Androgynous Coping Behaviors: a Test of Bem's Sex-Role Theory

Roy Lucas Lukman
Andrews University

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ANDROGYNOUS COPING BEHAVIORS: A TEST OF BEM'S SEX-ROLE THEORY

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Andrews University
School of Education

ANDROGYNOUS COPING BEHAVIORS: A TEST
OF BEM'S SEX-ROLE THEORY

A Dissertation
Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

by
Roy Lucas Lukman
August 1983
ANDROGYNOUS COPING BEHAVIORS: A TEST
OF BEM'S SEX-ROLE THEORY

A dissertation
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of the requirements for the degree
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by
Roy Lucas Lukman

APPROVAL BY THE COMMITTEE:

W. Peter Blitchington
Chairman: W. Peter Blitchington Dean, School of Education

Wilfred G. A. Futcher
Committee Member

Jerome Thayer
Date approved: 7/08/83
Committee Member

Derrick L. Proctor
Committee Member

John F. Stout
External Examiner
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ABSTRACT

ANDROGYNOUS COPING BEHAVIORS: A TEST OF BEM'S SEX-ROLE THEORY

by

Roy Lucas Lukman

Chairman: W. Peter Blitchington, Ph.D.
ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University
School of Education

Title: ANCROGYNOUS COPING BEHAVIORS: A TEST OF BEM'S SEX-ROLE THEORY

Name of researcher: Roy Lucas Lukman

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Problem

Bem contended that sex-typing can seriously restrict the range of behaviors available to an individual as he or she moves from one situation to another. The purpose of this study was to investigate the validity of Bem's theory of androgyinous flexibility in terms of coping behaviors to deal with everyday stress.

Method

This study employed two objective instruments, the Bem Inventory and Burke's questionnaire of coping behaviors.
The data which were computed and analyzed to test the four null hypotheses were provided by a purposive sample group of 616 subjects.

Findings

1. There is a significantly higher mean flexibility index of coping strategies among androgynous individuals than that among masculine individuals.

2. The mean flexibility index of coping strategies among androgynous individuals is not significantly higher than that among feminine individuals.

3. There is a significantly higher mean flexibility index of coping strategies among androgynous individuals than that among indifferentediated individuals.

4. There is a significantly higher mean flexibility index of coping strategies among androgynous females than that among androgynous males.

5. There is a significantly higher mean flexibility index of coping strategies among feminine individuals than that among masculine individuals.

6. There is a significantly higher mean flexibility index of coping strategies among feminine females than that among masculine males.

7. Masculine females obtained significantly higher flexibility indices of coping strategies than feminine males.
8. The mean flexibility index of coping strategies among indifferentiated females is not significantly higher than that among undifferentiated males.

9. The flexibility of coping strategies among androgynous males is not significantly higher than that among masculine males.

10. The flexibility of coping strategies among androgynous females is not significantly higher than that among feminine females.

Conclusion

Bem contended that androgyny allows one to be more flexible in his or her behaviors. However, statistical analyses of the data gathered for this study did not support Bem's theory in terms of coping behaviors.

Consistent with the postulation that women are more encouraged to display cross-sex behaviors than men, females were found to obtain higher coping flexibility indices than males. Among males and females separately, androgyny showed no significant advantage over appropriate sex-type.
CHAPTER I

INTRODUCTION

Statement of the Problem

Questions about the psychological nature of men and women have been continually investigated since the field of psychology began. More specifically, the topic of sex-role development and its differentiation has received enthusiastic attention especially within the last decade.

Originally, these psychological inquiries have largely been predicated on the supposition that there is a significant intercorrelation between biological gender, the psychological identification with masculinity or femininity, and masculine or feminine sex-role behaviors. That is, those belonging to a specific gender are typically expected to exhibit sexually appropriate personality characteristics and the appropriate sex-role behaviors. It can thus be assumed that a display of cross-sex behaviors and attributes is to some degree pathological, having negative implications for that individual's general adjustment and life satisfaction.
In every society from early recorded history to the present, men and women have been assigned separate behavior roles (Schaffer, 1980). Beyond the obvious physical and reproductive differences, the two sexes have been generally assumed to differ in personality, some dimensions of intelligence, ability, and various other aspects of human behaviors. This assumption naturally leads to expectations, which in turn, leads to a prescription and requirement for appropriate conduct.

Sex-typing has consequently become an inevitable human act. One of the primary concerns of a prospective mother or father is whether the newborn will be a boy or a girl. Following the establishment of gender, the newborn is treated accordingly with his or her own blue or pink blanket, and he or she begins a process of acquiring characteristics that are deemed appropriate for its sex. Culture and biology combine in this process of becoming masculine or feminine. The child is rewarded and punished in a manner that encourages sex-typed behaviors and discourages sex-inappropriate behaviors.

Recently, however, the Women's Liberation Movement and the lately emerging Men's Liberation Movement have insisted that this stringent system of sex-role differentiation serves only to prevent both men and women from becoming complete individuals. Supporters of the movement posit that individuals need not conform to
outdated social standards of masculinity and femininity, but that they should be encouraged to be androgynous.

Sandra L. Bem (1974) advanced the hypothesis that sex-role training can seriously restrict the range of behaviors available to an individual as he or she moves from one situation to another. Thus, a masculine self-concept leads to the suppression or inhibition of feminine behaviors, and a feminine self-concept leads to the suppression or inhibition of masculine behaviors. In contrast, the androgynous individual excludes neither masculine nor feminine behaviors. An androgynous self-conception denotes the integration of both masculinity and femininity within a single individual (Bem, 1977). This leads to greater flexibility, allowing the individual to engage freely in either masculine or feminine behaviors depending upon situational contexts and demands.

Purpose of the Study

The underlying purpose of this study was to investigate the validity of Bem's theory of androgynous flexibility. This study attempted to seek out evidence of behaviors that combine both feminine and masculine characteristics. Androgynous flexibility was investigated in terms of coping strategies utilized in dealing with the tension and strain of daily stress. Specifically, the following questions were raised for study:
1. Are androgynous individuals more likely to report higher flexibility of coping strategies than masculine individuals?

2. Are androgynous individuals more likely to report higher flexibility of coping strategies than feminine individuals?

3. Are androgynous individuals more likely to report higher flexibility of coping strategies than undifferentiated individuals?

4. Is there a difference in flexibility between androgynous males and androgynous females?

Definition of Terms

Gender is the biological sex of the individual, usually either male or female.

Sex-typing is defined as the process by which a person acquires a set of attributes culturally prescribed as desirable for that person's gender.

Sex-role refers to those behaviors stereotyped to characterize a person of a given biological sex within a society. Stereotyped behaviors commonly associated with being a biological male are sex-typed as masculine. Stereotyped behaviors commonly associated with being a biological female are sex-typed as feminine.

Androgyny is a person's sex-role identity that is defined as having somewhat equally high endorsement of both masculine and feminine qualities.
Flexibility refers to one's level of sex-role endorsement that reflects both extensity and balance of masculine and feminine dimensions.

Undifferentiated sex-role refers to an equal endorsement of masculine and feminine characteristics, but of low magnitude, within a person.

Stress is defined by Selye (1976) as the non-specific response of the body to any demand. Every demand, whether physical or psychological, is unique. However, all agents of stress share one thing in common; they increase the demand for readjustment, for performance of adaptive functions which reestablish normalcy.

Coping is defined as efforts, both action-oriented and intrapsychic, to manage environmental and internal demands, and conflicts among them, which tax or exceed an individual's existing resources (Lazarus & Launier, 1978).

Importance of the Study

Traditionally, psychologists were in agreement in accepting prescribed sex-roles as essential to personality development and function. Sex-role identity was uncritically considered to be a crucial factor in one's personal adjustment. Recently, however, several investigators have expressed their concern over possible detrimental effects of sex-role standards upon an individual's
development and psychological health as a whole. The feministic movement strongly attacked traditional sex-role patterns. It is the current conviction of many psychologists that existing sex-role standards exert real pressures upon individuals to behave in prescribed ways. Furthermore, these behavioral properties stereotypically associated with men and women are perceived to predominate each other. That is, one who acquired masculine qualities, or those behavioral properties stereotypically associated with men, is expected to be deficient in feminine qualities, or those behavioral properties stereotypically associated with women. Likewise, one who acquired feminine qualities is expected to be deficient in masculine qualities. This yields a theoretical model of a single bipolar dimension with masculinity at one extreme and femininity at the other.

Bem (1974) posited an alternative theoretical model of sex-roles which conceptualizes masculinity and femininity as two independent dimensions within an individual's potential. This model perceives the possibility for an individual to be masculine, feminine, or both, the latter of which is termed androgynous. Later Bem (1977) offered a fourth possibility where an individual acquires both masculine and feminine characteristics but of low magnitude, which is termed undifferentiated. It is the androgynous potential which has received much
attention. According to Bem (1974), androgyny offers the flexibility that frees individuals from rigid sex-role expectations. Liberation from traditional sex-role standards results in a broader repertoire of behaviors which enables the individual to respond more appropriately to a variety of situational demands.

The results of this study would provide useful information for individuals interested in a theory of sex-roles. To the best of the researcher's knowledge, no published investigation has been conducted and reported where Bem's theory is tested in terms of a systematic behavioral repertoire within an individual, such as one's repertoire of coping strategies to deal with the strain and tension of everyday stress.

Limitation of the Study

The population for this study was limited to students of college level. The subjects in the sample group were those enrolled in introductory psychology courses in midwestern state colleges and born in the United States. It is necessary, therefore, to limit the findings of this study to the above mentioned group.

Organization of the Study

This study was organized as follows: Chapter I includes the statement of the problem, purpose of the study, definition of terms, importance of the study, and
its limitations. Chapter II reviews the literature and lists the tentative conclusions. Chapter III describes the sample group, instrumentation, field procedures, lists the null hypotheses, and methods of analysis. Chapter IV presents the data and the statistical analyses. Chapter V summarizes the study, and presents the findings, conclusions, implications of findings, and recommendations.
CHAPTER II

LITERATURE REVIEW

Introduction

For many reasons, including the influence of the feminist movement and the interest created by Maccoby and Jacklin's 1974 analyses of sex differences, the topic of sex-roles has received increasingly enthusiastic attention from researchers and theorists. Bem raised a significant issue when she investigated the concept of androgyny and reported her findings to the field of psychology. Related literature regarding Bem's theory of androgyny and other relevant studies are reviewed in this chapter. Since a discussion of the development of sex-roles and stereotypes is appropriate to enhance the understanding of how these differential standards of behavior for men and women began, some historical and theoretical perspectives are also briefly summarized. Although the major traditional theories may have only limited applicability for explaining androgynous development, they provide the framework for studying the development of psychological sex. This review is divided into six main areas:

1. Theoretical perspectives of sex-role development
There are three major traditional theories that offer explanations of sex-role development. These three approaches—psychoanalytic, social-learning, and cognitive developmental—have received the majority of attention from researchers in their investigations. Thus, an examination of these various popular explanations for the development of feminine and masculine personality attributes and behavior increases the understanding of psychology’s approach to sex-role development.

Psychoanalytic Approach

Freud’s psychoanalytical explanation for differences between the sexes was based on the anatomical differences (Strachey, 1964). Early in life, both sexes soon discover similar pleasure from manipulating their genitals. Soon, however, they realize that the genitals of boys and girls are different and, consequently, development proceeds in different directions.

The male child focuses his psychosexual attraction toward his mother and enters into a rivalry against
his father for the mother's affection. This is called the Oedipal Complex. However, the boy realizes that the father, who is much more powerful than he is, has some attachment to the mother and will not give her up readily. This realization leads to the boy's castration anxiety, that is, the fear that the father will remove the boy's genitals to end his pleasures. This fear is reinforced when the boy notices that the penis is missing from the girl, apparently a victim of castration. In order to reduce this anxiety, the boy identifies with the stronger force, the father, thus acquiring masculine attributes. By being masculine, the boy quells his fears as well as nurtures his qualities so that one day he can possess a woman of his own.

For the female child, the enjoyment from clitoral pleasure comes to a halt when she notices that boys have a larger, and supposedly superior, organ. The girl then develops penis envy and focuses her psychosexual feelings toward the father, also known as the Electra Complex. Seeing the mother as the more powerful rival, the girl consequently identifies with her in hopes of sharing some of the mother's success at winning the father's love. It is this identification with the mother that accounts for the girl's development of her feminine attributes.

According to Freud (1925), the normal female is characterized by jealousy and feelings of inferiority as
a result of her realization that she lacks a penis.
Passivity is another characteristic of feminine personality as she accepts the passive sexual role she must adopt because of her inability to initiate an active sexual role for the absence of the penis. Thus, a woman's personality is unstable in many respects due to her inferiority complex, being envious of the man's sexual parts.

This lack of a penis, according to Erikson (1964), results in an inner sense, the feminine; while its presence results in an outer sense, the masculine. The inner sense is committed to resourcefulness in peace keeping and devotion in healing, whereas the outer sense is committed to a masculine fondness for what works and for what man can make.

In terms of androgyny, Freud wrote that everyone is born with a bisexual potential, the potential to develop in both masculine and feminine psychological directions. Freud noted that every individual displays a mixture of characteristics belonging to his own and the opposite sex. Every individual shows activity and passivity (Freud, 1905). Thus the androgynous theme was suggested.

Freud's approach to explain human behavior in general has been widely criticized for basing his conceptions on clinical work with neurotic adults. More
specifically, his differential explanations for female and male development have not withstood many empirical analyses. In many carefully controlled studies, researchers failed to find evidence of castration anxiety or penis envy among normal children (Conn, 1940; Friedman, 1952; Kreitler & Kreitler, 1966; Sherman, 1971). However, despite his shortcomings, Freud has been considered the pioneer who opened up a whole new way of understanding human behavior and development. His approach is heavily biological, apparently influenced by his training in neurology, and contains a hint at an androgynous potential within individuals.

Social-Learning Approach

Social-learning theorists such as Bandura (1965) and Mischel (1970) offered an alternative to psychoanalysis in explaining the development of sex-roles. Basic to the concepts of this approach is that the consequence of a behavior determines the probability for that behavior to reoccur when the stimulus is present. Based on this position, the acquisition of sex-role behaviors is the result of reinforcement, imitation, and modeling.

Social-learning theorists assume that children learn from observing the behavior of others and that imitation and observational learning, or modeling, are essential in the developmental process of sex-role
acquisition (Bandura, 1965). Mischel (1970) expanded this explanation further. He proposed that there are two distinct aspects in the learning of appropriate sex-role behavior, acquisition, and performance. Acquisition refers to the learning process which occurs primarily through observation of models. Performance is when the behavior can be observed and such an observation can be made only when the performer is motivated. Mischel (1970) discussed motivation in terms of reinforcement, which increases the probability for the behavior to recur; and punishment, which decreases the probability of recurrence. Thus, sex-appropriate behaviors are learned because they are reinforced. Likewise, sex-inappropriate behaviors are punished, thus decreasing the probability of learning to take place.

Some empirical evidence has been presented in support of social-learning theory. Laboratory findings led to the conclusion that children are more likely to imitate the behavior of models who are perceived as powerful (Grusec & Brinker, 1972), rewarded for their behavior (Bandura, 1965), or who are similar to the child (Rosenkrans, 1967).

The implication of social-learning theory for androgyny is that each child has access to models from both sexes. The child acquires both masculine and feminine behaviors early in life. Thus, most individuals
have acquired the necessary skills to be androgynous. However, due to societal rules, an individual's motivation to perform sex-role behaviors is limited to the ones learned as sex-appropriate.

**Cognitive Developmental Approach**

Jean Piaget (1952) reported on his work with the development of thinking patterns, and theorized that children go through several stages of cognitive development. As a child develops from stage to stage, the limitations of the child's thinking powers change, and these changes affect the way a child assimilates information from and about the environment.

On the basis of Piaget's theory, Kohlberg (1966) offered an explanation of sex-role development as a cognitive phenomenon. According to Kohlberg, children go through three major stages in the process of acquiring sex-appropriate behavior and identity. The three stages include: (1) gender identity, (2) gender stability, and (3) gender consistency. The child first recognizes that he or she is male or female. The child consequently learns the labels "boy" and "girl" and refers to himself or herself, and others, appropriately. Gender stability follows, which is the child's realization that boys invariably become men and girls become women. This schema of gender permanence appears to motivate children to learn how to become competent as male or female. Finally, when
the child arrives at the gender consistency stage, he or she recognizes that the attributes of being either male or female do not usually change, and are not expected to, even with changing environments and situations. This consistency is the motivational force in the acquisition of sex-appropriate behaviors. That is, sex-appropriate behaviors are performed to maintain the self-identity that was initially established, as a boy or a girl.

Findings reported by Money and his colleagues (Money & Ehrhardt, 1972; Money & Tucker, 1975) support the conception that an established gender identity plays a vital role in the development of the sense of psychological self. Money presented evidence which indicated that gender can be reassigned up to about age fifteen months without apparent psychological harm. However, gender reassignment after the age of about three years has been shown to be damaging psychologically. This finding has led to the conclusion that there is a critical period for the establishment of sex-role, roughly between the ages of eighteen months and three years (Money, 1961). By that time, the child has well established his or her self-categorization as male or female, and this sense of gender-self cannot be shifted without undermining the sense of self.
Kohlberg's cognitive approach carries an implication toward androgyny. According to its theoretical conceptions, an individual's thinking becomes more complex, less egocentric, and more flexible as he or she matures chronologically. Kohlberg (1966) reported that children were found to be more stereotypic in their thinking than older adults. Perhaps, with this progressively more flexible thinking pattern, an individual can then be encouraged to develop a nonstereotypic self-identity, which in turn may lead to less stereotypic and, perhaps, more androgynous behaviors.

Nature vs. Nurture Issue

The study of sex-roles cannot ignore the heredity vs. environment issue of its development. The heredity view holds that men and women are born with distinctly different features and different psychological structures and, thus, are destined to fulfill specifically different life tasks. It was hypothesized that the different personality structures of men and women are genetically determined to some extent. Thus, men fulfill genetic potentials that are somewhat different from women.

Some biological characteristics are common among all humans, while others vary as a function of one's sex. In particular, sex hormones have been found to play a major role in the prenatal development of the physical characteristics that distinguish males from females.
The role of the sex hormones during prenatal development is known as the "Adam Principle" (Money & Tucker, 1975). This principle states that in the absence of a sufficient complement of androgens, fetal development proceeds according to the female pattern. In other words, in the absence of early androgenic influence, femaleness prevails. However, although the male sex hormones are necessary for male development, female development does not require the presence of female sex hormones.

Furthermore, data gathered from ethological observations, field observations of preschool children, experimental investigations with animals, and recent clinical studies of girls who were androgynized prenatally or early in life have led to the general postulation that hormonal differences between the sexes have resulted in greater aggressiveness in males than in females (Goldberg, 1973; Hutt, 1972; Maccoby & Jacklin, 1974; Money & Ehrhardt, 1972; Wilson, 1975).

Postnatally, research evidence indicates that the sex hormones predispose members of each sex toward specific kinds of behavior. In particular, higher levels of androgens have been shown to increase the tendency for aggressive behaviors, and higher levels of progesterones and estrogens increase the tendency for care-taking behaviors (DeVore, 1965).
It is within these realms of aggression and nurturance that research findings have been most consistent. Out of fifty-seven statistically significant differences in aggression between the sexes reviewed by Maccoby and Jacklyn (1974), fifty-two showed the difference favoring the males. Females were reported to be more aggressive than males in the remaining five comparisons. In an earlier review of forty-five studies dealing with nurturance, Maccoby (1966) reported that only two studies found higher scores among males. Thirty-eight studies found significant differences in favor of females. The remaining five studies found no significant difference. Studies of sex differences on scores of other dimensions of behavior were reviewed by Maccoby and Jacklyn (1974). These dimensions include such variables as discrimination learning, general intellectual ability, sociability, suggestibility, self-esteem, achievement motivation, analytical ability, etc. Gender differences were found in both directions with no consistent pattern. Thus, next to aggression and nurturance, conflicting evidence exists in investigating sex differences. Recently however, some good evidence has been reported with some consistency of gender difference in terms of cognitive abilities. A majority of the studies reported findings of superiority among postpubertal females in verbal ability, and among
postpubertal males in spatial and quantitative ability (Konner, 1982).

Opposed to the biological view is the environmental view, which holds that sex differences other than the obvious anatomical ones are entirely the product of socialization. Mead (1935) wrote on three New Guinea tribes which were quite different with respect to their feminine and masculine qualities. In the Arapesh tribe, both sexes exhibited traits commonly associated with femininity. The opposite was observed among the Mundugumor tribe, where both men and women were found to be equally aggressive. The reverse was observed among the Tchambuli tribe where women were found to be the aggressive ones with the men adopting the passive role. From these differences among the three cultures, Mead was reported to conclude that the characteristics of males and females in any society are solely the results of social conditioning and are independent of any biological inheritance (Wesley & Wesley, 1977).

Mead's observational methods have not been spared from criticisms. Piddington (1957) wrote that Mead's sample of headhunters, medicine men, exotic dancers, fishermen, etc., was too small and that her recording methods were biased. In all her cultures, homicidal violence was evident and most of the violence occurred at the hands of men (Konner, 1982). Tchambuli men may have been perceived
as feminine in comparison with American stereotypes. However, the Tchambuli men were very much devoted to their traditional head hunting activities. Konner (1982) further stated that the Mundugumor men allowed their women to provide for them because it freed them to plot and fight.

Murdock (1949) conducted a study of over 200 cultures and reported that in almost all of them, men are engaged in hunting and fishing, and the women are responsible for the cooking and flour grinding. Furthermore, Konner (1982) wrote that there is no society recorded in history in which men were involved in as much baby and child care as women.

In their research with pseudohermaphrodites, Money and Ehrhardt (1972) reported that children reared in a sex contradicting their predominant external genital appearance were able to establish a gender role that is entirely in agreement with the assigned sex and rearing practices. Hampson and Hampson (1961) reported that a person with male sex chromosomes (XY) who has been raised as a girl usually wants to dress like a girl, engages in activities that are common to girls, and wants to marry a man someday. The basic point is that there is a very close relationship between the assignment of sex and rearing practices and the establishment of a masculine or feminine sex-role.
As Diamond (1965) concluded, research evidence revealed that due primarily to hormonal influences, human beings are definitely predisposed at birth to a male or female gender orientation. However, this innate predisposition serves only as a potentiality that is greatly modifiable by postnatal experiences. Additionally, these postnatal experiences are regarded as a powerful force in the formulation and establishment of a culturally acceptable sex-role.

It is apparent that both heredity and environment play significant roles in almost every aspect of human development. This has led some scholars to adopt a middle-of-the-road approach, proposing a dependent relationship between heredity and environment. However, this approach is not without its own shortcomings, since it is difficult to determine to what degree it is influenced by environment.

Interaction of heredity and environment can occur in several different ways. For example, Heinsteins (1963) found that boys and girls reacted differently to both breast feeding and bottle feeding. Boys who were formula-fed showed more bed-wetting occurrences than breast-fed boys, but had fewer fears and better appetites. Girls showed the opposite tendencies. Breast-fed girls reported fewer fears, better appetites, and more bed-wetting occurrences than formula-fed girls. Here, the environment was held constant and variance was found in heredity.
Heredity and environment may also covary. It has been observed that mothers tend to interact more often with newly born boys, holding them for longer periods and stressing their musculature more often in physical play (Moss, 1967). These mothers reported that they did this in order to quiet their more active and more fussy boys. However, in actuality, it may have the opposite effect. That is, the additional physical and social contacts may actually make the boys more active than girls. Such covariance indicates that heredity varies, and with it, environmental conditions also vary.

**Historical Perspectives**

According to a recent survey (Hunter, 1976), three dominant images of women have emerged from the ancient Greek and Roman civilizations. These include the inferiority of women to men, women regarded as love objects, and women as more evil than men.

The ancient Greeks were especially convinced about the inferiority of women (Pomeroy, 1975), which is evident in most themes of Greek literature. Although women were excluded from social and political life, they were tolerated because they were needed for propagation of the civilization. It was Aristotle who suggested that women had less intrinsic "soul heat" than men, and thus could not process their menstrual blood to the final stage of semen (Whitbeck, 1976). Therefore, in the
creation of children, women were thought to contribute only the materials that formed the embryo while the soul came from the father.

The society of the ancient Romans awarded status to women that was less inferior than that of the ancient Greeks. Roman women were given access to education, property, and independence. However, it was the emancipation of women that was believed to be responsible for the decadence in ancient Rome, the breakdown of the Roman family system, and the fall of Rome to the Barbarians (Hunter, 1976).

Among the ancient Hebrews, social practices reflected the established male superiority and female inferiority (Hunter, 1976). Double standards existed: i.e. a woman who was not a virgin at marriage could be stoned to death, whereas a man who raped a virgin was expected only to reimburse her father for damages of his property.

The advent of Jesus was regarded as the beginning of teachings and doctrines that treated men and women as equals. Jesus, who apparently did not make much distinctions between the sexes, appeared to have had a high opinion of women as well as men, and granted women spiritual equality with men (Faxon, 1973).

Nielsen (1978) examined sex-roles and status in preindustrial societies and concluded that there were
relatively clear sexual divisions of labor. The men were involved in hunting and subsistence work while women were confined to household work. Since contribution to food production affected one's overall status within the society, men consistently were awarded higher status than women. Even when women began to join the labor force in large numbers during postindustrial times, society was not so willing to award women equal status. The perceived inferior status of females generally persisted. Thus, a woman who decided to join the labor force had to pay the price of being responsible for two jobs, her chosen career and her expected household duties.

Traditional Sex-Roles

Although cultures differ in the degree to which they prescribe standards of behavior, all cultures promote different standards for males and females in certain behavioral and psychological areas. In the American culture, traditional expectations of men and women differ widely. According to Keller (1974), the core elements of the female role currently include:

1. A concentration on marriage, home, and children
2. A reliance on a male provider for survival and status
3. An emphasis on creation of life and nurturance
4. A stress on personal appearance
5. A ban on the direct expression of aggression, assertion, and power striving.

The core elements of the male role currently include (Pleck, 1974):

1. Physical strength and accomplishment
2. Emotional control
3. Avoidance of intimacy with same-sex others
4. Provision of sustenance and protection for women and children.

According to Parsons and Bales (1955), masculinity has been associated with an instrumental orientation. This orientation focuses on getting the job done or the problem solved. On the other hand, femininity has been associated with an expressive orientation, an affective concern for the welfare of others and the harmony of the group. An expressive orientation is concerned with the internal affairs of the system, whereas the instrumental orientation is concerned with external goals.

Bakan (1966) has suggested that masculinity is associated with an agentic orientation and femininity with a communal orientation. Agency manifests itself in self-assertion and self-expansion; communion manifests itself in the sense of being one with others. Agency concerns itself with the sense of isolation, alienation, and aloneness; communion with contact, openness, and union. Agency
involves the desire to master; communion involves non-contractual cooperation. Agency is committed to the repression of feeling and impulse; communion is committed to the lack and removal of repression.

As Kelley (1974) reported, the traditional masculine and feminine roles in American society have their roots in the patriarchal system, dating back to the time of the ancient Greeks and Romans. The masculine role is a reflection of man's physical strength and his ability to protect his family against attack from outsiders. The typical young American male values physical strength and athletic achievements.

The traditional masculine role also calls for dominance in other areas of life. Men commonly rule in the political world, economic sphere, and religion. This dominance is also expected in family life. Wives and children are expected to follow the masculine leadership. The husband plays the aggressive role in sexual relationships while the wife is considered the passive partner.

The male is also expected to carry out the major economic role in the family. He is the chief breadwinner, the main source of family income.

Finally, a man's status and position in the community is basic to his family's social status. His profession or his leadership in the community determines the respect his family receives. Clearly, men hold the dominant role in family and community life.
The traditional feminine role is essentially to complement the masculine role (Kelley, 1974). Man is active, so woman is passive. Men marched off to war, so women kept the home intact and awaited the return of their men.

The traditional woman finds her greatest pride and accomplishment in the role of wife and mother. She is to love her husband and mother his children. The woman is honored for bringing children into the world, for her loving and watchful care as she brings up her children, and her daily encouragement and undemanding love for her husband. She is the symbol of the strength and stability of the home.

The traditional woman's economic role is centered on responsibilities for the home and the children also. She is to center her attention on housework and on the care and guidance of the children, as the husband fulfills his responsibilities outside the home. Although she does not earn cash income directly, she carries responsibilities that enable the husband to go out and fulfill his.

The social role of the traditional woman is a much restricted pattern. Men are granted opportunities to engage in social activities outside the home, while the women are expected to be at home with the children (Kelley, 1974). It is not, therefore, uncommon for
groups of men to congregate for their own social activities, apparently unconcerned about the participation of their wives.

Although the Women's Movement has been a significant influence toward increasing dissatisfaction with existing prescribed roles for men and women, stereotypes have been shown to remain pervasive. There is little evidence to suggest that the recent changes in attitude have resulted in significant changes in behavior.

Recent studies (O'Leary & Depner, 1975; Osmond & Martin, 1975; Parelius, 1975; Steinmann, 1975) investigated the sex-role attitudes of men and women undergraduates. The results indicated that although both sexes agreed on a basic division of labor with the woman continuing her primary responsibilities of home and child care, and the man as the chief breadwinner, there were shifts away from traditional attitude among college women with increasing emphasis on their own achievement and leadership roles. However, despite this new emphasis, the women revealed that they seriously distrust liberal male attitudes and are still convinced that the men want women to remain in the traditional roles. The male attitudes are consistently perceived as unwilling to accept equal status with women.

The men also indicated that their ideal woman should be competent, adventurous, and successful.
However, further questioning revealed that the men were more willing to accept changes that are not threatening to their own position. In addition, the men also revealed that they were overstating their beliefs in order to avoid being labeled as chauvinists.

Komarovsky (1973) studied the effects of sex-role attitude changes among college men and found that, although these men expressed preference for women who are bright and who can compete with them intellectually, they revealed that such women made them feel anxious, nervous, and inferior. Upon further questioning, these apparent supporters of sexual equality indicated that there is no substitute for a mother during a child's growth years and were not willing to be involved in such tasks as laundry, cleaning, or changing diapers. Komarovsky concluded that attitudes toward traditional sex-roles may be weakening but its emotional allegiance appears to be unchanged.

In another study (Peplau, 1979), it was found that both male and female college students overwhelmingly rejected male dominance in a dyadic dating relationship and favored "equal partnership." However, only a small portion of the sample reported that they had actually achieved this desirable equal-power relationship.

This lack of observable behavioral changes to accompany sex-role attitude changes has been suggested by some investigators to be the result of attitude shifts.
being specific situational factors rather than lasting significant changes. One study reported that when in the company of desirable male partners, the women portrayed themselves in sex-role terms that were expected by the partners, either traditional or nontraditional (Zanna & Pack, 1975). The investigators suggested that changes in attitude among women may be largely due to their efforts to be what they perceive the important men in their lives want them to be. This may actually be reinforcing existing sex-role stereotypes by remaining dependent on the desires of men.

Theoretical Construct of Androgyny

Sex-role identity has traditionally been conceptualized as bipolars of traits and behaviors. That is, masculine characteristics essentially predominate feminine ones, and vice versa. Thus, an individual who acquires the set of characteristics found at one end of the continuum is expected to be deficient in the characteristics found at the other end of the continuum.

The unidimensional conception of sex-roles, where masculinity is equated with the lack of femininity, and femininity with the lack of masculinity, has been the target of much criticism recently. Scholars in the field such as Bem (1974), Block (1973), Carlson (1971), and Constantinople (1973) questioned this conception and formulated an alternative model in which masculinity and
femininity are perceived as separate dimensions which vary independently of each other. That is, a person's endorsement of certain masculine qualities, such as masculine aggressiveness, does not predict the lack of certain feminine qualities, such as feminine sensitivity.

Traditional conceptions of sex-roles are no longer perceived as appropriate to the conditions of modern society of today. A leading proponent of this alternative model, Sandra Bem (1974), suggested that it is the cultivation of both sex-role characteristics that makes a person whole. Such an individual is better equipped to enhance his or her life experiences in today's demanding society. It is Bem's position that traditional sex-roles have restricted human behavior in important ways. Several studies have shown that a high level of sex-typing may not be desirable. High femininity in females has been shown consistently to be correlated with high anxiety (Cosentino & Heilbrun, 1964), low self-esteem (Gail, 1969; Sears, 1970), and low social acceptance (Gray, 1957; Webb, 1963). On the other hand, high masculinity in males has been shown to correlate with high psychological adjustment during adolescence (Mussen, 1961). However, during adulthood, high masculinity has been shown to correlate with high anxiety, low self-acceptance, and low social adjustment (Hartford et al., 1967; Mussen, 1962). Furthermore, sex-typed boys and girls were found
to have lower overall intelligence, lower spatial ability, and lower creativity, while cross sex-typing correlates quite consistently with greater intellectual development (Maccoby, 1966).

More recent studies, however, reported that no significant difference was found between sex-typed and cross sex-typed subjects in social competence (Campbell, Steffen & Longmeyer, 1981) and creativity (Harrington & Anderson, 1981). No significant difference between the two groups was also reported in self-esteem and mental health (Henrichsen, Follansbee, & Ganellen, 1981). Thus, evidence presented by investigations on the differences between cross sex-typed and sex-typed individuals has not been consistent. However, cross sex-typing, where an individual displays those general characteristics commonly associated with the opposite sex, should not be confused as the equivalent of androgyny.

An androgynous conception of sex-roles means that each sex cultivates general characteristics usually associated with the other in traditional definitions, in addition to its own. This means that tenderness and expressiveness should be cultivated in boys and socially approved in men, so that a male of any age would be psychologically and socially free to express these qualities, in addition to his other traditional sex-appropriate attributes, in his daily functions. It means that
achievement need and constructive aggression should be cultivated in girls and approved in women, so that a female of any age would be equally free psychologically and socially to express these qualities, in addition to her other traditional sex-appropriate qualities, in her daily functions.

Correlates of Androgyny

Research findings indicate that sex-role stereotyping tends to limit the potential development of individual members of both sexes (Bardwick, 1971; Schaeffer, 1971). Neither the macho-male, aggressive but lacking in nurturance and interpersonal sensitivity, nor the submissive-female, lacking in instrumental independence and self-reliance, is well prepared to meet the demands of today's rapidly changing society.

The concept of androgyny implies that it is possible for an individual to be both masculine and feminine, both instrumental and expressive, both agentic and communal, depending upon the situational appropriateness at any given time. It is those individuals who combine within their own personalities those traits traditionally stereotyped as masculine and feminine that are found most likely to be high in creativity (Barron, 1969; Helson, 1968, 1969). This type of individuals has also been shown to have achieved more mature levels of moral development than other sex types (Block, 1973).
Research evidence has also revealed that an androgynous view of oneself has been found to be accompanied by a higher level of self-esteem than sex-typed or undifferentiated self-conceptions (Kaplan & Sedney, 1980; Heilbrun, 1981). It was also found that androgynous individuals were able to perform cross-sex behaviors with little reluctance or discomfort. Furthermore, they were able to perform effectively those behaviors requiring either masculine independence or feminine nurturance, depending on what a given situation called for (Bem, 1975).

Bem's undifferentiated group was found to score lower than sex-typed and androgynous groups in self-esteem. The subjects in the undifferentiated group displayed significantly less responsiveness toward a kitten in the experiment, and, among men, reported significantly less self-disclosure (Bem, 1977). Flaherty and Dusek (1980) reported that the androgynous group in their study scored significantly higher than the undifferentiated group on psychological adjustment. As Bem (1974) has put it, both masculinity and femininity must be available within the person in order for fully effective and healthy human functioning to be achieved.

However, due to the differential standards of child-rearing practices for both sexes, a look into sex-differences in androgyny appears warranted. The question is whether males would tend to demonstrate greater androgyny than females, or vice versa.
Brown (1958) pointed out that in the American culture males are exposed to stricter constraints in their sex-role behaviors during development than females. The boy is given little opportunity for engaging in passive play activities usually associated with girls, or for any uncontrolled emotional display of fear, joy, or affection. Violation of these constraints usually results in the boy earning the label of a sissy who then becomes the object of ridicule among his peers. On the other hand, girls are exposed to less strict constraints than boys. Girls engaging in aggressive and physical play activities usually associated with boys earn the label of a tomboy. However, the label of a tomboy does not carry with it as heavy a stigma as a sissy. Brown further pointed out that, among adults, this double standard persists. Females are accorded greater freedom to display feminine or masculine qualities while males crossing over stereotypic lines are more likely to elicit strong negative reactions. Thus, these more relaxed attitudes being exercised toward the females should facilitate development of androgynous qualities among the female sex.

However, Lynn (1969) pointed out that the opposite should be the case. That is, in the process of development, boys make an initial identification with the mother, followed by a subsequent identification with
the father at later years. Thus it is apparent that both feminine and masculine bases are instilled within the boy. The girl, on the other hand, is viewed to make successive identifications with the mother, thereby reinforcing a feminine base.

Block (1973) also pointed out that training prosocial behaviors, a feminine quality, is viewed as one of several important parental responsibilities toward the children. Thus, when such training is carried out toward boys, it would seem that it should facilitate androgynous development. For girls, in contrast, the emphasis of training prosocial behaviors would seem to reinforce their femininity.

Heilbrun's (1981) analyses of his data collected periodically for over two decades replicated Block's contentions. He reported that among androgynous individuals, the males consistently emerged as more androgynous than the females. That is, androgynous males were found to obtain significantly higher scores than androgynous females.

Coping Behaviors

Every individual is faced with stressful experiences in his or her daily life. Each person seeks ways to manage or master these trying experiences so that a state of psychological and physiological equilibrium is reestablished and generally maintained. These managing efforts are referred to as coping behaviors.
Each individual, from his or her past learning experiences, has a well-established structure of adaptation to deal with environmental demands (White, 1974). This structure consists of systematic responses readily available for the individual. The coping process is any attempt to deal with stressful situations which a person feels he must do something about, but which exceed his or her existing adaptation response patterns. Although coping behaviors may range from the most rational to the most irrational, all are utilized with the same ultimate objectives which are to prevent, reduce, or resolve the stress and its consequences.

Stress is viewed as a person-environment problem resulting from perceptions and appraisals of one's environment (Lazarus & Launier, 1978). Therefore, environmental events are not of themselves stressful. These events must be perceived by the person, subjected to an appraisal process, and evaluated as a threat to his well-being psychologically or physiologically, before they can fall under the rubric of stress.

Stress stimulates hormonal changes within the body to prepare it for some action. This response can be evoked by something unpleasant like an argument, or something that is perceived as threatening like being called to face a disciplinary committee. The stress response uses up energy which needs to be restored after
the particular challenge has been met. Therefore, when an individual is placed within a stress-inducing environment for a long period of time, such as a busy day in the office, it is not surprising that this individual seeks to fall into bed at the end of the day. However, for most people, there are other responsibilities which require them to keep functioning beyond the hours of a working day. In order to preserve energy to deal with the various stressful events one is met with daily, an individual devises his or her own collection of coping strategies.

Research evidence revealed that, in the highly tensed atmosphere of a coronary-care unit, the patient who chooses to ignore or deny the diagnosis and shuts out the possibility of sudden death, was indicated to fare the best, both physically and psychologically (Gentry, Foster, & Harvey, 1972). In a study of a group of financially successful men, those who had the least access to coping strategies were the least adjusted in overall psychological health (Vaillant, 1977).

Stress, as a universal human phenomenon, results in intense and distressing experiences, and appears to be of tremendous influence on behavior (Lazarus, 1966). No individual is completely free from stress. As Selye (1976) has put it, complete freedom from stress is death. Thus, how one copes with stress evidently affects his overall psychological health.
In view of the fact that sex-typed individuals have been shown to behave in certain prescribed ways, it appears logical that masculine individuals would adopt coping strategies that are different from feminine individuals. Since masculinity is associated with getting the job done or the problem solved, it appears likely that masculine individuals devote their coping efforts to changing their own problem-maintaining behavior or to changing the environmental conditions (Lazarus & Launier, 1978). On the other hand, with femininity associated with an expressive orientation, it appears likely that feminine individuals devote their coping efforts to the expression of stressful emotions to maintain a satisfactory internal state (Lazarus & Launier, 1978). It is therefore unlikely that a feminine individual will be able to cope effectively with stressful events that demand masculine strategies. Likewise, a masculine individual will be equally ineffective in coping with stressful events that demand feminine strategies. Thus, an androgynous individual who theoretically should be capable of both patterns of coping strategies should be more effective in dealing with varied stressful events. Consequently, this wider repertoire of coping strategies may explain the obtained higher self-esteem and social adjustment reported to be found among androgynous individuals.
Tentative Conclusions

From the preceding literature review, it is evident that an androgynous sex-role identity enhances the development of potentials. Bem and others suggested that androgyny results in greater flexibility of behaviors. Sex-typed individuals are more likely to be restricted in their behavioral repertoire in dealing with day to day demands. However, androgynous behavioral flexibility has not been validated in terms of a systematic behavioral repertoire such as coping behaviors. Furthermore, high self-esteem and high adjustment scores reportedly found among androgynous subjects have been merely correlational studies with no attempts to demonstrate behavioral flexibility as the dependent variable. In this study, empirical evidence was sought to validate Bem's conceptions of androgyny in terms of coping strategies employed to manage everyday tension and stress.

The preceding literature review also shows that there is ample support for sex-differences in androgyny. However, these sex-differences were found in terms of sex-role scores, with males achieving significantly higher scores than females. This study attempted to validate sex-differences in androgyny in terms of behavioral flexibility of coping behaviors. Hence, the following hypotheses were advanced for testing and validation:
1. There is a significantly higher mean flexibility index of coping strategies among androgynous than that among masculine individuals.

2. There is a significantly higher mean flexibility index of coping strategies among androgynous than that among feminine individuals.

3. There is a significantly higher mean flexibility index of coping strategies among androgynous than that among undifferentiated individuals.

4. There is a significant difference in the mean flexibility index of coping strategies between androgynous males and androgynous females.
CHAPTER III

METHODS

Sample Group

The sample group providing data for this study was made up of American born students from four mid-western state colleges. This purposive sample group consisted of those enrolled in introductory psychology courses in the Fall and Winter of the 1982-1983 academic year. A total of 616 subjects participated in this study (males = 308, females = 308). All measuring instruments administered to the subjects were returned. Careful inspection of each instrument revealed that all questionnaires were filled out completely. Thus, all were included in the analyses.

Instrumentation

This study employed two objective instruments, the Bem Inventory and Burke's coping behavior questionnaire (see appendix A). The practical advantages of these instruments lie in their clarity, brief form, simplicity of administration and scoring, and economy of time on the part of the respondents.

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Every individual meets with stressful situations in his or her day-to-day living. Each individual tends to rely on certain methods to manage the tension and strain that usually follow. Several instruments have been constructed to measure coping behaviors. However, most of these instruments purport to measure coping strategies toward a specific situation such as managerial stress in organizations, death in the family, terminal illness, or some medical procedures such as a major operation. To the researcher's knowledge, Burke's coping behavior questionnaire was the only one available that was shown to measure an individual's typical coping behaviors under stress from general everyday tension (Burke, 1979). The original questionnaire consisted of thirty-seven items which were pooled from several sources (Burke, 1971; Burke & Belcourt, 1974; Sible, Moos, Adams, & Cady, 1969).

In order to validate the instrument, subjects in Burke's pilot study were asked to list additional coping strategies that they considered had been omitted. Although some suggestions were added, all except one were judged as similar to the items already included. The one exception, pray for guidance and support, was added to the other items in the questionnaire. Overall, the evidence indicated that the thirty-eight items represented the coping domain adequately.
Respondents to the questionnaire are asked to indicate how likely they are to use each of the thirty-eight items in managing the tension and strain of daily stress. Items are rated on a 7-point scale ranging from 1 (very unlikely) to 7 (very likely).

The Bem Inventory, developed by Sandra Bem (1974), was constructed upon the conception of masculinity and femininity as two independent dimensions. The respondents are asked to indicate on a 7-point scale how well each of the sixty items describes themselves. The scale ranges from 1 (never or almost never true) to 7 (always or almost always true) and is labeled at each point along the continuum. On the basis of the subject's responses, masculinity and femininity scores can be derived by simple computations. A Fortran program was written to accomplish the task. From the derived scores, a fourfold classification can be determined. Specifically, the four categories include: masculine, feminine, androgynous, and undifferentiated.

Bem (1981) reported the psychometric analyses performed on two sample groups from Stanford University. The first sample included 444 males and 279 females (N = 723) who filled out the instrument in 1973. The instrument was again administered to a second sample group of 476 males and 340 females (N = 816) in 1978. Both sample groups consist of undergraduate students in introductory
psychology course. It is the 1978 sample group that currently serves to provide normative data.

In order for Bem to estimate the internal consistency of the inventory, coefficient alpha was computed separately for males and females on both scales and the F-M difference scores. The obtained coefficients are presented in table 1.

<table>
<thead>
<tr>
<th></th>
<th>Femininity</th>
<th>Masculinity</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>0.78</td>
<td>0.87</td>
<td>0.82</td>
</tr>
<tr>
<td>Females</td>
<td>0.78</td>
<td>0.86</td>
<td>0.82</td>
</tr>
</tbody>
</table>

Bem also employed Pearson's correlational procedures to estimate the relationship between the scales. The obtained correlation coefficient between masculinity and femininity scores is .00 for males, and -.05 for females. These obtained correlation coefficients empirically established the independence of the masculinity and femininity dimensions.

In order to estimate the consistency of the items, the test-retest method was employed by Bem in 1973. The
instrument was administered for a second time to twenty-eight males and twenty-eight females from the 1973 sample group. The time between the first and second administrations was approximately four weeks. Bem's obtained test-retest reliabilities of both masculine and feminine scale scores for both males and females, and their feminine-masculine difference (F-M) scores, are summarized in table 2.

TABLE 2
TEST-RETEST RELIABILITY FOR THE FEMININITY, MASCULINITY, AND F-M DIFFERENCE SCORES

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculinity</td>
<td>.76</td>
<td>.94</td>
</tr>
<tr>
<td>Femininity</td>
<td>.89</td>
<td>.82</td>
</tr>
<tr>
<td>F-M</td>
<td>.86</td>
<td>.88</td>
</tr>
</tbody>
</table>

Because of their recent publication, no review for Burke's coping behavior questionnaire of Bem's Inventory is available from the Buros Mental Measurements Yearbook.

Field Procedures
Since subjects for this study were made up of students enrolled in introductory psychology courses,
the instruments were administered in classroom settings. Those instructors who agreed to assist in gathering the data were briefed thoroughly so that instructions and administration were standardized. Data were collected during regular class time. More specifically, the procedures involved the following steps:

1. Instructors passed the instruments to the participating students.

2. Instructors assured the students that anonymity was guaranteed; that is, no form of identification was required from the subjects. However, those who were interested in their own scores and the overall results of the study could so indicate by giving their student ID numbers on the space provided.

3. Instructors read aloud the instructions found on the first and third pages.

4. Subjects were reminded not to skip any item on all three pages.

5. Subjects were told to begin filling out the questionnaires with as much time allowed as was needed.

**Statement of Null Hypotheses**

The following null hypotheses were constructed for statistical testing:

1. The mean flexibility index of coping strategies among androgynous individuals is not significantly higher than that among masculine individuals.
2. The mean flexibility index of coping strategies among androgynous individuals is not significantly higher than that among feminine individuals.

3. The mean flexibility index of coping strategies among androgynous individuals is not significantly higher than that among undifferentiated individuals.

4. There is no significant difference in the mean flexibility index of coping strategies between androgynous males and androgynous females.

**Data Analysis**

For data recording, subjects' responses were translated into a format convenient for data entry and analyses in the computer. Since the responses were anonymous, each questionnaire was systematically assigned an identification number.

The identification numbers and responses from each subject were entered twice into the computer. A simple FORTRAN program was written to check for the consistency of both entries on each subject. If at least one inconsistency were detected, the program would print out both entries involved. The identification numbers allowed quick and easy reference to the specific group of responses in question. This simple procedure ensured accuracy of data entry.

The initial step in the analysis of the data was to determine each subject's masculinity and femininity
scores as measured by the Bem Inventory. Based on these scores, subjects were then categorized accordingly as masculine, feminine, androgynous, or undifferentiated. Each of the four categories is illustrated in table 3.

**TABLE 3**

**BEM'S SEX-ROLE PROFILE**

<table>
<thead>
<tr>
<th>High Masculinity</th>
<th>Low Femininity</th>
<th>High Femininity</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>I</td>
<td>IV</td>
</tr>
<tr>
<td>II</td>
<td>III</td>
<td>IV</td>
</tr>
</tbody>
</table>

**Category I** : Masculine  
**Category II** : Androgynous  
**Category III** : Undifferentiated  
**Category IV** : Feminine

In order to classify a subject's sex-role identity, the hybrid method as suggested by Bem (1981) was employed. This method classifies subjects in two steps. Initially masculinity and femininity scale scores were derived.
This was done by simply summing the ratings for each scale and dividing by twenty, or the number of rated items if some items were omitted. These scores were converted into T-scores. Thus each subject obtained two basic scores, masculine and feminine T-scores. These obtained T-scores serve to classify subjects as masculine, feminine, or potentially androgynous on the basis of femininity-masculinity difference score. A difference score of ±10 was suggested by Bem as the cut-off point for separating the three groups. Thus, a person was considered masculine if his or her F-M difference score were less than -10. Likewise, a person was considered feminine if his or her F-M difference score were greater than 10. The rest were classified as potentially androgynous.

The second step was to further separate the potentially androgynous group into androgynous and undifferentiated groups. The method suggested by Bem (1981) was to employ the median split method. Thus, potentially androgynous subjects were classified as androgynous if their femininity and masculinity scores fell above both scale medians. All other subjects in the group of potentially androgynous were defined as undifferentiated. The norm group's median scores for both scales are presented in table 4.

In order to identify masculine and feminine coping behaviors, a method consistent with Bem's construction of
TABLE 4
BEM'S NORM MEDIAN SCORES

<table>
<thead>
<tr>
<th>Scale</th>
<th>Median Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculine Scale</td>
<td>4.95</td>
</tr>
<tr>
<td>Feminine Scale</td>
<td>4.90</td>
</tr>
</tbody>
</table>

her inventory was employed. A group of thirty-five randomly selected judges, consisting of teaching professionals in the Behavioral Science Departments of the participating colleges, were solicited for their participation. Thirty-three of the thirty-five judges (males = 19, females = 14) returned their questionnaires, yielding a response rate of about 94 percent. Each participant was asked to rate each coping behavior as either more likely masculine or more likely feminine as perceived in the American society (see appendix B). Judges rated each item on a 7-point scale, from 1 (most likely masculine) to 7 (most likely feminine).

To analyze the judges' ratings of the items, the categorical scaling method was employed. Categorical scaling places the items in an interval scale along a continuum. Each item is associated with a scale value which indicates that item's respective placing in the continuum between masculine at one end and feminine at the other. These scale values are ranked in order from smallest to largest or vice versa. In this particular
case, the ranking was ordered from smallest to largest. Thus, small scale values indicate items with more masculine ratings and large scale values indicate items with more feminine ratings. One is to look for relatively large breaks in the ranked scale values to serve as the cut-off points separating the masculine, ambiguous and feminine items.

Once the masculine and feminine items of coping behaviors are identified, total scores on the two scales can be obtained. Thus, each subject obtained M and F scores of coping behavior.

The next step was to determine the measurement of flexibility. An index of flexibility has been formulated that reflects both criteria of androgynous flexibility: extensity and balance (Heilbrun, 1981). Extensity refers to the high endorsement of sex-role characteristics. Balance refers to the equality of endorsement on both the masculine and feminine characteristics. The derived formula combines masculine and feminine coping scores in the following manner:

\[(M+F) - \text{ABS}(M-F)\]

The first term \((M+F)\) represents extensity, and the second term \((\text{ABS}(M-F))\) represents balance. Thus, the derived index indicates a person’s degree of flexibility.

As an example, subject X might have M and F coping scores of 65 and 50, and subject Y might have
scores of 62 and 50, respectively. The flexibility scores for both subjects would be:

\[
X: \ (65 + 50) - \text{ABS}(65 - 50) = 100 \\
Y: \ (62 + 50) - \text{ABS}(62 - 50) = 100
\]

Subject X might have obtained higher masculine coping score than subject Y, but that does not make X's degree of flexibility any higher than subject Y's. Additional examples are presented in table 5.

**TABLE 5**

EXAMPLES OF FLEXIBILITY INDICES

<table>
<thead>
<tr>
<th>Subject</th>
<th>Masculine</th>
<th>Feminine</th>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>50</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>60</td>
<td>60</td>
<td>120</td>
</tr>
<tr>
<td>3</td>
<td>70</td>
<td>60</td>
<td>120</td>
</tr>
<tr>
<td>4</td>
<td>60</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>5</td>
<td>60</td>
<td>60</td>
<td>120</td>
</tr>
<tr>
<td>6</td>
<td>60</td>
<td>70</td>
<td>120</td>
</tr>
</tbody>
</table>

As evident from table 5 subjects 1 and 2 have equally high scores on the feminine coping scale, but subject 2 has a higher masculine coping scale score. This gives subject 2 a higher flexibility index than subject 1. Subject 3 has higher scores on both the
masculine and feminine coping scales than subject 4. This obviously leads to a higher flexibility index for subject 3. Subject 6's higher score on the feminine coping scale than subject 5, however, does not yield to a higher flexibility index for subject 6.

To test for differences of the means between groups in flexibility index of coping behavior, the t statistic was employed. The t statistic was selected over an overall F test for two main reasons. Firstly, this study involved a number of specific questions to be answered separately. Thus, pairwise comparisons of the means are a priori. The ordinary analysis of variance and F test require planned comparisons to be orthogonal. However, it is obvious that the comparisons in this study are not orthogonal. In addition, nonorthogonal comparisons properly belong under a post-hoc rather than a priori category (Hays, 1973).

Secondly, it was not the purpose of this study to carry-out all possible pairwise comparisons. Out of the six possible pairwise comparisons, only three were of interest, and were conducted, to answer specific questions. It was thus decided to employ the t statistic for testing these planned nonorthogonal pairwise comparisons.

In the employment of the t statistic, two assumptions are involved. The first one assumes a normal
distribution of the sampled populations. This assumption is usually considered the less important of the two. The typical attitude is that this assumption may be severely violated without resulting in significant changes, provided the sample size is not extremely small (Hays, 1973).

The second assumption concerns homogeneity of variances. Conventional and conservative investigators typically carried out a separate test for homogeneity of variances prior to the t test itself. However, most modern authorities suggest that to test whether this assumption is upheld is not really necessary. The current popular attitude is that when the sample size is quite large, violations on both assumptions become relatively unimportant (Hays, 1973).

In this study, the researcher chose to adopt the conservative approach. That is, an F test of sample variances was initially performed to test the assumption of equal variances between the groups. The F-value is derived by obtaining the ratio of the larger variance over the smaller variance between the two groups. If this assumption were upheld, the student's t statistic was employed (Gosset, 1908). If it were not upheld, an approximate t statistic was employed.

Several suggestions have been offered for alternative methods of approximation t statistic which include adjustments to be made on the computational
formula and/or the degrees of freedom (Cochran & Cox, 1957; Fisher, 1935; Welch, 1938). The typical approach is to compute separate standard errors from each sample in deriving the t ratio, and the pooled estimate is not made (Hays, 1973).

The TINDMEAN program in the Andrews University STATL computer programs library was employed in the t statistic analyses. This program gives the alternative Welch’s procedure if the assumption of homogeneity of variance were not upheld. The Welch procedure makes adjustments both in the computational formula and the degrees of freedom.

For null hypotheses 1 to 3, tests of significance were one-tailed, while a two-tailed probability was used to test null hypothesis 4. It has been recommended by some statisticians that one-tailed tests should not be used in place of two-tailed tests of significance. One reason is that there is always the possibility of obtaining extreme results in either direction. Thus, when one-tailed tests are employed and extreme results are obtained in the opposite direction to the one expected, a researcher is obviously placed in an awkward predicament (Welkowitz, Ewen, & Cohen, 1976). Furthermore, significant results in either direction are usually of interest in the behavioral sciences. That is, even if extreme results were obtained in the direction other than theoretical expecta-
tions, these may open up new questions for study (Welkowitz et al., 1976).

However, Welkowitz et al. admitted that their position is a controversial one. They acknowledged that the nature of their position concerning one-tailed tests is not a question of their statistical validity, but more of practical validity (Welkowitz, et al., 1976). That is, the position simply concerns a researcher's potentially awkward predicament and professional embarrassment that should be avoided.

It has been argued, however, that there are only few instances in scientific research of theory testing where the basic interest is nondirectional (Fergusson, 1976; Huck, Cormier, & Bounds, 1974). The underlying theoretical conception for this research is obviously directional. Furthermore, in agreement with Hays (1973), the essential questions to be answered by the data have a clear implication for a difference in a specific direction. This research specifically tested the question if androgyny would result in higher flexibility. That is, the main concern was not limited to whether androgyny makes a difference, but whether it would increase one's coping flexibility, thus indicating that directional hypotheses were appropriate. Null hypothesis 4 is obviously an exception since the question was basically different from the previous three null hypotheses.
For all significance testing of the null hypotheses, alpha was set at the .05 level of confidence. To test for the assumption of equal variances between groups, alpha was set at the .01 level of confidence. Due to the multiple t tests employed, the experimentwise probability of type 1 error for this study was augmented to .14.
CHAPTER IV

RESULTS

Introduction

This chapter presents the findings from the analyses of the data collected from a purposive sample group of 616 subjects. This chapter is organized into three main sections. The first section reports the categorical scaling of Burke's coping questionnaire items and the reliability of the resulting scales. The second section presents a summary of the sample group, and deals with each null hypothesis constructed and stated in the preceding chapter. The third section presents additional investigations warranted by the findings from statistical analyses of the null hypotheses. The results are summarized.

Categorical Scaling of Burke's Items

Categorical scaling is a statistical procedure whereby a group of stimuli can be ordered within an arbitrary continuum, yielding interval values to indicate the relative positions of each stimulus. The CATSCALE program in the Andrews University STATL computer programs...
library was employed to serve this purpose. Initially, the thirty-three judges' ratings were tallied, yielding an \( m \) by \( n \) matrix, consisting of the number of times each stimulus (\( m \)) is placed in each category (\( n \)). In this analysis, the thirty-eight items were the stimuli which were placed into seven categories each. The categories ranged from most likely masculine (1) to most likely feminine (7). The obtained scale values for all 38 items are presented in Table 6.

**TABLE 6**

CATEGORICAL SCALING OF BURKE'S COPING QUESTIONNAIRE ITEMS

<table>
<thead>
<tr>
<th>Stimuli</th>
<th>Values</th>
<th>Stimuli</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-0.9190</td>
<td>20</td>
<td>-1.5610</td>
</tr>
<tr>
<td>2</td>
<td>1.4950</td>
<td>21</td>
<td>0.0000</td>
</tr>
<tr>
<td>3</td>
<td>-0.2779</td>
<td>22</td>
<td>-0.8121</td>
</tr>
<tr>
<td>4</td>
<td>-1.0320</td>
<td>23</td>
<td>0.8020</td>
</tr>
<tr>
<td>5</td>
<td>-0.2929</td>
<td>24</td>
<td>-0.5123</td>
</tr>
<tr>
<td>6</td>
<td>-1.0040</td>
<td>25</td>
<td>-0.0068</td>
</tr>
<tr>
<td>7</td>
<td>-0.0853</td>
<td>26</td>
<td>0.1118</td>
</tr>
<tr>
<td>8</td>
<td>0.2056</td>
<td>27</td>
<td>0.8946</td>
</tr>
<tr>
<td>9</td>
<td>-0.0197</td>
<td>28</td>
<td>-0.8677</td>
</tr>
<tr>
<td>10</td>
<td>-1.1110</td>
<td>29</td>
<td>0.7243</td>
</tr>
<tr>
<td>11</td>
<td>1.1380</td>
<td>30</td>
<td>-0.2423</td>
</tr>
<tr>
<td>12</td>
<td>0.8732</td>
<td>31</td>
<td>1.0300</td>
</tr>
<tr>
<td>13</td>
<td>1.1920</td>
<td>32</td>
<td>-0.5470</td>
</tr>
<tr>
<td>14</td>
<td>-1.2550</td>
<td>33</td>
<td>-0.0603</td>
</tr>
<tr>
<td>15</td>
<td>-0.9960</td>
<td>34</td>
<td>-0.4751</td>
</tr>
<tr>
<td>16</td>
<td>-1.4980</td>
<td>35</td>
<td>0.0206</td>
</tr>
<tr>
<td>17</td>
<td>-0.0992</td>
<td>36</td>
<td>0.9532</td>
</tr>
<tr>
<td>18</td>
<td>-0.3691</td>
<td>37</td>
<td>0.9481</td>
</tr>
<tr>
<td>19</td>
<td>0.9632</td>
<td>38</td>
<td>1.0540</td>
</tr>
</tbody>
</table>
The next step was to rank order these obtained scale values. In the construction of the original questionnaire for the judges, the ratings for the items were designed from masculine to feminine. That is, a lower rating indicates a more masculine item, and a higher rating indicates a more feminine item. Thus, in the resulting scale values, the negative end is the masculine end of the continuum, with the feminine end being at the positive end of the continuum. One is to look for relatively large breaks to serve as cut-off points separating the masculine, ambiguous, and feminine items. The rank ordered scale values revealed the locations of the two relatively largest breaks to serve as cut-off points. Ranked from highest to lowest scale values, the first relatively large break was found between the twelfth and thirteenth scale values (a distance of .52). The next relatively large break was found between the twenty-eighth and twenty-ninth scale values (a distance of .27). Thus these relatively largest breaks were judged sufficient to serve as cut-off points separating the masculine, ambiguous, and feminine items. These results are summarized in table 7.

As can be observed from table 7, the categorical scaling of the items yielded scale values which resulted in ten items judged as masculine and twelve items judged as feminine. The remaining sixteen items were judged as ambiguous.
TABLE 7
ORDERED SCALE VALUES OF BURKE'S COPING QUESTIONNAIRE ITEMS

<table>
<thead>
<tr>
<th>Stimuli</th>
<th>Values</th>
<th></th>
<th>Stimuli</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1.4950</td>
<td>7</td>
<td>-0.0853</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>1.1920</td>
<td>17</td>
<td>-0.0992</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>1.1380</td>
<td>30</td>
<td>-0.2423</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>1.0540</td>
<td>3</td>
<td>-0.2779</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>1.0300</td>
<td>5</td>
<td>-0.2929</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>0.9632</td>
<td>18</td>
<td>-0.3691</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>0.9532</td>
<td>34</td>
<td>-0.4751</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>0.9481</td>
<td>24</td>
<td>-0.5123</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>0.8946</td>
<td>32</td>
<td>-0.5470</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>0.8732</td>
<td>22</td>
<td>-0.8121</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>0.8020</td>
<td>28</td>
<td>-0.8677</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>0.7243</td>
<td>1</td>
<td>-0.9190</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>0.2056</td>
<td>15</td>
<td>-0.9960</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>0.1118</td>
<td>6</td>
<td>-1.0040</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>0.0206</td>
<td>4</td>
<td>-1.0320</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>0.0000</td>
<td>10</td>
<td>-1.1110</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>-0.0068</td>
<td>14</td>
<td>-1.2550</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>-0.0197</td>
<td>16</td>
<td>-1.4980</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>-0.0603</td>
<td>20</td>
<td>-1.5610</td>
<td></td>
</tr>
</tbody>
</table>

Thus, an individual's masculine coping score was derived by summing the ratings for each masculine item. Likewise, summing the ratings for each feminine item yielded the feminine coping score. Since there are two more feminine coping items than masculine coping items, a weight of 1.2 was given to the masculine coping score so that both scales were equally weighted in the coping flexibility index formula. Tables 8 and 9 present the obtained masculine and feminine coping items respectively.
TABLE 8
BURKE'S COPING QUESTIONNAIRE
MASCULINE ITEMS

<table>
<thead>
<tr>
<th>Number</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Try to see the humorous aspect of the situation.</td>
</tr>
<tr>
<td>2</td>
<td>Try not to worry or think about it.</td>
</tr>
<tr>
<td>3</td>
<td>Take some immediate action on the basis of your present understanding of the situation.</td>
</tr>
<tr>
<td>4</td>
<td>Try to reduce the tension by drinking more.</td>
</tr>
<tr>
<td>5</td>
<td>Try to reduce the tension by getting involved in some physical activity.</td>
</tr>
<tr>
<td>6</td>
<td>Considers a range of alternate plans for handling the situation.</td>
</tr>
<tr>
<td>7</td>
<td>Throw yourself into your work and work harder and longer hours.</td>
</tr>
<tr>
<td>8</td>
<td>Get rid of the tension by expressing some irritability and frustration to myself—swearing, slamming things down, crumpling up a piece of paper, etc.</td>
</tr>
<tr>
<td>9</td>
<td>Try to think objectively about the situation and keep my feelings under control.</td>
</tr>
<tr>
<td>10</td>
<td>Try to keep others from finding out about the stress you are under.</td>
</tr>
</tbody>
</table>

To estimate the reliability of the coping flexibility index scores, a test-retest procedure using the Pearson r was performed on a separate group of forty-three students from one of the participating colleges (males = 29, females = 14). The period span between the first and
second administration was twenty-nine days. The obtained correlation coefficient was .614.

TABLE 9
BURKE'S COPING QUESTIONNAIRE
FEMININE ITEMS

<table>
<thead>
<tr>
<th>Number</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Talk about the situation with someone else.</td>
</tr>
<tr>
<td>11</td>
<td>Try to reduce the tension by taking tranquilizers.</td>
</tr>
<tr>
<td>12</td>
<td>Try to reduce the tension by napping.</td>
</tr>
<tr>
<td>13</td>
<td>Try to reduce the tension by taking sedatives.</td>
</tr>
<tr>
<td>19</td>
<td>Withdraw physically from the situation.</td>
</tr>
<tr>
<td>23</td>
<td>Take a day off.</td>
</tr>
<tr>
<td>27</td>
<td>Daydream.</td>
</tr>
<tr>
<td>29</td>
<td>Switch to other activities in order to help keep your mind off the problem.</td>
</tr>
<tr>
<td>31</td>
<td>Try to reduce the tension by having a snack, chewing some gum or eating some candy.</td>
</tr>
<tr>
<td>36</td>
<td>Try to get advice and suggestions from someone else.</td>
</tr>
<tr>
<td>37</td>
<td>First express my feelings and frustrations to others so that I can then think rationally about it.</td>
</tr>
<tr>
<td>38</td>
<td>Pray for guidance and support.</td>
</tr>
</tbody>
</table>
Testing of the Hypotheses

Table 10 presents a summary of the sample group according to sex-role classifications and their respective group means of coping flexibility indices.

**TABLE 10**

<table>
<thead>
<tr>
<th>Sex Role</th>
<th>N</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculine</td>
<td>137</td>
<td>71.55</td>
</tr>
<tr>
<td>Feminine</td>
<td>163</td>
<td>77.09</td>
</tr>
<tr>
<td>Androgynous</td>
<td>205</td>
<td>75.83</td>
</tr>
<tr>
<td>Undifferentiated</td>
<td>111</td>
<td>66.94</td>
</tr>
</tbody>
</table>

**Null Hypothesis 1**

According to Bem's theoretical conception, androgynous individuals are expected to be more flexible than masculine individuals. The obtained F-value to test the assumption of equal variances between the androgynous and masculine groups was 1.06 (p = .72). The obtained F-value indicates that the assumption was upheld. Thus, the Student's t statistic was employed to test for differences of the means between the two groups. Table 11 summarizes this finding.
TABLE 11
TEST OF SIGNIFICANCE BETWEEN THE MEANS
OF COPING FLEXIBILITY INDICES FOR
ANDROGYNOUS AND MASCULINE GROUPS

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>Sd</th>
<th>t</th>
<th>df</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Androgynous</td>
<td>205</td>
<td>75.83</td>
<td>19.89</td>
<td>1.97</td>
<td>340</td>
<td>.025</td>
</tr>
<tr>
<td>Masculine</td>
<td>137</td>
<td>71.55</td>
<td>19.32</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The null hypothesis stated that the mean flexibility index of coping strategies among androgynous individuals is not significantly higher than that among masculine individuals. It is shown in table 11 that the obtained t-value is associated with .025 probability. This is sufficient to reject the null hypothesis.

This finding presents evidence that there is a significant difference in the mean flexibility index of coping behaviors between androgynous and masculine subjects. More specifically, it was revealed that androgynous subjects obtained significantly higher flexibility indices of coping behaviors than masculine subjects. Based on the pooled standard deviation of the two groups (19.67), the difference of the means (4.28) is associated with an effect size of .22.
Null Hypothesis 2

According to Bem's theoretical conception, androgynous individuals are expected to be more flexible than feminine individuals. The obtained F-value to test the assumption of equal variances between the two groups was 1.27 \( (p = .11) \). The obtained F-value indicates that the assumption was upheld. Thus, the Student's t statistic was employed to test for differences of the means between the two groups. Table 12 summarizes this finding.

**TABLE 12**

**TEST OF SIGNIFICANCE BETWEEN THE MEANS OF COPING FLEXIBILITY INDICES FOR ANDROGYNOUS AND FEMININE GROUPS**

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>Sd</th>
<th>t</th>
<th>df</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Androgynous</td>
<td>205</td>
<td>75.83</td>
<td>19.89</td>
<td>-0.57</td>
<td>366</td>
<td>.285</td>
</tr>
<tr>
<td>Feminine</td>
<td>163</td>
<td>77.09</td>
<td>22.42</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The null hypothesis stated that the mean flexibility index of coping strategies among androgynous individuals is not significantly higher than that among feminine individuals. It is shown in table 12 that the obtained t-value is associated with a .285 probability which is greater than the previously set alpha. Thus, the null was retained for lack of significant evidence.
More specifically, androgynous subjects did not obtain significantly higher flexibility indices of coping behaviors than feminine subjects.

**Null Hypothesis 3**

According to Bem's theoretical conception, androgynous individuals are expected to be more flexible than undifferentiated individuals. The obtained F-value to test the assumption of equal variances between the androgynous and undifferentiated groups was 2.28 (p < .01). The obtained F-value was significant which indicates that the assumption was not upheld. Thus, Welch's approximation t statistic was more appropriate to use than the Student's t statistic. Table 13 summarizes this finding.

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>Sd</th>
<th>t</th>
<th>df</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Androgynous</td>
<td>205</td>
<td>75.83</td>
<td>19.98</td>
<td>2.80</td>
<td>207</td>
<td>.003</td>
</tr>
<tr>
<td>Undifferentiated</td>
<td>111</td>
<td>66.94</td>
<td>30.04</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The null hypothesis stated that the mean flexibility index of coping strategies among androgynous individuals is not significantly higher than that among
undifferentiated individuals. It is shown in table 13 that the obtained t-value is associated with a .003 probability. This is sufficient to reject the null hypothesis.

This finding presents evidence that there is a significant difference in the mean flexibility index of coping behaviors between androgynous and undifferentiated subjects. More specifically, it was revealed that androgynous subjects obtained significantly higher flexibility indices of coping behaviors than undifferentiated subjects. Based on the pooled standard deviation of the two groups (23.94), the difference of the means (8.89) is associated with an effect size of .28.

Null Hypothesis 4

The null hypothesis stated that there is no significant difference in the mean flexibility index of coping strategies between androgynous males and androgynous females. The obtained F-value to test the assumption of equal variances between the male and female androgynous groups was 1.57 (p = .03). The obtained F-value indicates that the assumption was upheld. Thus, the Student's t statistic was employed to test for differences of the means between the two groups. Table 14 summarizes this finding.

It is shown in table 14 that the obtained t-value is associated with a .046 probability. This is sufficient to reject the null hypothesis.
TABLE 14
TEST OF SIGNIFICANCE BETWEEN THE MEANS OF
COPING FLEXIBILITY INDICES FOR MALE
AND FEMALE ANDROGYNOUS GROUPS

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>Sd</th>
<th>t</th>
<th>df</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>116</td>
<td>73.40</td>
<td>21.52</td>
<td>-2.00</td>
<td>203</td>
<td>.046</td>
</tr>
<tr>
<td>Females</td>
<td>89</td>
<td>78.90</td>
<td>17.13</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This finding presents evidence that there is a significant difference in the mean flexibility index of coping strategies between androgynous males and androgynous females. More specifically, it was indicated that androgynous females reported significantly higher flexibility index of coping strategies than androgynous males. Based on the pooled standard deviation of the two groups (19.75), the difference of the means (5.50) is associated with an effect size of .28.

Additional Findings

The findings revealed from statistical testing of null hypotheses two and four warranted further investigation of the data. It appeared that androgynous individuals obtained coping flexibility indices that are not significantly higher than feminine individuals. It was also found that androgynous females obtained signi-
significantly higher coping flexibility indices than androgynous males. These two findings consequently raised the question of possible sex-differences in coping flexibility indices.

As Brown (1958) pointed out, girls are exposed to less strict constraints than boys in their display of sex-role behaviors. This double standard can be observed to persist through adulthood. The general public is more willing to accept a female who displays behaviors that cross over stereotypic lines than a male, who would elicit strong negative reactions should he display behaviors that cross over stereotypic lines.

Based on the above contention, it appears logical to expect higher coping flexibility indices among females than among males. In order to confirm this expectation, several additional statistical analyses were conducted. Since the following analyses were incited by this study's findings and the question is clearly directional, one-tailed probability was employed. That is, females are expected to obtain higher coping flexibility indices than males. Alpha was set at the .05 level of confidence for all tests of comparisons. To test the assumption of equal variances, alpha was set at the .01 level of confidence.

Initially, the masculine and feminine groups were compared. The obtained F-value to test the assumption of equal variances between the two groups was 1.79 (p = .03).
The obtained F-value indicates that the assumption was upheld. Thus the student's t statistic was performed to test for differences of the means between the two groups. Table 15 summarizes this finding.

### TABLE 15

**TEST OF SIGNIFICANCE BETWEEN THE MEANS OF COPING FLEXIBILITY INDICES FOR MASCULINE AND FEMININE GROUPS**

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>Sd</th>
<th>t</th>
<th>df</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculine</td>
<td>137</td>
<td>71.55</td>
<td>19.32</td>
<td>-2.27</td>
<td>298</td>
<td>.012</td>
</tr>
<tr>
<td>Feminine</td>
<td>163</td>
<td>77.09</td>
<td>22.42</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is shown in table 15 that the obtained t-value is associated with a .012 probability. This finding presents evidence that there is a significant difference in the mean flexibility index of coping strategies between masculine and feminine subjects. More specifically, it was indicated that feminine subjects obtained significantly higher coping flexibility indices than masculine subjects. Based on the pooled standard deviation of the two groups (21.06), the difference of the means (5.54) is associated with an effect size of .26.

However, since both the masculine and feminine groups included subjects of both sexes, both groups were
further divided into appropriate sex-type and cross sex-type groups. That is, feminine males were removed from the feminine group. Likewise, masculine females were removed from the masculine group. This resulted in two groups of subjects whose sex-types are sex-appropriate. In other words, one group is made up of masculine males and the other made up of feminine females. Those subjects that were removed made up two other groups whose sex-types are inappropriate. That is, one group was made up of masculine females and the other made up of feminine males.

First, the two groups whose sex-types are sex-appropriate were compared. The obtained F-value to test the assumption of equal variances between the two groups was 1.36 (p = .09). The obtained F-value indicates that the assumption was upheld. Thus the Student's t statistic was employed to test for differences of the means between the two groups. Table 16 summarizes this finding.

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>Sd</th>
<th>t</th>
<th>df</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>114</td>
<td>70.97</td>
<td>19.64</td>
<td>-2.02</td>
<td>254</td>
<td>.022</td>
</tr>
<tr>
<td>Females</td>
<td>142</td>
<td>76.43</td>
<td>22.87</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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It was shown in table 16 that the obtained t-value is associated with a .022 probability. This finding presents evidence that there is a significant difference in the mean flexibility index of coping strategies between masculine males and feminine females. More specifically, it was indicated that feminine females obtained significantly higher coping flexibility indices than masculine males. Based on the pooled standard deviation of the two groups (21.45), the difference of the means (5.46) is associated with an effect size of .25.

The next step was to compare the cross sex-type subjects, the masculine females and feminine males. Due to the small sample size of both groups (masculine females = 23, feminine males = 21), the nonparametric Mann-Whitney U test was employed in place of Student's t statistic. The Mann-Whitney U test is the most powerful of the nonparametric tests for two independent groups, and the most useful alternative to the Student's t statistic (Siegel, 1956).

The obtained U was 145.5 which yielded a Z value of -2.26. The obtained Z is associated with a .012 probability. This finding presents evidence that there is a significant difference in the flexibility indices of coping strategies between masculine females and feminine males. More specifically, it was indicated that masculine
females obtained significantly higher coping flexibility indices than feminine males.

Finally, males and females within the undifferentiated group were compared. The obtained F-value to test the assumption of equal variances between the two groups was 1.79 (p = .03). The obtained F-value indicates that the assumption was upheld. Thus the Student's t statistic was performed to test for differences of the mean between the two groups. Table 17 summarizes the finding.

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>Sd</th>
<th>t</th>
<th>df</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>57</td>
<td>68.19</td>
<td>26.61</td>
<td>0.45</td>
<td>109</td>
<td>.328</td>
</tr>
<tr>
<td>Females</td>
<td>54</td>
<td>65.63</td>
<td>34.29</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is shown in table 17 that the obtained t-value is associated with a .328 probability which is greater than the previously set alpha. This finding indicates that undifferentiated females did not obtain significantly higher flexibility indices of coping behaviors than undifferentiated males.
The finding of sex-differences in androgyny also incited further investigation into the data. It was decided to compare androgynous males and masculine males, and androgynous females and feminine females.

The obtained F-value to test the assumption of equal variances between the androgynous males and masculine males was 1.20 (p = .33). The obtained F-value indicates that the assumption was upheld. Thus the Student's t statistic was performed to test for differences of the means between the two groups. Table 18 summarizes this finding.

| TABLE 18 |
| --- | --- | --- | --- | --- | --- | --- |
| Groups | N | Mean | Sd | t | df | P |
| Androgynous | 116 | 73.40 | 21.52 | 0.90 | 228 | .186 |
| Masculine | 114 | 70.97 | 19.64 |

It is shown in table 18 that the obtained t-value is associated with a .186 probability which is greater than the previously set alpha. This finding indicates that androgynous males did not obtain significantly higher flexibility indices of coping behaviors than masculine males.
The obtained F-value to test the assumption of equal variances between the androgynous females and feminine females was 1.78 (p < .01). The obtained F-value was significant which indicates that the assumption was not upheld. Thus Welch's approximation t statistic was more appropriate to use than the Student's t statistic. Table 19 summarizes this finding.

**TABLE 19**

**TEST OF SIGNIFICANCE BETWEEN THE MEANS OF COPING FLEXIBILITY INDICES FOR ANDROGYNOUS AND FEMININE FEMALE GROUPS**

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Androgynous</td>
<td>89</td>
<td>78.90</td>
<td>17.13</td>
<td>0.97</td>
<td>230</td>
<td>.167</td>
</tr>
<tr>
<td>Feminine</td>
<td>142</td>
<td>76.43</td>
<td>22.87</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is shown in table 19 that the obtained t-value is associated with a .167 probability which is greater than the previously set alpha. This finding indicates that androgynous females did not obtain significantly higher flexibility indices of coping behaviors than feminine females.
CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

This chapter presents the summary and conclusions of the study, implications of the findings, and recommendations for further research. The rationale for the study stemmed from the conception that masculinity and femininity are two independent dimensions of sex-roles, and that every individual has the potential for both. The acquisition of both characteristics, the androgynous type, has been theorized to facilitate flexibility of one's behavior.

Summary

The summary of this study is divided into four sections:

1. Purpose
2. Overview of Related Literature
3. Sampling and Instrumentation
4. Null hypotheses

Purpose

The underlying purpose of this study was to investigate the validity of Bem's theory of androgynous
flexibility. Androgynous flexibility was investigated in terms of coping strategies utilized in dealing with the tension and strain of everyday stress. It was hypothesized that androgynous subjects would report higher flexibility indices of coping strategies than other sex-types.

Overview of Related Literature

The review of literature for this study consisted of six sections. The first summarized the major theoretical perspectives of sex-role development. More specifically, three major theories were presented which included the psychoanalytical, the social-learning, and the cognitive developmental.

The second section explored the heredity versus environment issue of sex-role development. It was apparent that there is an interaction between heredity and environment which can occur in several different ways.

In order to enhance the understanding of how the differential standards for men and women began, some historical perspectives were presented in the third section. The double standards between the sexes existed from the early Greek and Roman civilizations. It was the mission of Jesus that was regarded as the beginning of teachings and doctrines that treated men and women as equals, at least in spiritual matters.
The fourth section presented the traditional expectations of men and women in the American culture today. It was shown that stereotypes of men and women differ widely.

Since this study involved Bem's theoretical conceptions and instrument, the fifth section dealt with a review of Bem's theoretical construct of androgyny. Bem suggested that it is the cultivation of both masculine and feminine sex-role characteristics that makes a person whole. Such an androgynous individual is better equipped to enhance his or her life experiences in the rapidly changing and demanding society of the 1980s.

The last section presented some correlates of androgyny. It was revealed that androgyny is correlated with high creativity, high self-esteem, high social skills, and more mature levels of moral development.

Sampling and Instrumentation

The purposive sample of 308 males and 303 females, yielding a total of 616 subjects, was made up of undergraduate students enrolled in introductory psychology courses in four midwestern state colleges. Data were collected in the Fall and Winter of the 1981-1982 academic year.

This study employed two objective instruments, the Bem Inventory and Burke's questionnaire of coping
behaviors. The practical advantages of these instruments lie in their clarity, brief form, simplicity of administration and scoring, and economy of time on the part of the respondents.

Null Hypotheses

The following null hypotheses were advanced for statistical testing:

1. The mean flexibility index of coping strategies among androgynous individuals is not significantly higher than that among masculine individuals.

2. The mean flexibility index of coping strategies among androgynous individuals is not significantly higher than that among feminine individuals.

3. The mean flexibility index of coping strategies among androgynous individuals is not significantly higher than that among undifferentiated individuals.

4. There is no significant difference in the mean flexibility index of coping strategies between androgynous males and androgynous females.

Conclusions

Based on the data gathered, analyzed, and presented, the following conclusions are drawn:

1. There is a significantly higher flexibility of coping strategies among androgynous individuals than that among masculine individuals.
2. The flexibility of coping strategies among androgynous individuals is not significantly higher than that among feminine individuals.

3. There is a significantly higher flexibility of coping strategies among androgynous individuals than that among undifferentiated individuals.

4. There is a significantly higher flexibility of coping strategies among androgynous females than that among androgynous males.

5. There is a significantly higher flexibility of coping strategies among feminine individuals than that among masculine individuals.

6. There is a significantly higher flexibility of coping strategies among feminine females than that among masculine males.

7. There is a significantly higher flexibility of coping strategies among masculine females than that among feminine males.

8. The flexibility of coping strategies among undifferentiated females is not significantly higher than that among undifferentiated males.

9. The flexibility of coping strategies among androgynous males is not significantly higher than that among masculine males.

10. The flexibility of coping strategies among androgynous females is not significantly higher than that among feminine females.
Implications and Recommendations

Bem postulated, and demonstrated, that androgyny allows one to be more flexible in his or her behaviors. However, statistical analyses of the data gathered for this study yielded evidence which provided no support for Bem's conceptions in terms of coping behaviors. Even though androgynous subjects were found to obtain significantly higher flexibility indices of coping strategies than masculine and undifferentiated subjects, their flexibility indices were not significantly higher than feminine subjects.

It appears that with today's more relaxed attitudes toward females, they are allowed to display sex-role behaviors with less restrictions. In other words, consistent with Brown's (1958) writings, the general public tends to be more accepting to a display of cross-sex behaviors if the performer were a woman than a man. Among androgynous subjects, the females were found to obtain significantly higher flexibility indices of coping strategies than the males. Additional analyses of the data also revealed that with the exception of the undifferentiated subjects, females consistently were found to obtain significantly higher coping flexibility indices than males. This further confirmed the position that women are more encouraged to display both sex-type and cross-sex behaviors than men. This double standard may
be attributed to the finding that there is no significant difference in flexibility of coping strategies between the androgynous and feminine groups.

Taken at face value, the inclusion of masculine and feminine qualities within an individual would be advantageous. Bem's androgynous individual is described to enjoy a broader range of behavioral repertoire and thus, able to be more effective in meeting the demands of a larger variety of situations. That is, the androgynous individual is not bound to respond from a more limited stereotyped repertoire of options.

However, Bem's theoretical formulations were based on a limited number of laboratory findings. A specific behavioral response of one's interaction to a kitten or nonconformity under peer pressure, is hardly sufficient evidence of androgynous behavioral flexibility. Yet, Bem enthusiastically regarded her findings as strong support for androgyny. It is evident that Bem had erroneously equated an observation of one or two specific behaviors as representative of a global behavioral repertoire. That is, Bem appeared to have mistakenly predicted an individual's range of available responses to his or her environment from a display of one or two specific behaviors.

Another obvious error of Bem's theoretical formulations in predicting behaviors involves the question of consistency in one's behaviors. Most psychologists would
agree that an individual's response to a given stimulus pretty much depends on that individual's interpretation of that stimulus. For example, a masculine individual is expected to assertively exert his or her independence when pressured to conform. However, there is no guarantee for that masculine individual to continue insisting on his or her independence when nonconformity is perceived as life-threatening. Thus sex-role dispositions may be subject to situational interpretations.

The advantage of this study is its approach to seek evidence of androgynous behaviors in terms of one's typical ways of coping with stress. Here, the stimulus is held constant and subjects' responses were investigated and compared.

The findings of this study provide no support for Bem's theory. There is no clear-cut evidence of greater flexibility of behavior in androgyny as Bem has predicted. It was indicated that femininity is equally important in obtaining one's flexibility of coping behaviors. It was also revealed that behavioral flexibility was shown favoring the females regardless of sex-role classifications, with the exception among undifferentiated subjects. Thus, consistent with Brown's contention, females are more likely to obtain higher flexibility than males, at least in terms of coping behaviors. In addition, it was also found that there was no significant evidence of greater
flexibility among androgynous males than masculine males, nor among androgynous females and feminine females. Thus by looking on each sex separately, it was indicated that appropriate sex-type achieves similar level of flexibility as androgyne for both sexes.

Although these findings appear to contradict previous ones (Heilbrun, 1980), one explanation can be offered. Heilburn (1980) found differences in androgyne that consistently favored the males. However, his scores were in terms of sex-role identification which appears to be a personality trait, and not coping behaviors which are clearly behavioral characteristics. It can be suggested, therefore, that Bem's theoretical model of sex-role identification is more appropriately tapping the traits within the personality domain rather than behavioral domain. This explains the presence of significant correlations between androgyne and such personality variables as self-esteem, while lacking significant correlations with behavioral traits.

There is no debate to the fact that men and women are designed differently in basic physiological terms. Thus, it is obvious that there are certain functions reserved for the males and certain others reserved for the females. It is important that each individual realizes this basic difference, with its accompanying limitations, and cultivate his or her specially reserved
potentials to their fullest. Thus, men and women should be encouraged to take up complementary positions, with respect for each other, rather than competitive.

This obvious basic difference between the sexes clearly warrants further study of the consequences of sex-roles for each sex separately. Since one sex is disposed for basically different functions than the other, sex-role identification may affect the males differently than the females. Results will also aid in the decision of whether to employ independent or common norms for the sexes.

The measurement of androgyny is an issue of itself. Bem's approach to measuring androgyny is to develop a fourfold typology based upon two independent masculine and feminine dimensions. The scale medians are used to indicate the crossing of the two dimensions. The obvious problem with this approach concerns those individuals who obtain borderline scores. Due to the standard error of measurement, borderline individuals could possibly fluctuate from one sex-role category to another on different occasions. Thus, an alternative to measuring sex-role should be explored. Treating sex-role as a continuous variable rather than discrete may lead one to new insights on the topic. Studies of sex-role may provide additional significant information if its multifactorial nature were taken into consideration. Inconsistency of results among
researchers of sex-role may be due to its factorial complexity. That is, an individual is not only masculine but that there may be several different ways of being masculine. A factor analytic model of sex-role would be very useful to aid in understanding its nature and its effects on one's behaviors.

Since data for this study were gathered from a sample of college students, replication of its findings should be conducted. Similar studies involving the adult or the old-age populations may provide some interesting insights.

Finally, sex-role should also be investigated within a religious context. There is some evidence as recorded in the Bible that Jesus displayed a repertoire of behaviors which may be regarded as androgynous. He was observed to be an effective leader and aggressive at times, such as when He found people buying and selling in the Temple. Jesus was also observed to be nurturant, such as when He commended the children to come to Him. An investigation of sex-role on those individuals who have chosen Jesus as their role model will provide useful information. The results may enhance a better understanding of androgyny and how it works.
APPENDICES
APPENDIX A

THE TWO INSTRUMENTS OF THE STUDY
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These consist of pages:

92-95

97-98
APPENDIX B

INSTRUMENT FOR THE JUDGES
BIBLIOGRAPHY


Gentry, W. D.; Foster, S.; and Harvey, T. "Denial as a Determinant of Anxiety and Perceived Health Status in the Coronary Care Unit." *Psychosomatic Medicine* 34 (1972): 39-44.


VITA

NAME: Roy Lucas Lukman
DATE OF BIRTH: January 9, 1952
PLACE OF BIRTH: Indonesia; U.S. Citizen
PERSONAL: Height, 6'3"
Weight, 175 lbs.
Status, Married; one child
No Handicap

EDUCATION:

1976 Bachelor of Science - Behavioral Science
Atlantic Union College, Massachusetts

1979 Master of Arts - Educational Psychology and
Counseling
Andrews University, Michigan

1983 Doctor of Philosophy - Educational and
Psychological Services
(Cognate Area: Research and Measurements)
Andrews University, Michigan