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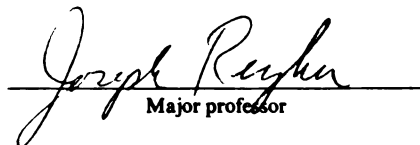
Jungian Typology in Relation To
Gender And Psychopathology:
An Exploratory Study

presented by

Daniel G. Mosher

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JUNGIAN TYPOLOGY IN RELATION TO GENDER
AND PSYCHOPATHOLOGY: AN
EXPLORATORY STUDY

By

Daniel Gene Mosher

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ABSTRACT

JUNGIAN TYPOLOGY IN RELATION TO GENDER
AND PSYCHOPATHOLOGY: AN
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By

Daniel Gene Mosher

The purpose of the present study was to explore the potential contribution of Jungian typology and the contrasexual archetypes (anima-animus) to an understanding of gender differences in psychopathology. The Singer-Loomis Inventory of Personality (SLIP), Symptom Checklist 90R (SCL-90-R), Minnesota Multiphasic Personality Inventory (MMPI) Psychopathic Deviate Scale, Impulsiveness Scale, Bem Sex Role Inventory (BSRI), Personal Attributes Questionnaire (PAQ), and the Anima-Animus Scale were administered in counterbalanced order to 120 participants from introductory psychology courses.

As predicted, females had significantly higher scores than males for introverted feeling and introverted intuition, which in turn, were positively linked with most measures of psychopathology; particularly symptoms of neuroses and depression. Males, however, did not have higher scores than females for extraverted

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thinking and extraverted sensation as expected, nor were the two function types related to symptoms of impulsiveness and sociopathy as predicted. On the other hand, females did tend to have somewhat higher scores than males for symptoms of neuroses and depression, whereas males tended to have higher scores for impulsiveness and sociopathy than females. As predicted by Jungian theory, female Animus scores and male Anima scores were negatively associated with psychopathology. A comparison with the BSRI and PAQ provided support for the construct validity of the Anima-Animus Scale, but also indicated that the scale measures somewhat distinct aspects of masculinity-femininity. Using a multivariate regression analysis, androgyny (as measured by the BSRI and PAQ) did not significantly contribute to a predictive system for psychopathology, over and above the main effects for masculinity. However, the Anima subscale and introverted feeling and introverted intuition did significantly contribute to the predictive system beyond the effects of masculinity.

Thus, the present study offers corroboration for the hypothesis that gender differences in typology underlie the documented gender differences in psychopathology. Furthermore, Jung's theory of the

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contrasexual archetypes and their relation to psychological health also appears corroborated. The present study, however, offers little support for either an additive or balance theory of androgyny in relation to psychological adjustment.

To Diann, with love.

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Introduction

Two influential studies during the 1970's (Chesler, 1972; Gove & Tudor, 1973) concluded that rates of mental illness are higher for women than for men. While not all subsequent studies (Goldman & Ravid, 1980) have found large sex differences in overall psychological disorders, the consistency of sex differences in type of psychopathology is striking. There is a clear pattern across studies whereby higher rates of neuroses are reported for women and higher rates of antisocial and addictive types of personality disorders are reported for men (Dohrenwend et al., 1980).

Furthermore, women are more apt than men to claim psychological distress (Brown & Donderi, 1985) and to seek out professional help (Rohrbaugh, 1979). They are twice as likely to develop a severe depression (Amneson & Lewinsohn, 1981; Klerman & Weisman, 1980), and they attempt suicide three times as often (Waldron, 1982).

There have been two major approaches to explaining these sex differences in psychopathology (Al-Issa,

1982). One theory (not supported by data) proposes that male and female rates of mental illness are comparable, but because of their gender role, females report more illness and are more comfortable with the sick role than males. The second (more data supported) approach suggests that sex differences are caused by stresses related to gender role. It is assumed that because the female role is more stressful than the male role, women tend to have more mental illness than men.

Kaplan (1983) argued that an additional explanation for these sex differences is that masculine-biased assumptions about what behaviors are healthy and what behaviors are disturbed are codified in diagnostic criteria, namely DSM III (American Psychiatric Association, 1980). These criteria then influence diagnosis and treatment rates and patterns. Williams and Spitzer (1983) pointed out that although Kaplan's view raised important issues, she unfortunately presented no data to support her thesis. The authors examined the sex ratios for DSM III Axis I clinical symptoms and found many categories that were more commonly diagnosed in men, thus providing no support for Kaplan's (1983) thesis. Kass, Spitzer, and Williams (1983) further argued against Kaplan's view by citing evidence of higher rates of personality disorders in men.

In his review, Al-Issa (1982) concluded that the consistently higher rates of neuroses among women and higher rates of personality disorders among men would suggest that sex differences are in the style of reaction to, rather than the amount of, stress due to sex role differences.

Jung's (1971) theory of psychological types offers a plausible theoretical model for differences in cognitive style that may underlie this observed pattern of gender differences in psychopathology. The theory incorporates two bipolar attitudes (introversion and extraversion) which, as the following discussion will show, have been linked to both differences in psychopathology and gender.

The extraverted attitude is an outward focusing of attention, or libido (psychic energy), toward objects, people, and the environment as the basis of consciousness. What the extravert experiences at any given moment is felt to be more directed by the sights or sounds of the objects themselves. The introverted attitude, on the other hand, is an inward turning of the libido toward the subject as the basis of consciousness. Introverts attend more to ideas, concepts, impressions, feelings, and images. For the introvert, experience always appears mediated by his or her experiencing of it. The distinction between extraverts and

introverts must be viewed from the perspective of differing perceptions or ways of processing information.

In contrasting introversion and extraversion, Jung wrote:

The first attitude (introversion) if normal, is revealed by a hesitating, reflective, reticent disposition, that does not easily give itself away, that shrinks from objects, always assuming the defensive, and preferring to make its cautious observations as from a hiding place. The second type (extraversion) if normal, is characterized by an accommodating, and apparently open and ready disposition, at ease in any given situation. This type forms attachments quickly, and ventures, unconcerned and confident, into unknown situations, rejecting thoughts of possible contingencies. In the former case, manifestly the subject, in the latter the object, is the decisive factor (p. 545).

Elsewhere, Jung (1971) further developed this conception:

A tense attitude is in general characteristic of the introvert, while a relaxed, easy attitude distinguishes the extravert (p. 287). . . To sum up: the primary [most developed] function is in my view more important than the secondary. The intensity of the primary function is the decisive factor. It depends on the general psychic tension, i.e., on the amount of accumulated, disposable libido. The factors determining this accumulation are the complex resultants of all the antecedent psychic states--mode, attention, affect, expectancy, etc. Introversion is characterized by general tension, an intense primary function [and thus more accumulated or damned up libido]. . . extraversion [is characterized] by general relaxation, and a weak primary function. . . (p. 288).

Psychopathology is produced when the excessive conscious development of one attitude (introversion

versus extraversion) blocks the unconscious compensatory effects of its bipolar opposite in the shadow (the rejected aspects of the personality) where it is subject to repression and regression. Eventually the ego comes under the sway of the unconscious attitude, and when it does, there are emotional and behavioral disturbances. These are more severe and variegated when introversion is the conscious attitude (Mullahy, 1948; Singer, 1973; Whitmont, 1969).

According to Jung (1964), femininity (Eros) is linked to introversion in that it fosters introspection and subjectivity. Masculinity (Logos), on the other hand, appears more closely related to extraversion, in that it signifies objective interest, structure, form and discrimination.

Thus, consistent with Jung's description of introversion, females, who tend towards introversion, would be expected to display different patterns of psychopathology than males, who tend toward extraversion. Although Jung did not specifically relate extraversion to psychopathology, his description of the extravert as easygoing and failing to think through contingencies, could be extrapolated as a tendency toward impulsivity and acting out behaviors. Eysenck (1960), expanding on the relationship between attitude and psychopathology and using somewhat different definitions of

introversion-extraversion, found introversion associated with anxiety, obsessional, and depressive symptoms, whereas extraversion was associated with psychopathic symptoms. In addition, Richek (1969), using the Myers-Briggs Type Indicator (MBTI) (Meyers, 1962), found that extraverts (both moderate and extreme) scored higher on measures of psychological adjustment than introverts, and concluded that extraverts were the least neurotic, and introverts, the most neurotic. Therefore, both studies found relationships between attitude and type of psychopathology, but neither study included gender as a factor.

With respect to gender, attitude, and type of psychopathology, women, because of their introversion, accumulate disposable (damned up) libido (psychic energy) which is converted to depression and neurotic disorders, including those hysterical disturbances of anorexia, bulimia, dissociation, and multiple personality. Indeed, according to DSM-III (American Psychiatric Association, 1980), women are assigned these diagnoses more often than men. Conversely, males, because of their extraversion, ought to be more disposed to impulsivity and sociopathy (American Psychiatric Association, 1980), and they are.

Research on expectancies and causal attribution is consistent with a correspondence between attitude

(introversion-extraversion) and gender. Frieze (1975), has shown that women often expect to fail and tend to internalize the cause of failure. Men generally attribute their success to factors such as ability and their failure to luck (externalize), whereas women tend to attribute failure to lack of ability (internalize) and success to luck or circumstance.

Other aspects of Jung's (1964) perspective further elucidate the contribution of gender to type of psychopathology. The psychic structure of the two sexes corresponds to a different biological makeup: a predominantly feminine conscious personality in women, masculine in men, together with a predominantly masculine (animus) or feminine (anima) component, respectively, in the unconscious. He used masculine and feminine not to describe roles or stereotypes but, rather, to denote archetypal (instinctual) principles: the feminine principle, eros, the masculine, logos.

According to Young-Eisendrath (1985), the contrasexual elements (animus/anima) constitute an archetypal-complex that operates in the shadow outside personal consciousness. Well-being is dependent upon an integration of the two archetypes with the conscious personality. More precisely, a dialogue (symbolic transformations) must be maintained between personal consciousness and the contrasexual archetype. Although

failure to integrate the two may result in psychopathology in both sexes (Stevens, 1983), Singer (1973) observed that women are disadvantaged in societies that esteem and reward traits associated with the animus (individualism-autonomy, technical skills, clarifying facts), but which either forbid or prevent women from developing their animus and integrating it with their personal consciousness. Therefore, integration of the psyche is more likely to be impaired in women.

Bem (1977) and Spence and Helmreich (1978) found that masculinity scores were positively associated with self-esteem in females, further suggesting that some degree of conscious integration of the animus is necessary for psychological well-being. However, the meaning of masculinity-femininity used by these investigators appears more broadly defined than Jung's specific conceptualizations embodied in the anima-animus.

The differences in the psychic structures of males and females are also reflected on two bipolar pairs of cognitive functions: sensation-intuition and thinking-feeling. Sensation and intuition are nonrational modes of perception which are rationally evaluated by thinking and feeling functions. Sensation operates through the five senses and is tangible and concrete, whereas intuition is perception via unconscious means or processes. Thinking addresses the question of whether

something is valid or invalid, logical or illogical; whereas feeling assesses whether something is important or unimportant, liked or disliked, valuable or worthless (feeling means value judgements, not affect). The two attitudes and four functions combine to form eight distinct function types.

Both Jung (1971) and Stevens (1983) observed sex differences in function type. Thinking and sensation tend to be more dominant in men whereas feeling (introverted feeling in particular) and intuition tend to be more dominant in women.

Mosher and Reyher (in preparation), using the Singer-Loomis Inventory of Personality (SLIP) (Singer & Loomis, 1984), found that males scored significantly higher than females on extraverted sensation and extraverted thinking, whereas females scored significantly higher on introverted feeling. Females also scored higher than males on introverted intuition, but this difference was not significant. Similarly, using various measures, Hirschman (1983) found external sensation seeking (similar to extraverted sensation) and external cognition seeking (similar to extraverted thinking) significantly higher in males than females and positively correlated with masculinity, as measured by the Personal Attributes Questionnaire (PAQ) (Spence & Helmreich, 1978), in both sexes. Internal cognitive

stimulation, emotional involvement and imagery, on the other hand, were significantly higher in females than in males and positively correlated with femininity in both sexes. If attitude is in fact related to psychopathology, then function type, which includes attitude, also ought to be related to psychopathology. Function type is a more refined way of describing psychic structure that is embodied in such measures as the SLIP.

If gender differences in function type do underlie gender differences in psychopathology, recognizing that social biases may exist in diagnostic criteria (Kaplan, 1983), then the following hypotheses can be tested:

1. Females will have higher scores than males for (a) introverted feeling and (b) introverted intuition.

2. Males will have higher scores than females for (a) extraverted thinking and (b) extraverted sensation.

3. Females, due to more highly developed introverted feeling and introverted intuition function types, will have higher measures of (a) somatization, (b) depression, (c) anxiety, (d) obsessive-compulsive symptoms, (e) phobic anxiety, and (f) interpersonal sensitivity (feelings of inadequacy and inferiority) than males.

4. Males, because of their greater degree of extraverted thinking and extraverted sensation function

types, will score higher than females on measures of (a) sociopathy, (b) impulsivity, and (c) hostility and (d) paranoid ideation, two symptoms often observed in personality disorders.

5. Females, because of their introverted feeling and intuition function types, will have higher measures of intensity of psychopathology than males.

6. Introverted feeling and introverted intuition will be positively associated with measures of (a) somatization, (b) depression, (c) anxiety, (d) obsessive-compulsive symptoms, (e) phobic anxiety, (f) interpersonal sensitivity, and (g) intensity of psychopathology.

7. Extraverted thinking and extraverted sensation will be positively associated with measures of (a) sociopathy, (b) impulsivity, (c) hostility, and (b) paranoid ideation.

In addition, if psychological adjustment in females is related to the degree of conscious integration of the animus (masculine component) with personal consciousness, then the following additional hypotheses should be supported:

8. For females, animus scores will be negatively associated with measures of (a) intensity of psychopathology, (b) somatization, (c) depression, (d)

anxiety, (e) obsessive-compulsive symptoms, (f) phobic anxiety, and (g) interpersonal sensitivity.

Similarly, if the degree of conscious integration of the anima (feminine component) is related to psychological adjustment in men, then:

9. Anima scores for males will be negatively associated with measures of (a) intensity of psychopathology, (b) sociopathy, (c) impulsivity, (d) hostility, and (e) paranoid ideation.

A secondary concern of the present study was to compare the Anima-Animus Scale, developed for this study on the basis of Jung's definitions, with the broader measures of masculinity-femininity used by Bem (1974) and Spence and Helmreich (1978).

Method

Participants

Participants in this study consisted of 120 college students from an introductory psychology course at Michigan State University. The group was made up of 55 males and 65 females. Each person received supplemental credit toward course grades for participating.

Materials

Singer-Loomis Inventory of Personality (SLIP).

Singer and Loomis (1984) developed a new inventory, the Singer-Loomis Inventory of Personality (SLIP), to assess eight functional types or cognitive modes based on Jung's two attitudes of introversion and extraversion, and the functions thinking, feeling, sensation, and intuition. Conceptually, the SLIP offers a major improvement over other Jungian instruments such as the Gray-Wheelwright (Wheelwright, Wheelwright & Bueler, 1964) and the Meyers-Briggs Type Indicator (Myers, 1962) in that it uses scaled items rather than a forced-choice format. This lack of constraint allows opposite functions such as thinking and feeling to be

measured independently, whereas with the earlier instruments the choice of one of these bipolar opposites automatically resulted in the rejection of the other. Items pertaining to each of the eight cognitive modes are assessed on Lickert-type scales (1 = never, 2 = occasionally, 3 = about half the time, 4 = usually, and 5 = always).

Conversion of SLIP raw scores to percent scores creates an ipsative scale (Clemans, 1973). Ipsative measurements for each individual are distributed about the mean for that individual, not about the population mean. This precludes comparisons across a population of individuals and results in artifactual negative correlations between scale items. For these reasons, SLIP raw scores were used, despite the high desirability of the items and the possible creation of a negative presentation of self by not endorsing an item. Notwithstanding these psychometric limitations, and the question of whether such self-report measures actually measure Jung's multidimensional conceptualizations, the SLIP produced sex differences in function type in line with Jung's theory (Mosher, 1985). Additional evidence supporting the SLIP's validity is limited to one predictive study (Loomis & Saltz, 1984), in which function type was used to successfully predict artistic style. Singer and Loomis (1984) reported internal reliability

coefficients for the eight function types ranging from .56 to .71, with an average alpha coefficient of .64.

Symptom Checklist 90R (SCL-90-R). Psychopathology was measured using the Symptom Checklist 90R (SCL-90-R) (Derogatis, 1977; Derogatis, Lipman, & Covi, 1973).

The SCL-90-R is a self-report inventory in which subjects are asked to rate how much they are distressed by 90 different symptoms on a 5-point scale ranging from 0 = not at all to 4 = extremely. The 90 symptoms are grouped into the following nine categories or types of psychopathology: somatization, obsessive-compulsive symptoms, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. In addition, the SCL-90-R provides a measure of the intensity or depth of psychopathology with the Global Severity Index (GSI). Derogatis (1977) has provided extensive evidence of the validity and reliability of the SCL-90-R, including test-retest reliabilities for the SCL-90-R subscales ranging from .78 to .90, and alpha coefficients ranging from .77 to .90.

Anima-Animus Scale. This scale was developed to provide a measure of the degree of conscious integration of the contrasexual archetypes; the anima and the animus. Jung (1959b) described the animus (masculine element) of the female psyche as an assertive,

autonomous, and discriminative function, whereas the anima (feminine element) of the male psyche was described as a capacity for emotion and relatedness. On the other hand, the unconscious or undeveloped anima and animus may be manifested in negative ways; the anima as rigidity, stubbornness, and moodiness, the animus in an aggressive, opinionated manner. Jung acknowledged his limitations in understanding the psychology of women (Mattoon, 1981). Consequently, he deferred to his female coworkers, especially Emma Jung (1957) and M. Esther Harding (1970), for presentations of some of the specific aspects of female psychology and the animus in particular.

It seems clear that Jung's concept of the anima-animus is more narrowly defined and different from the more popular conceptualizations of masculinity-femininity embodied in such instruments as the Bem Sex Role Identity (BSRI) (Bem, 1974) and the short form of the Personal Attributes Scale (PAQ) (Spence & Helmreich, 1978). The BSRI and the PAQ, incorporating such additional items as loyalty, childlikeness, excitability, and need for security, appear to encompass broader formulations of masculinity-femininity than those proposed by Jung in his concept of the anima-animus.

All 20 items (10 anima, 10 animus) of the Anima-Animus Scale correspond closely to Jung's specific

definitions, and include both positive (integrated) and negative (unconscious or repressed) aspects of each archetype. A complete list of items, direction of scoring, and the corresponding references can be found in Appendix A. Each item of the Anima-Animus Scale is scored from 1 to 7 on the basis of how well it describes the individual. Total anima and animus scores (possible range 10 to 70) are obtained by summing the individual scores for the 10 respective items, with negative aspects being reverse scored.

Minnesota Multiphasic Personality Inventory (MMPI). Sociopathy was measured using the Psychopathic Deviate (Pd) scale of the MMPI (Hathaway & McKinley, 1951). The 50-item Pd scale measures general social maladjustment, antisocial behavior, and the capacity for angry, impulsive acting out (Carson, 1969). A considerable body of research (Dahlstrom, Welsh, & Dahlstrom, 1982) has shown that the MMPI scales have construct validity for measuring personality traits in the normal range, and that the Psychopathic Deviate Scale (Scale 4) has a demonstrated test-retest reliability of .88.

Impulsiveness Scale (IS). Impulsivity was measured using the 10-item Impulsiveness Scale (IS) developed by Schalling, Edman, and Asberg (1983). The IS was developed from a series of item analyses of

other impulsivity scales, including the Barrat Impulsiveness Scale (BIS) and the Guilford Zimmerman Temperament Survey (Guilford & Zimmerman, 1949). The scale uses a 4-point scoring system and has been used widely by Schalling, et al. (1983) in their research on impulsive cognitive style. The IS has demonstrated adequate reliability (a test-retest reliability of $r=.71$) and is significantly correlated with other impulsiveness measures, such as the Impulsiveness Venturesomeness Empathy (IVE) scale (Eysenck & Eysenck, 1978).

Bem Sex Role Inventory (BSRI). This scale consists of a list of adjectives (20 masculine and 20 feminine) which are endorsed using a 7-point scale. Responses to the masculine and feminine adjectives are summed and averaged to yield a Masculine and Feminine scale score. These scales are based on empirical validation with several undergraduate populations (Bem, 1974) and have been found to be highly reliable. Bem (1974) reported alpha coefficients for internal consistency of .86 and .82 respectively for the BSRI Masculinity and Femininity scales. Test-retest reliabilities of $r=.90$ for Masculinity and $r=.90$ for Femininity were also presented.

Personal Attributes Questionnaire (PAQ). This is a self-report instrument consisting of 24 trait descriptions, each arranged on a bipolar scale (Spence

& Helmreich, 1978). The Masculinity scale contains eight items that are considered socially desirable in both sexes, but thought to occur to a greater degree in males. Similarly, the eight items for the Feminine scale are defined as desirable characteristics in both sexes, but exist to a greater degree in females. The Masculine-Feminine scale contains items for which one pole is desirable for males and the other pole is desirable in females. Low correlations between the PAQ scales and the Marlowe-Crowne Social Desirability Scale (Spence, Helmreich, & Stapp, 1975) support that the PAQ's validity is minimally distorted by a tendency for subjects to respond in a socially desirable manner. Alpha coefficients for the PAQ as reported by Spence and Helmreich (1978), were .85, .82, and .78 respectively for Masculinity, Femininity, and Masculinity-Femininity (M-F).

Design

The present study incorporated both correlational and experimental designs. The manipulation of the subject variable gender, as in the present study, is classified by some investigators as an instance of the experimental method (Wood, 1981), although the results of such experiments cannot be interpreted to make causal statements. Gender is a nonmetric, categorical

variable, and not an individual difference variable as described by Humphreys (1978). Therefore, the results of manipulating gender can be viewed with more confidence than the correlation of an individual difference variable, but they are not a guarantee of causality. Because of the exploratory nature of the present study and the difficulty of manipulating subject variables, such as function type, a primarily correlational design was selected as most appropriate. The rationale of this approach was to use correlation to discover possible causal relationships which could then become the subject of experimental investigations in subsequent studies (Wood, 1981).

Setting and Procedure

Participants were recruited from introductory psychology courses by using sign-up sheets with the title of the experiment labeled: Male and Female Differences. Some of the classes required student participation in research projects, while in other classes participation was optional. The instruments were administered to small groups of participants, 15 to 20 per group, in a classroom setting. The average time required to complete the instruments was approximately 75 minutes. The primary experimenter (male) was aware of the hypotheses of the study, whereas the assistant

experimenter (female) was "blind" with respect to the purpose of the experiment. Both experimenters shared equally in all duties, with the exception that the primary experimenter took the lead in describing the study and addressing the participants.

The limitations of self-report instruments due to social desirability and impression management are well documented (DePaulo, Kenny, Hoover, Webb, & Oliver, 1987; Goffman, 1959). In an effort to enhance self-disclosure, group size was purposely kept small, and an effort was made to engage each group personally during the explanatory phase of the experiment, rather than fostering a solely didactic, one-directional relationship. The participants were asked to respond to each item with as much candor as possible. They were assured that there were no right or wrong answers, and anonymity was ensured by instructing the participants that no identifying information was to be written on the questionnaires. The standard consent information was given verbally, and the participants were instructed that the return of their completed questionnaires constituted their informal consent to participate in the experiment.

At the same time, a concerted effort was made to control for unintentional expectancy effects, demand characteristics of the experimental setting, and

subject roles (Kazdin, 1980). This was attempted by using a "neutrally" worded instruction sheet that was attached to each packet of questionnaires. In addition, the same carefully constructed outline was used to guide the introductory and instructional phases of the experiment. The primary experimenter made every effort possible not to convey demand information regarding the experimental hypotheses, while at the same time trying to elicit self-disclosure.

The order in which self-report instruments are administered can have various effects on research outcome, including such factors as subject's self-attention and public self-consciousness (Osberg, 1985). To control for these various effects in the present study, the instruments were administered in counterbalanced order by systematically rotating the order in which a given instrument occurred in the packets of questionnaires. This procedure resulted in packets consisting of several different sequences of instruments, which were then randomly distributed to each group of participants.

Results

Means and standard deviations for the SLIP subscales are reported in Table 1. Although norms were not available for this research version of the SLIP, the means and standard deviations were well within the range of scores from a previous study by Mosher (1985).

Table 2 presents means, standard deviations, and norms (if available) for all measures of psychopathology. Mean scores for all subscales of the SCL-90-R were considerably higher than the norms reported by Derogatis (1977). These norms, however, were from a significantly different age group (mean age = 46) than the present college-aged population. The means from the present study more closely matched the norms reported for adolescent outpatients. The mean score for the MMPI Scale 4 (Psychopathic Deviate) was also higher than the normative score reported by Dahlstrom, Welsh, and Dahlstrom (1982). Norms were not available for the Impulsiveness Scale.

Means and standard deviations are presented by gender for the BSRI, PAQ, and the Anima-Animus Scale in Table 3. Mean scores for the BSRI and PAQ appeared to

Table 1

Means and Standard Deviations (Present and Previous Study) for SLIP Subscale Scores.

Scale	Present Study (N=120)		Previous Study ^a (N=117)	
	Mean	SD	Mean	SD
Introverted Thinking	48.29	6.81	49.79	6.71
Introverted Feeling	47.66	6.56	47.63	5.89
Introverted Sensation	48.84	6.14	49.45	6.03
Introverted Intuition	48.25	7.26	47.64	7.27
Extraverted Thinking	43.29	6.55	43.92	5.84
Extraverted Feeling	44.38	6.85	44.45	5.99
Extraverted Sensation	41.13	6.54	41.56	5.57
Extraverted Intuition	44.34	6.95	43.81	6.83

^aMosher (1985).

Table 2

Means and Standard Deviations (Present Study and Norms) for Psychopathology Scales.

Scale	Present Study (N=120)		Nonpatient Norms ^a		Adolescent ^a Outpatients	
	Mean	SD	Mean	SD	Mean	SD
SCL-90-R						
Somatization	.78	.63	.36	.42	.72	.71
Obsessive-Compulsive	1.22	.78	.39	.45	.94	.78
Interpersonal Sensitivity	1.26	.83	.29	.39	1.03	.85
Depression	1.22	.84	.36	.44	.96	.77
Anxiety	.85	.70	.30	.37	.84	.77
Hostility	.83	.73	.30	.40	1.20	.98
Phobic Anxiety	.43	.70	.13	.31	.57	.75
Paranoid Ideation	.95	.75	.34	.44	1.09	.85
Psychoticism	.80	.70	.14	.25	.73	.73
Global Severity Index (GSI)	.94	.64	.31	.31	.89	.65
Impulsiveness Scale	14.04	4.59	-	-	-	-
MMPI-Scale 4 Sociopathy	18.41	5.07	13.67	4.10	-	-

^aNorms for SCL-90-R from Derogatis (1977). Nonpatient N=974, Mean Age = 46. Adolescent Outpatients N=112. Norms for MMPI Scale 4 from Dahlstrom, Welsh, & Dahlstrom (1982) (N=691).

Table 3

Means and Standard Deviations (Present Study and Norms) for Masculinity-Femininity Scales.

Scale	Present Study						Norms ^a			
	Males (N=55)			Females (N=65)			Males		Females	
	$\bar{X}$	SD		$\bar{X}$	SD		$\bar{X}$	SD	$\bar{X}$	SD
			t							
BSRI Masculinity	5.01	.65	-2.29*	4.71	.77		4.97	.67	4.57	.69
BSRI Femininity	4.52	.55	6.38***	5.14	.52		4.44	.55	5.01	.52
BSRI Androgyny	24.95	3.66	1.30	25.92	4.39		-	-	-	-
PAQ Masculinity	20.75	3.22	-.58	20.39	3.56		21.69	4.18	19.54	4.32
PAQ Femininity	21.95	3.61	5.11***	25.32	3.61		22.43	3.73	24.37	3.68
PAQ M-F	17.49	3.42	5.32***	21.23	4.16		16.69	4.12	12.52	4.25
PAQ Androgyny	9.30	1.65	.61	9.50	1.84		-	-	-	-
Anima	48.98	5.56	1.21	50.19	5.30		-	-	-	-
Animus	49.4	4.66	-1.54	48.11	4.66		-	-	-	-
Jungian Androgyny	27.44	2.78	.38	27.63	2.94		-	-	-	-

^aBSRI norms from BEM (1974, N=723. PAQ norms from Spence & Helmreich (1978), N=715.

* $p < .05$.

*** $p < .001$.

fall within the range of reported norms (Bem, 1974; Spence, & Helmreich, 1978), with the exception of the PAQ M-F scores. Because the Anima-Animus Scale was constructed for the present study, norms were not available. Alpha coefficients of internal consistency for the Anima-Animus Scale were .54 for Anima and .50 for Animus. Although the alpha coefficients were somewhat lower than those of the SLIP (average alpha = .64), they were not considered to be an important problem at this point in the development of the Anima-Animus Scale. They were not critical insofar as the scale entering into significant relationships with the other measures. Furthermore, the slightly lower alpha coefficients were considered a fair trade-off to preserve the integrity of the conceptual basis of this Jungian derived scale.

Table 3 also shows that females scored significantly higher on BSRI Femininity, PAQ Femininity, and PAQ M-F than did males. Males had significantly higher mean scores for BSRI Masculinity.

The androgyny scores in Table 3 were calculated using a metric derived by Bobko and Schwartz (1984) to provide a continuous, rather than categorical, variable suitable for multiple regression analysis. The difference method of deriving androgyny proposed by Bem (1974) has been criticized (Spence, Helmreich, &

Strapp, 1975) because a person scoring $M = 7$ and $F = 6$ would receive the same androgyny score as someone who scores $M = 2$ and $F = 1$. While the median split method advocated by Spence and Helmreich (1978) avoids some of the problems of the difference method, it has not completely filled the need for an adequate measure of androgyny. The dichotomization of the original masculinity and femininity scores may cause a loss of a great deal of information (Lubinski, Tellegen, & Butcher, 1981, 1983), and the resulting categorical androgyny variable is not easily amenable to multivariate correlational analysis. Therefore, Bobko and Schwartz (1984) developed a metric $\left[\frac{(K-1) - |M-F|}{K} \right] \times \left[\frac{M+F}{2} \right]$, where K = maximum scale value) that they believed better incorporated the theoretical assumptions of androgyny and provided greater statistical utility. In the first factor, the absolute value of the difference between M and F was preferred over the algebraic difference since the index thereby focused on the dimension "androgynous" - "not androgynous". The first factor was weighted by the average of the M and F scale scores, thus separating androgynous from undifferentiated individuals by guaranteeing that more weight was given to persons scoring high on both subscales than to persons scoring low on both. Using the

BSRI, the authors obtained a test-retest reliability of $r=.88$.

Manipulated Effects

The manipulation of gender was tested by univariate analyses of simple effects using one-tailed t-tests. The one-tailed test was selected because of the strong theoretical and empirical bases of the hypothesized relationships.

Hypothesis 1

Hypothesis 1 predicted that females would have higher scores on the SLIP than males for (a) introverted feeling and (b) introverted intuition. Both hypotheses 1a and 1b were corroborated (see Table 4). Female ($M=49.82$) and male ($M=45.11$) means differed significantly ($t(118)=4.18$, $p<,.001$) for introverted feeling. Similarly, female ($M=49.52$) and male ($M=46.75$) means also differed significantly ($t(118)=2.12$, $p<.05$) for introverted intuition.

Hypothesis 2

It was expected that males would have higher scores on the SLIP than females for (a) extraverted thinking and (b) extraverted sensation. Hypotheses 2a and 2b were not corroborated (see Table 4). Male ($M=43.13$) and female ($M=43.43$) means did not differ

Table 4

Comparison of Mean Function Type and Mean Psychopathology Scores Between Males and Females (df=118).

Instrument/Scale	Females (N=65)		Males (N=55)		t
	$\bar{X}$	SD	$\bar{X}$	SD	
<u>SLIP</u>					
Introverted Thinking	48.98	7.20	47.47	6.28	1.21
Introverted Feeling	49.82	5.70	45.11	6.63	4.18***
Introverted Sensation	50.08	6.14	47.38	5.88	2.44 ⁺
Introverted Intuition	49.52	6.81	46.75	7.55	2.12*
Extraverted Thinking	43.43	7.06	43.13	5.98	.25
Extraverted Feeling	46.09	6.78	42.36	6.42	3.07 ⁺⁺
Extraverted Sensation	41.52	6.38	40.67	6.74	.72
Extraverted Intuition	45.29	6.66	43.21	7.17	1.64
<u>SCL-90-R</u>					
Somatization	.89	.60	.65	.14	2.11*
Obsessive Compulsive	1.23	.80	1.21	.76	.17
Interpersonal Sensitivity	1.30	.84	1.21	.81	.59
Depression	1.32	.86	1.11	.81	1.37
Anxiety	.91	.71	.78	.68	1.01
Hostility	.80	.68	.88	.79	-.60
Phobic Anxiety	.53	.75	.40	.63	1.02
Paranoid Ideation	.97	.75	.92	.76	.36
Psychoticism	.83	.69	.76	.71	.49
Global Severity Index (GSI)	1.01	.64	.86	.64	1.22
<u>Impulsiveness Scale</u>	13.54	4.86	14.64	4.23	-1.31
<u>MMPI-Scale 4 Sociopathy</u>	17.61	5.00	19.35	5.03	-1.88*

* $p < .05$, one-tailed.
 *** $p \leq .001$, one-tailed.

⁺ $p \leq .05$, two-tailed.
⁺⁺ $p \leq .01$, two-tailed.

significantly ($t(118)=.25$, $p<.40$) for extraverted thinking, nor did male ($M=40.67$) and female ($M=41.52$) means differ significantly ($t(118)=.72$, $p<.24$) for extraverted sensation.

Hypothesis 3

Females, due to their greater predicted degree of introverted feeling and intuition function types, were expected to have higher scores for (a) somatization, (b) depression, (c) anxiety, (d) obsessive-compulsive symptoms, (e) phobic anxiety, and (f) interpersonal sensitivity on the SCL-90 than males. Although mean differences were in the predicted direction (see Table 4), female ($M=.89$) and male ($M=.65$) means differed significantly ($t(118)=2.11$, $p<.05$) only for (a) somatization. Recognizing the equivalence of the t-test and correlational analysis allowed the use of partial correlation to further investigate the relationships of these measures of psychopathology to gender, while controlling for introverted feeling and introverted intuition, which were related to gender. However, none of the resulting partial correlations were significant ($p<.05$).

Hypothesis 4

Males ($M=19.35$), as predicted, scored significantly ($t(118)=-1.88$, $p<.05$) higher than females

($\bar{M}=17.61$) on (a) sociopathy as measured by the MMPI Scale 4.

Males ($\bar{M}=14.64$) also had a higher mean score than females ($\bar{M}=13.54$) for (b) impulsivity, as measured by the Impulsiveness Scale, however this difference was not significant ($t(118)=-1.31$, $p \leq .09$). In correlation terms, $r(.12)$ was also not significant ($p \leq .09$), however correlational analysis allowed the use of partial correlation to further investigate the relationship between gender and impulsivity, while controlling for introverted feeling and introverted intuition. As a result, impulsivity was found to be positively associated ($r=.16$, $p \leq .05$) with being male, thus corroborating hypothesis 4b.

It was expected that males would have higher scores on the SCL-90-R than females for (c) hostility and (d) paranoid ideation. Hypotheses 4c and 4d were not corroborated (see Table 4). Male ($\bar{M}=.88$) and female ($\bar{M}=.80$) means did not differ significantly ($t(118)=-.60$, $p \leq .27$) for hostility, although the difference was in the predicted direction. Male ($\bar{M}=.92$) and female ($\bar{M}=.97$) means did not differ significantly ($t(118)=.36$, $p \leq .35$) for paranoid ideation. Partial correlations, controlling for introverted feeling and intuition, were not significant ($p \leq .05$).

Hypothesis 5

The prediction that females, because of their introverted function types, would have higher measures of intensity or depth of psychopathology on the SCL-90-R than males, was not corroborated. Table 4 shows that the mean Global Severity Index (GSI) score for women was 1.01 versus .86 for men. Thus, although this difference was not significant ($t(118)=1.22$, $p<.11$), the mean difference was in the predicted direction. The partial correlation between gender and GSI, while controlling for introverted feeling and intuition, was not significant ($p<.05$).

Correlational Findings

The foregoing analyses indicate that, as predicted, females displayed greater degrees of introverted feeling and intuition function types, and that females also tended to have somewhat higher scores than males for symptoms of neuroses, depression, and intensity of psychopathology. On the other hand, males did not score higher than females on extraverted thinking and sensation as expected. However, males did score significantly higher than females on measures of sociopathy and impulsiveness as predicted.

The next step in the progression of analyses was to examine the associations among psychopathology and

two aspects of Jungian theory; the function types and contrasexual archetypes. Therefore, correlational analyses were used to test these predicted relationships (hypotheses 6 through 9).

Hypothesis 6

As expected, Table 5 reveals that correlations (r/r) for introverted feeling/introverted intuition, as measured by the SLIP, were significantly ($p \leq .05$) and positively associated with (b) depression (.25/.29), (c) anxiety (.24/.31), (d) obsessive-compulsive symptoms (.19/.24), (e) phobic anxiety (.18/.28), (f) interpersonal sensitivity (.24/.29), and (g) intensity of psychopathology (.24/.30), as measured by the SCL-90. However, hypothesis 6a (somatization) was not corroborated, although the correlations (.12/.12, $p \leq .09$) were in the predicted direction.

The foregoing findings are consistent with the hypothesized linkage between introverted feeling, introverted intuition, and psychopathology. Moreover, the non-significant findings for introverted thinking, introverted sensation, and psychopathology are inconsistent with alternative explanations based on generalized response biases. Impression-management (DePaulo, Kenny, Hoover, Webb, & Oliver, 1987; Goffman, 1959) provides an alternative explanation for this pattern of results. It is possible that the items constituting

Table 5

Pearson Product Moment Correlational Analysis of Function Type and Psychopathology.

Instrument/Scale	Introverted Thinking	Introverted Feeling	Introverted Sensation	Introverted Intuition	Extraverted Thinking	Extraverted Feeling	Extraverted Sensation	Extraverted Intuition
<u>SCL-90-R</u>								
Somatization	-.05	.12	-.01	.12	-.09	.04	-.07	.02
Obsessive-Compulsive	-.01	.19*	-.04	.24**	-.01	.10	.01	.19*
Interpersona Sensi- tivity	-.02	.24**	-.08	.29***	-.13	.09	.01	.19*
Depression	.05	.25**	.04	.29***	-.06	.06	-.02	.14
Anxiety	.09	.24**	.07	.31***	.05	.11	.05	.16*
Hostility	-.04	.09	-.14	.19*	-.01	.05	-.06	.10
Phobic Anxiety	.02	.18*	.04	.28***	-.06	.04	.06	.13
Paranoid Ideation	.02	.16*	-.13	.23**	-.09	.02	-.01	.14
Psychoticism	-.01	.16*	-.04	.24**	-.03	.10	-.01	.15*
Global Severity Index (GSI)	.02	.24**	-.01	.30***	-.05	.09	.01	.17*
Impulsiveness Scale	-.15*	.09	-.01	.06	-.08	.08	.09	.13
MMPI-Scale 4 Sociopathy	-.02	.02	-.17*	.18*	-.12	-.03	-.02	-.01

* $p < .05$.** $p < .01$.*** $p < .001$.

the introverted feeling and intuition scales are inherently less desirable than introverted thinking and sensation scale items.

To test this possibility, ten randomly selected introverted feeling or introverted intuition items, and ten introverted thinking or introverted sensation items were randomly paired. Twenty participants from the same pool of college students were asked to select an item from each pair of items that they thought a healthy, well adjusted person would most likely select. If there was no difference in social desirability, then it was expected that participants would not favor either member of a pair.

Table 6 presents a tabulation of item choices and the resulting chi square test for each matched pair of items. As Table 6 shows, none of the chi square tests for the ten matched pairs of items were significant ($p \leq .05$).

Hypothesis 7

Contrary to expectations, Table 5 shows that correlations (r/r) for extraverted thinking/extraverted sensation, as measured by the SLIP, were not significantly ($p \leq .05$) associated with (a) sociopathy ($-.12/-.02$) as measured by the MMPI Scale 4.

Similarly, extraverted thinking/extraverted sensation were not significantly ($p \leq .05$) associated with (b)

Table 6
Comparison of Introverted Thinking/Introverted Sensation and Introverted Feeling/Introverted Intuition Matched Pairs of Items.

<u>Matched Pair Number</u>	<u>Introverted Thinking/ Introverted Sensation</u>	<u>Introverted Feeling/ Introverted Intuition</u>	<u>χ^2 df = 1</u>
1	9	11	.2
2	10	10	0.0
3	8	12	.8
4	11	9	.2
5	9	11	.2
6	12	8	.8
7	11	9	.2
8	7	13	1.8
9	8	12	.8
10	9	11	.2

impulsivity ($-.08/.09$), as measured by the Impulsive-ness Scale, nor were they significantly ($p \leq .05$) associated with (c) hostility ($-.01/-.06$) and (d) paranoid ideation ($-.09/-.01$) as measured by the SCL-90-R. Therefore, hypotheses 7a through 7d were not corroborated.

Hypothesis 8

As expected, the Animus scores, which are not to be confused with introverted function types (Hypothesis 6), for females (see Table 7) were significantly and negatively associated with (a) intensity of psychopathology ($r = -.29$, $p \leq .01$), (b) somatization ($r = -.23$, $p \leq .01$), (c) depression ($r = -.23$, $p \leq .05$), (e) obsessive-compulsive symptoms ($r = -.24$, $p \leq .05$), and (g) interpersonal sensitivity ($r = -.31$, $p \leq .01$) as measured by the SCL-90-R. Female animus scores were also negatively associated with (d) anxiety ($r = -.19$) and (f) phobic anxiety ($r = -.20$), although these correlations were not significant ($p \leq .05$).

Hypothesis 9

As predicated, the Anima scores for males (see Table 7) were significantly and negatively associated with (a) intensity of psychopathology ($r = -.29$, $p \leq .05$), (d) hostility ($r = -.37$, $p \leq .01$), and paranoid ideation ($r = -.27$, $p \leq .05$) as measured by the SCL-90-R.

Table 7

Pearson Product Moment Correlational Analysis of Anima-Animus Scale and Psychopathology.

<u>Instrument/Scale</u>	<u>Females (N=65)</u>		<u>Males (N=55)</u>	
	<u>Anima</u>	<u>Animus</u>	<u>Anima</u>	<u>Animus</u>
<u>SCL-90-R</u>				
Somatization	-.12	-.23*	-.26*	-.33**
Obsessive-Compulsive	-.18	-.24*	-.26*	-.48***
Interpersonal Sensitivity	-.31**	-.31**	-.31**	-.38**
Depression	-.29**	-.23*	-.25*	-.37**
Anxiety	-.08	-.19	-.24*	-.38**
Hostility	-.23*	-.30**	-.37**	-.23*
Phobic Anxiety	-.06	-.20	-.30*	-.39**
Paranoid Ideation	-.24*	-.24*	-.27*	-.21
Psychoticism	-.27*	-.25*	-.26*	-.28*
Global Severity Index (GSI)	-.23*	-.29**	-.29*	-.36**
<u>Implusiveness Scale</u>	-.08	-.22*	-.16	-.49***
<u>MMPI-Scale 4 Sociopathy</u>	-.27*	-.39***	-.34**	-.21

*p < .05.

**p < .01.

***p < .001.

Anima scores for males were also negatively and significantly associated with (b). sociopathy ($r = -.34$, $p < .01$) as measured by the MMPI Scale 4.

However, Anima scores for males were not significantly ($p < .05$) associated with (c) impulsivity ($r = -.16$), as measured by the Impulsiveness Scale, although the correlation was in the predicted direction.

Multivariate Regression Analysis

At this point in the analysis, the significant findings relating introverted feeling and intuition, the contrasexual archetypes, and psychopathology were brought together, along with more traditional measures of masculinity, femininity, and androgyny, in an effort to evaluate their contribution to a predictive system for psychopathology.

The notion that androgyny is an index of adjustment and psychological health (Bem, 1974) has received very little empirical support (Long, 1986). Lubinski, Tellegen, and Butcher (1981, 1983) have represented androgyny as the unique contribution of the linear by linear interaction, MXF. They argued that androgyny has utility only if the MXF term significantly added to a prediction system, over and above the main effects of M and F. Using hierarchical regression, the authors found that androgyny did not significantly add to the

prediction system beyond the main effect of M for positive and negative affectivity. In those instances where androgyny did contribute, its association was in the direction opposite of that predicted.

Using the SCL-90-R Global Severity Index, as recommended by Derogatis (1977) when a single summary measure of psychopathology is required, the present study attempted to test whether any of the three androgyny measures significantly added to the prediction system, in the same manner as Lubinski, et al. (1981, 1983). In addition, the androgyny metric proposed by Bobko and Schwartz (1984) was compared with the linear by linear interaction, MXF, to test the author's contention that it contained substantially different information. In the present analysis, introverted feeling and introverted intuition were also included to test their contribution to the predictive system.

Table 8 presents the hierarchical regression analysis for the BSRI, PAQ, and Anima-Animus Scale on the dependent variable Severity Index (GSI). The main effects for masculinity were significant ($p \leq .01$) in all three cases. The main effects for femininity (anima) were only significant for the Anima-Animus Scale. In all three analyses, the main effects for introverted feeling were significant ($p \leq .05$), as were the main effects for introverted intuition for the BSRI and

Table 8

Regressions of Masculinity, Femininity, Androgyny, Gender, Function Type, and Pairwise Interactions on SCL-90-R Global Severity Index (GSI).

Step	Variable	BSRI			PAQ			Anima-Animus Scale				
		Partial r	R	R ² change	Variable	Partial r	R	R ² change	Variable	Partial r	R	R ² change
1	M	-.34	.34	.12***	M	-.33	.33	.11***	Anima	-.24	.24	.06**
2	F	.11	.36	.01	F	-.01	.33	.00	Animus	-.25	.34	.06**
3	IF	.19	.40	.03*	IF	.20	.38	.04*	IF	.22	.39	.04*
4	IN	.19	.44	.03*	IN	.13	.40	.01	IN	.20	.44	.03*
5	Sex	.06	.44	.00	Sex	-.06	.41	.00	Sex	-.03	.44	.00
6	MXF	-.03	.44	.00	MXF	.08	.41	.01	Animus x Anima	-.03	.44	.00
7	BSRI Androgyny	.05	.44	.00	PAQ Androg.	.02	.41	.00	Jung. Androg.	-.05	.44	.00
8	Sex x M	.00	.44	.00	Sex x M	.11	.43	.01	Sex x Animus	-.01	.44	.00
9	Sex x F	.08	.45	.01	Sex x F	.04	.43	.00	Sex x Anima	.04	.45	.00
10	Sex x IF	-.07	.45	.00	Sex x IF	-.09	.43	.00	Sex x IF	.02	.47	.01
11	Sex x IN	-.06	.45	.00	Sex x IN	-.02	.43	.00	Sex x IN	.02	.47	.00

* $p < .05$.

** $p < .01$.

*** $p < .001$.

NOTE: These data were obtained by entering main effects in an incremental fashion and then entering the interaction terms using the same procedure. The column labeled Partial r represents the partial correlation for that variable and GSI after controlling for all the preceding variables in the equation. Thus, the first entry in every column is merely the simple correlation. N=120. M = masculinity; F = femininity; IF = introverted feeling; IN = introverted intuition; BSRI Androg, PAQ Androg and Jung Androg are the androgyny scores using the metric by Bobko, et al. (1984).

Anima-Animus Scale. None of the interactions were significant ($p \leq .05$).

The MXF interaction did not significantly add to the prediction system, over and above the main effects for masculinity. In none of the analyses did the androgyny metric of Bobko et al. (1984) add to the predictive system beyond the contribution of the MXF interaction, which was negligible.

Other Findings

Although not anticipated, female ($M=50.08$) and male ($M=47.33$) means differed significantly ($t(118)=2.44$, $p \leq .05$) for introverted sensation. In addition, females ($M=46.09$) also scored significantly ($t(118)=3.07$, $p \leq .01$) higher on extraverted feeling than did males ($M=42.36$).

In regard to function type and psychopathology, introverted intuition was found to be positively associated with hostility ($r=.19$, $p \leq .05$), paranoid ideation ($r=.23$, $p \leq .01$), and psychoticism ($r=.24$, $p \leq .01$) as measured by the SCL-90-R, and with sociopathy ($r=.18$, $p \leq .05$) as measured by the MMPI Scale 4. Also not anticipated was the positive association between introverted feeling and paranoid ideation ($r=.16$, $p \leq .05$) and psychoticism ($r=.16$, $p \leq .05$).

Female Animus scores were found to be negatively associated with SCL-90-R measures of hostility ($r = -.30$, $p \leq .01$), and psychoticism ($r = -.25$, $p \leq .05$), Impulsiveness Scale measures of impulsivity ($r = -.22$, $p \leq .05$), and with the MMPI Scale 4 measure of sociopathy ($r = -.39$, $p \leq .001$). Although not hypothesized, female Anima scores were negatively associated with overall psychopathology ($r = -.23$, $p \leq .05$), interpersonal sensitivity ($r = -.31$, $p \leq .01$), depression ($r = -.29$, $p \leq .01$), hostility ($r = -.23$, $p \leq .05$), paranoid ideation ($r = -.29$, $p \leq .05$), psychoticism ($r = -.27$, $p \leq .05$), and sociopathy ($r = -.27$, $p \leq .05$).

For males, Anima scores were found to be negatively associated with somatization ($r = -.26$, $p \leq .05$), obsessive-compulsive symptoms ($r = -.26$, $p \leq .05$), interpersonal sensitivity ($r = -.31$, $p \leq .01$), depression ($r = -.25$, $p \leq .05$), anxiety ($r = -.24$, $p \leq .05$), phobic anxiety ($r = -.30$, $p \leq .05$), and psychoticism ($r = -.26$, $p \leq .05$). Similarly, male Animus scores were negatively and significantly ($p \leq .05$) associated with all measures of psychopathology, except paranoid ideation and sociopathy (see Table 7).

Comparison of Masculinity-Femininity Measures

One of the secondary purposes of the present study was to compare the Jungian based Anima-Animus Scale

with the BSRI and the PAQ. The intercorrelations for all three measures are presented in Table 9.

The Anima subscale was positively associated with both BSRI Femininity ($r=.41$, $p<.001$) and PAQ Femininity ($r=.41$, $p<.001$), and the Animus subscale was positively associated with both BSRI masculinity ($r=.34$, $p<.001$) and PAQ Masculinity ($r=.28$, $p<.001$). Thus, there was support for the construct validity of the Anima-Animus Scale.

There were, however, some differences between the Anima-Animus Scale and the other two measures. The Anima and Animus subscales were positively associated ($r=.49$, $p<.001$), indicating some overlap in the measurement of the two constructs, whereas the Masculinity and Femininity subscales were independent by design within both the BSRI ($r=-.08$) and PAQ ($r=-.00$). Similarly, BSRI Masculinity and PAQ Femininity were independent ($r=.08$), as were BSRI Femininity and PAQ Masculinity ($r=-.03$). The Anima subscale, on the other hand, was positively associated with BSRI Masculinity ($r=.17$, $p<.05$) and PAQ Masculinity ($r=.31$, $p<.001$), whereas the Animus subscale was not significantly ($p<.05$) related to BSRI ($r=.12$) and PAQ ($r=.11$) measures of femininity, thus offering additional support for the construct validity of the Animus subscale.

Table 9

Pearson Product Moment Correlational Analysis of Anima-Animus, BSRI, and PAQ Scales.

	Anima	Animus	Jungian Androgyny	BSRI Masculinity	BSRI Femininity	BSRI Androgyny	PAQ Masculinity	PAQ Femininity	PAQ Androgyny	PAQ M-F
Anima	-									
Animus	.49***	-								
Jungian Androgyny	.66***	.78***	-							
BSRI Masculinity	.17*	.34***	.19*	-						
BSRI Femininity	.41***	.12	.27***	-.03	-					
BSRI Androgyny	.30***	.22**	.27***	.56***	.51***	-				
PAQ Masculinity	.31***	.28***	.25**	.65***	-.03	.36***	-			
PAQ Femininity	.41***	.11	.27***	-.08	.72***	.36***	.00	-		
PAQ Androgyny	.35***	.20*	.24**	.50***	.15*	.53***	.83***	.20*	-	
PAQ M-F	.16*	.08	.00	.02	.39***	.20*	.09	.51***	.14	-

* $p < .05$.** $p < .01$.*** $p < .001$.

Furthermore, although the Anima subscale was positively associated with BSRI and PAQ measures of femininity, this relationship was not as strong as that between the BSRI and PAQ Femininity subscales ($r=.72$, $p<.001$). Similarly, the association ($r=.65$, $p<.001$) between BSRI and PAQ measures of masculinity was stronger than their relationship to the Animus subscales. And lastly, all three measures of androgyny were positively associated, but Jungian Androgyny was not as strongly related as were PAQ and BSRI Androgyny (see Table 9).

On the basis of the above comparisons, The Anima-Animus scale developed for the present study appeared to manifest construct validity, but also seemed to measure somewhat distinct aspects of masculinity and femininity. These distinctions could also be seen in the relationships of the three measures to psychopathology.

Table 10 presents the intercorrelations between psychopathology and the three measures of masculinity, femininity, and androgyny. The most noteworthy finding was the strong negative association between all three measures of masculinity and nearly all measures of psychopathology. Femininity, on the other hand, appeared independent of psychopathology, with the exception of the Anima subscale, which was negatively associated with most measures of psychopathology. In addition,

Table 10

Pearson Product Moment Correlational Analysis of Psychopathology, Masculinity, Femininity, and Androgyny.

Instrument/ Scale	Anima	Animus	Jungian Androgyny	BSRI Masculinity	BSRI Femininity	BSRI Androgyny	PAQ Masculinity	PAQ Femininity	PAQ Androgyny	PAQ M-F
<u>SCL-90-R</u>										
Somatization	-.16*	-.30***	-.18*	-.30***	.10	-.11	.17*	.08	-.12	.04
Obsessive- Compulsive	-.21**	-.34***	-.34***	-.30***	.12	-.10	-.30***	.02	-.18*	.08
Interpersonal Sensitivity	-.30***	-.35***	-.40***	-.40***	.09	-.19*	-.44***	-.07	-.32***	.03
Depression	-.25**	-.30***	-.30***	-.43***	.13	-.13	-.47***	.04	-.34***	.03
Anxiety	-.14	-.28***	-.22**	-.37***	.16*	-.15*	-.33***	.06	-.25**	.07
Hostility	-.30***	-.25**	-.32***	-.15*	.04	-.14	-.21*	-.14	-.18*	.02
Phobic Anxiety	-.15*	-.29***	-.22**	-.35***	.12	-.26**	-.29***	-.02	-.23**	.02
Paranoid Ideation	-.25**	-.23**	-.28***	-.23**	.08	-.09	-.25**	-.09	-.16*	.03
Psychoti- cism	-.26**	-.27***	-.32***	-.21*	.08	-.05	-.24**	-.07	-.17*	.06
Global Severity Index (GSI)	-.24**	-.33***	-.32***	-.34***	.12	-.13	-.33***	-.01	-.24**	.06
Impulsivity Scale	-.13	-.31***	-.24**	.10	-.07	.10	-.08	-.08	-.06	.13
MMPI-Scale 4 Socio- pathy	-.32***	-.27***	-.35***	-.09	-.04	-.14	-.29***	-.12	-.27***	-.18*

* $p < .05$.
 ** $p < .01$.
 *** $p < .001$.

Jungian Androgyny and PAQ Androgyny were inversely related to psychopathology. BSRI Androgyny was also negatively associated with psychopathology, but only three of the SCL-90-R subscale correlations were significant ($p \leq .05$).

Discussion

The purpose of the present study was to explore the potential contribution of Jungian theory to an understanding of gender differences in psychopathology. Specifically, this study attempted to examine the relationship of Jungian typology and the contrasexual archetypes (the anima and animus) to the documented differences in psychopathology between males and females. The rationale was to establish step by step linkages between gender and function type, gender and psychopathology, function type and psychopathology, and between the contrasexual archetypes and psychopathology. These relationships were then brought together, along with more traditional measures of masculinity, femininity, and androgyny, and examined within a multivariate hierarchical framework to evaluate their contribution to a predictive system for psychopathology.

As predicted, females were found to have more highly developed introverted feeling and introverted intuition function types than males. The present study, however, failed to replicate the previous finding by Mosher (1985) of greater extraverted thinking

and extraverted sensation in males than females. On the other hand, higher female scores for introverted sensation appeared to more firmly establish the important relationship between introversion and the female gender. The significance of higher scores for females than males on the "mixed" function type of extraverted feeling is unclear, although the link with the feeling aspect of the function type would be expected, and Jung (1971) reported observing this function type more often in women.

The predicted relationships between gender and psychopathology were partially corroborated. For two of the instruments, the MMPI Scale 4 and the Impulsiveness Scale, the relationship with gender was in the predicted direction and significant ($p \leq .05$). For the third instrument, the SCL-90, eight of the nine results were in the predicted direction, with one significant at $p \leq .05$. In general, these data offered support for the hypothesis that sociopathy, impulsivity, and hostility (symptoms often associated with personality disorders) would be more prevalent in males, whereas the symptoms associated with neuroses and depression would be greater in females.

It should be noted, however, that mean scores for the SCL-90-R and MMPI Scale 4 differed significantly from published norms (Derogatis, 1977; Dahlstrom,

Welsh, & Dahlstrom, 1982). These large differences may be the result of unique characteristics of the sample of college students included in the present study, or they may reflect a real difference in norms between college-aged populations in general and older populations, such as those on which the SCL-90-R norms were based (mean age = 46). It is also possible that the efforts taken in the present study to elicit self-disclosure may have been effective, and were reflected in higher psychopathology scores. Until future studies can address these issues, caution should be taken in generalizing these results to other populations.

Perhaps the most noteworthy finding of this study was the predicted relationships of introverted intuition and introverted feeling with psychopathology. Both function types had significant ($p \leq .05$) positive relationships with nearly all measures of psychopathology. In contrast, the other two introverted function types and the extraverted function types appeared independent of psychopathology; with the possible exception of extraverted intuition which had some weak, but significant, linkages with psychopathology. In addition, the alternative explanation of differences between these introverted functions in social desirability was examined, and not supported, by a comparison of randomly selected matched pairs of SLIP items.

Thus, the findings of the present study provided support for the role of Jung's typology in the pattern of psychopathology that has been observed in women (Dohrenwend, et al., 1980). Females displayed greater levels of introverted intuition and introverted feeling, which in turn, were both strongly associated with overall psychopathology, depression and symptoms of neuroses. Furthermore, females endorsed to a greater extent than males, symptoms associated with depression and neuroses. Males, on the other hand, endorsed more items associated with personality disorder and acting out behaviors. However, this study did not find the expected relationship between males and extraverted thinking and sensation, and between these two function types and symptoms related to personality disorders. On the basis of the present study, it appears that the extraverted function types are independent of psychopathology, or at least independent of those measures included in this study. Thus, the extrapolation of Jung's theory to link extraversion and psychopathology, and Eysenck's (1960) findings relating extraversion and psychopathic symptoms, were not corroborated. This does not, however, impune Jung's conceptualizations under investigation.

Masculinity, Femininity, and Androgyny

A comparison of the Anima-Animus Scale with the BSRI and the PAQ provided support for the construct validity of the Anima-Animus Scale. However, there was also evidence that the Anima-Animus Scale measured somewhat different aspects of masculinity and femininity. This finding was expected, as the Anima-Animus Scale incorporated the specific definitions of masculinity and femininity used by Jung (see Appendix A). The Jungian theoretical basis for the Anima-Animus Scale may be the reason for the overlap (positive association) between the Anima subscale and the Animus subscale, whereas masculinity and femininity were independent by design in both the BSRI and the PAQ.

When the Anima-Animus Scale, BSRI, and PAQ were compared with measures of psychopathology, other differences in the Anima-Animus Scale emerged. All three measures showed strong negative relationships between masculinity and psychopathology. These results supported the outcomes of previous studies that have found masculinity to be positively associated with psychological adjustment (Lee & Scheurer, 1983; Long, 1987; Thomas & Reznikoff, 1984; Zeldow, Clark & Daugherty, 1985) in men and women, and negatively associated with symptoms of psychological disorders (Heiser & Gannon,

1984), whereas femininity has been found to be generally independent of psychological adjustment. In contrast, the Anima subscale used in the present study was found to be negatively associated with psychopathology. Thus, the Anima-Animus Scale provided support for Jung's contention that incorporation of the contrasexual element of the psyche is essential for psychological growth and well-being. Furthermore, the finding that both the Anima and Animus subscales were negatively associated with psychopathology for males and females, would seem to indicate that incorporation of same-sex attributes is also important. This raises the question of androgyny (the relative amounts and balance between masculinity and femininity) and its relationship to psychological adjustment.

Masculinity and femininity are no longer viewed as mutually exclusive dimensions of a bipolar continuum, and the concept of psychological androgyny - the endorsing of both masculine and feminine attributes - has reorganized traditional perspectives on sex roles (Bem, 1974; Spence & Helmreich, 1978). Along with this development was the expectation that the androgynous person would be more versatile, adaptable, and psychologically adjusted (Bem, 1974). Results of studies in the last decade have suggested, however, that although androgyny may be associated with psychological health,

it appears to be the masculine component of androgyny that is the best predictor (Long, 1987).

Two logically distinct hypotheses regarding androgyny have been proposed. First, androgyny can be defined in terms of high amounts of masculinity and femininity, as in the additive approach of Spence, Helmreich, and Stapp (1975). Second, as in Bem (1974, 1975), androgyny can be defined in terms of a balance between masculinity and femininity, without regard for the absolute magnitude of each trait. Taylor and Hall (1982) observed that these two hypotheses are not mutually exclusive and can be tested using a two-way analysis of variance (ANOVA). Using the presence or absence of main effects for masculinity and femininity to test the additive definition of androgyny, and by testing Bem's original balance, or interactive androgyny hypothesis, using the presence or absence of an interaction effect, the authors found little support for either hypothesis. They did, however, find a strong association between masculinity and mental health. Lubinski et al. (1981, 1983) recommended using multiple regression techniques and tested whether the interaction term (MXF) added to the predictive system above and beyond the main effects of masculinity and femininity. The authors found no evidence of interaction effects favoring a balance theory of androgyny, but did

find that masculinity was strongly associated with subjective well-being. Zeldow, et al. (1985) used both ANOVA and multiple regression analyses, and found some support for an additive androgyny concept, but none for a balance formulation. As in previous studies, they found a strong association between masculinity and measures of psychological adjustment.

The present study used the multiple regression techniques advocated by Lubinski, et al. (1981, 1983) to test for masculinity and femininity main effects (additive androgyny) and MXF interactions (balance androgyny) for the Anima-Animus Scale, BSRI, and PAQ. In addition, the metric proposed by Bobko, et al. (1984), as an improved theoretical model of androgyny, was also tested using all three measures.

The results for the BSRI and PAQ provided no support for the additive, balance, or Bobko et al. (1984) models of androgyny, over and above the main effects of masculinity. Similarly, the Anima-Animus Scale results did not support the balance or Bobko et al. (1984) models. However, the significant main effects for both the Anima and Animus subscales, did provide support for an additive concept of androgyny. It should be noted that Jung's (1959a, 1966) writings on the archetype of androgyny and the importance of the contrasexual elements of the psyche predate present-day research. It

is conceivable that the Anima-Animus Scale, based on Jung's conceptualization and recognition of the qualities of the two sexes in each person, could be a more valid instrument for measuring androgyny than the BSRI and PAQ. Only additional research comparing the three instruments, using a broad range of dependent variables, can clarify this issue. As Zeldow et al. (1985) have suggested, an even more helpful approach would be a movement away from self-report measurements, and their many problems, and toward peer and professional ratings of the various formulations of androgyny and psychological adjustment.

In regard to the BSRI and PAQ, however, the results of the present study (as have the majority of previous studies) bring into question the validity and utility of the concept of androgyny in relation to psychological well-being. There is simply very little evidence to support the position that the androgyny concept adds information regarding psychological adjustment not already contained in masculinity or femininity measures. In fact, the utility of the androgyny concept, in general, can be questioned (Lubinski et al., 1983; Deaux, 1985).

In regard to Jungian theory, however, the present study supports the contention that Jung's typology and his definitions of the contrasexual archetypes, make

significant contributions to the prediction of psychopathology, and to factors underlying gender differences in psychopathology. Both introverted intuition and introverted feeling were strongly associated with psychopathology; with introverted intuition being a somewhat better predictor. Similarly, both the constructs of the anima and animus were found to be negatively associated with measures of psychological distress, although as in previous studies, the masculine element (animus) was the best predictor. Thus, the elements that were found to be most positively associated with psychopathology (introverted intuition and introverted feeling) were found to exist to a greater degree in females, and the factor (masculinity or animus) most protective of, or enhancing to, psychological health, was found to a lesser extent in females. Therefore, on the basis of the present study, Jungian theory clearly contributes to an understanding of gender differences in psychopathology, although no cause and effect relationships have been demonstrated.

The next issue that needs to be addressed is the source of these gender differences in typology and masculinity-femininity. Are these differences in instrumentality, that have been labeled masculinity, and the differences in expressivity, that have been labeled femininity, culturally determined? Or does biology

play a role? Although the answers to these questions are beyond the scope of the present study, they are discussed from a Jungian perspective.

Nature vs. Nurture and Jung

Much of the debate regarding gender differences has centered around the relative importance of biological-versus-environmental/social influences. This is an important question with serious social and political implications. Advocates of social change fear that the political pressure for new social roles will decrease to the extent that biological processes are implicated in sex-role behaviors. This fear has sometimes led to a bias against biological evidence coupled with a preference for socialization explanations of sex differences (Parsons, 1980). However, it is essential that the effects of both biology and socialization be carefully considered, because only by fully understanding the bases of sex-role dimorphism can we set up an efficient strategy for change.

In addition to the gender differences identified in the present study, consistent sex differences have been found for such traits as aggression, and for cognitive abilities like quantitative, spatial visualization, and verbal skills (Maccoby & Jacklin, 1974). Both the biological and socialization views would

explain these differences in relatively simple terms: either the biological or environmental source of influence is regarded as being so much more important than the other that for practical purposes the lesser influence can be neglected (or regarded as having only a weak modifying influence). Archer and Lloyd (1982) refer to these types of models as 'main effect' models. They point out that Mischel (1966), the social learning theorist, would regard different types of reinforcement and modeling opportunities as overriding any biological differences between males and females. On the other hand, Gray (1971) or Hutt (1972), biological theorists, would regard biological differences as being more important, and that environmental influences would only be capable of slightly modifying such differences.

In presenting their theory that sex hormones affect the brain during prenatal development so as to produce later behavioral and psychological differences between men and women, Money and Ehrhardt (1972) stress that the nature versus nurture approach to psychosexual differentiation is now outmoded. They propose that the basic issue should not be a dichotomization of genetics and environment, but their interaction.

Archer and Lloyd (1982) further developed the notion of an interaction or continuous interplay between biology and the environment. The main effect

models view the controlling influence as being either internal (biological) or external (environmental). In contrast, the interactionist model sees the controlling influences as residing neither within the individual nor in the outside world. They proposed a model derived from Bateson (1976), in which the constant interplay of organism and environment leads to the establishment of an internal controlling influence on development. In effect, what happens is that the organism is born with the capacity to control its own development, but it has no fixed control mechanism until it interacts with its environment, the exact nature of the control mechanism being determined by the environment.

In applying this model to human gender role differences, Archer and Lloyd (1982) state:

Hence the content [underline added] of the internal reference value, the gender role concept, depends on external influences; but the existence of the potential for classifying and acting on the basis of categories such as male or female is something which is part of the human biological make-up (p. 212).

Jung's (1971) theory of typology and his theory of archetypes (Jung, 1976) also have biological bases. In contrasting the expansive nature of the extravert to the tendency of the introvert to defend against demands from the outside, Jung (1971) wrote, "This biological

difference, it seems to me, is not merely analogous to, but the actual foundation of, our two psychological modes of adaptation" (p. 331).

A study by Zahn, Schooler, and Murphy (1986) provided empirical support for biological differences between males and females in relation to sensation seeking (similar to Jung's extraverted sensation). Women showed negative relationships between sensation seeking and autonomic arousal (skin conductance and heart rate), whereas males showed evidence of positive relationships between autonomic arousal (skin conductance) and sensation seeking and an active life style.

Jung's concept of the archetype includes a biological basis and has sometimes been misunderstood as Lamarchian (the inheritance of acquired characteristics). As Jung (1976) himself insisted, the term archetype:

is not meant to denote an inherited idea, but rather an inherited mode of functioning, corresponding to the inborn way in which the chick emerges from the egg, the bird builds its nest, a certain kind of wasp stings the motor ganglion of the caterpillar, and eels find their way to the Bermudas. In other words, it is a 'pattern of behavior'. This aspect of the archetype, the purely biological one, is the proper concern of scientific psychology (p. 518).

But the archetype is not biological alone. Jung differentiated between the "archetype-as-such", the

biological aspect, and the archetypal image, or content, that is provided through interaction with the environment. Jung (1959a) stated:

Again and again I encounter the mistaken notion that an archetype is determined in regard to its content, in other words that it is a kind of unconscious idea (if such an expression be permissible). It is necessary to point out once more that archetypes are not determined as to their content [underline added], but only as regards their form [underline added] and then only to a very limited degree. A primordial image is determined as to its content only when it has become conscious and is therefore filled out with the material of conscious experience (p. 79).

What Jung is saying is that the form of the archetype is biological, but the content is provided by experience of the environment. Thus, rather than a biological main effect model, Jung's theory is actually an interactionist model, very similar in concept and wording to that of Archer and Lloyd (1982). Contemporary Jungians (Mattoon, 1981; Singer, 1973; Stevens, 1983) have further elaborated both the biological and social nature of the archetypes.

Steven's (1983) has done much to demystify the archetype by identifying the remarkable similarities between Jung's theory and the science of ethology (the study of behavior patterns in organisms living in their natural environments). As Stevens (1983) points out:

Once one conceives of archetypes as the neuropsychic centers responsible for coordinating the behavioural and psychic repertoires of our species in response to whatever environmental circumstances we may encounter, they become directly comparable to the 'innate releasing mechanisms' responsible for Lorenz's (1977) 'species specific patterns of behaviour' and Bowlby's (1969) 'goal-corrected behavioural systems' (p. 17).

Regarding gender differences and Jung's contrasexual archetypes, the anima and the animus, the question may be raised as to whether Jung is describing archetypes or stereotypes. The answer to this question is complex and again rests on the interactionist nature of Jung's theory.

Deaux (1985) has described the "new look" in stereotypy that has shifted from a conceptualization of stereotypes as inherently negative and prejudiced to a view of stereotypes as potentially neutral categories that operate in the same way as do other cognitive categories. From this vantage point, questions have been raised not only about the content of gender stereotypes (what might be termed the "old look"), but also about the structure of these categories and the processes by which they operate.

Cross-cultural studies of gender stereotypes have provided valuable information as to both the diversity and the generality of gender stereotypes. In a study

of 30 nations, Williams and Best (1982) found a considerable degree of "pancultural generality", evidenced most clearly in the association of instrumental traits with males and expressive traits with females. At the same time, some variations were evident when comparisons were made between groups that differed in religious tradition or in national work-related values. In more descriptive explorations of other cultures, anthropologists have also found evidence for both the commonality of instrumentality and expressiveness, as well as for unique attributes that reflect specific cultural contexts (e.g. Strathern, 1976; Dwyer, 1978).

Strathern (1976) in describing the symbolic nature of gender stereotypes, stated:

Male-female relations thus provide powerful symbols, for they express oppositeness and contrast while at the same time including the possibility of complementarity or union. Gender constructs put sex differences in relationship to one another. In the evolution of society it is even possible that gender ideas played a part in the conceptualization of social relations (p. 60).

The above approaches to discussing and conceptualizing gender stereotypes are very compatible with Jung's theory of archetypes. Jung (1966) observed that the archetypes are general to human-kind but the images (content) are shaped by specific history and culture. For example, individuals or cultures may have different images (stereotypes) of the good mother or hostile

brothers but the motif (archetypal form) is the same whatever the image.

Mattoon (1981) has described how each category of archetypal contents can product a variety of culture-specific images. For example, depending on the interests and experience of a twentieth-century dreamer, the archetype of the "hero" could take the form of a medieval knight, a football player, a military leader, or an antiwar protester.

The same relationship could be described between the anima-animus archetypes and the gender stereotypes of various cultures. From Jung's viewpoint, these gender stereotypes reflect an archetypal reality that is born in biology but is expressed in, and modified by, the social environment.

While Jung's theories cannot resolve these important issues regarding gender differences and their causes, it appears they can make a contribution. Deaux (1985), in describing the growing body of empirical findings in the area of gender differences, has lamented the lack of an adequate theoretical framework. Perhaps Jung's work could contribute to the development of such a theoretical framework.

Implications

If typology is related to psychopathology, then psychological adjustment may possibly be enhanced by the manipulation of one's function types. Quenk and Quenk (1982) point out that whether analysands are directed toward the outer extraverted world or toward the inner introverted world, they must obtain a balance between the two that does not violate their basic characterologic trends. It would appear, on the basis of the present study, that this may be especially critical when the introverted feeling and introverted intuition function types are dominant. This balance can be facilitated by the analyst "rotating" his or her typology so that congruence with the patient may decrease tension in the analytic relationship, or by increasing tension by taking a compensatory or polar function in opposition to the patient.

Similarly, if the contrasexual element of the psyche is related to psychopathology, then it is possible this element may be developed to enhance psychological health. This may be especially important in the case of the animus (masculine) traits in females. Indeed, in Jungian analysis a confrontation with the contrasexual archetypes is one of the most important aspects of analysis (Whitmont, 1969), and their conscious incorporation, to some degree, is essential. It is likely

that in most forms of psychotherapy, the development of instrumental traits is associated with positive outcome.

One approach to further examining the role of typology and the contrasexual archetypes on the development of psychopathology would be through the use of psychotherapy outcome studies. If changes in typology and conscious integration of the contrasexual archetypes are found to be related to changes in psychological adjustment and therapy outcome measures, then these relationships would be even more firmly established. It would also be possible to include gender in such studies, to test for the existence of gender differences in factors related to psychopathology.

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Appendix

Appendix A
Anima-Animus Scale

Using the 7-point scale, please indicate how well each of the following statements describes yourself.

	1	2	3	4	5	6	7
Never or Almost True							
Often True							
Usually True							
Always or Almost Always True							
1							
(Anima) 1. Warm in relation to others ____							
(Animus) 2. Leadership ability ____							
(Animus) 3. Opinionated ____							
(Anima) 4. Creative ____							
(Animus) 5. Logical and objective ____							
(Anima) 6. Self-righteous ____							
(Anima) 7. Sense of relatedness to others ____							
(Anima) 8. Moody ____							
(Animus) 9. Able to take action on one's own behalf ____							
(Animus) 10. Self-aware ____							
(Anima) 11. Jealous ____							
(Animus) 12. Dominate others ____							
(Anima) 13. Capable of intimacy ____							
(Animus) 14. Aggressive toward others ____							
(Anima) 15. Aware of feelings ____							
(Anima) 16. Sensitive ____							
(Animus) 17. Capable of distinguishing and differentiating features ____							
(Animus) 18. Reflective ____							
(Anima) 19. Indifferent to others ____							
(Animus) 20. Able to evaluate alternatives and make decisions ____							

Note: CW refers to C. G. Jung's Collected Works by volume and paragraph.

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