner of functioning. Like the conformist, the individual with a high scale 3 elevation is often outgoing and visible in social relations, and these relations are often carried out on a superficial level (Carson, 1969; Lachar, 1974). Shapiro's (1965) portrayal of the hysteric as "easily influenced by another's opinions; by the pressure of real or imagined expectations; by fads, current prejudices, and excitements" sounds very much like a

definition of conformity. In addition, phrases applied to hysteria, such as bland without insight (Carson, 1969), naive (Lachar, 1974) and global, black or white (Shapiro, 1965) reflect the absolutistic and banal nature of the conformist's cognitive and affective style.

A conspicuous trait of persons scoring high on MMPI scale 7 is the exhibition of obsessive tendencies. There are numerous points of contact between this scale (psychasthenia, Pt) and the higher (i.e., post-conformist) levels of ego development. For example, the following characteristics of the conscientious level of ego development are attributed to the obsessive-compulsive style of functioning by Shapiro (1965): (a) preoccupation with achievement, "enormously productive . . . typically, intensely and more or less continuously active at some sort of work" (p. 31), "continuous sense of advancing the career, making money, writing papers, or the like" (p. 45); (b) emphasis on responsibility, "pressing themselves to fulfill unending duties, 'responsibilities' . . ." (p. 40); (c) intensive style, "more or less continuous experience of tense deliberateness, a sense of effort, and trying" (p. 31); and (d) capacity for self-criticism, "keenly aware of . . . the possible threat of criticism" (p. 39), "the obsessive-compulsive tells himself 'I should' almost continuously" (p. 34). In addition, the extreme indecisiveness of persons with elevations on scale 7 (Marks, Seeman &

Haller, 1974) seems to be related to their ability to perceive multiple possibilities in a situation. That is, it reflects a capacity for multiplistic thinking which first appears at the self-aware stage of ego development. In a study examining the relationship of ego level to coping, defense and fragmentation (Haan, Stroud & Holstein, 1973), ratings on intellectualization, a defense mechanism associated with obsessive-compulsiveness, were found to be significantly higher for subjects at the conscientious stage and above than for those at lower ego levels. It is interesting to note that among normals with scale 7 elevations males tend to be viewed as "individualistic," while females are perceived as being "conscientious" (Lachar, 1974, p. 11).

The paranoid style of psychopathology, measured by scale 6 of the MMPI, also seems to consist of several aspects of functioning dependent upon capabilities associated with the higher levels of ego development. This may be a factor underlying a series of correspondences between the paranoid and obsessive-compulsive styles observed by Shapiro (1965). One of the most prominent features detected by scale 6 is the potency of the defense mechanism of projection (Lachar, 1974). Paranoid projection also represents "externalizations of self-critical ideas or evaluations" (Shapiro, 1965, p. 96), an indication of the presence of the reflexive capacity found at the conscientious

stage and above. Haan, Stroud and Holstein (1973) found that significantly higher ratings were received by subjects at the conscientious ego level and above on the defense mechanism of projection and the delusional fragmenting reaction (also characteristic of paranoia) than individuals at lower stages of ego development. Another trait common in persons with scale 6 elevations is suspiciousness (Lachar, 1974), which expresses itself as an attempt to penetrate beneath appearances in order to discover the underlying truth (Shapiro, 1965). This is reminiscent of the distinction between inner reality and outer appearances made by persons at the individualistic stage. A major characteristic of this pathological style is what Shapiro (1965) calls the "general paranoid problem of autonomy" (p. 73), a "preoccupying concern with the defense of autonomy against external assault" (p. 83). While this may contraindicate rather than signify the attainment of the autonomous level of ego development, it does seem to indicate a move away from the conformist's concern with belonging and towards the preoccupation with individuality and independence distinctive of higher ego levels has been made. Gough, McKee and Yandell's (1955) description of high scale 6 subjects as insightful, tending to have a wide range of interests and progressive approaches, and capable of ego-involvement in various activities and making

them personally relevant is further indicative of higher ego levels.

The possible correspondences of these five clinical scales and the K scale of the MMPI with Loevinger's ego development hierarchy are explored in this study. Two additional scales derived from MMPI items, Edward's social desirability (nonoverlapping, purified Sd) scale (Adams and Horn, 1965) and Barron's (1953) ego strength (Es) scale, are also included. The Sd scale is employed as a comparison measure for K, which supposedly taps a response set determined largely by social desirability. The Es scale is used to assess a theoretical distinction between ego strength and ego development which underlies the contention that the relationship between psychopathology and ego development is primarily qualitative rather than quantitative. Barron (1953) defines ego strength as "adaptability and personal resourcefulness . . . the various aspects of effective personal functioning" (p. 327). If ego strength is the degree of effectiveness of personal functioning, and ego development is the level of complexity of personal functioning, then the tendency to equate higher ego levels with better adjustment is probably in part a reflection of the assumption that greater complexity implies greater efficiency. However, in the case of, for example, many paranoid individuals, adaptability is poor, a sign of low ego strength, but certain aspects of functioning, such as

systematized delusions, imply a capacity for considerable complexity and sophistication. It is this sort of observation which provides a rationale for the argument that neither high ego strength or good mental health can automatically be inferred from the attainment of a high level of ego development.

The omission of hypotheses concerning the remaining five clinical scales of the MMPI does not reflect any assumptions concerning their relation or lack of relation to ego development. Scale 2 (depression) and scale 9 (hypomania) were eliminated because, insofar as they measure affective states at the time of testing rather than stable traits (Lachar, 1974), they cannot be said to tap a mode of functioning. Scales 5 (masculinity-femininity) and 0 (social introversion) were excluded because they assess a dimension much closer to personality than to psychopathology. Scale 8 (schizophrenia) presents a unique case, for it represents "a general dimension of ego intactness-ego deterioration" (Lachar, 1974, p. 12). Therefore it is more relevant to ego development as defined by psychoanalytic ego psychologists (i.e., the formation of the ego as a structure, analogous to stage I-1 of Loevinger's scheme) than to the concept considered here (i.e., the evolutionary processes which the ego undergoes once it has come into existence). The deterioration of the ego cannot very well be regarded as a style of functioning.

It should be made clear that the proposal of a connection between ego level and psychopathological style does not imply a causal relationship. In all probability there is a reciprocal interaction between ego development and adjustment; this may be one of the factors which encourages conceptual confounding. Neither is it suggested that certain types of psychopathology are exhibited only by individuals within a restricted range of ego levels. It is merely contended that given forms of psychopathology are probabilistically related to specific portions of the ego development continuum.

HYPOTHESES

The present study was designed to test for the existence of a relationship between level of ego development and psychopathological style as delineated in the following hypotheses:

I. The average score on scale 4 (psychopathic deviate) of the MMPI will be higher for subjects at lower (i.e., pre-conformist) levels of ego development than for subjects at either the conformist level or higher (i.e., post-conformist) levels.

II. The average score on scale 1 (hypochondriasis) of the MMPI will be higher for subjects at lower (i.e., pre-conformist) levels of ego development than for subjects at either the conformist level or higher (i.e., post-conformist) levels.

III. The average score on scale 3 (hysteria) of the MMPI will be higher for subjects at the conformist level of ego development than for subjects at either higher or lower ego levels.

IV. The average score on the K scale (correction) of the MMPI will be higher for subjects at the

conformist level of ego development than for subjects at either higher or lower ego levels.

V. The average score on the Sd scale (social desirability) of the MMPI will be higher for subjects at the conformist level of ego development than for subjects at either higher or lower ego levels.

VI. The average score on scale 6 (paranoia) of the MMPI will be higher for subjects at higher (i.e., post-conformist) levels of ego development than for subjects at either the conformist level or lower (i.e., pre-conformist) levels.

VII. The average score on scale 7 (psychasthenia) of the MMPI will be higher for subjects at higher (i.e., post-conformist) levels of ego development than for subjects at either the conformist level or lower (i.e., pre-conformist) levels.

VIII. The average score on the Es scale (ego strength) of the MMPI will be the same for subjects at all (i.e., pre-conformist, conformist and post-conformist) levels of ego development.

METHODOLOGY

Subjects

A total of 250 high school students from a predominantly middle class, highly educated community, between the ages of 14 and 15, 125 boys and 125 girls, were recruited to serve as subjects. This age group was chosen in order to strike a compromise between holding age constant, insuring that the subjects had attained a sufficient reading level to be able to comprehend and respond to MMPI items, and working towards obtaining a substantial number of subjects in each ego level group (i.e., the pre-conformist, conformist and post-conformist sections of the ego development hierarchy). Extrapolating from the results of previous research (e.g., Loevinger & Wessler, 1970; Candee, 1974), in an average sample of college students 18 years old and over, little more than 5% could be expected to belong to the pre-conformist ego group. It was expected that among 14 and 15 year olds one would be most likely to find a relatively even distribution of subjects across pre-conformist, conformist and post-conformist ego levels (see Loevinger & Wessler, 1970, p. 50).

Instruments

The Minnesota Multiphasic Personality Inventory (Hathaway & McKinley, 1947) was utilized to measure psychopathological syndromes. Administration and scoring of this instrument conformed to the standard procedures for the 14 and 15 year old age group outlined by Dahlstrom, Welsh and Dahlstrom (1972).

Form AB 10-68 for Girls (see Appendix A) and Form 10-68 for Boys (see Appendix B) of the Washington University Sentence Completion Test (Loevinger & Wessler, 1970) was used to measure level of ego development. Subjects were instructed to complete each of the 36 sentences on these forms. The standardized instructions (Loevinger & Wessler, 1970) were read aloud once each subject had been provided with a form:

> Now I would like you to fill out this sentence completion form. You see that these are incomplete sentences. Please finish each one. Notice that there are two pages; please make sure you have completed each one (p. 138).

Responses to the sentence completion test (SCT) were rated in conjunction with a scoring manual for females (Loevinger, Wessler & Redmore, 1970) and one for males (Redmore, Wright & Rashbaum, 1974). Supplementary manuals were employed for the sentence stems "A girl has a right to--" (Browning & Holt, 1976) and "A husband has a right to--" (Coleman & Love, 1976). No manual was available for the stem "When I was younger--." This

sentence, therefore, was rated impressionistically. The manuals consist of examples of responses at each ego level for each sentence stem grouped into content category. An attempt has been made "to rationalize all empirical differences among categories in terms of theory" (Loevinger & Wessler, 1970, p. 38). Using these manuals, each of the 36 sentences is assigned an ego level, and a total protocol rating (TPR) is arrived at through the application of a set of ogive rules. For each protocol, the frequency and cumulative frequency of sentences rated at each ego level is tabulated. The ogive rules (see Appendix C) are then applied to the cumulative frequency distribution. For instance, a subject might receive the following distribution of ratings:

I-2	Δ	Δ/3	I-3	I-3/4	I-4	I-4/5	I-5	I-6	(item ratings)
o	2	1	5	12	16				(frequency)
o	2	3	8	20	36				(cumulative frequency)

Applying the ogive rules to this case, the TPR would be I-4, for there are less than 24 ratings at I-3/4.

Procedure

Administration. In all cases subjects were presented with the SCT first followed by the MMPI. Each subject was assigned a code number which served as the sole means of identifying his or her protocols. The sex, age and year in school of each subject was recorded.

Scoring. Out of the original pool of 250 SCT protocols, 75 for each sex were selected which appeared from impressionistic scanning to be most likely to produce a relatively even distribution across ego groups. SCT responses were then transcribed from the test forms and grouped by item rather than by subject in order to avoid a "halo effect" bias by raters. Three undergraduate students were trained by the experimenter to score SCT protocols. The experimenter and one of these raters scored the 75 boys' protocols; the remaining two raters scored the 75 girls' protocols. All SCT items were scored and TPRs were arrived at through the automatic ogive rules. In each case where the raters did not assign the same TRP to a subject, compromise ratings were arrived at through consultation between all four raters for each SCT item and the TPR for that subject.

Interrater reliability coefficients were computed for ego levels originally assigned to SCT protocols by raters before compromise ratings were arrived at. The correlation obtained for both pairs of raters was .79 (see Table 2).

Once the 150 SCT protocols had been scored, both raw scores and K corrected scores of all MMPI scales were obtained using the standard hand scoring stencil method as outlined by Hathaway and McKinley (1967).

Table 2

Interrater Reliability for SCT

Sex of Ss	Rater	Mean	SD	Pearson r
Boys' Protocols	A	3.147	1.049	.79
N = 75	B	3.280	1.410	
Girls' Protocols	C	4.053	1.618	.79
N = 75	D	3.360	1.322	

Statistical Analyses

Interrater reliability for the SCT was obtained by coding the impulsive through individualistic (the highest TPR assigned in this sample) stages from one to seven and applying the Pearson product-moment correlation to these coded scores.

A two factor (sex and ego development) multivariate analysis of variance (MANOVA) was performed on the following 21 dependent variables, the last 20 of which are MMPI scale scores:

(1) subject's age to the nearest month;

(2) L (lie scale) score;

(3) F (frequency scale, consisting of items rarely answered in the scored direction by normals) score;

(4) K (correction scale) score;

(5) Hs (hypochondriasis scale) score;

(6) D (depression scale) score;

(7) Hy (hysteria scale) score;

(8) Pd (psychopathic deviate scale) score;

(9) Mf (masculinity-femininity scale) score;

(10) Pa (paranoia scale) score;

(11) Pt (psychasthenia, i.e., obsessive-compulsive scale) score;

(12) Sc (schizophrenia scale) score;

(13) Ma (hypomania scale) score;

(14) Si (social introversion scale) score;

(15) K corrected Hs scale score;

(16) K corrected Pd scale score;

(17) K corrected Pt scale score;

(18) K corrected Sc scale score;

(19) K corrected Ma scale score;

(20) Sd (social desirability scale) score;

(21) Es (ego strength scale) score.

Univariate analyses were then computed for each of these 21 variables under each effect (i.e., sex, ego development, and the interaction of sex and ego development). Finally, t-tests for differences among several means were executed on the eight variables included in the hypotheses (i.e., Pd, Hs, Hy, K, Sd, Pa, Pt and Es) to compare average score on these scales for the pre-conformist, conformist and post-conformist ego groups.

These analyses were performed to evaluated differences in the absolute level of the 21 dependent variables.

However, in interpreting the MMPI, not only the absolute level of the individual scale scores, but the pattern (i.e., ordinal sequence of scales according to score) is considered. The traits associated with the scales receiving the highest scores are regarded as most characteristic of the subject, those receiving the lowest scores as least characteristic.

In order to test for differences in the pattern of the average MMPI profile for each ego group a profile analysis was carried out on the 13 basic scales (i.e., variables two through fourteen above). For this analysis all profiles were standardized by transforming raw scores using the table of "T Score Conversions for Basic Scales without K Corrections for Minnesota Adolescents Age 14 and Below" (Dahlstrom, Welsh & Dahlstrom, 1972, pp. 388-390).

RESULTS

Distribution of SCT Ratings

The distribution of ego levels obtained from the SCT is listed in Table 3. Note that this is not a random distribution but consists of the 150 protocols selected for scoring from the original 250 subjects tested.

Table 3

Distribution of SCT Scores

Sex of Ss	Pre-conformists			Conformists	Post-conformists		
	I-2	Δ	Δ/3	I-3	I-3/4	I-4	I-4/5
Boys	3	22	21	13	12	3	1
N = 75		(46)		(13)		(16)	
Girls	2	21	13	6	23	9	1
N = 75		(36)		(6)		(33)	

Multivariate Analyses of Main Effects and Interaction

Results of the multivariate analyses of the 20 MMPI scale scores and age to the nearest month are reported in Table 4. The interaction between sex and ego development

Table 4

Multivariate Analyses of Sex, Ego Development and Their Interaction

Source	df	F	p	Canonical Correlation
Ego Development	42	2.544	.00001	.63
Error	246			
Sex	21	15.517	.00001	.85
Error	123			
Ego Development x Sex	42	.453	.99861	.29
Error	246			

produced no significant effects either in the MANOVA or in the individual univariate analyses. As predicted, the effect of ego development on MMPI scores was significant ($p = .00001$); sex differences in MMPI scores were also significant at the .00001 level.

Univariate Analyses--Effect: Sex

Significant differences were found between boys' and girls' scores on nine out of the 21 dependent variables tested. Boys scored significantly higher on MMPI scales Es and Sd; girls scored significantly higher on scales D, Hy, Pt, Si, K corrected Hs and K corrected Pt (see Table 5).

Table 5

Mean Scores and Results of Univeriate Analyses for Sex Effect

Sex of Ss	Dependent Variables				
	L	F	K	Hs	D
Boys N = 75	2.800	9.840	11.427	6.827	18.733 **
Girls N = 75	2.987	9.253	11.693	8.053	21.333
	Hy	Pd	Mf	Pa	Pt
Boys	18.867 **	19.800	24.013 ***	11.920	16.747
Girls	21.520	20.053	35.667	12.493	20.173
	Sc	Ma	Si	Es	Sd
Boys	21.907	22.960	26.307 *	44.000 ***	16.627 **
Girls	22.267	21.320	29.487	37.987	14.851
	KHs	KPd	KPt	KSc	KMa
Boys	12.707 *	24.293	28.173 ***	33.360	25.227
Girls	14.253	24.707	32.080	34.200	23.680
	Age				
Boys	14.510				
Girls	14.576				

Note: In this table and those that follow, where the letter "K" precedes an MMPI scale code it refers to the K corrected score for that variable.

*$p \leq .05$. **$p \leq .005$. ***$p \leq .0001$.

Profile and Univariate Analyses--Effect: Ego Development

The profile analysis of the basic 13 MMPI scales yielded a significant difference between the three ego groups at the .0002 level. The rank order of the scales of the mean T-score MMPI profiles for each ego group with the plotted profiles themselves are presented for boys in Appendix D and for girls in Appendix E.

Sum of squares, mean squares and F-ratios of the univariate analyses of the ego development effect are listed in Appendix F. Results of the t-tests of the univariate analyses of the ego development effect pertaining to the hypotheses are reported in Appendix G.

Hypotheses 1 and 2. It was predicted by these hypotheses that scores on both the hypochondriasis and psychopathic deviate scales would be highest at the pre-conformist levels of ego development. Hypothesis 1 was supported by the results. The univariate analysis of the hypochondriasis scores, which were higher for both pre-conformist boys and girls than for those at other ego groups, was significant at the .00001 level (see Table 6). Rank order of the hypochondriasis scale in the mean MMPI profile for pre-conformist boys was 4.5 versus 6 for conformists and 10.5 for post-conformists. Only the rank order of this scale in girls' profiles yielded equivocal

Table 6

Mean Raw Scores and Univariate Ego Level Analyses on Scales Hs and Pd

MMPI Scale	Grouped Ego Levels			Significance Level
	Pre-conformist	Conformist	Post-conformist	
Hs Total (N = 150)	8.866	6.579	5.388	.001
Male (N = 75)	7.739	6.385	4.563	
Female (N = 75)	10.229	7.000	5.788	
Pd Total	20.988	19.158	18.449	.05
Male	20.391	20.154	17.813	
Female	21.514	17.000	18.758	

results, 4.5 and 4 for pre-conformists and conformists respectively, 8.5 for post-conformists.

Results of the analyses on the psychopathic deviate scale are more difficult to interpret. The univariate analysis of this scale did, as hypothesized, show pre-conformist scores to be significantly ($p = .04$) higher than at other ego level groups (see Table 6). However, for neither boys or girls was the rank order of the psychopathic deviate scale highest among the pre-conformist group. Among boys it was highest for conformists, among girls it was highest for post-conformists. It would seem that although pre-conformist subjects did score significantly higher on this scale than the other ego groups, several other MMPI scales were more characteristic of this group (see Appendices D and E).

Hypotheses 3, 4 and 5. These hypotheses stated that scores on the hysteria, correction and social desirability scales would all be highest for subjects at the conformist ego level. This was the case for all three scales (see Table 7). The univariate analyses for the correction and social desirability scales yielded significant results ($p = .00002$ and $p = .0003$ respectively). The analysis for the hysteria scale approached but did not reach the .05 level of significance ($p = .09$). However, for boys the hysteria scale appeared earlier in the profile of conformists (rank = 1) than in those of either

Table 7

Mean Raw Scores and Univariate Ego Level Analyses on Scales Hy, K and Sd

MMPI Scale	Grouped Ego Levels			Significance Level
	Pre-conformist	Conformist	Post-conformist	
Hy Total (N = 150)	20.427	21.053	19.469	NS
Male (N = 75)	19.022	20.462	17.125	
Female (N = 75)	22.114	22.333	20.606	
K Total	10.354	14.579	12.408	.001
Male	10.326	14.615	12.000	
Female	10.400	14.500	12.606	
Sd Total	14.741	17.842	16.592	.001
Male	15.913	18.308	17.313	
Female	13.200	16.833	16.242	

pre-conformists (rank = 9.5) or post-conformists (rank = 7.5). This was also true of girls' profiles, in which the hysteria scale ranked second for conformists as compared with ninth for pre-conformists and 6.5 for post-conformists. Similarly, the correction scale ranked sixth for the mean conformist profiles for both boys and girls versus thirteenth for the mean pre-conformist profiles for both boys and girls, 10.5 for post-conformist boys and 10.5 for post-conformist girls. Therefore, with the exception of the failure of the univariate analysis of the hysteria scale to reach the .05 level of significance, hypotheses 3, 4 and 5 were confirmed.

Hypotheses 6 and 7. These hypotheses, which stated that paranoia and psychasthenia scale scores would be highest for post-conformist subjects, both produced significant results ($p = .004$ and $p = .0003$ respectively), but not in the direction predicted. In both cases the highest scores were received by pre-conformist subjects (see Table 8). The rank order of these scales in the mean ego group MMPI profiles, however, suggest that paranoia and psychasthenia are more characteristic of post-conformists than pre-conformists. Ranks on the paranoia scale were 4.5, 9.5 and 4 respectively for pre-conformist, conformist and post-conformist boys, 8, 9 and 5 for girls; ranks on psychasthenia were 7, 11 and 5.5 for boys, 4.5, 4 and 3.5 for girls. Inspection of Table 8 shows that mean

Table 8

Mean Raw Scores and Univariate Ego Level Analyses on Scales Pa, Pt and Es

MMPI Scale	Grouped Ego Levels			Significance Level
	Pre-conformist	Conformist	Post-conformist	
Pa Total (N = 150)	13.232	10.053	11.327	.005
Male (N = 75)	12.913	10.000	10.625	
Females (N = 75)	13.600	10.167	11.667	
Pt Total	20.476	14.474	16.633	.001
Male	18.478	13.308	14.566	
Female	23.257	17.000	17.636	
Es Total	39.840	43.263	42.082	.005
Male	43.348	45.308	44.813	
Female	35.229	38.833	40.758	

scores on both these scales are high for pre-conformists, drop at the conformist level and rise again at post-conformist levels. Perhaps the failure of post-conformist means to surpass pre-conformist means on the paranoia and psychasthenia scales is due to the preponderance of individuals at I-3/4 among the post-conformists and the absence of subjects at the highest ego levels.

Hypothesis 8. This hypothesis stated that scores on the ego strength scale of the MMPI would not differ significantly across ego groups. For boys, those at the conformist level scores highest on this scale; among girls post-conformist subjects scored highest (see Table 8). The univariate analysis yielded a significant ego level effect at the .003 level.

Additional Results

K corrected MMPI scales. Five out of the ten basic MMPI clinical scales, hypochondriasis, psychopathic deviate, psychasthenia, schizophrenia and hypomania, normally are corrected by adding K or fractions of K to their scores. Pre-conformist subjects scored significantly higher on each of these scales than those at other ego level groups (see Tables 6, 8 and 9). Adding the appropriate K correction to the raw scores of the five scales diminished the difference across ego groups, thereby lowering the corresponding F-ratios in every case (see

Table 9

Mean Scores and Univariate Ego Level Analyses on Dependent Variables Not Included in Hypotheses

Variable	Grouped Ego Levels			Significance Level
	Pre-conformist	Conformist	Post-conformist	
KHs Total (N = 150)	14.305	14.105	11.857	.005
Male (N = 75)	13.022	13.923	10.813	
Female (N = 75)	15.886	14.500	12.364	
KPd Total	25.073	24.895	23.388	NS
Male	24.435	25.923	22.566	
Female	25.657	22.667	23.788	
KPt Total	31.012	29.053	29.061	.02
Male	28.804	27.923	26.563	
Female	34.086	31.500	30.273	

Table 9 (continued)

Variable	Grouped Ego Levels			Significance Level
	Pre-conformist	Conformist	Post-conformist	
Sc Total	26.146	15.526	17.837	.001
Male	25.043	15.846	17.813	
Female	27.829	14.833	17.848	
KSc Total	36.744	30.105	30.245	.001
Male	35.413	30.462	29.813	
Female	38.743	30.455	29.333	
Ma Total	23.488	20.053	20.694	.005
Male	24.022	19.923	22.375	
Female	22.886	20.333	19.879	
KMa Total	25.561	22.895	23.204	.02
Male	26.087	22.769	24.750	
Female	24.971	23.167	22.455	

Table 9 (continued)

Variable	Grouped Ego Levels			Significance Level
	Pre-conformist	Conformist	Post-conformist	
F Total	12.366	6.368	6.061	.001
Male	11.739	7.538	6.250	
Female	13.143	3.833	5.970	
D Total	20.890	19.474	18.816	.02
Male	19.087	19.308	17.250	
Female	23.286	19.833	19.576	
Si Total	29.864	25.105	25.694	.001
Male	27.674	25.077	23.375	
Female	32.743	25.167	26.818	
Mf Total	28.037	27.105	33.918	.001
Male	23.434	22.923	26.563	
Female	33.914	36.167	37.485	

Table 9 (continued)

Variable	Grouped Ego Levels			Significance Level
	Pre-conformist	Conformist	Post-conformist	
L Total	3.024	2.895	2.674	NS
Male	2.804	2.923	2.688	
Female	3.143	2.833	2.667	
Age Total	14.627	14.505	14.991	NS
Male	14.643	14.455	14.432	
Female	14.593	14.613	14.521	

Appendix F). This result, therefore, lends credence to Loevinger's (1966) claim that the K factor is a correction not for aquiescence or social desirability alone, but for ego development in general.

Other MMPI scales. Both the absolute scores and the ordinal ranks of the F scale for pre-conformist boys and girls were higher than at other ego groups. Scores on the depression and social introversion scales were also significantly higher for pre-conformists than for conformists and post-conformists (see Table 9). Nevertheless, the depression scale ranked more prominantly in the mean MMPI profiles for conformists, indicating that it was more characteristic of these subjects. Ranks of the depression scale were 9.5, six and 11 for pre-conformist, conformist and post-conformist boys, seven, four and 6.5 for pre-conformist, conformist and post-conformist girls. Results of the univariate analysis of the masculinity-femininity scale revealed that post-conformist subjects of both sexes obtained scores significantly farther towards the feminine extreme of the scale ($p = .0002$) than those in the conformist and pre-conformist ego groups. No significant differences were found across ego levels on the lie scale.

Age. Mean ages of the subjects in each ego level group are reported in Table 9. The univariate analysis for age yielded no significant differences among ego groups.

DISCUSSION

The overall results of this study point to a relationship between level of ego development and psychopathology which is neither entirely quantitative nor solely qualitative. The data suggest that to view this problem from either of these aspects to the exclusion of the other would lead to an oversimplification of an inherently complex issue.

Quantitative Relationships

From a quantitative viewpoint, the results clearly indicate a greater degree of maladjustment among preconformist individuals than at other ego levels. Preconformist subjects scored significantly higher on eight out of the ten basic clinical scales of the MMPI (i.e., hypochondriasis, depression, psychopathic deviate, paranoia, psychasthenia, schizophrenia, hypomania and social introversion) than either conformists or post-conformists. In every one of these cases there was no significant difference between the scores of conformists and post-conformists (see Appendices G and H); the quantitative relationship is not one of a steadily decreasing level of pathology as ego level increases, such as Maslow (1968), for example, might

have predicted. Rather there appears to be a sharp discontinuity between the degree of pathology at pre-conformist ego stages and at all those stages above the pre-conformist grouping. This observed pattern is consistent with Loevinger and Wessler's (1970) conjecture that "Probably those who remain below the conformist level beyond childhood can be called maladjusted, and many of them are undoubtedly so even in their own eyes" (p. 7).

This finding, particularly when considered in the context of the connection between socialization and the ego development hierarchy, helps to pinpoint the source of confusion of those who consider pathology to be equivalent to the deviation from socially sanctioned standards of behavior. The attainment of the conformist level of ego development is, in effect, the culmination of the socialization process, the acquisition not only of the modes of behavior perceived as appropriate by the members of one's culture but also of the rationale assumed by society to motivate that behavior. Therefore the pre-conformist adult, by definition, lacks the consensually validated modes of functioning which have often been equated with mental health. This is reflected by the fact that pre-conformist subjects' scores on the infrequency (F) scale of the MMPI, which consists of items rarely answered in the scored direction by normals, were significantly higher than those of conformists and post-conformists (see Appendix H).

Loevinger (1968) notes the paradox that many self-protective individuals are among the most successful ones in social situations. The root of this paradox probably lies in the ability of some self-protective persons to feign socially desirable behavior without understanding or being bound by the values which motivate those behaviors at higher levels. This is confirmed by pre-conformist scores on the correction (K) and social desirability (Sd) scales. Pre-conformists of both sexes scored significantly lower on these scales than conformists; pre-conformist girls scored significantly lower than post-conformists as well (see Appendix G).

Conversely, many well-adjusted post-conformists reject various aspects of socially desirable behavior because they are incongruent with their identity as individuals; but having passed through the stage of conformity they are aware of and understand the socially desirable perspective. Conformist and post-conformist people who suffer from psychopathology are cognizant of both socially desirable behaviors and the values which justify these behaviors, but are unable to act on this knowledge. It would seem, therefore, that one characteristic which distinguishes the maladjusted from the adjusted is not socially desirable behavior itself but an awareness of the values underlying that behavior and the ability to execute that type of behavior when one wishes to.

The pattern of scores on the ego strength (Es) scale across ego level groupings roughly parallels that of the clinical scales; no significant differences were found between conformist and post-conformist subjects on this scale. The only significant difference in ego strength scores was between pre-conformist and post-conformist girls (see Appendix G).

Both boys and girls in the post-conformist ego group received scores on the masculinity-feminity (Mf) scale which indicated they were more feminine than their pre-conformist and conformist classmates. On the surface this result is incongruous with evidence reported by Block (1973) that post-conformist high school students are more androgynous than pre-conformist and conformist students. The incongruity is only apparent, however, for as Carson (1969) notes about the Mf scale:

> It was originally intended to measure masculinity-femininity but is far from being a pure measure of this dimension; it is, for example, definitely correlated with education and intelligence . . . . In general, scale 5 is a measure of sophistication and aesthetic interest (p. 289).

Moreover, Dahlstrom, Welsh and Dahlstrom's (1975) review of the traits of males who score high on the Mf scale included many of the identifying marks of a high ego level:

> . . . psychologically complex and inner directed . . . value cognitive pursuits . . . derive important satisfaction from such work and achievements . . . frequently took stands on moral issues . . . showed a great deal of self-awareness . . . socially perceptive and responsive to interpersonal nuances . . .

> frequently fluent verbally, with an ability to communicate ideas clearly and efficiently . . . (p. 205).

In light of these comments concerning the Mf scale, the phenomenon of post-conformist subjects scoring in what has in the past been considered the more "feminine" end of the Mf continuum provides some insight into the true nature of this scale; but it cannot be interpreted credibly as reflecting any relationship between ego level and sex role identification. All that can be concluded with reasonable certainty is that this scale taps an area of psychological functioning intimately related to the process of ego development.

Qualitative Relationships

Fundamental to the argument that there is a qualitative relationship between pathology and ego development was the hypothesis that the K scale of the MMPI serves as a correction for ego level. The statistical analyses yielded three sources of evidence for this hypothesis: mean scores on K were significantly higher for conformists than for other ego groups; the profile analysis showed the K factor to be more prominent in the profiles of conformists than pre-conformists or post-conformists; and the addition of the appropriate fractions of K to the clinical scales diminished the mean differences between ego groups.

As predicted, hypochondriasis was most characteristic of pre-conformists, hysteria was most salient in

mean conformist profiles, and paranoia and psychasthenia were most prominent in the profiles of post-conformist subjects. Surprisingly, the one hypothesized qualitative relationship which appeared most obvious, that between psychopathic deviance and pre-conformist ego levels, was not borne out by the profile analysis (although absolute Pd scores were significantly higher among pre-conformists than at other ego groups). This finding, however, becomes more comprehensible when compared with the work of Hawk and Peterson (1974) on the relationship between the Pd scale and Kohlberg's measure of moral development. Three groups, delinquents, college students and staff members of a psychotherapy collective were administered scales L, K, and Pd of the MMPI and four of Kohlberg's Moral Judgement Situations. Members of the therapy collective scored high in moral development and delinquents scored low, with the mean score for college students falling in between those of the other two groups. Even though these three mean moral development scores were significantly different from each other, more than 50% of both delinquents and therapy collective members were classified as psychopathic (i.e., their Pd+K T scores were greater than 70). Hawk and Peterson (1974) concluded that the Pd scale measures "deviance from societal norms rather than psychopathic deviancy per se" (p. 367).

One qualitative relationship that was not predicted, a tendency for depression to be most characteristic of conformist individuals, was found. Researchers have recently begun to suspect that a strong trend towards conformity, particularly the dependency of depressives on social approval to maintain their self-esteem, plays an important role in the etiology and maintenance of this disorder (Friedman & Katz, 1974, pp. 75-78). Some evidence for this appears in an experiment by Hiroto (1974), who found that learned helplessness, an artificially elicited state analogous to depression, was more easily induced in subjects with an external locus of control than in internals. Depressives and conformists, in addition to this outer-directed interpersonal style, also share a similar cognitive style. The depressive, like the conformist, "has a tendency to make extreme absolute judgments" (Beck, 1974, p. 7) and tends to make predictions that are "overgeneralized and extreme" (p. 12). There also exists a connection between depression and hysteria, the other psychopathological style which was most salient in mean conformist MMPI profiles. Lazarus and Klerman (1969) found hysterical personality features in 43% of 35 depressed hospitalized females. Note, moreover, that neither the hysteria or depression scale of the MMPI receives a K correction.

Implications for Further Research

Many psychodynamic models of development, having been extrapolated from the clinical observation of clients in psychotherapy, tend to confound normal development and psychopathology. Loevinger's ego development hierarchy, derived from research on normal populations, provides a unique opportunity to study adaptive modes of personality functioning as they relate to psychopathology while avoiding the tendency to mistake traits which are present in certain disorders (e.g., deviance from social norms) for the characteristics which distinguish adaptive and maladaptive functioning. This makes it possible to clarify not only the relationship between the two variables but how they are distinct from each other. In this study the parallels between different styles of psychopathology and levels of ego development were explored in an attempt to explain why a given individual manifests one type of pathology rather than another. An important question for future research is what distinguishes adjusted individuals at a given ego level (e.g., conformists) from their maladjusted counterparts (e.g., hysterics, depressives).

The concept of a qualitative relationship between ego development and types of psychological disorders might also be applied to the problem of distinguishing the various subgroups of a broad category of psychopathology. It might be hypothesized, for example, that simple

schizophrenics would score at the pre-conformist end of the ego development continuum while paranoid schizophrenics would fall within the post-conformist ego level grouping.

A final important area of investigation would be the replication of the present study employing a sample of older subjects. A considerably larger proportion of such a sample can be expected to score at the post-conformist ego levels, including the highest levels which were only marginally represented or completely absent from the 14 to 15 year old sample tested here. This will make it possible to further explore the differences in psychopathological style both between conformists and post-conformists and within sub-divisions of the post-conformist ego group.

APPENDICES

APPENDIX A

SENTENCE COMPLETION FOR GIRLS (FORM AB 10-68)

APPENDIX A

SENTENCE COMPLETION FOR GIRLS (FORM AB 10-68)

Place of Testing_____ Date_____

Birthdate_____ Age_____ (Code A_____ Code B_____)

Instructions: Complete the following sentences in any way that you wish.

1. Raising a family

2. Most men think that women

3. When they avoided me

4. If my mother

5. Being with other people

6. The thing I like about myself is

7. A girl has a right to

8. When I get mad

9. My mother and I

10. What gets me into trouble is

Girls Form

11. Education

12. When people are helpless

13. Women are lucky because

14. When I am criticized

15. My father

16. Rules are

17. If I had more money

18. When my mother spanked me, I

19. A wife should

20. I feel sorry

21. When I am nervous, I

22. When a child will not join in group activities

23. Men are lucky because

24. At times she worried about

25. I am

26. A woman feels good when

27. My main problem is

Girls Form

28. Whenever she was with her mother, she

29. Sometimes she wished that

30. A good mother

31. The worst thing about being a woman

32. When she thought of her mother, she

33. If I can't get what I want

34. For a woman a career is

35. My conscience bothers me if

36. A woman should always

APPENDIX B

SENTENCE COMPLETION FOR BOYS (FORM 10-68)

APPENDIX B

SENTENCE COMPLETION FOR BOYS (FORM 10-68)

Place of Testing_____ Date_____

Birthdate_____ Age_____ (Code A_____ Code B_____)

Instructions: Complete the following sentences in any way that you wish.

1. Raising a family

2. When a child will not join in group activities

3. When they avoided me

4. A man's job

5. Being with other people

6. The thing I like about myself is

7. If my mother

8. If I can't get what I want

9. When I was younger

10. Education

Boys Form

11. When people are helpless

12. Woman are lucky because

13. What gets me into trouble is

14. A good father

15. If I were king

16. A wife should

17. I feel sorry

18. A man should always

19. Rules are

20. He felt proud that he

21. Men are lucky because

22. My father and I

23. A man feels good when

24. When I get mad

25. At times he worried about

26. When his wife asked him to help with the housework

27. My main problem is

Boys Form

28. When I am criticized

29. Sometimes he wished that

30. A husband has a right to

31. When he thought of his mother, he

32. The worst thing about being a man

33. If I had more money

34. I just can't stand people who

35. My conscience bothers me if

36. Crime and delinquency could be halted if

APPENDIX C

AUTOMATIC RULES FOR ASSIGNING TOTAL PROTOCOL RATINGS TO THE OGIVE OF ITEM RATINGS

APPENDIX C

AUTOMATIC RULES FOR ASSIGNING TOTAL PROTOCOL RATINGS TO THE OGIVE OF ITEM RATINGS*

TPR is:	If there are:
I-6[a]	No more than 34 ratings at I-5
I-5	No more than 31 ratings at I-4/5
I-4/5	No more than 30 ratings at I-4
I-4	No more than 24 ratings at I-3/4
I-3/4	No more than 21 ratings at I-3
I-2	At least 5 ratings at I-2
Δ (Delta)	At least 6 ratings at Delta
Δ/3 (Delta/3)	At least 6 ratings at Delta/3

Note: Apply these rules in the order given, for I-6 to Delta/3.

[a]To receive an I-6 rating, the I-5 criterion must also be met.

*From Loevinger and Wessler, 1970, p. 129.

APPENDIX E

MEAN T-SCORE (WITHOUT K CORRECTION)

MMPI PROFILES FOR GIRLS

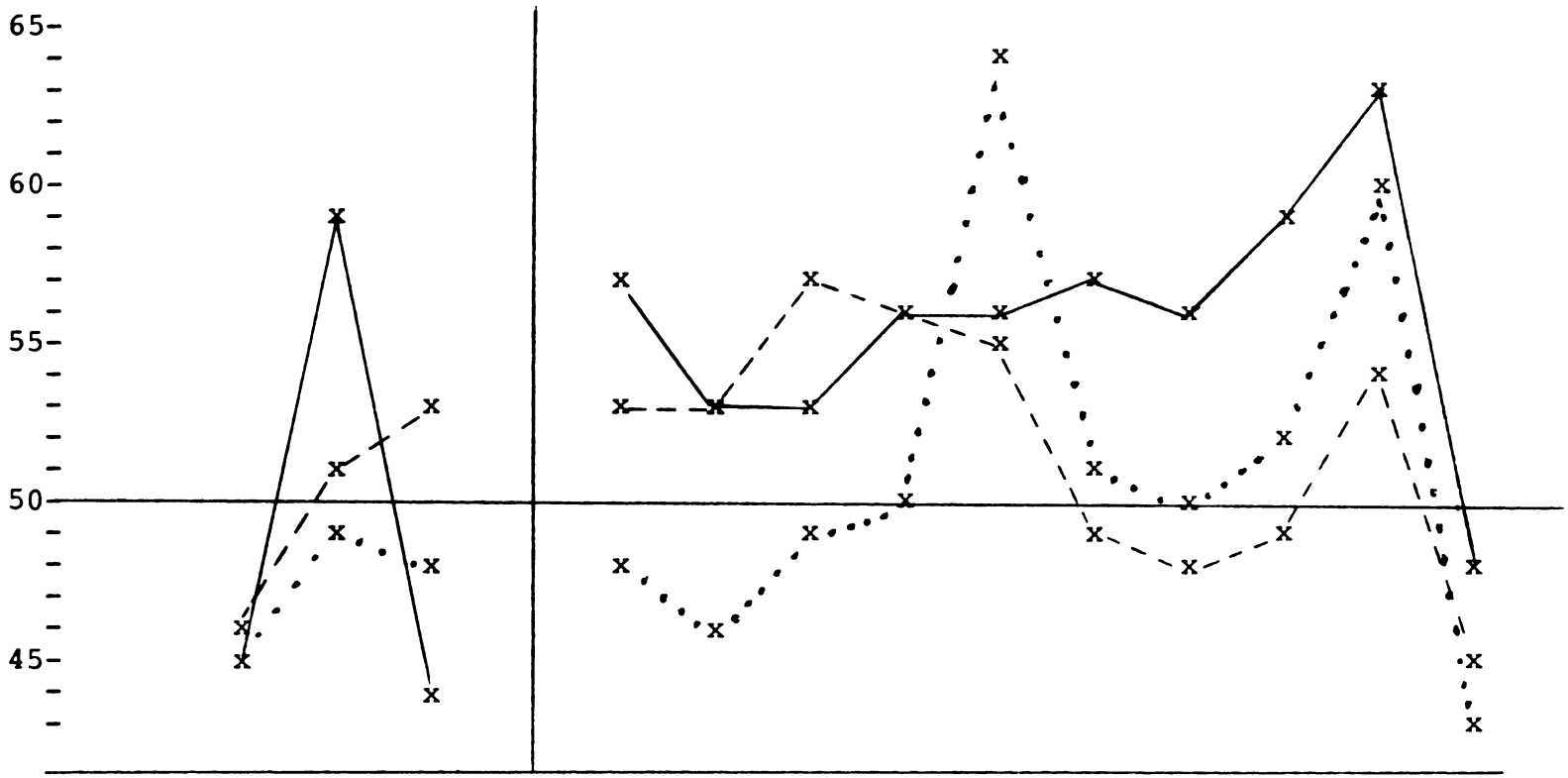
APPENDIX D

MEAN T-SCORE (WITHOUT K CORRECTION)

MMPI PROFILES FOR BOYS

Rank Order of Scales of Mean T-Score MMPI Profile for Each Ego Group for Males

MMPI Scale	Ego Level Groups		
	Pre-conformist	Conformist	Post-conformist
L	12	12	12
E	2.5	8	7.5
K	13	6	10.5
Hs	4.5	6	10.5
D	9.5	6	11
Hy	9.5	1	7.5
Pd	7	2	5.5
Mf	7	3	1
Pa	4.5	9.5	4
Pt	7	11	5.5
Sc	2.5	9.5	3
Ma	1	4	2
Si	11	13	13
	(N=46)	(N=13)	(N=16)



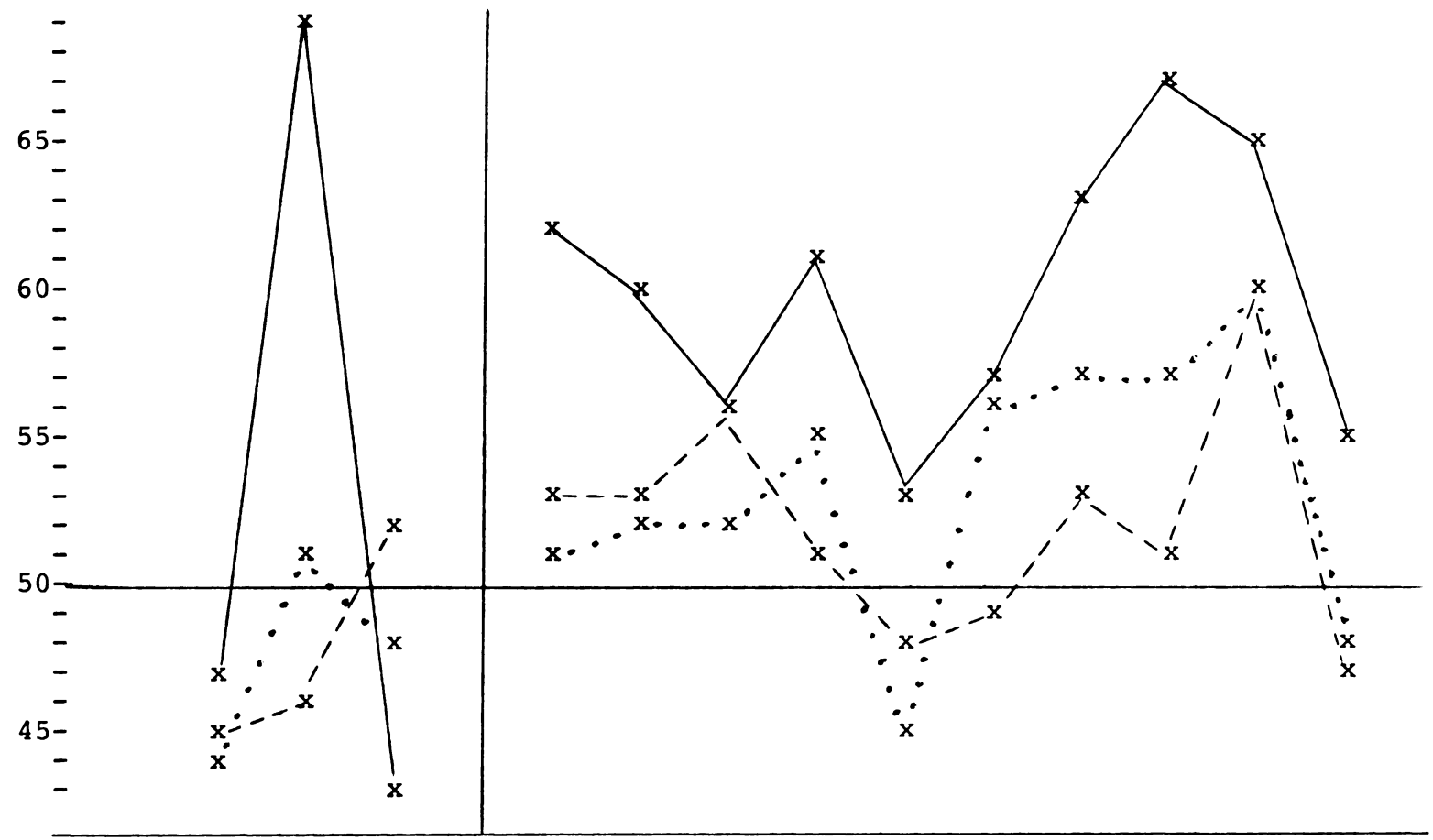
	L	F	K	Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	Si
T-Score	45	59	44	57	53	53	56	56	57	56	59	62	48
	46	51	53	53	53	57	56	55	49	48	49	54	45
	45	49	48	48	46	49	50	64	51	50	52	59	43

Mean T-Score (without K Correction) MMPI Profile

Pre-conformist Males (N = 46) ————————

Conformist Males (N = 13) ---------

Post-conformist Males (N = 16) ....



	L	F	K	Hs	D	Hy	Pd	Mf	Pa	Pt	Sc	Ma	Si
T-Score	47	69	43	62	60	56	61	53	57	62	66	64	55
	45	46	52	53	53	56	51	48	49	53	51	59	46
	44	51	48	51	52	52	55	45	53	54	54	57	48
	••	••	••	••	••	••	••	••	••	••	••	••	••

Pre-conformist Females (N = 33) ————————
Conformist Females (N = 6) ----------
Post-conformist Females (N = 33) ··········

APPENDIX F

SUM OF SQUARES, MEAN SQUARES AND F-RATIOS FOR UNIVARIATE ANALYSES OF EGO DEVELOPMENT EFFECT

APPENDIX F

SUM OF SQUARES, MEAN SQUARES AND F-RATIOS FOR UNIVARIATE ANALYSES OF EGO DEVELOPMENT EFFECT (N=150; df=2,143)

Variate	SS_B	SS_W	MS_B	MS_W	F
L	3.053	520.052	1.527	3.637	.419
F	1408.563	4561.189	704.282	31.896	22.080***
K	323.931	1940.964	161.966	13.573	11.933***
Hs	445.598	2457.571	222.799	17.186	12.964***
KHs	268.380	2641.018	134.190	18.469	7.266**
D	236.657	4313.458	118.329	30.164	3.923*
Hy	118.606	3526.714	59.303	24.662	2.405
Pd	201.104	4487.890	100.552	31.384	3.204*
KPd	94.004	4372.899	47.002	30.580	1.537
Mf	326.852	2587.984	163.426	18.098	9.030***
Pa	215.544	2733.969	107.772	19.119	5.637**
Pt	952.129	8062.507	476.064	56.081	8.444***
KPt	288.521	5352.888	144.260	37.433	3.854*

Variate	SS_B	SS_W	MS_B	MS_W	F
Sc	3174.639	14986.090	1587.319	104.798	15.146***
KSc	1736.138	11561.021	868.069	80.846	10.737***
Ma	309.626	3944.043	154.813	27.581	5.613**
KMa	202.477	3592.946	101.239	25.126	4.029*
Si	872.419	8523.210	463.210	59.603	7.319**
Sd	230.115	1912.353	115.057	13.373	8.604***
Es	406.686	5518.707	230.343	38.592	5.969**
Age	.605	25.097	.302	.176	1.723

*$p \leq .05$. **$p \leq .005$. ***$p \leq .0005$.

APPENDIX G

T-TESTS OF DIFFERENCES BETWEEN MEAN EGO GROUP SCORES ON HYPOTHESIS RELEVANT MMPI SCALES

APPENDIX G

T-TESTS OF DIFFERENCES BETWEEN MEAN EGO GROUP SCORES ON HYPOTHESIS RELEVANT MMPI SCALES

MMPI Scales	Mean Differences Between Ego Group Pairs		
	Pre-conformist/ Conformist	Conformist/ Post-conformist	Pre-conformist/ Post-conformist
	Males (N=75)		
K	4.289*	2.615*	1.674
Hs	1.355	1.822	3.177*
Hy	1.440	3.337*	1.897
Pd	.237	2.341	2.579
Pa	2.913*	.625	2.288*
Pt	5.171*	1.255	3.916*
Es	1.959	.495	1.465
Sd	2.395*	.995	1.394
	Females (N=75)		
K	4.100*	1.894	2.206*
Hs	3.229*	1.212	1.441*
Hy	.219	1.727	1.508

MMPI Scales	Mean Differences Between Ego Group Pairs		
	Pre-conformist/ Conformist	Conformist/ Post-conformist	Pre-conformist/ Post-conformist
Pd	4.514*	1.758	2.757*
Pa	3.433*	1.500	1.933*
Pt	6.257*	.636	5.621*
Es	3.605	1.924	5.529*
Sd	3.633*	.591	3.042*

*$p \leq .05$.

APPENDIX H

SCHEFFE' TEST OF MEAN DIFFERENCES BETWEEN EGO GROUP SCORES NOT INCLUDED IN HYPOTHESES

APPENDIX H

SCHEFFE' TEST OF MEAN DIFFERENCES BETWEEN EGO GROUP SCORES NOT INCLUDED IN HYPOTHESES

MMPI Scales	Mean Differences Between Ego Group Pairs		
	Pre-conformist/ Conformist	Conformist/ Post-conformist	Pre-conformist/ Post-conformist
	Males (N=75)		
F	4.201	1.288	5.489*
D	.221	2.058	1.837
Mf	.511	3.640	3.129*
Sc	9.197*	1.967	7.230*
Ma	4.099*	2.452	1.647
Si	2.597	1.702	4.299
	Females (N=75)		
F	9.310	2.137	7.173*
D	3.453	.257	3.710*
Mf	2.253	1.318	3.571*
Sc	12.996*	3.015	9.981*
Ma	2.553	.454	3.007
Si	7.575	1.651	5.925*

*$p \leq .05$.

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