# AN EMPIRICAL EVALUATION OF GENDER ROLE DEVELOPMENT IN ADULTHOOD

Donald Robert McCreary

A thesis submitted to the University of Kent, Canterbury, England, as required for the degree of Doctor of Philosophy, Social Psychology.

ABSTRACT

The purpose of this thesis is to examine empirically the hypothesis that masculine-instrumental and feminine-expressive gender role attributes develop or vary across the life-span. Seven studies are reported, including an analysis of the reliability and validity of the main measure in an elderly population, an examination of gender role stereotypes in three age-related developmental tasks, an assessment of self-perceived gender role variability as a function of participation in similar age-related developmental tasks, and a cross-sectional study examining gender role variability as a function of chronological age and position in both the family and occupational cycles.

In general, the results support those from previous empirical attempts to examine life-span gender roles and they offer important extensions to this literature. For example, each of the present studies have shown consistently that gender role attributes are perceived to become balanced in old age, but that the pathways to this androgynous state are different depending on whether the methodology asks subjects for their stereotypes or self-perceptions. It is suggested that future research should examine the effects of social role participation on self-perceptions of gender role attributes in an attempt to determine their relationship to traditional self-reports. That is, will there be significant mean differences between two self-ratings on a gender role inventory if they were completed while the subjects were actively engaged in different social roles?

## DEDICATION

This thesis is dedicated to Sarah, in appreciation for her continuous and selfless support. We have given each other a lot over the years, but I know that I have gotten the better end of the deal. For that I give her this.

ACKNOWLEDGEMENTS

This has been the strangest and most unorthodox three years I have ever spent. If someone asked me how I expected to spend the three years of my doctoral candidacy, I would have answered "getting to know Canterbury very well." However, my failure to secure adequate funding from my home government meant that my stay in Canterbury was pitifully short. But, in the 17 months that I was "in residence" at the University of Kent, I learned much from its excellent faculty and staff. I also made many friends who helped make the learning process much more enjoyable. At the start of my candidacy, Kevin Durkin was my supervisor. I wish to thank him for his patient help and guidance in getting me started on this direction of research. When Kevin took up a post at the University of Western Australia, Robert Povey graciously stepped in and offered his time and experience to the "writing up" phase of the project (a very difficult task when done through the post!). Rob's excellent editorial advice has helped me immensely and I am grateful for his insights into the research background, methods, and results. There are several other people in Canterbury whom I would like to thank for their help and support: Stephen Moston, Jan Lloyd, Gary Samson, Beatrice Shire, Geoffrey Stephenson, Derek Rutter, Rupert Brown, Noel Clark, Debbie Winter, and Mike Fuller.

In January, 1987, I arrived at Texas A&M University, on study leave from the University of Kent. My stay at Texas A&M was 15 months in duration and in that time I accomplished much. Without the help of

Steven Worchel, I would have accomplished much less. I would like to thank Steve for always having a course me to teach as well as for graciously allotting me office space, library facilities, and computer time. Much of the data analysis involved in this thesis was conducted at Texas A&M. There are several faculty members and graduate students whom I would like to thank for their time, help, and encouragement: Frankie Wong, Eddy Vela, Carlton Parks, Jeff Simpson, Tom Ward, Steve Smith, Jed Friend, Diane Carlson-Jones, Jorge Mendoza, and Margret Lerma. A special vote of thanks goes to Nancy Rhodes, who somehow made me feel guilty for not working when I could and was always available to listen and talk when I could not (Thank You Nancy!).

Finally, I would like to acknowledge those who have supported me financially since the beginning of this endeavour. My Father and Mother got me started and I thank them for the sacrifices they made but would not tell me about. Once at the University of Kent, I received funding from four sources: a two-year Overseas Research Student Award granted by the Committee of Vice-Chancellors and Principals of the Universities of the United Kingdom; a Mountbatten Memorial Grant from the Sir Ernest Cassell Educational Trust; several grants from the Faculty of Social Sciences, University of Kent; and two bursaries from the British Psychological Society. The copying and binding of this thesis was aided by a grant from the Gilchrist Educational Trust. Finally, several great friends treated me as the poor student I was, and ended up spoiling me rotten. Many, many thanks to Sarah, Barry, Morty, and Rob. I guess the free ride is over??!!

## PRESENTATIONS

Several conference presentations were given in relation to the research presented in this thesis. The citations are given below.

McCreary, D.R. (1986). *Theoretical and methodological problems in assessing the impact of the availability of multiple family generations on gender-role development.* Paper presented at the 1986 Postgraduate Psychology Conference, University of Hull, England, April 23.

McCreary, D.R. (1986). *The life-span development of the gender role.* Paper presented at the Annual Conference of the British Psychological Society, Scottish Branch, Stirling, Scotland, September 20.

McCreary, D.R. (1986). *Perceptions of gender role variability.* Paper presented at the Annual Conference of the British Psychological Society, Social Psychology Section, University of Sussex, England, September 27.

McCreary, D.R. (1987). *Cohort differences in the perception of sex role-related personality attributes: A life-span developmental perspective.* Paper presented at the Third Meeting of the International Society for the Study of Individual Differences, Toronto, Canada, June 19.

McCreary, D.R. (1988). *Retrospective ratings of gender role change.* Paper presented at the biennial meetings of the Southwestern Society for Research in Human Development Meetings, New Orleans, March 17.

TABLE OF CONTENTS

# CHAPTER 1

# INTRODUCTION

To date, the vast majority of theory and research examining gender role development has centred exclusively on children. The prevailing belief appears to be that, once adulthood is reached, individuals retain those levels of stereotypically masculine and feminine personality attributes that had formed during childhood and adolescence. This lack of attention to developmental issues beyond adolescence can be seen when one examines the gender roles research literature. Aside from the development of gender roles in childhood, most research addresses either the psychometric properties of the scales that have been designed to assess self-ascription to stereotypical masculinity and femininity (e.g., Lubinski, Tellegen, and Butcher, 1981; Myers and Gonda, 1982; Ramanaiah and Martin, 1984; Wilson and Cook, 1984) or the relationship between gender roles and other psychological constructs such as self-esteem (e.g., Spence and Helmreich, 1978; Taylor and Hall, 1982).

Several authors, however, have written theoretical critiques addressing the lack of a life-span developmental emphasis in gender role research. In some of these essays, the authors discuss gender role development in children and note the life-span issue in their summaries (e.g., "our belief [is] that sex roles do not emerge full blown and immutable in early childhood..." [Lamb and Urberg, 1978]), while in others, the issue is the centrepiece (Bozett, 1985; Emmerich,

1973; Havighurst, 1983; Katz, 1979a,b; Livson, 1983; Moreland, 1980; Nash and Feldman, 1981; Worell, 1981). Finally, others have written about gender roles in the elderly (e.g., Sinnott, 1986; Taylor, 1986) and have noted the significance of being able to adapt gender role attributes to specific life contexts.

Worell (1981) believes that gender roles and their development across the life-span are analagous to four aspects of a job description: selection, analysis, performance, and satisfaction. Job selection entails a dichotomous "choice" that is made for each individual at conception. That is, a child is born either male or female. Once this "choice" has been made, the individual is bound by the social implications and expectations regarding the gender roles that are appropriate for males and females. The next component, job analysis, includes learning about the expectations that society places upon being male or female as well as the actual socialization of gender roles. However, Worell also notes that this job analysis is age-graded, suggesting that gender role socialization is a life-long process.

The third component to Worell's analogy is that of job performance. This requires the individual to become competent in performing and displaying stereotypically masculine and feminine behaviours and attributes. Although Worell does not state this, how an individual performs is dependent upon his/her analysis of the task. This leaves room for individual differences as well as age-graded variation in the performance and display of these behaviours and

attributes. The final component is job satisfaction. It is here that the individual assesses his/her performance and effectiveness at being masculine or feminine. The more effective the individual perceives his/her gender roles, the less impetus there is to initiate a change.

Thus, for Worell (1981), gender role variability across the life-span is dependent upon making the self-evaluation that one's current gender roles are ineffective at the current stage of life. When change does occur, it is expected to happen within what Worell calls "a framework of reciprocal determinism, in which overt behaviour, internal self-monitoring systems, and external environment variables converge to produce both stability and change." (p. 340)

Whereas Worell believes that change comes from within, Livson's (1983) critique stresses the effect of social roles (i.e., external sources) upon life-span gender role variability. Livson notes that each individual (whether he/she is a child, adolescent, or adult) is engaged in a series of varied and multifaceted roles (e.g., career building, marriage, parenthood), each requiring different proportions of stereotypically masculine and feminine attributes and behaviours in order to be successful. Changes in one's social roles (e.g., the onset or ending of the parent role) are expected to precipitate changes in one's gender roles.

Although Livson states that gender role norms are changing, she still bases her model of situational variability upon traditional role allocations (i.e., males work while females raise the family) that no longer appear to be valid (Hoffman 1977; 1984). This division of

social roles, she believes, polarizes gender roles in the early and middle adult years, where parenting and occupational concerns are most salient. That is, she believes that it requires nurturance to raise a family (the stereotypical feminine role) and achievement to build a career (the stereotypical masculine role) and that these differential role demands lead to the development of masculine attributes and behaviours in males and feminine attributes and behaviours in females.

There are others who also believe that the family context affects gender roles. Nash and Feldman (1981) have suggested that gender role attributes and behaviours vary across the life-span as a function of the position in the family life cycle. They report data that tentatively validate Livson's assumption that males and females develop polarized gender roles during the parenting years. Their data revealed that males in the parenting years surpassed females in their sense of leadership, but not autonomy. Female parents, on the other hand were both more compassionate and tender than male parents, but this effect was reduced in those whose children were older and more autonomous.

Livson (1983) and Nash and Feldman (1981) have suggested that males and females follow different pathways in the life-span development of gender roles, while others have noted a "male bias" (Katz, 1979a) in the theories of gender role development. Katz (1979a, b) attempted to address several inconsistencies that exist between theory and research, inconsistencies which may have been influenced by a male-centred emphasis in the theoretical literature

(see also Archer and Lloyd, 1985; Gilligan, 1982). In her analysis, Katz (1979a, b) presented a discussion of life-span gender role development in females and showed that there are a larger number of psychological, biological, and social influences that combine to make the development of a female gender identity and gender roles different from the male's developmental process.

By addressing the topic of male gender role development in adulthood, Moreland (1980) demonstrated his belief that males and females follow different developmental pathways. Moreland believes that the variability of gender roles in adult males cannot be understood without knowledge of the adult developmental process. Building on the work of Levinson (1978; see Chapter 4 for a more detailed description of Levinson's work), Moreland notes that "the particular characteristics of a man's life structure are influenced by his conception of masculinity. In his 20s, a man measures his masculinity largely on the basis of successful competition and career advancement. The life structure he develops facilitates behaviour consistent with these sex-role standards. Male sex-role standards for many men in their 40s give much greater weight to interpersonal skills, the establishment of intimacy in same- and opposite-sex relationships, as well as a temporal focus on the present instead of a constant striving for the future. The life structures for men in this period of their lives are consistent with their conceptualization of masculinity." (p. 810)

Thus, Moreland (1980) states that, for males, there is an

emphasis on gender-congruent personality traits and interests in the early adult years but that this apparent gender role polarization decreases in middle adulthood when males construct a new personal environment that is incongruent with the previous emphasis. The belief that males and females become less sex-typed in adulthood is also shared by Livson (1983) who states that, although males and females in young adulthood display sex-typed gender roles as a result of their engagement in traditional social roles, men and women in their middle years begin to develop cross-sex gender roles. She believes that disengaging from various sex- and age-related roles (e.g., parenthood) causes males and females to be released from sex-typed gender role patterns, resulting in males becoming more expressive and females more instrumental.

Those who study gender roles in the elderly also believe that gender roles become balanced in old age (e.g., Sinnott, 1986). That is, males and females are expected to report higher levels of gender-congruent attributes in early adulthood. Unknown processes in later adulthood are believed to facilitate the development of cross-sex gender role attributes, erasing the frequently found sex differences in self-reported masculinity and femininity and creating a gender role balance. Sinnott (1977) believes that a gender role balance in old age is adaptive in that it leads to greater flexibility in dealing with the aging process. Taylor (1986), however, notes that this is still a speculative assumption as there is no consistent evidence to suggest that Sinnott's hypothesis is valid.

The goal of this thesis is to present an comprehensive evaluation of gender role development in adulthood. This assessment begins in Chapter 2 by defining terms such as masculinity, femininity, and gender roles. Also examined in that chapter are the development of the gender role construct, its measurement and validity, as well as an examination of the content and stability of gender role stereotypes. In Chapter 3, several theories of gender role development are examined and evaluated for their ability to explain life-span development. Among those reviewed are the traditional gender identity theories (e.g., Kohlberg, 1966; Mischel, 1966), androgyny (Bem, 1974), and gerontological approaches (e.g., Gutmann, 1975). Chapter 4 also addresses a developmental issue when it examines the major theories of adult development. These theories offer two advantages to the examination of life-span gender roles. First, they present a framework in which to describe the entire adult developmental process. Secondly, they describe the context in which adult development takes place and offer insights into the tasks confronting males and females in adulthood that may, if some critics are correct (e.g., Livson, 1983; Nash and Feldman, 1981), effect the development of gender role attributes and behaviours.

Chapter 5 reviews the empirical research that has examined the life-span gender roles issue. This review identifies the four research methods that have have addressed gender role development in adulthood (person perception, short-term longitudinal, cross-sectional, and cross-contextual) and organizes its discussion around the findings of

studies using these methodologies.

Chapter 6 offers an outline of the seven empirical studies that compose the present empirical evaluation. These studies include: an assessment of the reliability and validity of the main measure in an elderly population and an examination of the presence of cross-cultural and age/cohort effects (Chapter 7); a study of students' perceptions of gender role stereotypes in four age-related social contexts (Chapters 8 through 10, inclusive); a replication of this study using a sample of retired adults (Chapters 8 through 10, inclusive); an examination of the differences between the perceptions of the student and elderly samples (Chapters 8 through 10, inclusive); a study asking students to predict their level of gender role attributes in two prospective developmental tasks (Chapters 11 through 13, inclusive); a study asking elderly subjects to rate their gender role attributes in two previous developmental tasks (Chapters 11 through 13, inclusive); and a cross-sectional study assessing gender role attributes in 341 British adults (Chapter 14).

Finally, Chapter 15 summarizes the findings and offers suggestions for future research on the life-span development of gender role attributes.

# CHAPTER 2

## GENDER ROLES: DEFINITIONS, CONCEPTS, AND MEASUREMENT

The phrases "gender roles" and "sex roles" are used by most authors interchangeably. Confusing the matter even more, terms such as gender identity, gender role preferences, gender role behaviour, and gender role attitudes provide an extensive array of overlapping phrases which some consider to be synonomous with "gender roles" (and, by extension, "sex roles"; see Katz, 1986). Most authors acknowledge the ambiguity that this looseness in terminology creates and some have attempted to define sex and gender, and the roles that go along with both categories, separately (e.g., Unger, 1979). Unfortunately, most just acknowledge the problem and continue to use the ambiguous terminology, no doubt to avoid confusing the reader.

Unger (1979) discusses the uses of the terms sex and gender. She remarks that biological sex often is used as both an independent and a dependent variable. As an independent variable, sex refers to the differences between males and females; i.e., between chromosomes and physiology. Any differences found between men and women that are called "sex differences" should be attributable to some genetic distinction between the two sexes. Thus, the term "sex" should be reserved for this context. "Gender", however, should be considered a result of postnatal socialization, which itself is dependent upon the social structure into which the individual is born. Using the term "gender" emphasizes the role of society in the development of the

individual and, when using this word, differences between men and women should be considered the result of socialization, not chromosomes.

In this thesis, Unger's distinction has been employed whenever possible; i.e., the term "sex" refers to biological sex (male versus female) while the term "gender" refers to environmentally determined characteristics of masculinity and femininity. "Gender roles", therefore, are the culturally defined roles or attributes to which individuals subscribe (i.e., subscription versus ascription). Gender roles are considered to be male-valued (masculine) and female-valued (feminine). The subscription to male- and female-valued gender roles is considered to be independent of one's biological sex. Using this framework, sex roles and gender roles must be examined independently of one another.

Another distinction that should be made is that between gender roles and gender role stereotypes. The former concerns the various masculine-oriented and feminine-oriented characteristics to which the individual subscribes. The latter, however, refers to the society's commonly held stereotypes of men and women. This difference is important because of the separate types of research questions each asks. Research examining gender roles asks individuals for their self-attributions along the masculinity and femininity dimensions while that examining gender role stereotypes asks individuals for their perceptions of the masculinity and femininity of specific target individuals in various situations, contexts, or social roles.

The remainder of this chapter will examine first the development of the gender role construct, from its beginnings (Masculinity-Femininity) to the treatment of the two domains as independent constructs. The two will be compared and the validity of the gender role construct will be discussed. Secondly, the content and stability of gender role stereotypes will be discussed, as will the relationship between gender role stereotypes and gender role attributes.

## 2.1 Gender Role Attributes

### 2.1.1 Masculinity-Femininity

Over the years, the concept of gender roles has evolved. This evolution comes in the form of a conceptual shift from thinking about "sex" roles (i.e., roles or attributes which differentiate the sexes) to "gender" roles (i.e., roles or attributes which society defines as masculine-oriented and/or feminine-oriented but to which an individual may or may not subscribe). Thus, the emphasis, in theory, has shifted from sex differences to individual differences in the area of personality socialization. (Owing to the importance of sex differences in the distinction of masculinity-femininity, and in order to separate the conceptual distinction between the new and the old theories of gender roles, the phrase "sex roles" will be used in this section. The use of the term "gender roles" will continue in Section 2.1.2)

The distinction between "sex roles" and "gender roles" has not always been clear. When researchers first began to study this area, sex roles were referred to as Masculinity-Femininity (M-F) and were

considered to be the two poles of a undimensional continuum. Theoretically, an individual's position on the continuum (i.e., the pole to which he/she fell, as there could be no midpoint) was a function of his/her sex: males at one end, females at the other. It was assumed that males are masculine and females are feminine and that males and females rarely develop cross-sex traits.

In the following examination of the M-F construct, attention will be paid primarily to the measurement of Masculinity-Femininity, the reason for this being its psychometric sex differences as the means of operationalizing the construct. Following this is a critical review of the M-F construct, incorporating both methodological and theoretical issues.

a) Measurement of Masculinity-Femininity

Instruments to assess sex roles were derived from scale items that could reliably differentiate the sexes (Constantinople, 1973). For example, the Strong Vocational Interest Blank (SVIB; Strong, 1936) is an inventory that measures vocational interests and was developed as a counselling aide. However, approximately fifty percent of its items successfully differentiated males from females and these items were viewed as a measure of Masculinity-Femininity (males endorsing masculine vocational interests and females endorsing feminine interests).

Another M-F test is contained in the Attitude-Interest Analysis Test (Terman and Miles, 1936), whose authors believe that masculinity

and femininity are at the core of one's personality and that the rest of the personality develops as a function of these traits. Their M-F test contains items that the authors knew differentiated males from females and include word association and ink-blot association tasks as well as interests, introversion, and emotional and ethical attitudes.

Although it was always assumed that males developed only masculine traits and interests and females developed only feminine traits and interests, there were acknowledged deviations. Hathaway and McKinley (1943) created the M-F scale for the Minnesota Multiphasic Personality Inventory (MMPI). The purpose of this scale was to identify male homosexuality (or inversion, as they call it). Thus, at this point in history (and the stereotype still exists) it was assumed that male homosexuals were more feminine than male heterosexuals.

These authors used the same item selection criteria as the previous M-F scales. That is, they subjected the entire MMPI item pool to a discriminatory analysis. Those items that distinguished males from females were examined further in an attempt to discriminate male soldiers from known male homosexuals and those who scored high on a known inversion scale. Finally, all remaining items were reanalysed for their male/female discriminatory power.

Examples of items that are included in the MMPI's M-F scale include: "I think I would like to be a librarian", "I enjoy reading love stories", and "I believe in a life hereafter" (all three are keyed in the feminine direction); "I do not have a great fear of snakes", "I enjoy a race or game better when I bet on it", and "I

sometimes tease animals" (all three are keyed in the masculine direction). Thus, according to one of the most widely used psychiatric diagnostic tools, women like passive, quiet jobs where they can read books oriented toward their affiliative needs and dream about reincarnation. Men, on the other hand, enjoy gambling and being sadistic to animals (among other hedonistic pursuits). This scale was the most popular of the M-F instruments (Constantinople, 1973).

The M-F scale included in the California Psychological Inventory (CPI; Gough, 1966) was derived from a longer M-F scale developed earlier by Gough (1952). Items on the CPI M-F scale were more directly related to personality attributes than those on the MMPI, and also were similar to the previous inventories in that they were selected because they could reliably differentiate males from females. Gough (1952) considered M-F to be a bipolar contruct and this effected his scoring system (the items are true-false, with answers in the feminine direction coded +1).

Examples of CPI M-F scale items include: appreciative, patient, helpful, gentle, moderate, respectful and accepting of others, and warm (feminine items); outgoing, hard-headed, ambitious, active, robust, manipulative, opportunistic, impatient regarding indecisiveness, delay and reflection (masculine items).

b) A Critical Examination of M-F

In a critical paper that examines the definition and measurement of Masculinity-Femininity, Constantinople (1973) asks whether the

dictum "everything that exists, exists in some quantity, and if it exists in some quantity, it can be measured" can be applied in reverse (i.e., if something cannot be measured, it does not exist). She reviews several M-F scales, including the ones described above, and indicates many problems that she feels limits the validity and generalizability of their findings.

The first problem is the use of the terms "Masculinity" and "Femininity". Constantinople argues that these are valuable descriptive constructs for the layperson but should not have been adopted by psychologists wishing to study M-F. The continuing use of these terms only can result in vague conceptual definitions and the inability to define the constructs unless they are couched in trait descriptions with references to the anatomical and physiological differences between males and females or the differences between the two in appearance, attitude and behaviour.

The second fault that Constantinople notes with regard to the traditional M-F concept is it's dependence on bipolar conceptual and operational definitions. There are three aspects to this dilemma.

i. Using a dichotomous variable to validate an apparently continuous variable.

One problem with the bipolar M-F construct is its use of a dichotomous variable (subject's sex) to validate a continuous variable (the M-F continuum). Although the implication is that there are two poles and a distribution, in actuality the M-F continuum appears to be

categorical as there is no distribution between the poles. Restating the problem, an item's ability to discriminate males from females in a pretest situation is the sole criterion for its inclusion on an M-F scale. Proof that the scale can categorize subjects as male or female with little error or overlap corroborates the validity of the scale. Thus, the fact that no one can fall in the middle of the continuum means that, statistically, the variable represents a dichotomy rather than a continuum.

ii. Use of logical reversals.

The second problem with the assumption of bipolarity is the use of logical reversals; that is, the tendency to define Masculinity as NOT Femininity and Femininity as NOT Masculinity. This assumption is made in two ways. In a definitional sense, it is assumed that belonging to one category means not belonging to another. For example, in the item selection of the MMPI M-F scale, the items to survive the first male/female discrimination were tested for differences between soldiers (i.e., "men") and male homosexuals (i.e., not "men"). This is the same underlying principle as looking for differences between men and not men (i.e., "women").

The use of logical reversals also is made in the dichotomous response options that the subjects are given, usually in the form of a true/false distinction. Some scales, such as the SVIB, have three options: like, indifferent, and not like. There are no qualifiers such as "a little like me" or "sort of like me". The effect of logical

reversals (i.e., having such a limited number of responses) is to restrict the sensitivity of the instrument and its reliability to categorize the subject correctly.

iii. Assumption of a single dimension.

The third problem with bipolarity is the assumption that the M-F continuum is a single dimension ranging from one extreme through a zero point to the opposite extreme. Thus, the behaviours or attributes that define one end should be negatively correlated with those on the opposite pole.

This latter problem borders on the third fault that Constantinople finds with the M-F concept: the assumed unidimensionality of the continuum. She notes that studies using correlational and factor analytic methods can and should be used to indicate whether Masculinity-Femininity is a multidimensional construct. M-F scales should be highly correlated (i.e., share much of their common variance) if they are measuring the same construct. However, various correlational studies reported by Constantinople revealed that the range of the coefficients was large (0.20 to 0.80), with an approximate average of 0.45. This yields a coefficient of determination of only 20%, which indicates that M-F instruments share only one-fifth of their common variance (on average).

Further, if M-F is a single dimension, factor analyses of M-F data should yield a single factor accounting for much, if not all, of the variance within the analysis. Studies reported by Constantinople

indicate that M-F is multidimensional in nature and, thus, the use of single summary scores as evidence of that person's sex role provides an ineffective description of the person and, in extension, the data. Supplemental evidence for the multidimensionality of M-F was offered by Bernard (1981) who factor analyzed the results of four traditional M-F scales and found five orthogonal factors that accounted for approximately 100% of their common variance.

The underlying theme of Constantinople's paper, as noted by her concern about whether something exists if it cannot be measured, is one of incredulity. Since 1936, scientists have studied Masculinity and Femininity under the assumption that these traits and/or behaviours are ascribed to men and women and are related to various personality characteristics such as mental health. She notes, however, that "...there is no...body of data which indicates that M-F, or M or F alone, consistently is related to other variables in predicted ways (except whether the subject is male or female!)." (p.389, material is in parentheses in original text).

Constantinople also remarks that there is a lack of similarity in what scientists are measuring; i.e., "different investigators have chosen to emphasize different dimensions of the concepts in the measurement process, making generalizations across their measures difficult." (p.390). This is evident in that some research instruments ask questions directly related to personality characteristics (e.g., the CPI) while others ask questions more tangentially related to such characteristics (e.g., the MMPI).

By defining Masculinity and Femininity in terms of sex differences, those studying this area have closed themselves to possibility of cultural and cohort effects in the interpretation of their data. As they assume that Masculinity and Femininity are a function of one's biological sex, they must assume that the factors defining this dimension are genetic and not affected by socialization practices, developmental trends, or cultural changes.

### 2.1.2 Masculinity and Femininity

The development of the bipolar M-F construct into one where Masculinity and Femininity are independent and orthogonal constructs began with the work of Rosenkrantz and his colleagues. This concept grew out of work on gender role stereotypes and states that the attributes that define masculinity are conceptually independent (i.e., form a separate cluster) from those that define femininity. Further, these two constructs are uncorrelated (i.e., orthogonal). A distinction is made between the terms independence and orthogonality. The former refers to the lack of a theoretical relationship between two variables while the latter relates to the lack of a statistical relationship between two variables.

This section examines four aspects concerning the operationalization and conceptualization of the masculinity and femininity constructs. As it is difficult to determine whether measurement issues preceeded conceptual issues in this area, the development of gender role measures will be examined first. Following

that will be a discussion of the integration of masculine-instrumentality and feminine-expressivity into the popular Androgyny concept. Finally, the validity of the gender role constructs and their measuring instruments will be discussed.

a) Developing Gender Role Measures

Although several researchers have created gender role measures, only two are used in present-day research. The development of these measures was precipitated by the research of Rosenkrantz and his colleagues, who examined the relationship between social stereotypes and self-concepts. Following their work, both Bem and Spence and Helmreich independently developed gender role measures. The questionnaires, and their relation to one another, are discussed below.

i. Paul Rosenkrantz and his colleagues.

Rosenkrantz, Vogel, Bee, Broverman, and Broverman (1968; Broverman, Vogel, Broverman, Clarkson, and Rosenkrantz, 1972) actively rejected the work on M-F and the scales which are used in its measurement. As previous studies had shown the existence of separate male and female stereoptypes (e.g., McKee and Sherriffs, 1957), Rosenkrantz et al. chose to examine the relationship between the self concept and the social stereotypes for adult males and females.

They asked students to list attitudes, personality characteristics, and/or behaviours that differentiate adult males from

adult females. The resulting list contained 122 items which were bipolar in nature, with one end perceived to be masculine and the other feminine. This 122-item questionnaire was presented to other groups of students with the instructions to denote the extent to which each item was characteristic of adult males, adult females, and themselves. Items were deemed to be male-valued if 75% of the subjects agreed that the masculine end was more descriptive of the male stimulus person (SP). Female-valued items were chosen in a parallel fashion. A total of 41 items met these criteria. Examples of items that were seen as stereotypic of males and females can be found in Table 2-1.

The results clearly indicated that differences exist between the males' and females' self concepts and their social stereotypes for men and women. Men rated themselves less masculine than the "adult male" stimulus person. Similarly, females rated themselves as less feminine than they rated the "adult female" SP.

Rosenkrantz et al. (1968) discussed the relationship between social desirability and the items on their Sex-Role Questionnaire (a question that had not been addressed by the M-F studies). When they asked an independent sample to rate the 122 items in terms of social desirability, more of the male-valued items were found to be socially desirable. However, when they compared the mean social desirability rating for the male-valued items to that of the female-valued items, no significant difference was found. Thus, although they revealed that there are a greater number of positively valued descriptors of adult

Table 2-1: Examples of stereotypic male- and female-valued traits found by Rosenkrantz et al. (1968).

| Male-Valued | Female-Valued |
|---|---|
| Aggressive | Gentle |
| Independent | Strong Need for Security |
| Likes Math and Science | Appreciates Art and Literature |
| Talks Freely About Sex with Men | Expresses Tender Feelings |
| Not Conceited About Appearance | Interested About Own Appearance |
| Easily Influenced | Aware of Feelings of Others |

males than adult females, there were no differences in the absolute ratings of desirability. This asymmetry has been noted and documented by many researchers (e.g., Peterson, 1975).

Although their items were bipolar in nature, with one pole reflecting a femininity response and the other a masculinity response, this study can be distinguished from the M-F studies in two ways. First, it showed that men and women see themselves differently from the social norm and that this "deviation" is a common occurrence. M-F studies always have assumed that males and females internalized all the appropriate (and inappropriate) values and characteristics associated with their sex and were similar to the norm. Deviations from the norm were characterized as aberrant. This study showed that variability around the social stereotype is normal and that new benchmarks of masculinity and femininity are needed if traditional M-F research is to continue.

The second distinction is a methodological one. When Rosenkrantz et al. (1968) selected a subgroup of 48 items that was able to

differentiate the male and female stimulus persons, they found no differences between males' and females' perceptions of the same-sex stimulus person and their self-ratings (i.e., ratings of the male SP versus self-ratings for the male subjects were identical as were the ratings of the female SP versus self-ratings for the female subjects). That is, analyses that used items that statistically distinguished between males and females (i.e., as they were chosen in M-F research) led to different assumptions about the nature of the self-concept in relation to the internalization of social stereotypes than were made when the analyses used items that were chosen by a consensual belief that they were descriptive of males and females but valued in one sex more than another.

ii. Sandra Bem.

Bem (1974) proposes that males and females are free to develop both traditionally masculine and feminine attitudes, attributes, and behaviours independent of one another. Further, Bem believes that the ability to respond to situational demands irrespective of the boundaries that society places on men's and women's roles should be the goal of the socialization process. She advances the belief that males and females who cannot develop a range of characteristics and/or behaviours in both the masculinity and femininity domains are restricted (and at a disadvantage) in their social interaction vis a vis the strategies that they apply to cope in everyday situations. Bem calls this theory Psychological Androgyny and it since has become

known solely as androgyny. The theory will be discussed more fully in Chapter 3.

With the advent of androgyny came the reversal of the traditional conception of masculinity-femininity. Bem defines masculinity and femininity as two independent and orthogonal factors represented by two separate scales in the Bem Sex Role Inventory (BSRI; Bem, 1974), a global self-report measure of the gender role. Although she offers a new conceptual and operational definition of masculinity and femininity (independent of the work by Rosenkrantz and his colleagues, whose research she does not cite), her retention of the confusing lay terminology is misleading. At this point, it is necessary to offer a new set of terms. The reason for this is the inclusion of the adjectives "feminine" on the BSRI's femininity scale and "masculine" on the masculinity scale. Bem notes that she associates masculinity with instrumentality and femininity with expressivity. This dichotomy was drawn from Parsons and Bales (1955) and Barry, Bacon, and Child (1957). Others have developed similar descriptions of the male and female social stereotypes. For example, Bakan (1966) uses the dichotomy of agency versus communion to describe the male and female roles, respectively. Future references to these constructs will be based on the Parsons and Bales (1955) classification and will speak of masculine-instrumentality and feminine-expressivity.

In selecting items for the BSRI, Bem compiled a list of approximately 200 personality characteristics "that seemed to the author and several students to be both positive in value and either

masculine or feminine in tone." (p. 156) How these items were pooled was not stated. Did the author and her colleagues collect these from the existing scientific literature, the popular literature, or were they their own perceptions of what attributes describe masculine-instrumentality and feminine-expressivity? This is important because of the constraints it imposes on those who compose the BSRI validation studies. If the manner in which these items were chosen produced a random, representative sample of socially accepted masculine-instrumental and feminine-expressive personality characteristics, then the BSRI may be seen as a content-valid measure of instrumental and expressive orientations. However, if the item selection represents the author's and students' personal biases and their implicit theories as to what comprises these two dimensions, then the BRSI is not a content-valid measurement of these two aspects of personality. Thus, it is important to generate items based on the responses of many who are not directly involved in the research (and privy to the future agenda or goals of the project) and then gain a group consensus as to which items reflect what construct.

In its final form, the BSRI consists of 60 items: 20 that describe masculine-instrumentality, 20 feminine-expressivity, and another 20 that are neutral with respect to their association with the two dimensions. Items were selected for the masculine-instrumentality scale if they were considered to be significantly more desirable for a male to possess than a female. Items were chosen for the feminine-expressivity scale if the judges agreed that they were more desirable

Table 2-2: Examples of masculine-instrumental, feminine-expressive, and neutral items from the Bem Sex Role Inventory (Bem, 1974).

| Masculine-Instrumental | Feminine-Expressive | Neutral |
|---|---|---|
| Masculine | Feminine | Adaptable |
| Aggressive | Gentle | Helpful |
| Independent | Childlike | Unpredictable |
| Defends Own Beliefs | Gullible | Truthful |
| Strong Personality | Shy | Theatrical |
| Willing to Take Risks | Yielding | Unsystematic |

for females to possess than males. Items for the latter scale combine to act as a measure of social desirability. They were chosen if they were judged not to be more desirable for either males or females and if the male and female judges did not differ in their overall rating of the item's desirability. Examples of the BSRI's items can be found in Table 2-2.

iii. Janet Spence and Robert Helmreich.

Similar to the BSRI is the Personal Attributes Questionnaire (PAQ; Spence, Helmreich, and Stapp, 1974; 1975; Spence and Helmreich, 1978). Derived from the Sex Role Questionnaire (SRQ; Rosenkrantz et al., 1968), the PAQ is a survey containing 55 bipolar characteristics, with one pole representing masculine-instrumentality and the other pole feminine-expressivity. In its development, students were asked to rate each item in terms of both the typical and ideal male and female.

An example of the short form PAQ (Spence and Helmreich, 1978) can be found in Appendix A.

Spence, Helmreich, and Stapp (1974, 1975) also consider the two dimensions of masculine-instrumentality and feminine-expressivity to be independent and orthogonal and they allocated their items to specific scales in a manner similar to Bem (1974). The items that were included in the masculine-instrumentality scale were those that subjects rated as being equally likely to be found in both the typical male and typical female stimulus persons but which subjects rated towards the masculine-instrumental pole. The same principle vis a vis the feminine-expressive pole was used when assigning items to that scale. As each item is bipolar, both the typical male and female would have had to have been rated at the same end of the continuum to have been included on the PAQ (i.e., the masculine-instrumental end for inclusion on that scale and the feminine-expressive end for inclusion on that scale), indicating that the items were expected to be found in both sexes even though they are stereotypically attributed to one sex more often than the other.

The third scale on the PAQ is reminiscent of an M-F scale. This scale contains items that successfully differentiated the typical male and female stimulus persons. Thus, for these items, the typical male was perceived to fall on or near the masculine-instrumental pole while the typical female was perceived to be on or near the feminine-expressive pole. This scale has been named the masculinity-femininity

scale (M-F) because of its relationship to the traditional M-F construct (Spence and Helmreich, 1978).

iv. Comparing the BSRI's and PAQ's methods of item assignment.

Bem (1974) and Spence et al. (1974; 1975) have described two similar yet distinct methods of assigning items to the masculine-instrumental and feminine-expressive scales of their instruments. The two methods should be compared in order to determine the possibility that the scales' pools are contaminated with items that do not fit the conceptual definition offered by the researchers.

Spence and Helmreich (1975) note that the PAQ uses items that are perceived to be possessed by both the typical males and females but are defined socially as either instrumentally- or expressively-oriented. The BSRI, however, uses items that are desirable for one sex, but not the other. This distinction in item assignment may provide different responses in terms of rating the self-concept as well as perceptions of social stereotypes. The BSRI's use of items that are more desirable for one sex may indicate that it is closer to the traditional M-F definition of sex roles. Although Bem correlated BSRI scores with those from the CPI and the Guilford-Zimmerman Temperamemt Survey (a factor-analytically derived measure of M-F; Guilford and Zimmerman, 1949) the results are equivocal, with moderate correlations in the appropriate directions on the CPI but a lack of relationship on the Guilford-Zimmerman. Further, the relationship between the PAQ, BSRI and M-F instruments must be assessed directly to

determine if the item assignment distinction between the PAQ and the BSRI produces the effect predicted above. In summary, it appears that the PAQ may be a more valid measure of gender roles (i.e., roles to which both males and females can subscribe), while the BSRI may be measuring gender role stereotypes (i.e., roles which distinguish males from females).

v. Reliability of the BSRI and the PAQ.

Each questionnaire (i.e., the BSRI and the PAQ) is scored by adding the Likert-type scores for each item within each scale. All items on the two BSRI scales are scored on a 1-7 continuum, with a high score being indicative of that scale's attribute (masculine-instrumentality or feminine-expressivity)(Bem, 1974). The PAQ is scored in a similar manner, using a 0-4 continuum (Spence et al., 1974; 1975). For both questionnaires, masculine-instrumentality and feminine-expressivity scale scores are calculated. These may be left as scale summations or scale means may be used. Bem (1974) suggests the latter, while Spence et al. (1974; 1975) use the former.

Psychometrically, each survey's scales have adequate reliability. For the BSRI, measures of internal consistency (coefficient alpha; Cronbach, 1951) found that both the masculine-instrumentality and feminine-expressivity scales were reasonably stable (alphas = 0.86 and 0.80, respectively) while the social desirability scale was moderately reliable (alpha = 0.70). Four-week retest scores were calculated using product-moment correlations and all three scales' initial ratings were

highly correlated with their Time 2 values (masculine-instrumentality r = 0.90, feminine-expressivity r = 0.90, and social desirability r = 0.89)(Bem, 1974).

Spence et al. (1975) also report adequate reliability for the PAQ. Both part-whole correlations and alpha coefficients were calculated for each of the three scales. They report that each item was significantly correlated with the scale total for both males and females and correlation coefficients ranged from 0.19 to 0.70. Alpha coefficients, averaged over males and females, indicate that the masculine-instrumental and feminine-expressive scales have adequate internal consistency, but that the M-F scale has only a moderate degree of consistency. Coefficients were 0.85 for the masculine-instrumental scale, 0.82 for the feminine-expressive scale, and 0.69 for the M-F scale. Retest reliability was not stated.

vi. Development of similar scales.

Other scales have been developed that purport to be measures of gender roles; however, they are not as popular as the PAQ and the BSRI. One of these scales is the PRF ANDRO, which is part of the Personality Research Form (Berzins, Welling, and Wetter, 1978). Another was developed by Heilbrun (1976) and is based on the Adjective Check List (ACL). Also, Hall and Halberstadt (1980) have adapted the PAQ for use with children. Other researchers have developed measures of gender role behaviours (Orlofsky, 1981; Robinson and Follingstad, 1985), sex-role egalitarianism (Beere, King, Beere, and King, 1984),

and sex-role orientation (Dreyer, Woods, and James, 1981).

There is, however, a major problem in the use of questionnaires purporting to measure gender roles. Along the same lines as the old M-F scales defining sex roles as the ability to discriminate males from females, gender role measures are created by authors who argue that their instruments measure male and female roles because their items resemble or incorporate an instrumentality-expressivity or agency-communion distinction. Often, these labels are added to existing scales on a post hoc basis.

An example of this is the set of semantic differential scales developed by Rosencranz and McNevin (1969) and extensively used in personality research (especially that dealing with aging, as will be noted in Chapter 5). The Rosencranz and McNevin semantic differential is a set of thirty-two bipolar adjective rating scales, scored on a seven-point Likert continuum. Factor analyses have indicated that nine of the scales represent a dimension called "instrumental-ineffective" (each dimension is bipolar in nature, with high scores on the scales indicative of the positively-valued adjective, and low scores indicative of the negatively-valued adjective), another nine scales represent a factor called "autonomous-dependent", and the remaining fourteen scales represent a dimension called "personal acceptability-unacceptability". The labelling of the factors has led to post hoc speculation that the former two factors represent the traditionally masculine role or stereotype and the latter factor represents the traditionally feminine role or stereotype (e.g., Sherman, 1985).

Although these assumptions have not been tested empirically, their validity has yet to be questioned by several journal reviewers and editors.

b) Integrating Masculinity and Femininity

In and of themselves, ratings of masculine-instrumentality and feminine-expressivity tell very little, other than whether an individual appears to have internalized many or few of the stereotypical attributes measured by the instrument. Rather, they are understood best when correlated with other constructs (e.g., ratings of typical or ideal others, self-esteem, sex role values, sex role behaviours, etc.). Most authors use the scale scores to create an androgyny index. As Bem's (1974) concept of androgyny states, males and females should develop and use both masculine-instrumental and feminine-expressive attributes. Therefore, the androgyny index presents a method of examining gender roles using an individual differences approach.

i. Methods of categorization.

Bem (1974) originally used a t-ratio to divide BSRI respondents into three categories: androgynous, masculine sex-typed, and feminine sex-typed (although the latter two descriptions contain the ambiguous terms masculine and feminine, they actually are appropriate in this context. As will be demonstrated, they carry a distinct similarity to traditional M-F). A sex-typed person is one who uses either masculine-

instrumental or feminine-expressive attributes almost to the exclusion of the other. An androgynous person, however, uses each trait type freely. For each subject, Bem subtracted the masculine-instrumentality score from the feminine-expressivity score and normalized it with respect to the shared standard deviation of the two scales. Those subjects whose t-ratio was significant and on the positive side of zero were classified as feminine sex-typed. Those whose t-ratios were significant and on the negative side of zero were categorized as masculine sex-typed. Finally, those whose ratios were not significant were categorized as androgynous. The similarity between this concept and the original, bipolar notion of M-F can be seen. In this case, however, the continuum between M and F has a distribution and those who fall in the tails (i.e., poles) are considered to be the disadvantaged.

Spence et al. (1975; Spence and Helmreich, 1978), however, do not use a t-ratio. They note that subjects may be either high or low in their use of attributes in either of the two domains, and they use a median split method to categorize their subjects into a four-fold typology. This method creates four categories that have become known as androgynous (above the median on both the masculine-instrumentality and feminine-expressivity scales), masculine sex-typed (above the median on the masculine-instrumentality scale but below the median on the feminine-expressivity scale), feminine sex-typed (above the median on the feminine-expressivity scale but below the median on the masculine-instrumentality scale), and undifferentiated (below the

median on both scales). These categories differ from Bem's (1974) three-level grouping in that her androgyny category has been subdivided into two separate groups: those who rate themselves high on both masculine-instrumentality and feminine-expressivity (androgynous individuals) and those who rate themselves low on both dimensions (undifferentiated individuals). Bem since has adopted the four-group typology and the median split method of categorization (Bem, 1977) and this method of reporting data has become almost universal.

ii. Categorizarion and the theoretical models of the relationship between masculine-instrumentality and feminine-expressivity.

Taylor and Hall (1982; Hall and Taylor, 1985) make the distinction between a main effects model and a balance model when they distinguish between the two scoring systems discussed above. They remark that the scoring systems are tied to theoretical models about what defines androgyny. In the balance model (Bem's [1974] original definition), those who are sex-typed are unbalanced vis a vis masculine-instrumentality and feminine-expressivity (i.e., they are high in one domain and low in the other). Those who are undifferentiated and androgynyous are balanced in that they are high or low in both domains. One looks for effects due to the balance or imbalance of these attributes.

In the main effects model, however, the masculine-instrumentality and feminine-expressivity scales are dichotomised into above and below the medians. One then looks for differences between the masculine sex-

typed and feminine sex-typed categories (i.e., in ANOVA terminology, a main effect for either or both masculine-instrumentality and feminine-expressivity).

c) Validity of the Gender Role Construct

In order to assess the construct validity of androgyny theory, and hence the belief that masculine-instrumentality and feminine-expressivity are independent and orthogonal constructs, Taylor and Hall (1982) conducted a meta-analysis of all published studies that tested androgyny hypotheses. The results of this analysis and its implications for androgyny theory will be discussed in Chapter 3; however it is important to reinterpret some of the findings in Taylor and Hall's report so that the validity of the masculine-instrumentality-and-feminine-expressivity-as-independent-and-orthogonal-constructs hypothesis can be tested against the traditional assumption that they are bipolar.

This can be done in the following manner. In their meta-analysis, Taylor and Hall reorganized the data in terms of the independent effects of both masculine-instrumentality and feminine-expressivity (i.e., the two main effects). This was done separately for studies that looked at masculine-typed (e.g., achievement, dominance, and aggression) and feminine-typed (e.g., empathy, attitudes towards women, and preference for the title "Ms") dependent measures. The categorization process was as follows. If a study using a masculine-typed dependent variable found a positive effect for the masculine-

instrumentality scale (i.e., those who were high in masculine-instrumentality had higher values on the dependent measure than those low in masculine-instrumentality) and a positive effect for the feminine-expressivity scale (i.e., those who were high in feminine-expressivity had higher values on the dependent measure than those low in feminine-expressivity), it was placed in a positive/positive category. If the study found a positive effect for the masculine-instrumentality scale and a negative effect for the feminine-expressivity scale (i.e., those who were low in feminine-expressivity scored higher on the dependent measure than those high in feminine-expressivity), it was placed in a positive/negative category. Two other categories also were used: negative/positive and negative/negative. This categorization was repeated for studies using feminine-typed dependent measures.

Specifically, the traditional assumption that masculinity and femininity are bipolar and represent the poles of a single continuum would be validated if the effects for masculine-typed dependent measures revealed that there are more positve effects for masculine-instrumentality and more negative effects for feminine-expressivity. Further, with regard to feminine-typed dependent variables, there must be more positive effects for feminine-expressivity and more negative effects for masculine-instrumentality. The assumption that masculine-instrumentality and feminine-expressivity are independent and orthogonal constructs would be supported if, for the masculine-typed dependent variables, there are more positive effects for masculine-

instrumentality and an equal amount of positive and negative effects for feminine-expressivity. The parallel effect should be evidenced for feminine-typed dependent measures.

The results, as reported by Taylor and Hall (1982), confirm that masculine-instrumentality and feminine-expressivity are independent and orthogonal constructs. They note that, for those studies using a masculine-typed dependent measure, 93% showed a positive effect for masculine-instrumentality and only 7% showed a negative effect. A balanced number of studies showed positive and negative effects (56% and 44%, respectively) for feminine-expressivity. Similar results were found for those studies using feminine-typed dependent measures.

This appears to be the only study that has tested the validity of the newer concept of masculine-instrumentality and feminine-expressivity in relation to the older concept of M-F. The study by Bernard (1981) that was reported earlier did not compare the predictions made by the two. Rather, that study examined the multidimensionality of the M-F construct. Although Taylor and Hall's (1982) paper is the only test of the new concept's validity, it makes a strong case as they reviewed all published papers and used a meta-analytic framework for their analyses and presentation. However, as they used only published material, their results may contain a publication bias. That is, as published papers more often contain positive effects than not, their results may reflect a bias against publishing papers in which, for example, a strong negative/negative or negative/positive effect was found using a masculine-typed dependent

measure. Thus, a more thorough identification procedure is needed so that the presence of a possible bias can be distinguished and, if present, corrected.

d) Validity of the Gender Role Instruments

As the independence of the masculine-instrumentality and feminine-expressivity constructs has been sufficiently validated, one now can attempt to establish the validity of the instruments designed to measure the constructs. This is difficult to establish, as certain aspects of the questionnaires' validity are confounded with the theory of androgyny. For example, predictive validity of the BSRI may be shown if the gender role survey can reliably predict which subjects will exhibit sex-typed behaviour or, as the theory for which the questionnaire was designed is based on psychological well-being, which subjects have higher self-esteem.

There are many ways to test the validity of the PAQ and BSRI. There has been, however, a much more extensive analysis of the BSRI. In order to maximize the similarity in the discussion of the two instruments, the following types of validity will be considered: content validity, as assessed by the appropriateness of the BSRI's and PAQ's items; concurrent validity, as assessed by the correlations between the BSRI and/or PAQ and other measures of gender roles; and the construct validity, or the validity of the two-factor model, as determined by the correlation between the two orthogonal scales as well as factor analytic methods.

i. Bem Sex Role Inventory.

It should be remembered that Bem (1974) asked subjects to rate the items selected to comprise the initial item pool in terms of their desirability for males and females. Bem then selected items that differentiated stereotypic males from stereotypic females. There are two aspects to the selection procedure that need clarifying. First, are the BSRI items truly more desirable for one sex as opposed to the other? Secondly, what is "desirable"?

With regard to the former question, two independent studies by Edwards and Ashworth (1977) and Pedhazur and Tetenbaum (1979) found that only two of the 40 sex-typed items on the BSRI were believed to be more desirable for one sex more than the other (i.e., the adjectives masculine and feminine). But, when asking subjects to rate which items are more "desirable" for males or females, it is not known in what sense the word is being used (Strahan, 1975). For example, gullibility is not a socially desirable trait. However, some may endorse the adjective "gullible" as desirable for females even though they hold a viewpoint that gullibility is not a socially desirable trait in a general sense. The inclusion of more negatively connotated feminine-typed adjectives (as noted by Edwards and Ashworth, 1977) confounds social desirability with the feminine role. Thus, the validity of the BSRI's items is equivocal.

The BSRI's concurrent validity has been established by correlating its masculine-instrumentality and feminine-expressivity scales with those of similar gender role instruments. Kelly, Furman

and Young (1978) assessed the corrrelation between the BSRI, PAQ, PRF ANDRO, and the ACL. They note that, for masculine-instrumentality, the BSRI was correlated 0.85 with the PAQ, 0.70 with the PRF ANDRO, and 0.75 with the ACL. For the feminine-expressivity scale, the BSRI was correlated 0.73 with the PAQ, 0.62 with the PRF ANDRO, and 0.68 with the ACL. Thus, the BSRI appears to share some common variance with the other instruments, especially with regard to the masculine-instrumentality domain. However, it appears that the measures are not highly correlated and this appears to limit the comparability of the instruments.

There are two ways to establish the more general construct validity of the instrument. As the BSRI was founded on the assumption that it's two scales are both conceptually independent and statistically orthogonal, one way would be to test this assumption empirically. Bem (1974) has found minimal correlations between the two scales. She reports that for Stanford males the scales were correlated 0.11 and for Stanford females they were correlated -0.14. Correlations differed somewhat, but not significantly, for another sample reported in the same study (-0.02 for males and -0.07 for females). Both sets of coefficients were not significantly different from zero. This effect was replicated by Wilson and Cook (1984) who reported a nonsignificant correlation of 0.12 between the two BSRI scales. Thus, the two BSRI scales appear to be orthogonal.

Another way to establish the BSRI's construct validity is through factor analysis. This type of analysis tests the assumption that the

BSRI measures two factors: masculine-instrumentality and feminine-expressivity. Factor analytic studies are not consistent in their findings but those that are not methodologically flawed typically find that the two-factor model is not sufficient (Wong, 1986). For example, a study by Pedhazur and Tetenbaum (1979) has shown that the BSRI consists of four factors, the first two being indicators of masculine-instrumental and feminine-expressive traits, and the latter two being bipolar measures of self-sufficiency and M-F, respectively.

ii. Personal Attributes Questionnaire.

There has been very little research on the validity of the PAQ. However, as Spence and Helmreich (1978) have very specific views about the nature of the PAQ (as well as other measures of gender roles), its validity can be established by testing the questions that stem from their views. Thus, although this section will examine the same types of validity as detailed above using the BSRI, the questions asked will be somewhat different as they are framed around Spence and Helmreich's beliefs.

The first area to be examined is that of content validity. Spence et al. (1975) selected the items on the basis of their applicability for the typical male and female, thus avoiding the ambiguity of the term "desirable". That each item is found in the subjects' perceptions of both the typical male and female suggests that the PAQ is not basing its items on bipolar definition of gender roles. Thus, it appears that the item content of the PAQ reflects the theory of the

independence of the two trait domains more so than that of the BSRI.

Concurrent validity can be established by the same correlational methods used above. However, other scales have certain definitional aspects that may preclude the prediction of high correlations between the scales of each instrument. For example, Bem assumes that, although her items were chosen on the basis of the instrumental-expressive dichotomy, the BSRI is a measure of global gender role stereotyping. This definition may have produced a more heterogeneous set of within-scale items. Spence (1985b) refers to the relationship between instruments as reflecting their "manifest content". She notes that those scales whose content is restricted to socially desirable, instrumental attributes should be highly correlated.

Kelly, Furman, and Young (1978) found support for this statement by Spence (1985b) in that, for the masculine-instrumentality scale, the PAQ was correlated 0.85 with the BSRI, 0.66 with the PRF ANDRO, and 0.70 with the ACL. For the feminine-expressivity scale, the PAQ was correlated 0.73 with the BSRI, 0.59 with the PRF ANDRO, and 0.51 with the ACL. The stronger correlations between the masculine-instrumentality scales appear to reflect the homogeneity in item content. That the PAQ masculine-instrumentality scale seems to be more highly correlated with that scale on the BSRI offers a further indication of the relationship between content and social desirability (Spence, 1985b). The lower overall correlations between feminine-expressivity scales suggests that there remains some questions about the homogeneity of the other instruments in terms of what they measure

(i.e., their content) and the social desirability of the items (Lubinski, Tellegen, and Butcher, 1983).

The assessment of construct validity makes the same assumptions for the PAQ and the BSRI; i.e., that their masculine-instrumentality and feminine-expressivity scales are unrelated and that they form two factors corresponding to the two scales. Regarding orthogonality, Spence et al. (1975) have shown that the two scales scales are orthogonal. However, in the instances where a significant relationship has existed, the two scales have been positively correlated with each other, not negatively correlated as would be expected by the traditional M-F approach (Spence and Helmreich, 1978).

In order for the PAQ to be representative of a two-factor model, a factor analysis would have to indicate that only two factors comprise the majority of the variablity in PAQ scores. This hypothesis has been confirmed by Helmreich, Spence, and Wilhelm (1981). Thus, both the masculine-instrumentality and feminine-expressivity scales appear to be unifactorial and thus homogeneous in item content.

## 2.2 Gender Role Stereotypes

As alluded to throughout this chapter, the possession, or the self-attribution, of gender role attributes is considered to be different from possessing knowledge about culturally defined gender role stereotypes. When individuals self-report their possession of masculine-instrumental and feminine-expressive attributes, they are making statements about their self-concepts. When individuals make

similar attributions about a "typical male" or an "ideal female", they are stating their general knowledge about the gender role stereotypes that the culture uses to describe this person. Throughout this thesis, reference will be made continually to gender role stereotypes (perceptions of others) and gender role stereotyping or gender role attributes (self-perceptions). It is important to distinguish between these two concepts.

This section examines the social stereotypes of masculine-instrumentality and feminine-expressivity. Three aspects of these gender role stereotypes will be considered: their content, their stability over time, and their relationship to gender role attributes.

### 2.2.1 Content

#### a) Global Stereotypes

Papers by Rosenkrantz et al. (1968) and Broverman et al. (1972) were among the first to note the pervasiveness of stereotypes about males and females and to delineate the content of the common gender role stereotypes. They asked students to rate the degree to which they felt the items on their gender role questionnaire (discussed earlier in this chapter) were indicative of adult males and females. From this analysis, two clusters emerged; a "competency" cluster was descriptive of the adult male stereotype and a "warmth-expressiveness" cluster was descriptive of the adult female stereotype (Rosenkrantz et al., 1968). Also, adult males were seen as possessing higher mean levels of competency-related items and lower levels of warmth-expressiveness-

related items. The opposite pattern was found for the adult female stimulus person.

The desirability of each cluster was examined in relation to the sex of the stimulus person (Broverman et al. 1972). This study revealed that all items in the competency cluster were more desirable for males than for females, but only seven of the 12 warmth-expressiveness items were more desirable for women as opposed to men. Furthermore, the mean differences between males and females on items in the competency cluster was much larger than differences on the warmth-expressiveness cluster. Broverman et al. conclude that, although the prevalency of the stereotypes is not in dispute, it appears to be more desirable for a male to possess traditionally feminine characteristics than for a woman to possess traditionally masculine characteristics.

Since this work, most research has focussed on the degree to which the content of gender stereotypes changes as a function of varying the instructions about whom to rate. For example, the most prevalent type of manipulation is to ask for the descriptions of either a "typical" or "ideal" male or female. Studies that have addressed this question (e.g. Gilbert, Deutsch, and Strahan, 1978; Ruble, 1983) have found that subjects rate a "typical" male and female more stereotypically than they rate an "ideal" or "desirable" male and female. However, it appears that perceptions of others' traditionally feminine characteristics may be mediated by the sex of the perceiver. When asked to rate males, females, or persons with respect to gender

role stereotypes, males and females do not differ in their perceptions of attributes in the traditional masculinity domain. However, in their perceptions of feminine-expressivity, males tend to rate females in a more stereotyped manner while females rate the male and female stimulus persons (SPs) equivalently (Silvern and Ryan, 1983).

b) Social Roles

Some authors have suggested that using a person perception approach to examine social stereotypes does not take into account the multidimensionality of the stereotypes (Ashmore and Del Boca, 1979; Deaux, 1984). This belief is demonstrated in a study by Clifton, McGrath, and Wick (1976) who varied the description of a female stimulus person (described as either a typical housewife, bunny, clubwoman, career woman, or woman athlete). Their results indicate that there is not one main stereotype for women, but that the perceptions of a woman's degree of feminine-expressivity differ depending on her social role.

A series of studies have examined the perception of gender role stereotypes as a function of engaging in various social roles. Garske (1975) examined how individuals perceived stimulus persons described as an adult female, adult male, male undergraduate, female undergraduate, male graduate student, a female graduate student. His results indicate that the adult male and adult female were seen as stereotyped in the appropriate directions (i.e., males were more masculine-instrumental and females were more feminine-expressive).

However, the undergraduate SPs were seen as less stereotyped than the adults but were not different from the graduate students. The graduate student SPs were perceived to be less stereotypic than the adult SPs.

In a replication of Garske's (1975) study, Gerber and Balkin (1977) assumed that role similarity (undergraduate and graduate student) would result in a similarity of perceptions vis a vis gender role stereotypes. They also examined the supposition that males and females are perceived to marry someone similar to themselves (need similarity) as opposed to someone unlike them (need complementarity) by predicting that a perceived marital relationship between two stimulus persons "facilitates the expression of stereotypically 'masculine' characteristics in women and of stereotypically 'feminine' characteristics in men." (p. 9) Gerber and Balkan added three rating conditions to Garske's original design: adult male and female married to each other, undergraduate male and female married to each other, and male and female graduate students married to each other.

Gerber and Balkan replicated Garske's findings and noted that male and female SPs with role similarity were not seen as significantly different from one another. The married adult couple was seen as stereotypic and the married undergraduates were seen as less stereotypic than the married adults. The married graduate students were seen as least stereotypic. There were no overall significant differences between married and nonmarried stimulus persons.

As can be noted from the data reported above, the absence of social role information leads to stereotypical attributions about the

instrumentality and expressivity that stimulus persons possess. This effect has been found by Deaux and Lewis (1984) who also note that the effect of the gender label can be overridden by the inclusion of social role information (e.g., role behaviours, traits, etc.) in the descriptions given to subjects. The importance of Deaux and Lewis' study is in its appropriate use of a bidimensional measure of gender role stereotypes. Garske (1975) and Gerber and Balkin (1977) used a bidimensional scale but reflexed the femininity scores so that the scale could be presented in a bipolar fashion with high scores being representative of masculinity. This action violates the assumed independence of the two stereotype dimensions, resulting in the necessity to interpret their results cautiously.

Eagly and Steffen (1984) offer the most thorough examination of the social role hypothesis used to account for the differential social stereotypes for men and women. These authors varied the social role information available to subjects in five studies and conclude that information about occupation, marital status, or parental status overrides the effect of the gender label. In their first two studies, Eagly and Steffen examined the effects of role status. The results of this manipulation indicate that role status only slightly affected ratings of communality (i.e., feminine-expressivity). That is, women in lower status positions were seen as more communal than men in those positions or when no social role information was given. Agency (i.e., masculine-instrumentality), however, was affected by differential role status such that those in high status positions were perceived as more

agentic than those in low status positions and situations where the SP's status was not given. Those whose job status was unstated were seen as more agentic than those in low status jobs. Surprisingly, the female SPs were rated as more agentic than the male SPs in both studies.

Three findings from the previous two studies suggest that the distribution of males and females into social roles (e.g., "housekeeper" for women and "employee" for men; also, women who work usually do so in low status positions) leads to differences in the attributions of gender role characteristics to male and female SPs (i.e., that those in the high status jobs were seen as more agentic than those in low status positions, women in lower status positions were seen as more communal than men in the same position, and that subjects perceived the male SPs to be less agentic than the female SPs).

To test this hypothesis, Eagly and Steffen created "average" male and female SPs who either were employed outside the home, were a homemaker, or were not given a social role descriptor. Consistent with the findings of Deaux and Lewis (1984), the SPs were perceived as more stereotypic when no social role information was given (i.e., males were seen as more agentic/less communal and females as more communal/less agentic). However, when role information was available, there were no differences between the two SPs on the measure of communality in both role conditions and on the measure of agency in the homemaker condition. Only when the female was described as working

was she seen as more agentic than the male. Thus, males were not seen as different from females in the role of homemaker, but they were seen as different in the role of employee.

Eagly and Steffen thought that subjects may have rated the female employee as more agentic because they perceived her as having two roles: employee and parent/housekeeper. The next study varied the marital status and parental status of an "average" male and female employee. For ratings of communion, married SPs were seen as more communal than single SPs. Those SPs described as having children were seen as more communal than those described as not having children. Surprisingly, male SPs without children were perceived as more communal than those with children, although this effect was not true for the female SPs. With regard to agency, the female SP again was perceived as more agentic than the male.

In the last study, the authors considered the hypothesis that the higher levels of perceived agency in the women who work stem from the attributions about why they work. Are women who are perceived to work out of choice seen as more agentic than men? Is this the same for women who work out of necessity? Thus, Eagly and Steffen created SPs described as average, employed men or women who either choose to work, or do so out of necessity. When women are seen as choosing to work, all stereotypic differences between men and women disappear, including the higher agency scores attributed to women. When the SPs were described as being employed out of necessity, or when there are no social descriptors given, women are perceived as more agentic and more

communal than men.

Geis, Brown, Jennings, and Taylor (1984) examined the effect of social role reversal on the attributions of gender role characteristics. For example, are males observed in female-oriented social roles perceived to possess more stereotypically feminine attributes than when they are observed in male-oriented social roles? Their subjects viewed six professionally reproduced television commercials, each containing an actor and an actress. Three of the commercials were reproduced exactly as they were originally aired on television. In the remaining three, the actors reversed their roles. For example, in one advert, a woman would be extolling the virtues of a laundry soap when a man (presumably the husband) would come in and congratulate the woman on getting his shirts so clean. In the reversed role advert, the man would be describing the soap and the woman would congratulate the man. The subjects rated the two actors on five bipolar adjectives which were found to be representative of masculine and feminine stereotypes.

When viewing the original adverts, subjects rated the actors more traditionally (i.e., males as more masculine and females as more feminine). However, the oppposite was true when they rated the nontraditional commercials. Females acting in traditionally male roles were rated as more masculine than when they acted in traditionally female roles, but their masculinity ratings did not differ from those of the males rated in the same part. A male acting in a traditionally female role was rated more feminine than when he played the male role.

but not as feminine as when a female played in that part.

Geis et al. believe that the differences in the perceptions of the male and female actors stem, not from the variation of the social roles, but to the differential status applied to male and female roles in society (i.e., male roles are higher in status). By reversing the roles, one also reverses the status, the exception being the male in the traditionally female role who was accredited less femininity (low status) than a female in the same role.

Thus, the social role approach emphasizes the importance of social roles in mediating our perceptions of masculine-instrumentality and feminine-expressivity in others. When asked to attribute masculine-instrumental and feminine-expressive traits to a typical male or female, or a stimulus person described only as a male and a female, traditional stereotypes are used. However, by adding information about the social context and the role the stimulus person plays in that environment, stereotypes may be overcome as was seen in the higher ratings of agency for women in the studies by Eagly and Steffen (1984).

### 2.2.2 Stability of Social Stereotypes

There have been no studies that have examined the stability of gender role stereotypes in society. That is, do social gender role stereotypes change as a function of changes in the social climate (e.g., the women's liberation movement of the 1960's and 1970's)? If so, then are these changes reflected uniformly across the population?

There are two possible hypotheses that can be derived. The first presupposes that all individuals possess the same gender role stereotypes. One then could state that, if change has occurred, it would be represented in all age and social groups. To test for these changes, one would examine the perceptions of first year university undergraduates (a widely available, much examined, and moderately homogeneous group) and, if changes have occurred, then these could be generalized to all other groups. However, if, as the second hypothesis would postulate, gender role stereotypes do not change in the same way in all groups (e.g., age cohorts, ethnic groups, social class categories), then this generalization is not possible. Thus, the question then becomes one of (a) determining which stereotype (if any) is representative of the present social norms and (b) examining the similarities and differences between various social groups' gender role stereotypes.

Of the few studies that do exist, all but one have assessed the stability of gender role attitudes (i.e., stereotypic attitudes concerning the roles of men and women in society) and have mostly assumed that university students represent the social trend. The exception is a paper by Lueptow (1985), who asked subjects to rate their perceptions of the typical male and typical female. This was done by different groups of students in 1974, 1977, 1980, and 1983. His findings indicate that the typical male was seen as possessing more traditionally masculine and feminine attributes in 1983 than in 1974. The typical female, however, was seen as possessing only more

traditionally feminine attributes in 1983. Thus, although the recent trend is for women to be treated as equals with men, the social norms for the "typical" woman appears to be one of greater gender role traditionality (i.e., more stereotypical). Typical men, on the other hand, are being seen as possessing less traditional gender roles.

Similar trends were reported by Spence, Helmreich, and Gibson (1982) using the Attitudes Toward Women Scale (Spence and Helmreich, 1978), a measure of gender role attitudes. Data revealed that students' attitudes towards women's rights and roles in society became less conservative between 1972 and 1976. However, females became significantly more conservative between 1976 and 1980. Parents of these students became less conservative between 1972 and 1976. Overall, males were significantly more conservative than females at all rating periods.

Addressing the question of whether gender role attitudes change uniformly at all age levels, Cutler (1983) reports that, in the period 1972-1976, older adults evidenced more positive change in their opinions of the women's liberation movement. Although there was an overall positive mean difference in terms of attitude change, those over 60 years of age showed significantly more positive change than those in the younger age groups. This may be an indication that changes in social stereotypes are not distributed uniformly across age levels, thus making generalizations concerning the content of these stereotypes hazardous.

2.2.3 Relation to Gender Role Attributes

Is an individual's knowledge of social gender role norms related to his/her internalization of those attributes? Or is knowing about these stereotypes unrelated to one's self-reported gender roles? Stated differently, when an individual responds to a gender role inventory, does he/she indicate his/her gender role attributes or his/her knowledge of gender role stereotypes?

Spence et al. (1975) addressed this distinction when they asked subjects to rate themselves and either a typical man or typical woman. They reasoned that, if there is a high correlation between an individual's self-reported masculine-instrumentality and feminine-expressivity scores and those of the stimulus persons, then subjects are reporting general knowledge. However, if there is no correlation between the ratings, then individuals are reporting their own traits and not social stereotypes. Their results showed that only five of the possible 18 correlations were significant and that this was proof that subjects were acknowledging the presence of their individual traits.

Storms (1979) disputes the conclusion drawn by Spence et al. and bases his challenge on three methodological flaws that he believes misrepresented their findings. First, Spence et al. were not uniform in their presentation of the PAQ items. Some were presented in a bipolar fashion (e.g., very passive to very active) while others were represented as single labels (e.g., active). Secondly, the scales that were used to rate the single adjectives were bipolar and unidimensional, with a midpoint that was ambiguous (e.g., much more

characteristic of the male ... much more characteristic of the female). Assuming that masculine-instrumentality and feminine-expressivity are independent of each other and not related to biological sex, then it is clear that this type of unidimensional scale is not a valid representation of the conceptuality of the PAQ (even when referring to the bipolar M-F scale, which should have the same rating scheme as the other items). Lastly, Storms (1979) notes that, as the masculine-instrumentality and feminine-expressivity scales are conceptually and operationally defined as being independent and orthogonal, then 18 correlations are unnecessary and six are all that are required (i.e., correlations between the three scales in the self versus other rating context, separately for males and females). When Spence et al.'s data are re-examined under this assumption, three of the six coefficients are significant.

Storms re-evaluated the relationship between gender role attributes and gender role stereotypes in a study that replicated and corrected the faults in the Spence et al. study. He found that, indeed, there were significant correlations between stereotypes and self-attributes in five of the six relationships. For males, all three correlations between self and other were significant and ranged from 0.19 to 0.34 across the three PAQ scales. However, for women, only their self-rated masculine-instrumentality and M-F scale scores were significantly correlated with their perceptions of typical others (correlations ranged from 0.30 to 0.33). Their perceptions of feminine-expressivity scores for self and others were not

significantly related.

Thus, Storms notes that self-ratings of gender role attributes do contain some degree of knowledge about social stereotypes. According to Storms' data, however, the degree of this relationship (as assessed by coefficients of determination) ranged from 3.6% to 12.0% of the shared variance and cannot be seen as proof that self-reports are not valid.

# CHAPTER 3

## THEORIES OF GENDER ROLE DEVELOPMENT

Several theories exist as to how one develops gender role attributes (i.e., personality characteristics that social standards dictate as being male- or female-valued). As with the theories concerning the nature of masculinity and femininity, these concepts have undergone notable changes in their emphases. The first theories that were postulated were broad attempts to account for sex differences in the male and female personalities. These theories discussed the development of the gender identity (i.e., one's sense of masculinity or femininity) under the assumption that males and females develop gender role attributes consistent with their gender identity. Later theories, however, have ignored the gender identity construct and have proposed explanations of how males and females adopt stereotypically masculine and feminine gender role attributes.

This chapter is divided into three sections. In the first section, theories concerning the development of the gender identity will be discussed (i.e., psychoanalytic, social learning, and cognitive-developmental). Although these theories specify the development of a construct that is not being examined in this thesis, the gender identity concept offers intriguing explanations for any possible developmental variations in the use of gender role attributes, as well as a rationale for the development of gender-congruent attributes.

Secondly, the notion of psychological androgyny (Bem, 1974) will be discussed. This concept purports to be a theory of gender role identity. The difference between gender identity and gender role identity appears to be centred in the relationship between masculinity and femininity and being male or female. In gender identity, the two are usually the same, whereas with gender role identity, masculinity and femininity are independent of biological sex. Bem does not appear to acknowledge the presence of a gender identity in the way that previous theorists have defined the construct. Rather, she apparently feels that her gender role identity construct serves the same purpose. Although they are not the same, she either believes them to be interchangeable or she does not believe in the existence of the traditionally defined gender identity.

The more recent approaches to gender role development will be discussed in the third section. These theories include schema theories, sex role transcendence, integrations of gender role development with other theories of psychological development, and two gerontological approaches to gender roles in old age. The majority of the latter theories differ from psychological androgyny and gender identity theories in that they discuss relationships with other psychological functions (e.g., cognitive processes and moral development) and are unrelated to the mental health concept that has plagued the gender role construct since the days of M-F.

## 3.1. Gender Identity Approaches to Gender Role Development

Some theories are not designed to discuss solely the development of masculine and feminine personality characteristics. Rather, their goal is to explain the development of what I will call gender identity (Spence, 1985a). A similar concept that I will equate with gender identity has been called sex role identity (Kagan, 1964; Kohlberg, 1966; Storms, 1979). Spence (1985a) defines gender identity as "a fundamental existential sense of one's maleness or femaleness, an acceptance of one's gender on a psychological level that, with rare exceptions, parallels and complements awareness and acceptance of one's biological sex." (pp. 79-80) Similarly, Storms (1979) defines the concept of sex role identity as "an acquired self-concept of being masculine or feminine." (p. 1779)

Gender identity is the most basic understanding of one's masculinity and femininity. In most cases, males develop a masculine gender identity and females develop a feminine gender identity. Spence views these two identities as bipolar and, thus, unidimensional and negatively correlated. A person develops either one or the other and in most cases it is congruent with that person's biological sex.

The initial purpose of the gender identity is to orient the child towards gender-congruent attitudes, attributes, and behaviours so that the child may reaffirm his/her her sense of masculinity or femininity. However, as the child ages, the gender identity becomes less prominent in guiding him/her in social and personal situations. This becomes the function of the domain or structure of gender role attributes.

Although the gender identity becomes more peripheral with age, it is important to maintain and protect it from one's sense of inadequacy (Spence, 1985a). This becomes the job of the gender role attributes. Individuals must perceive themselves as possessing enough gender-appropriate attributes so that they may continue to take their gender identity for granted. Thus, each individual's gender identity is idiosyncratically defined. "What constitutes an adequate amount of gender-relevant qualities for a given individual is determined by a complex calculus operating below the level of conscious awareness." (Spence, 1985a, p. 83). Spence assumes that people try to keep their sense of masculinity or femininity intact by discounting the highly valued gender-congruent attributes they are missing by saying that they are not necessary. Further, cross-sex attributes that an individual possesses are believed to be important and it is felt that these attributes are needed.

Gender identity is believed to remain stable across the life-span. Spence notes, however, that there are several crises stemming from various developmental tasks or life events that threaten the stability of the gender identity, but that the gender role attributes' adaptive capabilities protect it. For example, the male who is unemployed and finds that he must develop more nurturant qualities in order to be a father and a full-time caretaker of his infant does not give up his sense of masculinity because he lacks the main component of the traditional male social role and has taken on that of the traditional female social role. What Spence predicts is that this man

should reaffirm his sense of masculinity by devaluing the lack of employment (e.g., by noting that he is needed at home and his wife is capable of providing financial security) and noting that the feminine qualities he has developed are necessary for the successful completion of the task (child care).

What is the relationship between gender identity, gender role attributes, and gender role stereotypes? Spence does not state whether there is any relationship between the three, other than the direct relationship between gender identity and gender role attributes (and the feedback loop that protects the gender identity). It is difficult to determine whether Spence believes that social stereotypes of gender roles affects the gender identity, especially after the crucial reduction in the saliency of the gender identity. Thus, when one uses a gender role instrument such as the PAQ or the BSRI is one tapping the gender identity or the set of gender role attributes?

It should be recalled that Storms (1979) revealed that there was a slight positive correlation between gender role stereotypes and gender role attributes. He also examined the relationship between gender role identity and these two concepts. Using the PAQ as a measure of gender role attributes and the Sex Role Identity Scale to measure what I am calling gender identity, Storms found that there was no relationship between gender role stereotypes and gender identity. Thus, if there ever was a relationship between the two, it disppears by the time individuals become introductory psychology students. However, Storms did find significant positive correlations between

gender identity and gender role attributes. His study revealed that the measure of gender identity was correlated with masculine-instrumentality for males (0.39) and feminine-expressivity for females (0.39). There were no significant correlations between gender identity and cross-sex gender role attributes. As the cross-sex trait dimensions were not strongly negatively correlated with gender identity, the idea that males and females develop only same-sex attributes cannot be supported. Further, as the correlation between gender identity and same-sex gender role attributes accounts for only 15% of the shared variance, the hypothesis that gender identity and gender role attributes are the same constructs also cannot be supported.

In an exploratory study that examined conceptions of masculinity and femininity from a gender identity perspective, Spence and Sawin (1985) found that subjects could not define their own sense of masculinity or femininity, although they had no difficulty in identifying specific gender role attributes that they possessed. Yet, even when subjects acknowledged that they possessed both masculine-instrumental and feminine-expressive attributes, they "explicitly denied that these characteristics were related to masculinity and femininity" (Spence and Sawin, 1985, p. 57). Rather, they remarked that males and females can have cross-sex attributes and still be masculine or feminine. Further, when they were asked to put a numerical value on their own sense of masculinity and femininity, males rated themselves highly masculine and females rated themselves

highly feminine. The authors offered this as supportive of the conceptual difference between gender identity and gender role attributes.

To summarize, Spence (1985a) hypothesizes that there is a gender identity that initially directs the individual's development of gender role attributes. It is important to understand this concept before reviewing the three theories that follow as they originally proposed that a masculine or feminine gender identity led to the development of only gender-congruent attributes. This lack of distinction between the two constructs (i.e., identity and attributes) has led to the belief that, as one's sense of masculinity or femininity is defined by the gender role attributes he/she develops, the gender role attributes (and therefore the gender identity) remain stable across the life-span. However, by differentiating the two concepts, researchers are free to examine the variability of gender role attributes, secure in the knowledge that the individual's masculine or feminine self-concept remains stable.

### 3.1.1 Psychoanalytic Theory

The first theory of gender identity development was postulated by Freud in his essays on sexuality (Freud, 1927). In his theory of psychosexual development, Freud argued that differences between the psychological makeup of males and females were the direct results of the Oedipus complex. Males, he argues, identify with the father because of their fear that they will be castrated for their desire to

possess their mother. Females, on the other hand, initially identify with their mothers, but then desire to be like their fathers. Freud theorizes that women then return to identifying with their mother because they fear that, as they lack a penis, they have been punished for desiring to be like their father. Thus, males develop a masculine gender identity and masculine attributes, attitudes, and behaviours. Women develop a feminine gender identity and feminine attributes, attitudes, and behaviours. (So that the phrase "attributes, attitudes, and behaviours" will not have to be repeated whenever referring to the constellation of possible outlets for gender-appropriate characteristics, the term "traits" will be used in the remainder of the thesis. However, the term has been chosen to denote a set of global characteristics and not because of the connotations of stability that have developed for it. Indeed, it is the purpose of this thesis to determine whether these characteristics vary as a function of the social situations.)

This theory was the impetus behind the development of the M-F construct. It has an emphasis on the congruence between biological sex, gender identity, and the development of gender-specific traits. It also assumes that there is little or no variability between the traits individuals develop and the male/femalesocial stereotypes held by all in this specific culture. That is, all women are alike, as are all men and these males and females do not differ from the social norms.

There is very little proof for the validity of the Freudian

theory of gender identity. Although it appears, from the work by Spence (1985a), that anatomy is destiny with regard to the development of the gender identity, Freud's theory does not allow for deviation from the social stereotypes (vis a vis the development of gender role attributes) either within or across gender role domains. However, the work by Rosenkrantz et al. (1968), reported in Chapter 2, has shown that there is a great deal of variability in the perception of the self and others vis a vis gender role attributes.

Psychoanalytic theory would not be popular with life-span developmentalists attempting to explain gender role development in adulthood. Development, according to a Freudian psychologist can only be achieved through analysis and this change is only from a maladaptive way of dealing with reality to a more adaptive way. This, according to Freud, would entail the development of more stereotypical attributes and, in a sense, corrects the faulty socialization of the child.

### 3.1.2 Social Learning Theory

Mischel (1966) outline's a social learning approach to the development of gender role attributes. As it relies on the combination of a traditional learning theory model (i.e., conditioning through a stimulus-response-reward contingency) and learning through observation and modelling, the concept of gender identity only can be inferred. That is, learning theory models neglect the importance of a self-identity and believe that all learning is the result of a reward

contingency. Later, more cognitive approaches to social learning theory (Bandura, 1977), addressed the issue of identification but were unclear as to whether a gender identity is developed.

The basic tenet of social learning theory is that children will develop gender-appropriate (i.e., same-sex) traits through the process of reinforcement and punishment. The social environment acts as the reinforcing agent, dispensing rewards for the display of gender-congruent traits and punishment for displaying gender-incongruent traits. Further, the social group acts as a model. The child observes males and females and then imitates the trait they have been rewarded for displaying. If the child is then rewarded for displaying of the new trait, the likelihood of that trait being used again is increased. Similarly, the child may be punished for displaying a gender-incongruent trait and this punishment should reduce the likelihood of that trait being displayed in the future.

Thus, children are thought to develop repertoires of gender role traits by observing models, discriminating gender-typed traits, generalizing them to other situations, and then modelling the traits themselves. Reward or punishment is hypothesized to be the determinant of the likelihood that the trait will recur. Although this originally was meant to suggest that the child developed one set of traits to the exclusion of the other (i.e., gender-congruent traits), recent considerations suggest that there is an asymmetric relationship in terms of allowing males and females to develop cross-sex traits. That is, females are given more latitude to develop traditionally masculine

traits than are males vis a vis feminine traits (Archer, 1984).

Support for the validity of the social learning approach to gender role development comes from research that has shown that parents and teachers reward gender-appropriate behaviour more than they reward gender-inappropriate behaviour (see Archer, 1984; Hargreaves, 1986). Social learning theory would predict that these traits are generalized to situations other than the one in which the reward or punishment occurred. For example, in a study with preschool children, Serbin, Connor, and Citron (1981) noted that children free play in a more sex-typed manner when the teacher is present, than when she is not observing. It appears that, at least with preschool children, the presence of an adult (or is it more specific: just the teacher or parent?) increases the use of gender-congruent traits.

In a further test of the validity of this approach, Mischel (1970) suggests that children are more likely to attend to, and imitate, same-sex models than models of the opposite sex. Perry and Bussey (1979) offer evidence that children imitate same-sex adult models only after they have determined that the trait they are modelling is a frequently occurring one and that the actor usually displays traits that are congruent with the child's sex.

Finally, a note concerning the applicability of social learning theory when examining gender role development from a life-span perspective. Although Mischel (1966) originally was discussing the development of gender role traits in children, it is conceptually possible to extend this model to adulthood. There are two reasons,

however, why this would prove difficult. First is the underlying belief that gender role traits are stable and unchanging. That is, there is a belief that, once established, personality traits do not alter. This assumption has manifested itself in both psychological theory and research (Whitbourne, 1986). If belief is correct, then there should not exist a social stereotype (a form of model) that allows for the variability of gender role traits in adulthood. Second, and related to the first point, is the lack of consistent empirical findings that males and females do "blend" or "reverse" their gender role traits at some point in adulthood (see Chapter 5). Thus, adults appear to have no social stereotypes or consistent role models upon which to base gender role change.

### 3.1.3 Cognitive-Developmental Models

Kohlberg (1966) advanced a three stage model of gender identity and gender role development that takes into consideration certain aspects of social learning theory and Piagetian cognitive development. In this model, Kohlberg hypothesizes that the development of the gender identity affects the development of gender role attributes. That is, males will develop traditionally masculine traits and females will develop traditionally feminine traits (assuming that there is a one-to-one correspondence between biological sex and gender identity). Knowledge of gender role stereotypes also is positively related to the development of gender role attributes. Individuals with a greater knowledge of gender role stereotypes will aquire a larger repertoire

of gender-congruent attributes. As noted earlier in this chapter and in Chapter 2, Storms (1979) has found support for this model.

The first stage of Kohlberg's theory concerns the development of the gender identity. This stage sees the child beginning to categorize the elements within the environment and it is in this stage that the child realizes that he/she is a boy or a girl. In the second stage, the child develops a sense of gender stability. That is, he/she realizes that boys grow up to be men and girls grow up to be women. Finally, the child develops a sense of gender constancy, the sense that he/she is and will remain a boy/girl.

Kohlberg proposes that children are actively involved in the development of their gender identity and gender role attributes and that change comes about through observation and modelling that lead to the further development of a cognitive schema. Specifically, the child is expected to observe and model the behaviour of both sexes and incorporate that knowledge into a schema of growing complexity. Schema development is related to the cognitive developmental processes reported by Piaget (1947). That is, the child builds a schema either by assimilating the information to fit a pre-existing schema or by accommodating the schema to fit the information.

As the perceptual process is related to the complexity of the various cognitive schemata (i.e., the child's level of cognitive development), how the child attends to the environment is different at each stage, as is his/her qualitative understanding of the environment. Children who have developed the belief that they are and

will remain members of their sex are hypothesized to observe and model members of their sex more frequently than those of the opposite sex, resulting in a more complex schema for gender-congruent traits. The reason for this difference in perceptual attention stems from the child's desire to become a member of his/her sex. For example, the male child believes that he wants to be a man, therefore he must learn to be a man by observing and learning from other men.

There are several studies that have applied Kohlberg's model to children and offer validity for the theory. For example, in an examination of gender identity, Weinraub, Clemens, Sockloff, Ethridge, Gracely, and Myers (1984) found that the majority of two year old children in their study knew their own sex and could tell other boys from girls but had little stereotyped knowledge about gender role appropriateness. Children three years old knew slightly more about gender role stereotypes but less than one third could classify children's toys into gender appropriate categories.

Slaby and Frey (1975) examined the relationship between gender constancy and the amount of time observing same-sex and opposite-sex role models. Their results revealed that children who have not yet achieved gender constancy spent similar amounts of time watching both sexes. However, those children who had developed gender constancy spent significantly more time observing the same-sex model.

Fagot (1985) presents longitudinal data for a study that followed a large group of children between 18 and 54 months old for a total of five years. Her results revealed that children developed a sense of

self at approximately the same time as they developed their gender identity. Also, Fagot showed that both males and females developed the concepts gender stability and gender constancy at the same time and that gender identity preceded the latter two stages.

Ullian (1976) offers a variation of the cognitive-developmental model of gender role development. She proposes that there are three stages in the gender role's developmental sequence, each with an emphasis on either a biological, social, or psychological orientation of gender role expression. Each of these stages contains two substages which alter conformity with the stages developmental emphasis and transcendence of that emphasis.

In the first stage, individuals develop specific gender role traits based on a biological orientation. Boys and girls develop traits that are based on differences such as size and length of hair. For example, children at this stage will deem that only females have long hair. Ullian notes that, while "social and psychological differences also are recognized, they are assumed to derive from external physical differences." (p. 34) However, in the second half of this stage, children realize that gender role traits may exist independent of biological sex and the physical differences that previously were salient. Those in this stage feel that individuals can choose to act however they like.

The second stage concerns the development of gender role concepts based on a societal orientation. In this stage, children view the development of gender-specific traits to be "inherent in the

requirements of the system of social roles and are viewed as fixed and unchangeable." (p. 34) Thus, those in this stage are aware of the differential social role prescriptions for males and females and believe in conformity (for the self and others) with these rules. However, by the second substage, children become aware that these prescriptions are arbitrary and that males and females are equal in potential. Although the social prescriptions still exist, it is not viewed as necessary to abide by them.

The third stage is centred around a psychological orientation towards gender roles in the self and others. In the conformity half of the stage, it is deemed necessary for males and females to develop masculine and feminine traits as their gender identity is defined by the display of these attributes. Deviations from the social norms are viewed as abnormal and conformity is seen as necessary for the successful completion of developmental tasks. In the transcendent half of this stage, however, there develops an awareness that masculine and feminine roles exist independently of the gender identity.

This theory is different from Kohlberg's initial theory in that it is more content-oriented. That is, it is descriptive of the thoughts and beliefs that those in each stage possess but it does not combine any of the cognitive or social learning aspects of Kohlberg's model in order to understand the process of the development from one stage to the next. Nor does it include the development of gender identity or gender constancy, two constructs that also aid in the explanation of the process of the developmental sequence.

The distinction between a process- and a content-orientation is important in the interpretation of any theory of personality development. Many theories offer only descriptions of the changes in the manifest content of the personality dimension under scrutiny. These theories do not describe the processes involved in the development or change. They do not tell us how the individual "learned" the new content, or how he/she applies it in the environment. Whereas Kohlberg's theory is strong on both content and process, Ullian offers only a new look at the content, proposing a sequencing of the content's theme. Certainly both constructs would benefit from a consolidation; however, any integration must contain the process inherent in Kohlberg's original model.

Kohlberg's process-oriented model is superiour to Ullian's content-oriented model with regard to predictions concerning gender role changes in the adult years. Based on the proposed relationship between gender role stereotypes, gender role attributes, and gender identity, the latter is expected to remain stable across the life-span while gender role attributes are free to vary across contexts or developmental tasks without effecting the individual's sense of masculinity or femininity. Unlike social learning theory, the lack of the existence of empirically proven stereotypes concerning gender role development in adulthood does not effect the development of those attributes. According to Spence (1985a), the individual is free to develop cross-sex attributes at any point in his/her life-span. As long as the individual can rationalize their existence, his/her sense

of masculinity or femininity is not threatened.

Unfortunately, Ullian's theory has depended on descriptions of the schema content at each stage. An extension of her data to adulthood would require an analysis of the content of adults' gender role beliefs and a categorization of these beliefs into various stages. It also would have to determined if the conformity and transcendence sequence was present beyond adolescence.

### 3.2 Psychological Androgyny

As noted in Chapter 2, Bem (1974) proposes a content-oriented theory which states that individuals are free to develop both stereotypically masculine and feminine traits and that these traits are developed independently of one one's biological sex. Those who develop high levels of both masculine-instrumental and feminine-expressive traits are said to have androgynous gender roles while those who develop low levels of both traits are said to have undifferentiated gender roles. Individuals who develop one set of gender role traits almost to the exclusion of those in the other domain are said to be sex-typed. This theory deviates from the previous gender identity theories in that positive emphasis is placed upon the androgynous, as opposed to the sex-typed, individual.

Bem's (1974; 1977) theory states that individuals who develop both masculine-typed and feminine-typed attributes (i.e., androgynous individuals) will display both masculine-typed and feminine-typed traits. This, says Bem, allows the individual a greater degree of

behavioural and personal flexibility in coping with day-to-day living. Thus, an androgynous person should display high frequencies of both masculine- and feminine-typed traits, while a sex-typed individual should show high frequencies of gender-congruent traits and low frequencies of gender-incongruent traits. The undifferentiated person should show equally low or high frequencies of both trait types.

As Bem expects androgynous individuals to have a greater degree of personal success as a result of their increased behavioural and personal flexibility, she also expects these individuals to have a higher degree of self-esteem. Someone who is sex-typed has developed gender role traits in only one domain. Thus, they are restricted in their flexibility and, therefore, the number of successes they ultimately could achieve. As they are unable to achieve as much as someone with greater flexibility, they are expected to have lower levels of self-esteem than androgynous individuals. Finally, as the undifferentiated individual has not adopted neither set of gender role traits, he/she will be the least adaptive and is expected to have the lowest levels of self-esteem.

The androgyny construct, thus, is a simple one and, because it makes specific predictions about the relationship between the various androgyny categories and the display of sex-typed traits and self-esteem, it can easily be validated. The following two sections will review studies addressing these issues.

### 3.2.1 Androgyny and Sex-Typed Behaviour

Several studies exist that examine the correspondence between androgyny categorization and the use of sex-typed behaviour. Bem (1975, Study 1) examined the relationship between conformity (which was presumed to be a stereotypically feminine behaviour) and androgyny. Her data revealed that masculine sex-typed and androgynous subjects conformed significantly less than feminine sex-typed subjects. In another study, Bem (1975, Study 2) found that those who were feminine sex-typed played with a kitten (again, a behaviour whose nurturant qualities are supposedly feminine-typed) for a significantly longer period of time in a free play setting and enjoyed playing with the kitten more in a forced play situation.

Bem and Lenney (1976) asked subjects to perform both masculine- and feminine-typed tasks and then had them rate how comfortable they felt performing the tasks. Their data revealed that sex-typed subjects felt more uncomfortable than androgynous or undifferentiated subjects when performing cross-sex-typed tasks. In a replication of this experiment, however, Helmreich, Spence, and Holahan (1979) found that androgynous and masculine sex-typed subjects were more comfortable performing the tasks when compared to feminine sex-typed and undifferentiated subjects, irrespective of the sex-typing of the task.

In general, there appears to be a weak link between gender categories and gender-typed behaviour. This appears to be a result of the tasks that Bem and her group have chosen. It is odd that they have not used more well-defined social roles and behaviours stemming from

these social roles (e.g., feeding someone else's infant, building a shelf). Perhaps there would be more of a relationship if these types of examples were to be used, or perhaps the action-oriented nature of behaviours is related more to instrumentality and expressivity than gender stereotypes per se (Helmreich et al., 1979).

### 3.2.2 Androgyny and Self-Esteem

Perhaps the most disappointing fact about androgyny theory is its continued relationship with mental health. Since the concept of M-F first stated that males and females developing cross-sex gender role traits are deviates and are in need of psychotherapy, the concepts of masculinity and femininity have been associated with psychological well-being. However, it is apparent that the reason for this perceived relationship is the lack of a distinction between gender identity and gender roles. As others have felt that these two constructs are synonymous (Bem also does not make a proper distinction between the two), theorists have continued to assume that the inability to develop sex-appropriate gender roles or an androgynous personality is indicative of poor psychological functioning.

Several studies examining the relationship between self-esteem and androgyny have found that androgynous and masculine sex-typed persons have higher levels of self-esteem than feminine sex-typed and undifferentiated individuals (e.g., Antill and Cunningham, 1979; Lubinski, Tellegen, and Butcher, 1981). Taylor and Hall (1982) performed a meta-analysis of all published studies pertaining to the

relationship between androgyny and self-esteem. The results have indicated that it is not androgyny that is important to the development of high levels of self-esteem; rather, it is the development of high levels of masculine-instrumentality. Therefore, those who develop high levels of masculine-instrumentality (i.e., androgynous and masculine sex-typed individuals) will rate themselves as having greater self-esteem when compared to those with less masculine-instrumentality.

Marsh, Antill, and Cunningham (1987) offer a reanalysis of data presented in earlier papers (Antill and Cunningham, 1979; 1980). In the original study, subjects were presented with five gender role instruments, two self-esteem scales, and two social desirability scales. Marsh et al. (1987) report that masculine-instrumentality was highly related to self-esteem while feminine-expressivity was either not related or negatively related to that construct. Feminine-expressivity, on the other hand, was more positively related to social desirability than was masculine-instrumentality. Thus, Marsh et al. conclude that androgyny is confounded by the relationship between its main defining characteristics (i.e., masculine-instrumentality and feminine-expressivity) and self-esteem and social desirability. This has the effect of limiting the discriminative validity of the measuring instruments as the strength of the relationship between masculine-instrumentality and self-esteem hinders the scale's ability to discern those high in masculine-instrumentality and self-esteem from those low in masculine-instrumentality and high in self-esteem

(or vise versa).

Thus, it appears that one of the primary bases for the existence of androgyny (i.e., that being androgynous results is a greater degree of personal and behavioural flexibility which leads to higher self-esteem) has been invalidated, therefore bringing into doubt the validity of the androgyny concept itself.

c) Summary of the Androgyny Construct

To summarize, psychological androgyny appears to be a truly troubled theory. Its base was built around two assumptions: 1) that those with androgynous gender roles will display both masculine- and feminine-typed traits while sex-typed individuals display gender-congruent traits more frequently than gender-incongruent traits; and 2) that those with androgynous gender roles will display higher levels of self-esteem than sex-typed and undifferentiated individuals. There have been few unequivocal findings concerning the relationship between androgyny and sex-typed behaviours. Also, the relationship between androgyny and self-esteem appears to be the sole result of a high correlation between masculine-instrumentality and self-esteem.

Androgyny theory was created and standardized on middle class Americans of approximately 18-22 years of age. These individuals have yet to determine a self-identity separate from their peers and their family. It is unclear whether, once a self-identity is chosen and the individual is launched into the adult world, his/her level of self-reported masculine-instrumentality and feminine-expressivity (and

hence their androgyny categorization) will vary across the life-span. Owing to the content-oriented nature of the theory, life-span development is possible (although the process of the change is unknown). What kinds of life-span gender role development is possible within an androgyny framework? Hypotheses could be made concerning various developmental tasks in adulthood. For example, does parenthood result in a gender role polarization (i.e., sex-typing), with males and females becoming more sex-typed? Does old age result in a blurring of gender roles, with males and females developing a balance of gender role attributes (e.g., androgyny or undifferentiation)?

### 3.3 More Recent Approaches to Gender Role Development

In this section, newer theories of gender role development will be examined. These theories are not concerned with gender identity but, unlike androgyny, they tend to offer a more process-oriented approach to the development of gender role attributes. For example, these theories ask the following types of research questions: do sex-typed individuals attend to gender-congruent stimuli more than gender-incongruent stimuli? Do those with higher levels of cognitive complexity (i.e., ego development) process information in a gender-salient manner, or have they transcended these stereotypes? The newer theories place less emphasis on the effects of the environment in shaping behaviour and personality (e.g., as in the social learning perspective) and more on the cognitive processes involved in the interaction of personality and environment.

### 3.3.1 Gender Schemata

A schema is a "cognitive structure that represents organized knowledge about a given concept or type of stimulus." (Fiske and Taylor, 1984, p. 140) Generalizing from this definition, a gender schema is a structure containing knowledge about gender; e.g., what is male and female and how to tell them apart? What sets of attributes, behaviours, occupations, etc., does society prescribe for males and females?

Schemas are thought to operate in many ways and at many levels. They effect what stimuli will be attended to as well as the encoding of that stimulus event. Schemas assimilate the stimulus event so that it is better organized within the existing cognitive structure. Finally, schemas help in the retrieval of information from the knowledge structure (Ruble and Stangor, 1986). As Bem (1981) remarks, "schematic processing is ... highly selective and enables the individual to impose structure and meaning onto the vast array of incoming stimuli." (p. 355)

There are two competing views concerning the structure and the effects of a gender schema: Bem's (1981) gender schema theory and Markus' concept of the self-schema (Markus, Crane, Bernstein, and Siladi, 1982).

#### i. Sandra Bem.

Bem (1981) relates gender schematic processing to her previous concept of psychological androgyny and believes that a highly

available gender schema is a precursor to what she refers to as "sex-typing" in androgyny theory. Bem remarks that "the phenomenon of sex-typing derives, in part, from gender-based schematic processing, from a generalized readiness to process information on the basis of the sex-linked associations that constitute the gender schema." (p. 355). Thus, a sex-typed person (i.e., someone who is gender schematic) is expected to perceive and act in situations in a gender-congruent manner.

However, androgyny theory and gender schema theory are conceptually different in two aspects. In androgyny theory, the emphasis is on the androgynyous person and the benefits this person receives vis a vis mental health and cognitive and behavioural flexibility. In gender schema theory, the emphasis is on the cognitive processing of the sex-typed individual (i.e., the gender schematic) and how he/she differs from the aschematic person in terms of attention, storage, and retrieval of stimulus information.

These two also differ in that gender schema theory signifies a return to the balance concept of masculine-instrumentality and feminine-expressivity (Taylor and Hall, 1982). When Bem (1977) joined Spence et al. (1975) in using a median split method of categorizing subjects into androgyny categories, she lost the balance concept of her initial androgyny theory and was forced to acknowledge the conceptual difference between androgynous and undifferentiated individuals. However, she now returns to this former concept by defining the relationship between androgyny theory and gender

schematic processing in the following manner: sex-typed individuals are gender schematic and androgynous and undifferentiated subjects are gender aschematic. Thus, Bem believes that gender is salient for the former two androgyny groups and not salient for the latter two groups. Bem further believes that gender schematicity can be determined from an individual's responses to the BSRI (i.e., an instrument she believes to be a global measure of the self-concept) and thus she feels that "the self-concept itself gets assimilated into the gender schema." (p. 355)

ii. Hazel Markus and her colleagues.

Markus et al. (1982) conceive of the gender schema in a similar manner to Bem. However, the two theorists differ in several respects. First of all, Markus et al. distinguish between self-schemas and the self-concept. They believe that only those who incorporate their self-schema for gender with their self-concept are gender schematic. That is, where Bem assumes that all subjects merge their self-concept with their gender schema, Markus et al. feel that only the gender schematics do so.

Markus et al. also state that there is both a masculinity and a femininity schema and that they are independent of one another. Thus, masculine schematics will demonstrate their schematicity only with respect to masculinity and feminine schematics will do so only with respect to femininity. They believe that schematics probably have some structure relevent to the opposite gender role, but as that structure

is not self-relevant it is not salient. Bem, however, believes that the gender schema is one global schema that contains both masculine and feminine role information and a gender schematic individual has access to both roles and makes a bipolar distinction between the two (i.e., "me" versus "not me").

Another difference between Bem and Markus is their definition of those individuals who are gender aschematic. According to Bem, androgynous and undifferentiated individuals do not have a salient gender schema. Markus et al., however, believe that the two groups differ in their cognitive processing. They feel that the undifferentiated are the true aschematics (as they fall below the median on both the masculine-instrumentality and feminine-expressivity scales of a gender role instrument) and that androgynous individuals will fall part way between the schematics and the aschematics in terms of the salience they give to gender.

Several studies have examined the gender schema theories discussed above. These generally have taken either a free recall or reaction time format. Studies using a free recall methodology pose the following types of research questions: do schematics recall more gender-congruent words than gender-incongruent words? Do masculine schematics differ from feminine schematics in the recall of words in both semantic categories? Is there clustering in the recall such that schematics remember either gender-congruent words or gender-incongruent words in blocks? Studies using a reaction time paradigm ask similar types of questions: do schematics identify gender-

congruent words as self-descriptive faster than they identify gender-incongruent words as self-descriptive? Conversely, do schematics identify gender-incongruent words as not like them faster than aschematics?

Researchers using a recall and clustering method have found equivocal results. Bem (1981, Study 1) asked subjects to recall words that had been flashed on a projection screen and then examined the way they clustered the words upon recall. She found that masculine and feminine schematics clustered their words on the basis of gender more so than the androgynous and undifferentiated subjects. She does not state whether the schematics recall more gender-congruent items than gender noncongruent items or whether this type of recall differs among androgyny categories.

Markus et al. (1982, Study 1) revealed that masculine schematics recalled more masculine-typed words than feminine-typed words and that they recalled a greater number of masculine-typed words than did the feminine schematics. There was a parallel finding for feminine schematics. Androgynous subjects recalled more feminine-typed than masculine-typed words while undifferentiated subjects did not differ in the types of words recalled. Markus et al. report that there were no significant differences between the four androgyny categories with regard to clustering. Other studies that have used clustering and recall measures to examine the gender schema also have found nonsignificant results with respect to differences between the androgyny categories in these areas (Deaux, Kite, and Lewis, 1985;

Edwards and Spence, 1987, Studies 1 and 2).

Those using a reaction time paradigm have consistently found that masculine schematics acknowledge that masculine-typed items are like them faster than do those in the other three gender role categories. Also, it takes these individuals longer, when compared to those in other gender role categories, to acknowledge that gender-incongruent items are like them. Parallel findings were revealed for feminine schematics vis a vis feminine-typed words (Bem, 1981, Study 2; Bryntwick, 1983; Markus et al., Study 2). With respect to androgynous and undifferentiated individuals, all studies report that there is no significant difference between the two in either their endorsement of gender-congruent or gender-incongruent traits or their rejection of these two trait types.

Thus, research into schema theories has shown that schematics and aschematics differ somewhat in their recall and clustering of gender-related items and that they identify these items as belonging to their self-concept quicker if they are gender-congruent. The above research tends to accept Markus' notion that schematics have access to only one well developed gender-congruent schema. Markus et al. remark that "if masculine schematics were sensitive not only to masculinity but to femininity as well, they should have exhibited faster ... judgments to feminine items than to neutral items." (p.48) This was not found.

With respect to the question of which androgyny categories represent gender aschematicity, the reaction time studies tend to support Bem's notion that androgynous individuals are true

aschematics, whereas the differences between androgynous and undifferentiated subjects in Markus et al.'s recall studies suggest the opposite.

Perhaps this dispute over gender aschematicity can be used to highlight the dependence on androgyny categorization to determine who is schematic and who is not. According to social cognitivists, when a schema is activated that domain is said to be salient to the individual. However, can gender role salience be defined as an individual's responses to a gender role survey? It appears that this may not be the case. Studies that have attempted to replicate the findings of Bem and Markus et al. have had no success (e.g., Deaux et al., 1985; Edwards and Spence, 1987). For those studies that have found positive effects, the effect for the androgyny categories is weak. Perhaps a formal concept of gender role salience should be developed and operationalized. This construct may explain more of the clustering and recall findings (or lack thereof) than the androgyny concept. As androgyny appears to be highly related to self-esteem and social desirablity (Marsh, Cunningham, and Antill, 1987), perhaps gender role salience will be more predictive of the nonclinical apsects of this personality construct.

How can gender schema theories be applied to theories of life-span gender role development? Owing to the purely process-oriented nature of the theory, only predictions concerning the variability of schematicity across the life-span can be made. For example, it may be that individuals in the early parenting years may be more gender

schematic than their same-aged, non-parent peers. Also, retired adults may be more gender aschematic than their same-aged, working peers.

### 3.3.2 Sex Role Transcendence

Sex role transcendence is a theory postulated by Hefner, Rebecca, and Oleshansky (1975; see also Rebecca, Hefner, and Oleshansky, 1976). Someone who is sex role transcendent acts with "individual behavioural and emotional choice that is based on the full range of possible human characteristics. This [behaviour] is appropriate and adaptive for the particular individual in the specific situation and is not determined by adherence to sex role stereotyped conceptions of appropriateness. [It is a] post-conventional stage in which behaviours and feelings are not determined by conventional sex role stereotypes." (Hefner, Rebecca, and Oleshansky, 1975; p. 152)

Sex role transcendence is a three stage content-oriented model of sex role development that allows (in fact, it anticipates) for development to extend beyond childhood. The three stages of development are: undifferentiated sex roles, polarised sex roles, and sex role transcendence. Each stage is descriptive of the person's cognitive capabilities (although these are not explicitly stated) and designates a transition period between stages.

In the undifferentiated stage, children have not yet developed a gender identity (although this term is not used by the authors, it is clear that this is what the authors mean when they state that the child is "unaware of culturally imposed restrictions on behaviour

according to biological sex" and the "child learns that the world is composed of discrete objects and that there is figure and background." [Rebecca et al., 1976; p. 202]). The transition between this stage and the polarised sex role stage begins with the child's categorisation of the environment (e.g., big-small, male-female, mother-father). The child's increased discriminatory abilities highlight the differential traits ascribed to males and females.

With the advent of polarised sex roles, gender constancy is achieved and the child interacts with society in a manner prescribed by traditional gender roles. Roles are delegated to males and females as are behaviours, attributes and emotions. Rebecca et al. (1976) believe that, in this stage, the concepts of masculinity and femininity and male and female are used to determine the individual's (for this person may or may not be a child) day-to-day interactions with society.

For some, the ability to interact in a manner that is independent of gender role ascription is achieved. This is the stage of sex role transcendence. In this stage, behaviours are performed, attributes are used, and emotions are displayed in a pragmatic fashion (i.e., gender roles are not salient [Garnets and Pleck, 1979]) without conscious awareness that they are performing a gender-congruent or gender-incongruent trait. If the situation requires it, males can display nurturant behaviours and attributes and females can display agentic, goal-oriented behaviours or attributes.

Sex role transcendence often has been confused with androgyny.

The ability of the transcendent individual to select traits independent of social gender role prescriptions is similar to the concept of adaptivity that Bem believes the androgynous individual to possess. However, the degree to which the two concepts are similar has yet to be determined. Robinson and Green (1981) believe that androgyny is a stage that comes before transcendence. In other words, androgyny is the transition to transcendence. The difference between androgyny and transcendence may stem from the individual's conscious awareness that he/she is displaying stereotypically masculine or feminine traits. Both androgynous and transcendent individuals can comfortably display traits in both domains, but it may be that the androgynous individual is conscious of the gender labelling while the transcendent individual is unaware of this.

As of yet, there has been no research that has examined the sex role transcendence theory empirically. Thus, the concept remains unvalidated. The problem that plagues the development of this theory is its dependence on gender role salience as an indicator of transcendence. Until this measure is operationalized and validated, researchers will continue to use androgyny as a synonym for transcendence.

Garnets and Pleck (1979) attempted to overcome this problem when they used a sex role transcendent perspective in their presention of the concept of sex role strain. This theory hypothesizes that subjects who are high on gender role salience and have a discrepancy between their self-ratings and their ideal same-sex ratings on a gender role

survey have a high degree of sex role strain. Those who have a high degree of correspondence between these two measures and are low in gender role salience are low in sex role strain.

In this model, gender role salience is the mediating variable and the authors offer many ways in which to operationalize the construct. They believe that one method may be to analyse the degree of within-subjects variability in masculine-instrumentality and feminine-expressivity scale scores. If there is a high degree of consistency on the average variance score for the two scales (i.e., the average variance is low) then that person is gender salient. Thus, each subject would have an average of the two scale's variances calculated and this would become the dependent measure. The higher the average, the lower the salience.

Thus, the sex role transcendence model offers a theory of life-span gender role development that is not dependent on chronological age or life context. It states, not that individuals will be either polarized or transcendent, but that transcendence is a developmental possibility for some. As it is presently described, sex role transcendence is a limited theory. It is a descriptive theory that states that some people may transcend gender role norms. It does not state how this happens and the only predictions that can be derived from it concern the estimated percent frequency of transcendent individuals in the population and their demographic similarities (e.g., their average age).

However, a consolidation of this theory and a gender schema model

may be appropriate. The primary benefit of this integration is the explanation of the life-span change process. As the two models share the notion of gender role salience, predictions based on salience in various developmental tasks can be derived in a notion similar to those discussed above. However, before this can be done, the identification of schematic (i.e., gender role salient) and aschematic (i.e., non gender role salient) individuals should be made independently of the androgyny categorization process.

### 3.3.3 Integrating Gender Roles With Other Personality Factors

Several authors have attempted to integrate the concept of gender-typing with other personality theories (e.g., Block, 1973; Prager and Bailey, 1985; Robinson and Green, 1981). This section will outline two such incorporations: ego development and moral development.

#### a) Ego Development

Loevinger (1966) outlines a series of developmental milestones that highlight the development of the ego. Loevinger conceives of the ego as a framework that contains the self-identity, as well as the meaning an individual attaches to the environment and the way he/she interacts within the environment. Thus, the role of the ego is to organize and synthesize an individual's experiences in a subjective and individual manner.

According to Loevinger (1966; 1976), ego development may continue

across the life-span, over the ten stages she has presently identified (Loevinger has not determined a fixed number of stages but leaves open the possibility that researchers may find others). In the first four stages (presocial, symbiotic, impulsive, and self-protective), she describes those who are typically children. Those falling in the first two stages are usually young children, newborns who have not yet developed an ego and older infants who have not yet developed a firm sense of the permanence of the self. With the advent of the third stage (impulsive), the children remain dependent on others as their impulses are controlled by the fear of punishment. These children have a developing sense of the self, however, and they are conceptually rigid in their inability to conceive of the present from the future and the past. The self-protective stage identifies the child's ability to control his/her impulses through the anticipation of immediate rewards and punishments. These children are opportunistic and hedonistic. Although some older children and adults may be found at this stage, most advance to at least the next stage.

The conformist stage is the first of the stages where there is a substantial proportion of adults within its ranks. Those in this stage identify themselves with the group that is most salient to them. Children in this stage will adopt the values of the family or their peer group. Adults more often assume the values of their peers, as well as conform to society's laws. Conformists obey the rules set by the group, and avoid deviating from them because of the disapproval they feel the group will express.

Those who go beyond conformity may enter the transition from the conformist stage to the conscientious stage (also known as the self-awareness level). Loevinger considers this stage to be the modal level for adults in American society. In this transition, the individual becomes more aware of the self (e.g., that one does not always live up to the example set by the group; there is a growing awareness of the inner self). They also become cognizant of the fact that there exist many possible responses to a given situation, not just a right one (the response sanctioned by the group) and a wrong one (anything else). This is the beginning of cognitive flexibility; i.e., the ability to see alternatives.

The stage currently following the transitional period is the conscientious stage. Fewer adults may be found at this stage compared to the previous one. A conscientious person has finished internalizing society's rules and evaluates and chooses his/her own rules. This person may even break one of societies rules if he/she feels that the rule interferes with their own conscience. Loevinger (1976) uses the example of the conscientious objector who chooses not to fight in a war because of religious or personal beliefs which are against the sanctioned killing others.

The last three stages (the transition from conscientious to autonomous stages [also known as the individualistic level], the autonomous stage, and the integrated stage) represent the highest forms of ego development. The person in the transition has an increased sense of individuality (i.e., uniqueness) and is able to

disentangle emotional dependence from other forms of dependence (e.g., people who are no longer financially dependent on their spouses can become aware that their feelings for them are not related to the fact that they were, at one time, financially dependent upon them). In the autonomous stage, the individual is able to cope with his/her inner conflicts and arrive at a pragmatic solution, taking into account the complex and multifaceted nature of the environment. This person is conceptually complex in that he/she is able to take separate ideas, find their similarities and differences, and integrate them into a larger concept. In the last stage, the individual expands on the skills in the autonomous stage with the result that he/she has developed a more consolidated sense of the self.

Block (1973) related ego development to life-span gender role development. In her conception of the relationship, the impulsive stage is where the child first develops a sense of gender identity. The child in this stage is very stereotypical in terms of what he/she deems gender appropriate. In the conformist stage, males and females adopt sex-appropriate gender roles which they apply to themselves and others. They believe that they are masculine or feminine and those displaying cross-sex traits are labelled as deviants. This stage is also known as sex-typing.

Those who develop beyond the conformist stage to the conscientious stage are less sex-typed. Although they have developed sex-appropriate characteristics, they also have a repertoire of cross-sex traits. Their ability to introspect and self-evaluate allows them

to go beyond social norms in their day-to-day interactions and act in a pragmatic fashion. This is similar to Bem's (1974) conception of androgyny.

In the autonomous and integrated stages, Block notes the individual's struggle in coping with the conflicting masculine and feminine aspects of the self and eventually overcoming the conflict by integrating the two into an individually defined gender role. This is similar to the concept of sex role transcendence (Hefner et al., 1975) but bears little resemblence to androgyny. That is, in Bem's (1974) concept of androgyny, the two trait domains coexist. However, in the latter two stages of ego development, the emphasis is not on coexistence, but on taking the two independent concepts and creating a new, more subjectively defined, integration of the two.

The relationship between ego development and gender roles is an important one. Ego development offers a description of the ontogenesis of cognitive and interpersonal processes, as well as character development and conscious preoccupations. As Block has noted, the advantage of the integration between the two theories lies in its ability to relate differences in gender role processing and content to that of other psychological processes. For example, those who conform to the societal norms (e.g., the sex-typed) may also be conforming or personally inflexible in other areas (e.g., moral development, political ideas, attitudes towards women's rights and roles in society, etc.).

Validity for this conceptual integration can be found in work by

Browning (1985) and Prager and Bailey (1985). Using a large sample of adults studied in the 1970's, Browning (1985) found that ego development in both males and females was linearly related to gender role development. For both males and females, higher levels of ego development were related to the holding of fewer stereotypic beliefs about the masculine role. Also, males in the post-conformist stages were more likely to endorse feminism.

Prager and Bailey (1985) assessed the differences between androgyny and ego development in a sample of adult females. The sample yielded subjects falling in three ego categories: conformist, conscientious, and autonomous. Their results indicated that androgyny was associated with higher levels of ego functioning (of those whose ego functioned was in the autonomous stage, 83% were classified as androgynous). However, the conclusions that Prager and Bailey draw from this finding are questionable. Although the majority of those who fell in the autonomous stage were androgynous, they neglected to note that only ten percent of the entire sample functioned at this level. Hence, their generalizations were founded on an unrealistically small subsample and should be deemed unreliable. A study by Nettles and Loevinger (1985) failed to find a significant relationship between gender roles and ego development.

How does this integration relate to life-span development? Although Loevinger states that chronological age is unrelated to the development of ego stages, it is apparent that if there were to be a slight relationship it would be positive. Hence, older individuals

should have higher levels of ego development (to a point). If the ego changes in adulthood, so should the gender role. However, it is unclear what precipitates ego development. Is it related to role enactment, cognitive development, participation (or lack thereof) in developmental tasks, etc.? These questions have yet to be examined.

b) Moral Development

Kohlberg's conceptualization of moral development (1969) is a much more prevalent theory in psychology, compared to Loevinger's concept of ego development. In this subsection, Kohlberg's theory will be reviewed briefly and research evidence attesting to the validity of the integration between moral development and gender roles then will be discussed.

Kohlberg (1969) identifies three stages of moral development, each with two substages. The first is the stage of preconventional thought, where the child has no notion of morality and acts solely to avoid punishment. Later in this stage, the child also will act to receive rewards.

The child next develops conventional thought. A person (child or adult, as some never outgrow this mode of morality) in this stage learns right and wrong in a manner different from reward and punishment: right is what the social norm is (defined first by the family and later by various social institutions) and wrong is anything else. Intentionality is considered in the second half of this stage, as are one's sense of duty and respect for authority.

The third stage in Kohlberg's sequence is that of post-conventional thought, however, not everyone reaches this stage of moral reasoning. Those found at this level are characterized by the development of individual moral standards which are independent of those that govern society, some of which may be counter social norms. This is the stage in which some may develop a social conscience and/or universal ethical principles.

As can be seen, there is much similarity in the content of this and Loevinger's theory of ego development. However, the two theories differ in many respects. The major difference is that Loevinger is essentially dealing with the development of affective processes, aspects of the self that are concerned with how we see ourself and interact with others. Kohlberg, on the other hand, is concerned with the cognitive processes involved in the development of moral reasoning (i.e., how an individual interprets the social rules). Thus, when action takes place, the former results in other-oriented activity while the latter is self-oriented.

Gilligan (1982) criticized Kohlberg's theory for its reliance on all male samples in its validation studies. She believes that males and females may have differing moral orientations, with males focusing primarily on the "morality and justice" theme and females on the "morality and caring or responsibility" for others theme. Although she offers limited and mostly anecdotal evidence for this difference in content (Smetana, 1984), the relationship between these two categories of moral orientation and traditional gender role stereotyping allow

for an interesting examination of individual differences in moral development. In fact, this topic has dominated the little research being done in the area of moral development and gender roles, and tests of the relationship between Kohlberg's definition of moral development and gender roles cannot be found.

Two studies have examined the relationship between moral orientation and gender roles (Ford and Lowery, 1986; Pratt and Royer, 1982). Pratt and Royer (1982) asked subjects to rate their ideal and real (i.e., self-reported) gender roles and found that, for women, increased femininity in their ideal self-concept was related to a "morality as responsibility" orientation. A similar finding was reported by Ford and Lowery (1986) who asked subjects to generate their own moral dilemmas and then asked them to rate the dilemmas as having been either justice- or responsibility-oriented (subjects read specific definitions of the two types and made their judgments based on that information). Their findings indicate that males with high levels of self-reported femininity rated their dilemmas as having been reponsibility-oriented more often than males with more stereotypical self-concepts.

It is difficult to generalize the findings of these two studies and make statements concerning the nature of the relationship between moral orientation and masculine-instrumentality and feminine-expressivity. The two studies examined the relationship between the two variables in different ways. Pratt and Royer structure the moral stimuli for the individual, while Ford and Lowery ask the subjects to

generate their own moral dilemmas. It is unclear whether the differences between the studies are a reflection in this methodological variation.

Unfortunately, no research exists that examines whether the psychological processes involved in gender role development are similar to those involved in moral development. Robinson and Green (1981) apparently had this in mind when they related moral development to the theory of sex role transcendence. In their integration, they noted that the undifferentiated stage of gender role development is similar to the first stage of moral development and sex role polarity to the first substage of Kohlberg's stage of conventional thought. As they see androgyny as a blending of masculine-instrumentality and feminine-expressivity, it is similar to the second substage of conventional thought or the transition to the postconventional stage of moral development. Finally, they believe that transcendence can be found in those in the stage of postconventional thought.

That there exists a relationship between gender role development and moral development is not a new assumption. Block (1973) proposed that there is a similarity in the development of ego, moral, and gender role development and that this development unfolds across the life-span. Also, Ullian's (1976) cognitive-developmental model of gender role ontogyny is obviously related as much to Kohlberg's model of moral development as it is to Kohlberg's (1966) model of gender role development.

Moral and gender role development share similar ontological

emphases. For example, the child in the preconventional moral stage resembles a child who has not developed a sense of gender constancy. These children have not yet developed a sense of social prescriptions and act in order to please others and escape punishment. However, with the onset of gender constancy, children develop the need to conform to these social prescriptions although, later in this period, they see others who don't conform as intending not to conform. Finally, as Robinson and Green (1981) noted, those who have achieved postconventional morality are similar to those who have developed a sense of androgyny or transcendence. They are aware of social norms but either choose to ignore them because they interfere with their situational performance or they no longer think in terms of what constitutes social standards because they have developed a sense of universal gender role understanding.

### 3.3.4 Gerontological Approaches

Two authors have proposed theories of the life-span development of the gender role and these have centred around gender role changes in late adulthood. Gutmann's (1975) parental imperative relates gender role development in the postparental years to the reduction of the salience of parenting. Sinnott (1977; 1986) believes that an elderly person's ability to be flexible with regard to gender roles is an adaptive ability and is related to more successful aging and a longer life. This section will describe these two theories and the research that has examined their hypotheses.

a) Gutmann's Parental Imperative

Gutmann (1975) proposes that males and females actively supress cross-sex gender role attributes and behaviour during the parenting years because these traits are counterproductive to the childrearing process. Males are supposed to give up their nurturant qualities in order to devote themselves to the instrumental-achievement activities that support their family while females are believed to give up their aggressive traits in order to focus on being nurturant toward their children. It is hypothesized that, in the postparental years (i.e., when the children have left the nest), males and females attempt to recapture these cross-sex traits. Males are expected to place more emphasis on being nurturant and expressive while females are believed to become more instrumental and aggressive. Gutmann has termed this "the unisex of later life."

Some see Gutmann's model as proposing a gender role reversal in old age, as opposed to the balance of gender roles suggested by the term "unisex" (McGee and Wells, 1982). McGee and Wells (1982) cite a paper by Gutmann (1978) in which he states that individuals relinquish some gender-congruent traits at the same time as there is an adoption of cross-gender traits. Taken to the extreme, this may signal a gender role reveral. However, considering that Gutmann believes that males and females abandon cross-sex gender role traits in the parenting years, resulting in high levels of gender-congruent attributes and low levels of gender-incongruent attributes (i.e., sex-typing), this "give-and-take" easily may result in a balance of the two traits.

There are several problems with the parental imperative model that warrant discussion. Most importantly is the theory's lack of ability to cope with within-sex variability. It assumes that all males are fathers and providers while all females are mothers and housewives. While the model may hold for those who conform to this set of rigid role requirements, it does not fit those who remain childless and/or unmarried, mothers who work, or families with adult "children" living at home. Further, its emphasis on parental roles outways the multitude of other social roles the individual maintains. McGee and Wells (1982) note that family and work roles also are important to many parents (both male and female). Gutmann does not outline the rationale for the saliency of the parental role over all other roles.

Gutmann's theory also lacks an emphasis on process involved in the gender role change. He states that an individual changes his/her gender role content in the postparental years. However, is this a sudden change and how does it manifest itself? How does this change take place? Through what mechanism?

Although the initial evidence that Gutmann used to support his theory can be questioned on methodological grounds (see McGee and Wells, 1982), two recent studies have found evidence for the validity of concept. Ripley (1984) compared masculine-instrumentality and feminine-expressivity ratings in parental versus postparental males and found that the former rated themselves significantly higher on masculine-instrumentality and significantly lower on feminine-expressivity than those whose children had left the nest. A study by

Cooper and Gutmann (1987) was unable to find significant mean differences between parental and postparental females on a gender role questionnaire. However, when they examined the items individually, they did find significant differences between the two groups (in the predicted directions) for items concerning submissiveness, aggressivenss, self-confidence, assertiveness, creativity, and problem solving ability.

b) Sinnott's Dialectical Model

Sinnott (1977; 1986) has proposed a process-oriented model in which she believes gender role flexibility in old age is a sign of "successful aging". This theory makes three assumptions, the first being that there is an adaptive (in the Darwinian sense) aspect to the ability to be flexible vis a vis gender roles (i.e., Sinnott believes that those who possess the ability to be flexible may live longer). Secondly, creativity may be related to adaptivity and that flexibility may be a form of creativity.

The third assumption is that there is a synthesis of the first two assumptions. This is the dialectical aspect of the theory. Sinnott believes that there are conflicting gender role demands placed on individuals in old age and that these demands arise from three areas: biology, psychology, and culture. For example, an elderly person's biological needs are expected to be similar whether they are male or female (i.e., their needs are equivalent) while their cultural needs may be either disparate (i.e., they are expected to behave

differently) or equivalent, depending on the culture. Someone who is flexible and can combine these three opposing needs creatively is believed to have the adaptive edge.

Although gender roles are important to this theory, so are the mediating constructs of creativity and (cognitive) flexibility, both of which Sinnott has related to longevity. Sinnott (1977) reports several studies that purport to demonstrate a positive relationship between the integration of cross-sex gender role attributes (i.e., what she believes to be flexibility) and successful aging (as measured by longevity). However, these data are limited in that some are based on projective measures while others are based on clinical samples (McGee and Wells, 1982).

Recent examinations of the relationship between gender roles and direct measures of cognitive flexibility have shown that there is no relationship between pencil and paper measures of the two in an elderly sample (Windle, 1986). However, Carter (1985) has shown that there is an effect of androgyny categorization on cognitive flexibility in a sample of young adults. Carter found that those who were above the median on the BSRI's masculine-instrumentality scale (i.e., androgynous and masculine sex-typed) were significantly more flexible than those who scored below the median.

Sinnott believes that the development of an androgynous gender role is a representation of role complexity (i.e., flexibility) and will be adaptive and beneficial. In a study assessing the relationship between gender roles and other measures that may indicate successful

aging, Sinnott (1982; 1986) noted that the majority of the elderly subjects reported androgynous gender roles. She also reported that those males and females who scored in the top or bottom quartiles on the BSRI's feminine-expressivity scale tended to score in the same top or bottom quartile on the masculine-instrumentality scale, indicating the presence of a balance of the two attributes. This study did not assess the relationship between creativity, flexibility, gender roles, and longevity. However, Sinnott did report that elderly androgynous males were more likely to be in good health, have a high verbal IQ, low levels of depression, and high levels of stress. Androgynous women share good health with the males, but they are more likely to have less stress.

Although Sinnott considers androgyny to be role complexity (this being an indirect indication of flexibility) she does not offer any firm data regarding her assumption that the two are positively related. In order to show the validity of the dialectical model, more direct testing of the assumptions underlying the theory must be made and the ambiguity of the hypothesized links between gender roles and dialectical change must be corrected (McGee and Wells, 1982).

# CHAPTER 4

## MODELS OF ADULT DEVELOPMENT

As can be seen from examining the gender role theories discussed in Chapter 3, most are unable to explain changes of gender role traits in adulthood. Further, even if there were predicted changes in adulthood, these theories are unable to provide a basis or rationale for such changes (with the exception of Gutmann's [1975] parental imperative model which anticipates that the demands of the parenting role will polarize gender roles. However, Gutmann does not say whether gender roles were less or more polarized before the onset of parenthood). Models are needed that describe adult development in a general, structural sense, and from both developmental and social psychological perspectives. From these descriptions, hypotheses concerning gender role polarization, reversal, blurring, etc. (and at what points in the life-span these events occur) can be made. Once theories of adult development are prevalent, their presence should act as a catalyst, giving the gender role theories a basis for making future predictions about development, or variability, in adulthood.

Most theories of psychological development are centred on the ontogenesis of psychological characteristics in children. With the emergence of gerontology as a major research interest, psychologists have examined development in old age (usually with an emphasis on the decline from the peak of functioning reached at the end of childhood). However, very little work has been completed towards the creation of a

model of development in adulthood. Neugarten (1968) has likened the emphasis on childhood and gerontology to a crowd at a circus. She remarks that "as psychologists seated under the same circus tent, some of us who are child psychologists remain seated too close to the entrance and are missing much of the action that is going on in the main ring. Others of us who are gerontologists remain seated too close to the exit. Both groups are missing a view of the whole show." (p. 137) Neugarten adds that a psychology of adulthood should be concerned with "the orderly and sequential changes that occur with the passage of time as individuals move from adolescence through adulthood and old age, with issues of consistency and change in personality over relatively long periods of time, and with issues of antecedent-consequent relationships." (p. 137)

There are many reasons for this lack of attention to the adult years. For a number of years, psychology has concentrated on the "developmental milestone" and its relation to chronological age. As humans leave childhood, the tenuous relationship between the two grows further apart, to a point when age no longer predicts the level of psychological functioning. This reasoning also has been affected by the belief that humans are complete beings after adolescence and all that remains is a little "fine-tuning" that is accomplished by "hands-on" experience. Stability of all personality characteristics in adulthood had been assumed and there was little, if any, reason to suspect that there was growth in the adult years.

Several theorists, however, believe that, while some aspects of

the adult personality remain stable, there are certain facets that do not. Erik Erikson (1963) was one of the first developmental theorists to posit that there is development in adulthood. His stage theory of psychosocial development has been the basis for many future theories in this area. Later theories have developed frameworks within which change takes place. Robert Havighurst (1953) proposed that men and women face several "developmental tasks" and change is a function of successful (or unsuccessful) performance in each task. Levinson (1978; 1986) compiled a structural framework of adult developmental "eras" that consist of several alternating stable and transitional periods while Gould (1978) described adulthood as the continuing realization of the falsehoods that threaten to impede a person's full adult potential.

This chapter will summarize the various models of human development and then discuss their predictions about the variablity of gender role attributes across the adult years. It is important to include these predictions in any life-span perspective of human development as life-span personality models tend to concentrate on intrapsychic growth or decline and often neglect the multifaceted nature of adulthood.

## 4.1 Developmental Models

### 4.1.1 Erikson's Theory of Psychosocial Development

Erikson (1963) offers a stage theory of individual development based on the interaction between biology and psychological readiness,

as well as social expectations. In what he describes as "The Eight Ages of Man", Erikson posits eight psychological crises, three of which are directly pertinent to adulthood. Each stage describes a psychosocial crisis that has one of two possible outcomes: positive or negative. Hence, Erikson presents these crises (i.e., tasks that exhibit themselves at a period when the individual is sensitive the that particular developmental issue) in the form of a positive outcome "versus" a negative outcome.

The first crisis of adulthood is "intimacy versus isolation". Here, young adults are urged to develop a sense of intimacy, failing which they will remain isolated. The individuals who are capable of intimacy are those who can fuse their identity with those of others, commit themselves to various types of relationships, and abide by their committment to others. These individuals should be supported by those with whom they are intimate. They prove to the person that the mutuality gained from fusing identites is beneficial, that they are faithful to the relationship, and that they are willing to make sacrifices to maintain the relationship (Freiberg, 1987).

Those who fail to succeed at developing intimacy become isolated. This term is used to describe those who avoid committing themselves to an intimate relationship, distance themselves from others who may be encroaching on their sense of isolation (e.g., someone who makes it known that they want an intimate relationship), and are self-absorbed. The lack of intimate contact with others leads to feelings of being exploited by others. Being so absorbed in the self leads to the lack

of a sense of competition or cooperation.

Following is the crisis of "generativity versus stagnation". This is more than just creating offspring and developing parenting skills. The concept of generativity concerns the development of a concern for the next generation and a desire to guide that age group through teaching and nurturing. This does not have to be done with one's own children. Those who remain childless can develop these skills through relationships with others' children. Again, this behaviour should be reinforced by the society such that they encourage and applaud the devotion. Truly generative individuals will cause others to reflect back on the value of their own efforts (either the children themselves or the adults that have not reached this stage in their psychosocial development).

Failing to develop a sense of generativity leads to stagnation. When something is stagnant, it does not change and becomes unproductive and outdated. When Erikson refers to stagnation, he refers to those who are self-concerning and self-indulgent. These people typically have low self-esteem and do not believe they have anything to offer others or society. They become physical or psychological invalids, doing the minimal amount of "work" (both physical and psychological) necessary to survive. Also, these people are exploitive. They interact with others to satisfy their need for pseudointimacy, but are unable to provide real intimacy.

Erikson's eighth stage is that of "ego integrity versus despair". Gaining ego integrity means reviewing one's life and accepting what

has happened as one's own responsibility. That is, individuals must accept their successes as well as their failures, and must feel no remorse over the way they has lived their lives. Not only are these individuals accepting of themselves, but also of those with whom they interact.

Those who fall into despair cannot accept what their life has been and they develop feelings of helplessness, low self-esteem, and incompetence. These individuals often dwell on past events and the ways in which they should have handled them at the time. There is little feedback from those in their environment.

Most stage theories are oriented toward child development and are rigid in their assumption that individual's progress through the sequence of events in a forward order. However, although Erikson states that the successful completion of one stage lays the foundation for the next, he allows for flexibility in the movement between and among the primary crises. Further, he believes that there is no relationship between the developmental stages and chronological age.

There has been extensive research on the development of these psychosocial stages in childhood, but what little research has been performed on the adulthood portions of the sequence have concentrated on the earlier crises. The existing research typically has used the Inventory of Psychosocial Development (Constantinople, 1969) as an individual difference measure to examine crisis resolutions and their relations to demographic features and other personality variables. For example, Fitch and Adams (1983) have shown that females are better

able to resolve their intimacy versus isolation crisis than males. However, males who are secure in an occupation resolve this crisis easier than males who are not. Also, two studies have found that androgynous males and females are likely to resolve this crisis more easily than those with nonandrogynous gender roles (Glazer and Dusek, 1985; Schiedel and Marcia, 1985). Whether this is a function of masculine-instrumentality or feminine-expressivity is not known.

### 4.1.2 Havighurst's Developmental Tasks

Havighurst (1972) proposes that development from infancy to old age can be described as the completion of a series of developmental tasks. "A developmental task is a task which arises at or about a certain period in the life of the individual, successful achievement of which leads to his happiness and to success with later tasks, while failure leads to unhappiness in the individual, disapproval by society, and difficulty with later tasks." (1972, p. 2)

As with Erikson's psychosocial theory, Havighurst conceives of the developmental task as arising from one or more of the following sources: physical maturity, societal expectations, and an individual's goals and aspirations. Thus, some tasks may result from biological maturation (e.g., learning to walk) or social pressure (e.g., achieving a masculine or feminine role) alone, while others may result from an interaction of two or all three sources (e.g., starting a family is a social pressure typically requiring physical maturity and a spouse).

There are three adult eras defined by Havighurst (1972), each containing tasks which were relevent at their time of conception. Most still retain a degree of face validity, although it is obvious that these are not universal developmental stages and that there exists a great degree of inter- and intra-cultural variability. One of the major drawbacks of the developmental task is that Havighurst assumes that all individuals meet the developmental tasks of early adulthood since these become the basis for some of the tasks in middle and old age. Thus, Havighurst does not allow for variablity in the choices of non-normative life paths. If a subject does not marry and have children (i.e., a "worst-case scenario" in terms of the applicability of future tasks) then several of the tasks are not relevant (Whitbourne, 1986).

The first adult era is Early Adulthood. In this era, Havighurst identifies eight developmental tasks, all of which assume that physical maturity has been reached. Thus, each originates from various pyschosocial demands that individuals share. Each is self-explanatory: selecting a mate, learning to live with a marriage partner, starting a family, rearing children, managing a home, getting started in an occupation, taking on civic responsibility, and finding a congenial social group.

Havighurst defines seven tasks in the Middle Age era. These developmental tasks assume that those from the previous era have been accomplished successfully. The tasks for this era include: assisting teenage children to become responsible and happy adults, achieving

adult social and civic responsibility, reaching and maintaining satisfactory performance in one's occupational career (including that of a housewife), developing adult leisuretime activities, relating to one's spouse as a person, accepting and adjusting to the physiological changes of middle age, adjusting to aging parents. As can be seen, the majority are psychosocial in nature but some concern biological aspects of aging (e.g. the development of leisure activities will be affected by the level of physical functioning).

The final era is that of Later Maturity. In this last stage, Havighurst defined six developmental tasks, many having both psychosocial and physiological origins: adjusting to decreasing physical strength, adjusting to retirement and reduced income, adjusting to the death of one's spouse, establishing an explicit affiliation with one's age group, adopting and adapting social roles in a flexible way, and establishing satisfactory physical living arrangements. Thus, in old age, adults must adapt to their declining physical health and the loss of their spouse and friends. In this case, psychosocial tasks appear to be consequent to biological antecedents.

### 4.1.3 Levinson's "Seasons"

Levinson (1978; 1986) proposes a structural model of psychological development in adulthood. He believes that adulthood is divided into three "eras", each preceded by a cross-era transitional period. Thus, before entering the era of early adulthood, the

individual passes through the Early Adult Transition. Similarly, the individual advances from early adulthood to the Midlife Transition to middle adulthood, to the Late Adult Transition, and late adulthood.

According to Levinson, the Life Structure (i.e., the combination of eras and transitions) is an invariant sequence of "structure-building" and "structure-changing" periods. In a structure-building period, the individual builds the life structure by adopting certain values, goals, and social roles. The average structure-building period lasts approximately five to seven years, after which the individual reassesses his/her life structure and changes certain features. This transition terminates the existing structure as the individual "explore[s] possibilities for change in the self and the world, and ... move[s] toward commitment to the crucial choices that form the basis for a new life structure in the ensuing period." (1986, p. 7) The transitional periods last approximately five years.

Most theorists consider the transitional aspects of any developmental stage theory to be the most stressful. Levinson, however, believes that the structure-building periods within each era also are stressful. That is, when building a structure, certain choices are made (e.g., to pursue various goals) and these often are compromises. Discovering that one's choices are unsatisfactory and the structure must be rebuilt is not conducive to tranquility. As modifications are required to maintain the stability of the structure, there exists, within each era, an entry structure followed by a mid-era transition and an end-of-era structure. This gives the individual

optimal opportunities to adapt to the demands of the chosen life course as well as to change certain goals, values, or social roles that are difficult to maintain. Table 4-1 sets out the developmental periods within early and middle adulthood. Although Levinson acknowledges the preadulthood (i.e. childhood and adolescence) and late adulthood (i.e., old age) eras, his theory currently emphasizes the middle years.

In the Early Adulthood Era (approximately 18-45 years old) individuals are at a peak, both physically and intellectually. At the novice period of this stage (i.e., the entry structure) the person has a preliminary adult identity, one that will become more complex as the individual develops the structure. This stage is indictative of changes in the following areas: occupation, relationships, marriage, and the beginning of a family. By the time the individual reaches the advanced period of this era, he/she will have progressed in all of these areas, in one way or another.

Levinson is most descriptive of changes in the Middle Adulthood Era (approximately 40-65 years old). He discusses changes in three areas of a person's life: biological and psychological functioning, sequence of generations, and the evolving career. In the first, the individual's physical and intellectual abilities are somewhat diminisished but, unless there is a debilitating illness, this is not enough to limit the a person's functioning. Secondly, the individual finds him/herself of the middle generation. Those younger than he/she (i.e., in the Early Adulthood Era) are a complete generation behind

Table 4-1: Levinson's stages of adult development.

| Structure-Building Periods | Structure-Changing Periods |
|---|---|
| | Early Adult Transition |
| Entry Life Structure for Early Adulthood | Age 30 Transition |
| Culminating Life Structure for Early Adulthood | Midlife Transition |
| Entry Life Structure for Middle Adulthood | Age 50 Transition |
| Culminating Life Structure for Middle Adulthood | Late Adult Transition |

and some are young enough to be their children. Those older than they are in the same generation as their parents. Finally, Levinson notes that people look back over their careers and evaluate what they have done and what they want to do in the future. For some, this will involve a change of careers.

Levinson's stage model has two major criticisms associated with it. First, the sample from which the process was mapped was all male. Although Levinson and his colleagues attempted to cover a wide range of variability in terms of social class (Levinson, Darrow, Klein, Levinson, and McKee, 1974), the lack of a cross-sex comparison questions the generalizability of the model. As Gilligan (1982) noted in her criticism of Kohlberg's theory of moral development, because males and females are socialized differently and have different life-

expectations it is unwise to suggest that they share similar developmental milestones. However, Levinson is attempting to answer this criticism. He notes (Levinson, 1986) that a study has been completed with a sample of women and that the model also holds with this group.

Secondly, Levinson's model in based on the results of in-depth interviews with only 40 men. Although each man was interviewed for approximately 20 hours, it would be wise to expand the data base in order to test the reliability of the model in similar and other subpopulations.

### 4.1.4 Gould's "Transformations"

Gould (1978) notes that the main objective of adulthood is to overcome what he calls a "childhood consciousness". With this consciousness, adults fear that life is out of control and destructive. Gould has termed this "demonic anger"; "because of the lingering belief in demonic anger, we misinterpret the actions of others as well as misjudge our own motives. When we confuse the forgotten demonic reality of childhood with the current manageable adult reality, our life is disturbed in two costly ways: 1) we limit our love relationships ... ; [and] 2) we don't fully realize our talents because we stop ourselves short of fulfillment, fearing a demonic motive might be at work in our ambition." (pp. 18-19)

Gould (1972) determined the main themes of adulthood from a sample of adults between 16 and 60 years of age who attended

outpatient group therapy sessions. From these sessions, Gould determined that there were four eras which had distinctive false assumptions that had to be overcome. The first era (leaving our parents' world) challenges the assumption that "I'll always belong to my parents and live in their world." (1978, p. 43) Thus, the adolescents and young adults in this stage of development are trying to escape from what they believe to be their parents' hold on them. In the second era (I'm nobody's baby now), young adults must face life on their own and develop a sense of themself as separate from their parents in many different roles. The false assumption that is challenged at this stage is "doing things my parents' way, with willpower and perseverance, will bring results. But, if I become too frustrated, confused, or tired or am simply unable to cope, they will step in and show me the right way." (1978, p. 71) The third era is called "opening up what's inside" and involves developing a greater, more psychologically-minded sense of the self. The false assumption challenged in this era is "life is simple and controllable. There are no significant coexisting contradictory forces within me." (p. 153) Finally, the fourth era is the "mid-life decade" and involves a reorientation of thinking about the time gone versus the time remaining. The assumption in this stage is that "there is no evil or death in the world. The sinister has been destroyed." (p. 217)

Although Gould goes beyond Levinson by incorporating a female presence into the creation of the model, the clinical nature of the sample is the main objection to this developmental sequence. Thus,

even though the raters that coded the session tapes were blind to what group they saw, as well as the members' diagnoses, they easily could have been affected by the content of the sessions, arriving at intuitive diagnoses which, in turn, may have affected the outcome of the assessment; in essence, "garbage in, garbage out". Thus, when Gould (1972, Study 2) proposed to examine the presence of age effects in what he terms "salient statements" concerning each developmental era, he may have contaminated the study with clinically biased representations about the salient issues of adulthood.

In this second study, Gould (1972) constructed a questionnaire of the salient statements referred to earlier. The survey was distributed to 524 males and females who were not psychiatric patients. This sample was well represented between the ages of 16 to 60 years and showed the presence of seven distinct age periods which corresponded to the eras discussed above.

### 4.1.5 Comments Concerning the Validity of these Life-Span Theories

These life-span theories appear to have been based on observation and were derived to be face valid. However, their general construct validity may be the most difficult to prove. The reason for this is the inherent difficulty in determining the validity of a theory that proposes to offer a sequence for the life-span development of males and females. The variability in the number of developmental paths, both between and within sexes, is the largest hurdle to overcome for any one theory. Once it has been shown to be valid across and within

many subsets of the population, then application of the model to other cultures is the next test. Thus, while a theory may hold for post-industrial, "Westernized" societies, it may not be universal.

As life-span development is a new approach to traditional developmental (i.e., child) psychology and somewhat distinct from gerontology, theories of adult development also are relatively new and, thus, untested. The exceptions to this are Erikson's (1963) theory of pyschosocial development (see above) and Havighurst's (1973) description of developmental tasks, although most of the experimental work in both cases has been centred in childhood. As such, these models remain untested, their validity being only that resulting from an intuitive understanding of the sequence and the structure imposed on that sequence (i.e., face validity).

Part of the validation process comes from addressing the criticisms of each theory and determining the applicability of the theory to life-span issues. However, validation of Havighurst's construct has never occurred as most realize the intuitive nature of the theory. As he has never linked his theory with other (personality) constructs there has been no reason to assume that men and women do not (modally) perform these tasks and that they are not as important as Havighurst has indicated. However, with more males and females opting for nonnormative lifestyles (or perhaps the norm is not precisely defined), perhaps this may change.

The validity of Levinson's and Gould's theories are not as easily determined. For both, it will come slowly as the method of obtaining

the initial descriptions was from interviews. As with Erikson's work, these two theories are waiting for researchers to test pieces of each theory to determine the direction of change or the falsehood to be replaced.

Finally, these theories are not competitive; i.e., they do not describe the same aspects of development and, therefore, they cannot be compared directly. Whereas Levinson provides a description of of the development of goals, roles and values, Erikson and Gould describe the development of the self-identity while Havighurst discusses the tasks within social roles. Thus, each theory must be tested by itself, and not compared to another.

## 4.2 Predictions for Gender Role Development

What predictions do theories of adult development make concerning gender roles? Surprisingly, very few. As can be seen by reviewing the nature of the Eriksonian crises, they become more affiliative and nurturant in adulthood. Although Erikson does not mention changes in terms of masculinity, femininity, or gender roles, he does emphasize the development of relationships and nurturing the next generation. These types of qualities have been ascribed to the female in society and are viewed as stereotypically feminine attributes. Thus, it appears that males should develop a more balanced gender role as they age. Supposedly, as females are nurturant already, and as there is a lack of emphasis on instrumental qualities, there is less change expected for them as they age, although this is not stated.

Havighurst also does not make predictions concerning the development of the gender role. In this case, post hoc assumptions about the overall nature of the tasks in each stage cannot be made as they are both instrumental/agentic and expressive/communal in nature. Further, as Havighurst does not make any statements concerning the personality attributes that accompany the execution of these tasks, there is no reason to assume that gender role (or any other personality) attributes will vary in adulthood or old age.

Levinson (1978), however, states that, as males age, they attempt to establish a balance between their masculine and feminine attributes. Levinson believes that males in the Early Adulthood Era want "to live in accord with the images, motives, and values that are most central to his sense of masculinity, and he tends to neglect or repress the feminine aspects of the self. Any part of the self that he regards as feminine is experienced as dangerous." (p. 230) Thus, Levinson believes that men between the ages of 18 and 45 years tend to express themselves in stereotypically masculine ways. Note that he does not say that men develop only masculine attributes. Rather, they possess both masculine and feminine attributes but neglect or deny the latter's existance.

In the Middle Adult era, Levinson notes that "every man ... must come to terms with the coexistence of masculine and feminine parts of the self" (p. 197) while incorporating their need to attach themselves to others with their need to be separate from them. This balancing may cause masculinity to be reduced, but Levinson believes that it may

result in a fuller expression of the trait dimension because it had been previously restricted by the need to constrain the feminine side of the self.

How Levinson's statements can be incorporated into gender role development predictions is unclear. When he states that males possess but deny or retrain their femininity, does this mean that the feminine qualities can be tapped by a gender role survey, or does this mean that they are hidden from this measure? If they are hidden, there should be differences between those in the two eras; if they are not, there should be no difference. Also, does this apply to behaviours and attributes equally, or does it concern one more than the others? What about individual differences? Are they present and, if so, what forms do they take? It will be interesting to see what Levinson finds with regard to females' development and acknowledgement of stereotypically masculine attributes.

Finally, Gould (1978) believes that "childbearing leads many women into stereotyped roles. To have a child, a women must in some measure rely on her husband to take care of her while she takes care of the child." (p. 99) There appears to be two parts to this assumption. First, women must give up their independence and their instrumentality. Second women must enhance their expressivity and their nurturance to fit the social stereotype. The same questions that were asked with regard to Levinson's work apply here. That is, is this change measureable by gender role surveys and in which domains (attribute, behaviour, attitude) does it take place?

# CHAPTER 5

# LIFE-SPAN GENDER ROLES: A REVIEW OF THE EMPIRICAL STUDIES

Although theories of gender role development and models of adult development have generated few hypotheses concerning post childhood gender role development, there have been many studies that have examined this variability and/or development in adulthood. Several of these have been cross-sectional in design, while others have used short-term longitudinal and person perception methods or have looked for differences between groups in two or more social contexts. Typically, most are performed without a basis in the theory of gender role development and most predictions are derived from intuitive interpretations of models of adult development.

This chapter presents a review of the empirical studies that have examined the concept of life-span gender role development. The studies have been grouped into three main categories: (1) person perception; (2) traditional developmental methods (i.e., [a] short-term longitudinal and [b] cross-sectional); and (3) cross-context. Following the review, there will be a discussion of the methodological considerations that may limit the generalizabilty of the conclusions drawn from the first part of this chapter.

## 5.1 The Studies

### 5.1.1 Person Perception

Studies examining life-span gender role development within a

person perception paradigm typically ask subjects to read prepared biographies of one or more stimulus persons (SPs) and rate the target(s) on a number of gender role attributes. The age and sex of the SPs usually are the manipulated features of this type of study. Results of person perception studies are important as they offer valuable evidence for the existence of social stereotypes which suggest that the attributes defining the instrumental and expressive domains of the gender role are expected to vary as a function of the manipulated variables.

As noted above, rationales for studying gender role development in adulthood are derived mainly from intuitive (and possibly erroneous) interpretations of adult developmental theories that stress the saliency of stereotypically masculine and feminine attributes during certain developmental periods. Several theorists have noted the nurturant aspects of old age (e.g., Erikson, 1963) and some have suggested a blurring or balance of gender roles in this period (e.g., Gutmann, 1975; Sinnott, 1977). Assuming that the majority of males and females possess more gender-congruent than gender-noncongruent attributes, a balance can be achieved either through the increase of gender-noncongruent attributes or the reduction of gender-congruent attributes.

Sherman (1985) noted this effect when she asked subjects to rate a SP described as an old man, old woman, middle-aged man, middle-aged woman, middle-aged person, or old person using a semantic differential. Her results indicate that subjects perceived the older

male SP to have fewer masculine attributes than middle-aged males while the older female SP was rated significantly more independent in old age than in middle-age.

Silverman (1977) used the Sex Role Scale developed by Rosenkrantz et al. (1968) to assess the perceptions of someone described as a male of "approximately" 25, 35, 45, 55, or 65 years of age, or as men or women in general. Silverman found that, in comparison to all other groups (with the exception of the "women in general" category), subjects described the 65 year old male as possessing significantly more stereotypically feminine attributes. Also, the 55 year old male was seen as possessing more expressive attributes than "men in general". It appears that both males and females in this study perceived males to increase their levels of stereotypically feminine attributes as they reach old age.

Minnigerode and Lee (1978) found that subjects saw less semantic distance between masculinity and femininity when SPs were decribed as old, as opposed to when they were described as adolescents or young adults. These researchers asked undergraduates for their perceptions of the following SPs: boy, girl, adolescent boy, adolescent girl, young man, young woman, middle-aged man, middle-aged woman, old man, and old woman. They found that the subjects perceived the adolescents and young adults to have the most polarized gender roles (i.e., male stimulus persons were high in masculinity and low in femininity; female stimulus persons were high in femininity and low in masculinity), the children and middle-aged targets to be moderately

separated and the old aged pair to be the least polarized. This can be interpreted as an equivalence, or balance, of the two attribute domains in the perceptions of the elderly stimulus persons.

Sherman and Gold (1978-79) examined perceptions of a typical and ideal middle-aged or elderly stimulus person using a three factor semantic differential technique. Their results indicate that, overall, those described as "ideal" were perceived to be more instrumental than the "typical" stimulus persons. However, the typical middle-aged SP was seen as more instrumental and autonomous (two stereotypically masculine attributes) than a typical elderly person. These differences disappeared for the perceptions of the ideal SPs.

O'Connell and Rotter (1979) assessed perceptions of both a male and female SP described as 25, 50, or 75 years old using the same three factor semantic differential. Their results indicate that, overall, the male SP was perceived to be more masculine sex-typed and the female SP more feminine sex-typed. With regard to the masculine attributes, the 25 and 50 year old male SPs were seen as possessing more of these than the female SPs of the same ages, however, this difference disappeared for those described as 75 years old (i.e., male and female stimulus persons were seen as possessing equal levels of stereotypically masculine attributes). The female SPs were perceived to be more feminine than the male SPs at all age levels. O'Connell and Rotter's findings suggest that males reduce their masculine attributes while maintaining their levels of feminine attributes.

The studies reported above suggest subjects perceive males and

females to vary their use of stereotypically masculine and feminine attributes across the life-span. However, are these stereotypes present in all age groups, or are there developmental trends in the possession of stereotypes for life-span gender role variability? Neugarten and Gutmann (1968) examined this problem. They asked subjects between the ages of 40-75 years to complete Thematic Apperception Test (TAT) protocols after viewing cards displaying two couples in a family-type surrounding: one elderly couple and one younger couple. They found that younger males and females perceived the old man to be the authority figure (the traditionally masculine role) while the older men and women saw a reversal of roles; i.e., that the female was the authority figure while the male was seen as submissive (the traditionally feminine role).

Ahammer and Baltes (1972) asked adolescent, adult, and elderly subjects to rate the desirability of possessing personality attributes in four areas: affiliation, nurturance (i.e., stereotypically feminine attributes), achievement, and autonomy (i.e., stereotypically masculine attributes). They compared these perceptions to the self perceptions of those in each generation. Adults perceived adolescents as desiring more autonomy than the adolescents rated themselves as wanting and adolescents and adults saw the elderly as wanting more autonomy than they desired for themselves. Also, adolescents and adults perceived the elderly as more nurturant than they reported. Ahammer and Baltes report that the adult group made the most errors in person perception, and the elderly the least. Also, the adult group

was the least misperceived and the elderly group the most misperceived.

Similarly, Luszcz (1985-86) asked adolescent, middle-aged and elderly subjects to rate ideal, real, and typical stimulus persons described as an adolescent, middle-aged, or elderly person using the three factor semantic differential. She reported that adolescents were seen as less autonomous than the older two target groups and the elderly were seen as the least instrumental. The elderly subjects contradicted the perceptions of the adolescents and middle-aged adults in that they did not see instrumentality to decline in old age. With regard to the type of rating (i.e., ideal, typical, or real), the ideal elderly stimulus person was perceived to be moderately instrumental but the typical elderly SP was seen as relatively ineffective. Thus, subjects viewed the elderly as significantly different than adolescents and middle-aged adults and these perceptions varied as a function of age of the rater only with regard to instrumentality.

Fischer, Hyland, McMahon, and England (1985) asked subjects in three age categories (university undergraduates as well as middle-aged, and elderly adults) to rate a typical same-sex, same-age peer and a typical opposite-sex, same-age peer using the attributes on the PAQ. These authors noted that those subjects in the young and middle-aged categories rated their male peers as more masculine-instrumental than feminine-expressive and vice-versa regarding their female peers. However, while the oldest subjects rated their female peers as more

feminine-expressive than masculine-instrumental, they regarded their male peers as possessing both attributes equally.

Two studies by Urberg (Urberg, 1979; Urberg and Labouvie-Vief, 1976) further highlight the developmental effects in the perception of the ideal male and female sex role. In the first study, Urberg and Labouvie-Vief (1976) asked a group of elementary and high school students, as well as a group of adults, to rate one target (ideal male or female) according to an adjective checklist of gender role attributes. Older subjects in this study perceived the stimulus persons to possess more achieving, nurturant and self-confident (i.e., positive masculine and feminine attributes) qualities than did the younger subjects. Also, this group of subjects saw the stimulus persons as less succorant and abasing (i.e., negative masculine and feminine attributes). Urberg (1979) attempted to replicate the earlier study; however, she was not able to find significant developmental trends in the perceptions of the ideal male and female gender roles.

A study by Sharp, Candy, and Troll (1980) examined the possibility that, along with differences in the content of stereotypes, young and old males and females may attend to different aspects of the individual when perceiving or judging them. When asked to generate descriptions of someone they know, there were significant sex differences and an effect of the subjects' age in the responses. Overall, males tended to concentrate on the external aspects of the person they were describing (e.g., occupation and their material possessions) while the women more often reported the intrapsychic

aspects of the person (e.g., good-natured and expressive). Also, the older subjects more often used terms which described these people in moralistic ways and with respect to their family roles. Thus, males may define gender role attributes in another person based on their physical aspects, females on their knowledge of the person's personality characteristics, and the elderly on the way the person conforms to social norms and family roles. All of these assumptions, however, have yet to be confirmed with further empirical evidence.

In a study with implications similar to those of Sharp et al., Sedney (1985) reports a study that asked females in four age categories (midforties, midthirties, midtwenties, and first year university students) to define masculinity and femininity. Sedney used semi-structured interviews to gain responses to several open-ended questions regarding their conceptions of the definitions of masculinity and femininity and found that younger women were more superficial, relying on concepts of the self, such as an "individual identity" and physical differences between the sexes. Older women spoke of role or behavioural differences. Both groups of women emphasized the psychological aspects of masculinity and femininity, a finding also reported by Sharp and her colleagues.

Two studies have used a social role approach to examine perceptions of gender role change in adulthood, both using the developmental task of parenthood as the social role. Rhodes (1986) asked subjects to rate male and female stimulus persons described as either a spouse, a parent, or a typical male or female using both

positively- and negatively-valued gender role attributes from the extended version of the PAQ (Spence, Helmreich, and Holahan, 1979). Her results revealed that the female parent and the female spouse were rated significantly higher than the typical woman on positively-valued masculine-instrumental items. The male parent was perceived to have significantly fewer of the negatively-valued masculine-instrumental items when compared to the typical male. With regard to the positively-valued feminine-expressive items, the male parent was perceived to have significantly more of these attributes than the typical male. Overall, parenthood appeared to have been a highly salient factor in the perception of others. Males were seen to give up negative aspects of their masculine-instrumentality and acquire positive aspects of feminine-expressivity. On the other hand, women in this role were seen as more masculine-instrumental than the typical women.

Uleman and Weston (1986, Study 1) asked parents to rate themselves on the BSRI using standard rating instructions and then, at a later date, under the instructions to describe themselves in their role as a mother/father. The authors noted that this manipulation produced significantly more androgynous parents than when the subjects rated themselves under the normal self-rating instructions. This means that, assuming women scored higher on the BSRI feminine-expressivity scale and men higher on the masculine-instrumentality scale, women and men would have had to increase their levels of cross-sex attributes in order to become androgynous. If they were undifferentiated in the

normal self-rating, they would have had to raise the absolute value of both attribute domains.

One other study has asked subjects to rate their gender role attributes based on their performance in other situations. Puglisi (1983) used a prospective/retrospective design to assess subjects' perceptions of their expected future gender role changes or their previous, past changes. He asked a group of university undergraduates to recruit two family members, one middle-aged and the other elderly. The subjects were asked to rate themselves on the BSRI at three target ages: 20, 45, and 70 years old. Puglisi found that males continually scored higher than females on the BSRI's masculinity scale and females higher than males on the femininity scale, with one exception: middle-aged male and female subjects did not differ on their projected feminine-expressivity score at age 70. Overall, subjects of all ages expected masculine-instrumental attributes to vary as a function of the projected ages. For each age cohort, masculine-instrumentality was expected to peak at age 45 and decline from this level when they rated themselves at 70. Feminine-expressivity, however, was not perceived to vary across these three age levels.

To summarize, studies that have used a person perception approach to examine life-span gender role stereotypes have found varied results. Most studies have shown that elderly males and females were perceived to balance their gender role attributes either by reducing levels of masculine-instrumentality or increasing levels of feminine-expressivity. Other studies have shown that these perceptual studies

may have been confounded by developmental or cohort-related trends in the content of these age stereotypes. That is, subjects of different age groups may perceive male and female stimulus persons differently. However, whether this is a developmental trend or a function of differential cohort socialization patterns has not yet been determined. These studies also have alluded to the possibility that sex differences exist in the perceptual process and that sex of the perceiver may covary with the developmental/cohort factor discussed previously.

Two methodological points, however, should be considered before attempting to make generalizations to adult developmental models or theories proposals of life-span gender roles. The first concerns the use of unvalidated measures of gender role attributes and the second examines the possibility that demand characteristics contaminate within-subjects designs.

i. Use of unvalidated measures.

The most popular measures of gender role attributes and stereotypes are the PAQ and the BSRI, although the use of other related measures (which are discussed in Chapter 2) is not uncommon. However, the problem with using a measure other than the PAQ or BSRI is the lack of data supporting its validity as a measure of gender role attributes or stereotypes. This is the case with the three-factor Rosencranz and McNevin (1969) semantic differential scales used in many of the studies examining stereotypes of SPs of different ages.

Authors such as Minnigerode and Lee (1978) have noted the similarity between the content of the scales and stereotypically masculine and feminine characteristics (i.e., instrumentality and expressivity) and many have added labels to the scales (on a post hoc basis) purporting them to be measures of gender role stereotypes. However, there is no evidence that these semantic differential scales measure the stereotypes that some authors state that they measure. There are no studies of their concurrent validity, examining the correlation between ratings on these scales and those, for example, from the PAQ or BSRI. There are no studies of the construct validity of the semantic differential that assess the relationship between the scales that are assumed to measure masculine-instrumental attributes or stereotypes and those that are assumed to measure feminine-expressive attributes or stereotypes. Further, although Rosencranz and McNevin report three orthogonal factors, the dimensionality of the scales has yet to be confirmed.

In summary, studies that use measures of gender role attributes or stereotypes that have not been validated are difficult to interpret as legitimate findings. Validation of these scales should be undertaken to confirm what others have speculated.

ii. Between-subjects versus within-subjects designs.

Many of the studies using a person perception paradigm have employed a within-subjects methodology. These types of designs often ask subjects to rate several stimulus persons using the same dependent

measure. Kogan (1979) has criticized this type of research because of the demand characteristics it places on the subjects. He believes that, when subjects are presented with several stimulus persons and are asked to rate each one (e.g., on the PAQ), they assume that there are differences between these targets in the dimensions upon which the experimenter is testing. This biasing effect may present differences where they do not exist (i.e., the equivalent of a Type I error), or they could enhance existing stereotypes.

Using an example of life-span gender role research, subjects who are asked to rate a typical male who is 30 years old, using the PAQ, and then again at 65 years old may report significant differences between the two targets because they believe that the experimenter expects there to be differences.

However, a within-subjects design has its benefits as well as its drawbacks. In this type of design, subjects act as their own controls, reducing the amount of error variability in the design. These designs also are important when a large subject pool is not available to complete a full between-subjects design. Further, statistical procedures are available to detect correlations between the levels of the within-subjects factor and control for their presence in the inferential process (see Chapter 6).

### 5.1.2 Traditional Developmental Models

Two designs within the traditional developmental paradigm have been used to examine the variability of gender role astributes in

adulthood: (a) the short-term longitudinal and (b) cross-sectional designs. This section will examine the life-span gender role research stemming from the use of these two methods as well as the methodological considerations associated with the interpretation of these data.

a) Studies Using a Short-Term Longitudinal Design

Some studies report longitudinal changes in masculinity and femininity. However, interpreting these results is almost impossible. The present long-term longitudinal studies which are reporting developmental changes in adulthood all began to collect data before the 1970's. At that point, gender roles were thought of, not as two orthogonal aspects of a highly diverse identity, but as the two poles of a bipolar continuum (i.e., masculinity at one end and femininity at the other). Those studies which report changes in gender roles are reporting one of two things: changes over time on a nonvalid instrument which operationalizes the gender role construct in a bipolar fashion; or self-reported changes in idiosyncratically defined masculinity and femininity. Further, the results from a traditional longitudinal design are indicative of the period and cohort from which the subjects were drawn. That is, what may be reported in one study for one group, may not be replicated by another study using a different sample.

Short-term longitudinal designs are a compromise, although period and cohort are even more highly confounded using this method than in a

longitudinal study. Such designs usually follow subjects through a transitional period (e.g., the birth of the first child), assessing their changes on a gender role instrument at various points in the developmental process. Changes which occur may be attributed to a possible developmental source; or, at least, may be highlighted as an area in which to concentrate future research.

Feldman and Aschenbrenner (1983) reported the results of a short term longitudinal study examining the changes in masculine and feminine role behaviours, personality attributes and the gender identities of first-time parents from the beginning of the third trimester of pregnancy to the point when their infant was six months old. Subjects were brought into the laboratory at the beginning of their third trimester. At this point, a measure of their masculine and feminine role behaviour was taken. This involved computing a composite of their spontaneous responses to a an unfamiliar infant (this was done covertly, without the subjects awareness) as well as scores from self-report measures such as nurturance (feminine role), satisfaction with expressiveness (feminine role), feminine task score from a responsibilities checklist (feminine role), satisfaction with instrumentality (masculine role), and the masculine task score from the responsibilities checklist (masculine role). Each subject received a masculine and feminine role score. Sex-typed personality was measured using the BSRI, and gender identity was measured using the items "masculine" and "feminine" from the BSRI.

Feldman and Aschenbrenner's first finding concerned the stability

of their measures across the approximately nine month period. Role behaviours were the least stable characteristics with product-moment correlation coefficients ranging between 0.33 (masculine role behaviour for women) and 0.71 (feminine role behaviour for men). Gender identity was moderately stable, with the exception of males' sense of masculinity at Times 1 and 2 correlating only 0.33. All other coefficients ranged between 0.70 and 0.77. The most stable factors were the personality measures, whose coefficients ranged between 0.70 (men's femininity scores) and 0.90 (men's masculinity scores).

However, even though these measures appeared to be stable, there were significant changes over time. Feminine role behaviour became accentuated for both males and females, as did their gender identity scores. There were no significant differences on their BSRI feminine-expressivity scores between Time 1 and Time 2. On the other hand, masculine-instrumental personality traits varied significantly between the two points as both males and females rated themselves more masculine-instrumental at Time 2.

Feldman and Aschenbrenner found that, when pregnant, the women showed virtually equal feminine and masculine role scores while the males had a higher masculine than feminine role score during the period of their wives' pregnancy. After the birth of the child, this effect was reversed. The women became more female role-oriented and the men showed equal (i.e., balanced) role scores.

Along these same lines, Brouse (1985) examined gender role changes in primiparous (i.e., first-time) and multiparous women from

the third trimester of pregnancy to two or three weeks postpartum and then four to six weeks postpartum. Brouse not only wished to assess the differences in gender roles across the three testing periods, but also the difference between first-time mothers and those who have had previous children (i.e., already are engaged in the parenting role). This latter point suggests that multiparous women will display less gender role variability across the three rating periods. However, Brouse found no overall difference between the two groups.

When comparing the high-feminine (androgynous and feminine sex-typed) and low-feminine (masculine sex-typed and undifferentiated) groups, her data revealed that the high-feminine group increased their femininity scores in a linear fashion across the three rating periods, while the low-feminine group increased their femininity from Time 1 to Time 2 and then decreased in their ratings from Time 2 to Time 3. This finding suggests the possibility that high-feminine women are better able to sustain adult gender role development associated with the birth of a child.

Also with respect to pregnancy, Dixon and Strano (1984-85) examined the effects of abortion on a group of women's self-reported gender roles. Subjects were approached at an abortion clinic and those who volunteered to participate in the experiment completed the BSRI before the procedure was performed. BSRIs also were completed two weeks and three months after the procedure. Although Dixon and Strano hypothsized that there would be a reduction in femininity scores from the pretest to the post-test and the follow-up, they reported that

femininity scores did not differ across the three rating points.

They also predicted a significant increase in masculinity ratings, as they perceived the decision to have the abortion and live with the consequences to require the flexibility and instrumentality inherent in the androgynous personality (this hypothesis assumes that most women were feminine-typed before the procedure). Consequently, they predicted an increase in masculine-instrumentality and androgyny scores (Bem's original t-value) from the pretest to the follow-up. Both masculinity ratings and androgyny values increased from the pretest to the post-test and from the pretest to the follow-up.

Using a sample of parents in twenty-six families, Bailey (1987) found four year retest coefficients for the PAQ to vary from 0.60 to 0.85. For fathers, the masculine-instrumentality scale had the highest degree of stability (0.85) while the feminine-expressivity scale had the lowest (0.60) suggesting that being a father of children between 2 and 6 years of age affected self-reported femininity more so than self-reported masculinity. For the mothers, both PAQ scale scores were moderately stable (0.76 and 0.81, respectively).

Analyses of variance for repeated measures showed that fathers reported significantly higher masculine-instrumentality scores than mothers and that these scores varied significantly as a function of the time of testing (these attributes increased from Time 1 to Time 2). For the feminine-expressivity scale, fathers scored less than the mothers when their child was two years, but there was no significant difference when their child was six years old (i.e. feminine-

expressivity scores increased significantly for the fathers).

Yanico (1985) studied the BSRI's four year test-retest scores in a group of female university students. Correlations between the two administrations were only 0.55 for the masculinity scale, 0.68 for the femininity scale, and 0.61 for the androgyny score (M scale minus F scale). These correlations were significantly different from zero and the coefficient for the femininity scale was significantly higher than that for the masculinity scale. These moderate retest coefficients suggest that masculinity and femininty, as defined by the BSRI, were not completely stable characteristics. An analysis of the differences between the two means for each of the BSRI scales showed that, although masculinity scores appeared to increase and femininity scores to decrease, these effects were not signicantly different than would be expected by chance.

A short term longitudinal study by McBroom (1984, 1987) highlights the effects of sex and social role transition on gender role traditionality. McBroom (1984) sampled individuals in three age cohorts: 23-32, 33-41, and 42-52 years. Subjects participated in a random, stratified mail survey in 1975 and a second, identical survey in 1980. Gender role traditionality was measured by responses to the following items: husbands should be more strict with their wives, women are too independent these days, a woman's place is in the home, a man should wear the pants in the family, and a husband should help with the housework (reversed scoring). McBroom's definition of gender role traditionality is similar to that of other gender role attitudes

(e.g., Spence and Helmreich, 1978), and should not be confused with gender role attributes which are considered to be personality characteristics.

McBroom calculated gain scores to assess changes in the sample over the five year interval (i.e., the 1980 scores were subtracted from the 1975 scores). The results showed that, overall, the sample was less traditional in 1980. This, however, varied as a function of the sex of the respondent, their marital status, and whether or not they altered that status. Both males and females became less traditional but the females reported a greater decrease in traditionality. Also, there were significant differences between the three cohorts, the youngest cohort reporting the most change, the oldest cohort the next, and the middle cohort the least.

Marital status affected the results to a surprising degree. Subjects who remained single or who were separated or divorced from their spouse in the 5-year interval had the least degree of change. Subjects in the older cohort who remained married reported greater change in their sex role traditionality. The most change, however, came from those women who were married between the two testing times. These women reported a large reduction in traditionality, especially in light of the fact that they were more traditional at the first testing time than their already married, same cohort counterparts.

McBroom (1987) used multiple regression to assess the relationship between the gain scores reported above and the following independent variables: sex of respondent, work status, marital status,

and whether or not the subjects had an increase in the number of children in their family. For men, a decrease in traditionality was significantly related to the continuation of the marriage role. However, for women, a decrease in traditionality was significantly related to change: becoming married or putting increased emphasis on the value of their career/work (i.e., becoming employed).

Although not a major contributor to the amount of variance accounted for in the equation, the advent of additional children accounted for a significant decrease in the women's, but not men's, traditionality. Putting an increased value on one's family and/or marriage also was significantly related to an increase in one's traditionality.

In summary, the findings from short-term longitudinal studies indicate that parenthood is an influential developmental task with regard to the gender role attributes, role behaviours and attitudes. However, given the intuitive understanding that parenthood is associated with expressivity in females and instrumentality in males (i.e., gender role divergence [Gutmann, 1975]), it is surprising that these studies do no show consistent increases in gender-congruent attributes and roles. Although Feldman and Aschenbrenner found that women increased their feminine role behaviour after the birth of their child, there was not an increase in the males' masculine role behaviour. Further, feminine-expressivity did not vary across the pregnancy in two of these three studies or in Dixon and Strano's examination of the effects of abortion on gender role attributes. Only

in Brouse's study was their a reported effect for feminine-expressivity and this showed that there were individual differences in the way that this attribute domain fluctuated.

When differences in masculine-instrumentality did occur, they did not occur in the manner expected by Gutmann (1975). That is, both males and females increased their levels of instrumentality across the onset (and aborting) of pregancy and as the child aged.

Lastly, while there are no expectations for the variability of traditional gender role attitudes, it appears that remaining in the same role (i.e., parenthood) is sometimes related to the retainment of traditional attitudes. Change in one's role, even the addition of more children for women, caused a decrease in traditionality.

b) Studies Using a Cross-Sectional Design

There have been many studies that have used a cross-sectional method to examine the question of gender role development. These studies typically collect a large sample with a diverse age span and categorize their sample's ages into three or four (usually meaningful) groups. Experimenters then look for differences in masculine-instrumentality and feminine-expressivity between the various levels of the age variable. Another way researchers have asked this question has been to create androgyny categories from the masculine-instrumentality and feminine-expressivity items and look for differences in the mean ages between the four groups.

Several studies using a cross-sectional design have shown that

older adults display more cross-sex gender role attributes or that they become less sex-typed by decreasing levels of gender-congruent attributes. Not every study, however, shows that males and females increase or decrease, with respect to their levels of these attributes, in the same manner at the same age. Rather, they show a highly diverse pattern, one that indicates that males and females may follow differential pathways of development.

Foley and Murphy (1977) used the Sex-Role Questionnaire (Rosenkrantz et al., 1968) to examine gender role attributes in a group of men and women between the ages of 65-85 years. Their results were compared to those of the normative sample (i.e., university students). Foley and Murphy's findings showed that older males displayed significantly more feminine-expressive, and fewer masculine-instrumental, attributes than the males in the normative sample. Women in the elderly sample, however, were comparable to the normative ratings in the feminine-expressivity domain and possessed more masculine-instrumental attributes.

Hubbard, Santos, and Farrow (1979) examined the differences in PAQ masculine-instrumentality and feminine-expressivity scores between middle-aged and old-aged married couples. Their data revealed that there were significantly fewer sex-typed subjects in the older group, the gender role categories of this group being mostly androgynous and undifferentiated. Middle-aged males scored significantly higher than middle-aged females on the masculine-instrumentality scale but this trend was reversed in the old age group, with females being more

masculine-instrumental than the males.

Hyde and Phillis (1979) assessed differences in BSRI scores in a sample of subjects between the ages of 13-85 years. Employing the median split method to categorize subjects into those with androgynous, masculine sex-typed, feminine-sex-typed, or undifferentiated gender roles, Hyde and Phillis found that, as subjects aged, there was an increase in the number of males who reported androgynous gender roles, while the number of androgynous females decreased with age. (As noted earlier, in order to be considered androgynous, males would have to increase their levels of feminine-expressivity while females would have to increase their levels of masculine-instrumentality.) Keane (1986), however, sampled women between the ages of 18-60 years old and found the opposite. That is, significantly more older women were classified as androgynous.

Fischer and Narus (1981) demonstrated significant age effects in a sample of university students whose ages ranged from 16-54 years (the majority of subjects, however, fell within the 18-22 year old range). Their data revealed that older men and women were more likely to report androgynous gender roles; however, the effect for the males only approached significance. Categorizing their subjects by age, Fischer and Narus found that, for males, the eldest cohort rated themselves significantly higher in feminine-expressivity than the younger three cohorts. Also, the eldest two cohorts of females rated themselves significantly higher in masculine-instrumentality.

Pratt, Golding and Hunter (1984) examined differences in both PAQ

and BSRI scores in a small sample aged 18-75 years and found that BSRI-rated femininity scores increased with age for males. There were significant effects neither for males on the PAQ femininity scale nor for females on either instruments' scales.

Costa and McCrae (1977) examined cross-sectional differences in field-independence and tough-mindedness (i.e., two characteristics that are stereotypically attributed to males) in two groups of adult males (25-35 and 55-82). The older subjects displayed significantly less of these traditionally masculine characteristics than the younger subjects. Costa and McCrae also determined that field-independence and tough-mindedness were positively correlated in the younger group but they were not related at all in the older group. Thus, whereas the younger group showed a clustering of these stereotypically masculine attributes, the older group showed less of an overall impact of these masculine gender role attributes on their self-concept.

Suzuki (1979) asked males and females in four age categories (18-24, 25-49, 50-60, and older than 60) to complete the BSRI. She hypothesized that men over 60 would endorse more feminine BSRI items and fewer masculine items while there will be no significant differences for women on either scale. The results showed that males 25-49 rated themselves significantly higher on the masculinity scale than did the males over 60. There were no other significant differences for the males or the females.

Fischer, Hyland, McMahon, and England (1985) asked subjects in three age groups (young adult, middle-age, and old age) to complete

the PAQ. Masculine-instrumentality scores were higher in the young adult and middle-aged groups but feminine-expressivity scores were the same across all three age categories.

Macdonald, Ebert, and Mason (1987) used the PAQ to examine gender role changes in a sample of males and females 17-88 years old. Correlational analysis showed a negative relationship between age and both masculine-instrumentality and feminine-expressivity for the women only. No significant relationships emerged for the males.

Spence and Helmreich (1979) examined differences in masculine-instrumentality and feminine-expressivity in samples of high school students, university students, parents of elementary school children, and parents of university students. Spence and Helmreich reported that there were no significant differences between the four groups on the PAQ's feminine-expressivity scale. However, the male parents reported significantly higher levels of masculine-instrumentality than the students.

Puglisi and Jackson (1981) administered the BSRI to subjects betwen the ages 17-89 years old. Males scored higher than females in masculinity ratings in all age cohorts and vice versa for females and femininity. Puglisi and Jackson note that masculinity scores peaked at aged 30 for females and 40 for males and then went into decline while self-reported feminine-expressivity remained stable.

Banta Chinn (1984) examined gender role socialization in four age cohorts of women, 28-65 years old, and noted that most women in the eldest two cohorts (50-55 and 60-65 years) rated themselves as

feminine sex-typed while the younger two age cohorts (28-33 and 40-45 years) rated themselves mainly as androgynous.

Monge (1975) used a semantic differential technique to assess differences in the self-concepts of a group of subjects, 9-89 years old. Monge derived four factors from his scale, which he labelled Achievement/Leadership, Congeniality/Sociability, Adjustment, Masculinity-Femininity. Three of these factors are traditionally masculine in orientation, the Congeniality/Sociability factor being traditionally feminine. The results showed that, overall, males scored significantly higher on the masculine factors and females on the feminine factor. Males and females in the 9-19 years age range were the most sex-typed and the degree of sex-typing decreased as subjects aged.

Studies that have found no differences across age groups include a report by Gillett, Levitt, and Antonucci (1977) which examined gender roles in 10 families, each containing three generations of women. These authors found that there were no generational differences in stereotypical masculinity or femininity.

When Urberg (1979) extended her previous study (Urberg and Labouvie-Vief, 1976) in which she assessed various age groups' perceptions of the gender roles of male and female stimulus persons, she also asked subjects for their self-reported gender roles. Urberg, however, reports no significant differences in self-reports across the age levels.

Robinson, Skeen, and Flake-Hobson (1982) examined the self-

reported gender roles of homosexual males across four age cohorts (13-20, 21-30, 31-40, and 41-60+ years). They found no significant relationship between the age and androgyny categories.

Cameron (1976) asked white, urban males and females (18-79 years old) to rate themselves as either "above average", "average", or "below average" compared to all other adults of their sex in the following areas: femininity and masculinity of personality style, possession of feminine and masculine interests, feminine and masculine skills, and social pressure to do feminine and masculine "sorts of things." Analyses showed that there were no effects due to the subjects' age.

Hall and Frederickson (1979) asked male factory workers under and over 30 years of age to view 20 cartoons through a tachistoscope set for a one second exposure. Each cartoon depicted a sex-ambiguous stimulus person performing either a traditionally masculine or feminine task. The subjects assigned a label of male or female to the ambiguous stimulus person in the picture. If the subject assigned more gender-appropriate labels to the SPs performing the sex-typed tasks, they were labelled gender stereotyped. The researchers found no significant difference between the two age groups in their degree of gender stereotyping.

White (1979) examined gender role attributes adult nurses of varying ages. White's results showed that there was no effect for subjects' age on either the agentic or communal scales of the Adjective Checklist (Gough and Heilbrun, 1965).

Some studies have examined constructs related to gender role attributes using a cross-sectional method. For example, Pepe and Wyly (1976) used a survey designed to assess gender role traditionality in a sample of white, middle class males and females. Subjects were approximately evenly distributed among three age cohorts: 20-25, 40-49, and 60-69 years. Their results indicated that females in the 20-25 and 60-69 year old cohorts were the least traditional in their gender role attitudes, while the women in the 40-49 year old cohort were the most traditional. For men, traditionalism increased with age as the youngest cohort was the least traditional and the latter two were the most traditional.

Zey-Ferrell, Tolone, and Walsh (1978) examined sex role egalitarianism in married couples and their university-aged children. They found that female undergraduates were more egalitarian than male undergraduates but that the mothers were not more egalitarian than the fathers. With regard to generational differences, female undergraduates were more egalitarian than their mothers but male undergraduates were not more egalitarian than their fathers. Crossing generation and sex of respondent, female undergraduates were overwhelmingly more egalitarian than their fathers but male undergraduates did not appear to be more egalitarian than their mothers. Thus, it appears that there is a trend in the socialization of women that they should be more egalitarian in their attitudes towards the female role but that this has not yet affected the males. Also, younger women were more egalitarian than older women who

appeared to be established in roles and relationships that were defined before the trend toward egalitarianism.

A study by Albrecht, Bahr, and Chadwick (1979) assessed the preferred and actual divisions of labour in the household, marital decision-making, and attitudes towards alternative family styles (e.g., both husband and wife employed full-time and a nanny is brought in to look after house and child, or both husband and wife work part-time and share housekeeping and child care tasks) in married couples under 30 years of age, 30-44 years, 45-64 years, and older than 64. The findings were analysed across four marital roles: the provider role, the housekeeper role, the kinship role (maintaining contact with relatives), and the child care role; the first being a stereotypically masculine role and the latter three being stereotypically feminine. Results revealed that those in the older cohort were much more likely to respond that all the roles were enacted by the husband and wife equally.

In summary, studies examining the differences between various age cohorts with respect to gender role attributes have found evidence that gender roles do indeed vary in adulthood, but that there is no set pattern for that development. Some studies report that males and females have similar patterns of development in that they increase their levels of cross-sex gender role attributes in old age. However, the same or other studies hint at the presence of differential patterns of development, in that males and females do not always change their gender-congruent attributes in the same manner.

How can one be certain that these findings are the result of development and do not represent cohort effects? If one assumes that gender roles attributes have undergone a recent liberalization, in that it has been only recently that males and females have been encouraged to develop and display cross-sex gender role attributes, then one must assume that those socialized before this social change would be more sex-typed in their use of these attributes. If development in these older cohorts has not taken place, then elderly males should rate themselves high in masculine-instrumentality and low in feminine-expressivity while the opposite would be true for females. Several studies, however, have shown this not to be the case, as males and females either have perceived themselves to be balanced in one or more gender role domains (i.e., no sex differences) or there has been a self-perceived gender role reversal.

c) A Methodological Consideration

As with the studies examining gender role stereotypes, there is an issue that should be raised for discussion in that it may effect the interpretation of the findings presented above. This is the use of similar but different gender role constructs. Both short-term longitudinal and cross-sectional studies have examined gender role attributes and gender role attitudes in subjects of various ages. However, a point to be considered is the interpretation of studies that use measures of gender role traditionality or egalitarianism, as opposed to gender role attributes. These former constructs tend to

represent attitudes; e.g., should women be allowed to work while the children are still in school? If a women is more qualified than a man applying for the same position, should she get the job? If someone answers by stating, for example, that women belong in the home looking after the family while men bring home the money, then they are classified as traditional. Egalitarianism is a similar construct and represents the idea that men and women are equal and should be treated equally in all respects. This also is an attitude.

These measures do not assess self-subscription to gender role attributes or perceptions of gender role stereotypes. Further, Spence and Helmreich (1978) have shown that the PAQ (a measure of masculine-instrumental and feminine-expressive gender role attributes) is only modestly correlated with the Attitudes Towards Women Scale (Spence and Helmreich, 1978), a measure of gender role traditionality. Thus, the distinction between the two types of measures should be made and, as they are not comparable constructs, measures of gender role attitudes should be interpreted differently than those assessing gender role attributes.

### 5.1.3 Cross-Context

Some studies have looked at how differences in social contexts or social roles affect the self-perceptions of those who are in those contexts or roles. This method asks research questions such as: do women in traditional versus nontraditional occupations differ in their self-perceptions?; Do men who stay home and look after the children

while their wives go out to work differ in their self-reported gender roles from men who go to work while their wives stay home to look after the children?

Abrahams, Feldman, and Nash (1978) considered the hypothesis that social context mediated self-reported BSRI masculine-instrumentality and feminine-expressivity. They chose to study the effects of four relationship situations: cohabitation (without children), married (childless), married (expecting their first child), and married (with a child between 6 and 12 months). Abrahams et al. felt that, as the latter contexts were indicative of greater involvement in the parenting role, feminine-expressivity would increase for the females; however, males at parenthood were expected to experience a decline in feminine-expressivity because they believed this role to be indicative of a divergence of tasks which leads to a divergence of self-concept. Masculine-instrumentality, for both males and females, was expected to increase until the parenthood stage is reached where the opposite trend to feminine-expressivity is expected to occur; i.e., males will report higher levels of masculine-instrumentality and females will report lower levels.

For females, the expected linear increase in feminine-expressivity was observed. The males' feminine-expressivity scores did not vary significantly across the four contexts. The predictions for masculine-instrumentality were not entirely met, as women showed a significant decrease in masculine-instrumentality in parenthood but the males' scores did not vary significantly across the contexts.

Feldman, Biringen, and Nash (1981) examined variations in self-reported gender roles across eight family life cycle groups: adolescents, single (no children), married (childless), married (expecting first child), young parents (youngest child less than 10 years old), mature parents (youngest child between 14 and 17 years old), empty nesters (children no longer lived at home and were not grandparents), and grandparents.

Feldman et al. used factor analysis to reduce the data from the short form BSRI to nine factors, of which five were classified masculine and four feminine. They also used the BSRI's original scale scores. To summarize their findings, the effects of position in the family life cycle were more pronounced for the feminine factors (compassion, tenderness, social inhibitions, and immaturity/athletic) as both males and females varied significantly across family life cycle categories on all of these. Those in childless stages show decreased levels of compassion and tenderness and more social inhibition.

In the masculine category, however, only three of the five factors (autonomy, aquiescence, nonassertiveness) varied significantly as a function of the eight family groups and one of these (autonomy) was significant only for men. Two factors (leadership and self-ascribed masculinity), plus the BSRI scale score for masculine-instrumentality, showed no significant effects for family life cycle stages. A couple's pregnancy and/or parenthood appeared to enhance masculine-instrumentality in males and lessen these attributes in

females.

Whereas Feldman and her colleagues pointed to the importance of the family context in the variablity of self-attributed personality characteristics, Cunningham and Antill (1984) conclude that an "individual's involvement in the adult world of work and study has a greater impact on his or her masculinity and femininity scores than a nurturant role toward children." (p. 1135). These authors assessed the relationship between BSRI-rated masculine-instrumentality and feminine-expressivity in four family context groups: dating, cohabiting, married, and divorced. Using regression analyses, they noted that there were very few effects for men's masculine-instrumentality scores. The main effect for the family contexts only approached significance.

However, the interactions between the various life contexts and the subjects' employment status provided more information than the family cycle main effects. For example, while cohabiting males whose partners were employed showed the lowest masculine-instrumental self-ratings, dating males whose partner was not employed showed the highest (both couples were employed in the majority of cohabiting couples). Non-employed, married women had the lowest masculinity ratings of all family life stages.

Feminine-expressivity scores were more variable across the social contexts but, again, they were more understandable in terms of their relationship to employment status. While dating women had the highest feminine-expressivity ratings when compared to the women in all other

family cycle categories, employed women had significantly lower scores than non-employed women. Those women who were studying had significantly lower feminine-expressivity scores than those who were not studying.

Erdwins, Tyer, and Mellinger (1983) offer an indirect extension of Cunningham and Antill's assertion that being involved in a student role promotes nontraditional gender roles. They examined the effects of age and roles on a sample of women divided into six groups. Group 1 consisted of single university students. Group 2 was a sample of married female students with one or more children between the ages of 1-15 years. The third group was of married students with children older than 15 years. Group 4 consisted of a sample of married homemakers with children between the ages of 1-15 years. Group 5 was made up of homemakers with children older than 15 years. The last group consisted of married or widowed women (60-75 years old) with one or more children. Presumably, this latter group was retired and their children had left the nest, although this was not stated.

Using the BSRI as well as scales from the Edwards Personal Preference Schedule (affiliation) and the California Psychological Inventory (achievement via independence, responsibility, and self-control), Erdwins et al. found that the mature students (groups 2 and 3) scored highest on achievement and towards the low end on the BSRI femininity scale. The older nonstudents, however, scored higher on all measures of femininity and scored the lowest on the BSRI masculinity scale. Thus, the older cohorts who did not attend school appeared to

have more traditional gender roles in comparison to the mature students who were combining motherhood and education.

Boser (1985) examined the effects of marriage and parenthood and child-rearing on female's self-attributed gender roles in a novel way. Her subjects were married women with children and Franciscan Sisters, a group whose life-style precludes these two options. Both groups completed the PAQ. Although chronological age data were not given for the two groups, the author stated that three age groups were studied: young adulthood, middle age and old age. Her results indicated that the Sisters were more androgynous than secular women in the young adult and middle age groups, suggesting that parenthood may be related to polarized gender roles. Within-group analyses showed that mid-life Sisters were categorized as androgynous more frequently than older Sisters, who more often were classified as undifferentiated. Also, the younger Sisters more often were classified as feminine sex-typed compared to the middle-aged Sisters.

Other studies of nonnormative lifestyles include one by Rosenwasser and Patterson (1984-86) who compared the BSRI scores of a group of nontraditional males to the medians reported by Hyde and Phillis (1979). A nontraditional male was defined as a man whose wife was employed outside the home and who had more than half of the responsibility for childrearing and maintaining the household. Their results show that there were more androgynous men in this sample when compared to Hyde and Phillis' adult sample.

Ripley (1984) designed a study to test Gutmann's Parental

Imperative Model (Gutmann, 1975). She used the PAQ to assess gender role differences in parental and post-parental males in each of three age groups. Support for the model was gained as parental fathers rated themselves significantly more masculine-instrumental and less feminine-expressive than post-parental males. Chronological age was not related to masculinity or femininity.

A similar hypothesis was tested by Cooper and Gutmann (1987) on a sample of middle-aged women. Half the women in this study were pre-empty nest and the other half were post-empty nest. However, unlike the study reported above, there was no significant relationship between parental status and self-reported scores on the gender role questionnaire. An analysis of individual characteristics, however, revealed that pre-empty nest women perceived themselves as more submissive and less aggressive (i.e., more nurturant in the way predicted by the Parental Imperative Model) than the post-empty nest group. Similarly, the post-empty nest group saw themselves as more self-confident, assertive, creative and better able to problem-solve (i.e., they perceived themselves to be more agentic) than the pre-empty nest group.

In summary, studies examining the differences in the self-reported gender role attributes of those in differing social contexts or social roles have found sufficient yet inconsistant evidence for possible variations in adulthood. Studies centring on the family life cycle have shown significant differences in measures of feminine-expressivity between those at its various stages; however masculine-

instrumentality was not as variable. Other studies have shown that occupational and student roles were related to less stereotypical gender roles.

While it is not possible to state cause and effect (i.e., developmental) relationships with this data, it may be that gender role variation in adulthood is a function of the social context. Alternatively, subjects with less stereotypical gender roles may be drawn to various student, occupational, and family roles. Although this is a problem in the interpretation of these data, the studies reported above are important in that they compliment social role analyses of the stereotypes in these contexts. When the contexts are those that carry highly gender-typed connotations, it may be possible to determine the differences between stereotypes and self-attributions.

### 5.1.4 Concluding Comment

To summarize, this chapter has reported several empirical studies that have examined gender role development in adulthood. Curiously, this research has evolved without impetus from theories of gender role development or models of adult development. However, the research is plagued by several methodological flaws. First, studies (especially those using a person perception paradigm) have used nonstandardized measures of gender role attributes. Second, many studies examining gender role stereotypes have used within-subjects methodologies that may have created a bias in the responses. Last, several studies have

confused gender role attributes with gender role traditionality and egalitarianism.

The results of these studies have demonstrated the homogeneous nature of gender role attributes. The resulting conclusion must be that adult gender role development does take place; however, the pathways of this development must be examined further.

# CHAPTER 6

## THE PRESENT STUDIES: AN OVERVIEW

The many studies reported in Chapter 5 indicated that gender role attributes are not stable personality characteristics, but that they are subject to variability across differing chronological ages and social contexts. However, when these studies are combined, several weaknesses come to light. For example, each study appeared to be a "one-off thing". That is, the studies did not appear to be part of a larger, well thought out research programme designed to examine life-span gender roles. The individuality of each study has not allowed for much methodological or theoretical advancement as many authors have only replicated previous studies with minor modifications to their sample characteristics.

In order to make a meaningful contribution to the study of life-span gender roles, there are several avenues that a research programme should take in order to build upon these studies. One direction is to clarify the research questions so that the programme examining life-span gender roles becomes purposeful. This involves addressing three issues. First, it must be determined which dependent variable is of interest: attributes, attitudes, or behaviours? Is one more important than the other? Are there differences expected between the three domains? As these three domains are not comparable, they should be examined separately. Secondly, the same dependent variable (in conceptual terms) must be used throughout the programme in order to

maximize the generalizability and comparability between studies. Thirdly, questions concerning the importance of chronological age must be considered. For example, is chronological age itself the determinant or are gender roles expected to vary in adulthood as a function of some other social organizing feature(s)? If the former is of interest, then are ages to be examined on a continuum or in categories (e.g., young adult, middle adult, and elderly)? If the latter is deemed to be of importance, what social contexts are expected to influence gender roles? How are these contexts defined (e.g., developmental tasks, social roles)? How are they related to other aspects of development, including chronological age?

A second direction is to help clarify issues concerning dependent measures. Researchers must be reminded of the conceptual differences both between and within measures of gender role attributes, attitudes, and behaviours. If different instruments are used to measure the same construct, it is important that they are comparable (i.e., highly correlated) in order to avoid unwanted variablility due to measurement error. Also, if measures of different constructs are used, they should be identified as such. Further, once this distinction is made, all instruments must be shown to be valid and reliable in samples of varying chronological ages. The reason for this is that most scales were developed with university students. Although this group is homogeneous with respect to many demographic features (Sears, 1986), chronological age is the most obvious difference when asking life-span developmental research questions.

A third direction concerns the relationship between empirical findings and the method(s) used to assess the research questions. For example, most studies examining self-reported life-span gender roles have used a cross-sectional or short-term longitudinal design. Would similar findings emerge if the same questions were asked using different methods (e.g., retrospective interviews or a prospective questionnaire)? Are self-reported life-span gender roles similar to life-span gender role stereotypes?

This chapter presents an overview of the seven studies of life-span gender role development that are presented in Chapters 7 through 14, inclusively. These studies were designed with the above research directions in mind. Each used the same dependent variable and measuring instrument, as well as the same method of categorizing the life-span. However, the seven studies varied widely in terms of their methodology. Thee process of clarifying the research questions is examined first and this is followed by a discussion of the relationship between empirical methods and results. Next, each of the studies is outlined according to the type of methodology that was used to examine the life-span developmental hypothesis: (1) person perception; (2) self-perception, and (3) cross-sectional. This is followed by a discussion of the methodological issues that must be considered in order to interpret the data properly.

## 6.1 Clarifying the Research Questions

In order to arrive at the statement of purpose noted above, a

two-part process of clarification was needed. The first step was to determine which gender role domain was to be assessed and select the dependent measure to be used throughout the research programme. The second step involved the determination of the independent variables and establishing the importance of chronological age as a grouping factor.

a) Selection of the Dependent Variable and Measuring Instrument

Most of the previous empirical work, as well as the theoretical interpretations of life-span gender roles (e.g., Livson, 1983; Moreland, 1980; Worell, 1981), has centred on the variability and/or development of gender role attributes. Thus, in order to maximize comparability with the greatest number of empirical studies, and owing to the lack of theoretical emphasis this thesis has placed on the life-span development or variability of gender role behaviours and attitudes, the attribute domain was selected to be examined.

Once this domain was chosen, the Personal Attributes Questionnaire (Spence and Helmreich, 1978) was selected to measure gender roles attributes. This pencil and paper survey was chosen over the more popular Bem Sex Role Inventory (Bem, 1974) because of the several advantages it has over Bem's instrument. The two instruments were described thoroughly in Chapter 2, and it should be recalled that the PAQ's item selection procedure was superior to that of the BSRI. Also, factor analyses of the PAQ showed that Parsons and Bales' (1955) instrumentality-expressivity distinction was more closely related to

that instrument, even though both scales use the dichotomy in their conceptual and operational definitions. Further psychometric analysis of the PAQ is included in Chapter 7.

In order to maximize generalizability and comparability across the studies presented in this thesis, both this dependent variable and its measure were used throughout the research programme.

b) How Important is Chronological Age to Life-Span Gender Roles?

To date, chronological age has been the most widely used grouping variable in life-span gender role research. Studies examining the perception of stimulus persons described at various ages have shown a significant amount of variability in the mean levels of perceived stereotypically masculine and feminine personality characteristics. Further, studies using a cross-sectional design have shown that adults of varying chronological ages often differ significantly in their self-reported gender role attributes.

If, as adult developmental psychologists like to note, chronological age does not predict any aspect of adult psychological development (Whitbourne, 1986), then why have researchers examining life-span gender roles placed such a great emphasis upon this independent variable's ability to predict development? The answer appears to be an intuitive understanding that, as people age, their gender role attributes may change or vary. This emphasis on aging, and therefore development, has led to an instinctual belief that gender role development is a direct result of the aging process and,

therefore, is determined by one's chronological age.

The results from the many studies reviewed in Chapter 5, however, do not support this hypothesis. Even though most studies reported in Chapter 5 did find significant differences between subjects of different actual and target ages, the lack of homogeneity in the findings suggests that there are other influences, besides biological age, that may be more predictive of gender role variability in adulthood. Therefore, instead of examining gender role differences as a function of chronological age, specific, age-related developmental tasks were utilized in the research reported in this thesis. Developmental tasks are contexts in which development may take place. An individual performing a task is not only goal-oriented but also is involved in one of many social roles that will lead to the successful or unsuccessful completion of the task. The developmental task was examined more thoroughly in Chapter 4.

Developmental tasks (Havighurst, 1972) were selected because they represent the age-related social contexts around which individuals develop goals. Their use was chosen over the various social roles that defined the research of Eagly and Steffen (1984), Geis et al. (1985), and Rhodes (1986) because of the several differences between the global construct of a developmental task and the more specific social roles that can be identified within each task situation. One difference between the two is that developmental tasks have a normative association while social roles are selected by the individual on a voluntary basis. That is, developmental tasks are

normative in that everybody who follows what society dictates to be a normal adolescence and adulthood should have to address most tasks at one point in their life. Social roles, however, are more specific and are part of the developmental tasks themselves. For example, some women may choose to become "career women" while others may choose to become "housewives". Both of these are social roles that are part of the "establishing oneself in an occupation" developmental task. Also, while there is only one "career establishment" task, there are several social roles that may be chosen within that one task.

Another difference between developmental tasks and social roles is that developmental tasks are hierarchical and carry connotations associated with their positive or negative completion that will effect the realization of future tasks. That is, failure to accomplish one task successfully leads to the failure to complete the next task in the hierarchy that presupposes the former's completion. For example, a couple that chooses a career over a family until it is too late to have children will not succeed at the developmental task of creating a family. Consequently, they will not meet the subsequent tasks that deal with the family (unless they overcome this lack by other means). Social roles, on the other hand, are conceptually independent of one another and failure to perform successfully in one role should not affect performance in another (unless that failure leads to physical or emotional injury). Thus, the role of career man or woman is independent of the role of mother or father, wife or husband, sister or brother, friend, neighbour, etc., and, for example, failure at

being a wife does not lead to failure at being a mother.

Next, it becomes necessary to establish which of the many developmental tasks will be used to examine life-span gender role variability in this thesis. A developmental task should be selected if there is a great deal of information available to everyone concerning the social expectations for performance in it (i.e., an abundance of stereotypic knowledge). As well as the pervasiveness of stereotypes, it should be normative, in that the majority of the population should be expected to complete it. If an individual does not complete the developmental task, its omnipresence in society should allow the individual to experience it through observation, so that he/she may develop knowledge and affective links toward the situation.

Three adult developmental tasks were selected: establishing oneself in an occupation, establishing a family, and retirement (Havighurst, 1972). It should be noted that these three tasks are not representative of the three developmental eras that Havighurst (1972) defined. The first two tasks belong to the Early Adulthood Era and were chosen because they represent two of the most concrete developmental tasks. Also, they are two of the most widely stereotyped, as men are believed to form instrumental qualities that are necessary in the establishment of an occupation, while women are expected to develop nurturant attributes in order to look after the family. The final task was taken from Havighurst's Later Maturity Era and, while there may not be as many stereotypes about performance in this task as in the previous two, its use offers the possibility of

determining what stereotypes do exist for the retirement context. Thus, the three tasks represent a within-Era comparison as well as a comparison between Early and Late Adulthood.

## 6.2 Relationship Between Methods and Results

Ashmore, Del Boca, and Wohlers (1986) have warned that depending upon one method of examining a research question may lead to biased findings and generalizations. Is the study of life-span gender roles affected by this problem? The answer is "possibly". Life-span gender roles have been examined previously using two methodological models: person perception and self-perception. Results from these two models, however, cannot be considered comparable (and therefore two methods of examining the same question) because the former elicits social stereotypes and the latter evokes perceptions of the self-concept.

The study of person perception is very limited in terms of methodological variability, thus increasing the possibility that a methodological bias may exist. With regard to self-perceived gender roles, there also is a possibility that a methodological bias is present. Even though there exists several ways of assessing self-perceptions, most studies examining self-reported life-span gender roles have relied on one method: the cross-sectional design. Although there are several short-term longitudinal studies (i.e., a second method), most studies have examined gender role variability across a limited developmental transition (e.g., the onset of parenthood). Thus, when the goal is to examine self-perceptions across the life

cycle, the short-term longitudinal design has not been used to its fullest avail.

Three different methods were used in this thesis to examine life-span gender role self-perceptions. Along with a cross-sectional study that examined gender roles as a function of one's position in the family and occupational cycles (as well as chronological age, so that findings could be compared to previous studies), a modification of Puglisi's (1983) prospective/retrospective design was used. This alteration included adapting Puglisi's target ages to life-span developmental tasks as well as separating the prospective and the retrospective components of the self-rating. A fourth method assessed life-span gender role stereotypes using a person perception model.

## 6.3 Description of the Studies

The purpose of the studies presented in this thesis is to examine the variability of gender role attributes in adulthood. Seven studies are presented in order to explicate this point. Study 1 (Chapter 7) examined the psychometric properties of the PAQ in a sample of elderly British. Next, two experimental paradigms were employed to examine the life-span gender role concept. Studies 2-4 (Chapters 8-10) incorporated a person perception approach which examined stereotypes of gender role variability in four stimulus persons across four social contexts (one neutral context and three developmental tasks). Studies 5-7 (Chapters 11-14) examined the life-span gender roles using a self-perception approach. In two of these, subjects rated their gender role

attributes in the present and in two prospective or retrospective developmental tasks. The third study examined life-span gender roles from a cross-sectional perspective, using position in the occupational and family cycles (i.e., two developmental tasks used throughout the research programme) as grouping factors.

### 6.3.1 The PAQ in an Elderly British Population (Study 1; Chapter 7)

As noted in the research directions stated at the beginning of this chapter, it is necessary to select an appropriate measure of gender role attributes and use that measure throughout the programme of research. It also was stated that the short form of the Personal Attributes Questionnaire (Spence and Helmreich, 1978) was chosen to measure this domain and that it was superior to other gender role instruments in several aspects (see Chapter 2 for a more detailed description of the PAQ).

Although the PAQ has been validated using samples of high school and university students, as well as young and middle-aged adults (Spence and Helmreich, 1978), there have been no published studies that use it in an elderly population. Thus, the two issues regarding the use of the PAQ in this research programme are its reliability and validity in an elderly British population. This is an important question as elderly adults are utilized as subjects throughout this thesis. If the instrument upon which they are rating themselves or their stereotypes is not internally consistent or does not maintain its construct validity, then the results themselves are unreliable and

not valid.

Another question concerns the comparability of PAQ data in this population to those of the established (i.e., American) norms. That is, are there significant differences between self-reported gender roles in elderly British and American adults as well as those in other normative samples? This question must be addressed in order to determine the generalizability of findings in the present research.

Thus, Study 1 (Chapter 7) is an attempt to address these issues. Briefly, 175 elderly British (recruited from the SAGA population; see section 6.5.1) completed the short form PAQ (Spence and Helmreich, 1978). Analysis centred on the following characteristics: psychometric properties (internal consistency, central tendancy, and scale intercorrelations [as Spence and Helmreich anticipate the three scales to be correlated in a specific manner, this analysis was used as a measure of construct validity]) as well as a comparison to established norms (both American and British).

### 6.3.2 Life-Span Gender Role Stereotypes

(Studies 2-4; Chapters 8-10)

The presence of life-span gender role stereotypes is examined using a person perception paradigm. Using this approach, it is possible to present subjects with descriptions of stimulus persons engaged in one or more developmental tasks in order to elicit stereotypes of the gender role attributes that are perceived to be necessary for successful completion of the tasks. Also, there are

several social roles within each developmental task and, by manipulating these roles, it is possible to determine whether the stereotypes are homogenous or if stimulus persons engaged in different social roles (within the same developmental task) are perceived differently. Thus, it is possible to ascertain whether the perceptions of a stimulus person's gender role attributes in a developmental task are affected by the manner in which the target is performing the task.

Overall, these studies have attempted to determine: 1) if perceptions differ as a function of the developmental tasks in which the stimulus persons are rated; 2) if perceptions differ as a function of the descriptions of the stimulus persons; 3) if there are perceived differences between stimulus persons described with varying social role information in the same developmental task; and 4) if previous role descriptions affect the perceptions of stimulus persons in future developmental tasks.

Studies 2 through 4 examined subjects' perceptions of stimulus persons (SPs) described in four life contexts (one neutral situation plus three developmental tasks). Subjects read descriptions of one stimulus person in each life context and, after reading each description, rated the SP using the PAQ (Spence and Helmreich, 1978). Thus, for each stimulus person there are four ratings of gender role attributes. The protocols for these studies can be found in Appendix B.

i. Study 2 (Student Job Study).

In this study, university students read descriptions of one of four SPs in each of four life contexts (as a student taking an exam, at work, as a parent, and at retirement) and described the SP using the Personal Attributes Questionnaire. In order to examine whether there were perceived differences between males and females in the same life contexts, two of the stimulus persons were women and the other two were men. Further, the effects of different social roles were examined by manipulating the roles of the stimulus persons in the work context. In one male-female pair of stimulus persons, both were described in the same upwardly mobile, male-dominated occupation. In the other pair, however, the SPs were described in more traditional, nonmobile occupations (i.e., the female SP was described as a cashier and the male SP as a mechanic).

The effects of this social role manipulation on perceived attribute usage in other tasks can be determined in this mixed, between-within design. For example, are women who are described in a male-dominated occupation seen as possessing the same gender role attributes in the parenthood context as another woman described in a traditionally female occupation?

ii. Study 3 (Elderly Job Study) and Study 4 (Cohort Analysis).

Study 3 was a replication of the first study using elderly adults as subjects. By examining the perceptions of older individuals (i.e., those from a different age cohort who, presumably, have engaged in the

tasks on which they are rating the stimulus persons), it is possible to examine whether chronological age, birth cohort, or experience in the situations has effected the perceptions of these social stereotypes. However, in order to examine the possibly combined effects of these variables (i.e., the three are confounded), the two data sets must be merged so that direct comparisons can be made. This was the purpose of Study 4 (Cohort Analysis).

### 6.3.2 Life-Span Gender Roles and Self-Perception

(Studies 5 and 6; Chapters 11 to 13)

Self-perceptions of life-span gender roles are examined using three methods: a prospective questionnaire (Study 5), a retrospective interview (Study 6), and a cross-sectional survey (Study 7). It is noted that the prospective and retrospective designs bear a strong resemblance to the person perception model; only in this instance subjects rate themselves in specific life contexts, not a stimulus person. Further, while also eliciting self-perceptions, the cross-sectional method is a quasi-experimental design and is part of the developmental model. As such, the cross-sectional study (Study 7) is presented separately, in Chapter 14.

In these two studies of self-perceived gender roles, subjects were asked to rate their masculine-instrumentality and feminine-expressivity at the present and again in two prospective or retrospective developmental tasks. Students, who are at the beginning of the life course, rated their gender role attributes prospectively

(at parenthood and retirement), while elderly adults, who are at the end of the life course, rated themselves retrospectively (at work-entry and parenthood). Thus, while one rating elicited perceptions of the self at the present moment, the prospective and retrospective ratings evoked the individual's expectations or remembered experiences of the gender role attributes that he/she used or will use.

i. Study 5 (Prospective Gender Role Study).

In this study, unmarried, childless, university undergraduates completed a questionnaire that asked them to rate their gender role attributes at the present and then in two future developmental tasks: parenthood and retirement. Before completing the prospective ratings, the students answered questions concerning their expectations for the task situations. The protocol for this study can be found in Appendix C.

ii. Study 6 (Retrospective Gender Role Study).

In this study, retired adults took part in a brief structured interview. At the beginning of the session, they rated their gender role attributes in the present context and then answered questions concering their entry into the work force. At this point, they rerated themselves on the PAQ under the instructions to answer how they felt they would have answered at the time they entered the work force. This procedure was repeated for the "onset of parenting" context. In both cases the subjects' present self-ratings were used as benchmarks

against which change was measured. A copy of the interview can be found in Appendix D.

### 6.3.4 Life-Span Gender Roles: A Cross-Sectional Study

(Study 7; Chapter 14)

Finally, a cross-sectional design was employed to examine whether masculine-instrumentality and feminine-expressivity could be found to vary as a function of position in the family and occupational cycles, as well as to determine whether these variables accounted for more between-subjects variability than that of chronological age.

This study examined the gender role attributes of 341 British adults living in five towns within the Canterbury voting district. The Electoral Register was used to select a pool of 924 adults who were sent research materials by post. Thirty-seven percent of the initial pool returned completed data. Respondents were asked for demographic information such as their age and position in the family and occupational cycles as well as to rate their gender role attributes on the PAQ. A copy of the survey and accompanying letter can be found in Appendix E.

## 6.4 Latitude for Gender Role Development

Archer (1984) suggests that males and females are subject to differential socialization practices. He argues that, while it is socially acceptable (to a point) for females to exhibit cross-sex gender traits, males are punished for doing so. This, he believes,

results in a restriction of gender role development and the emergence of separate developmental pathways in the socialization of gender role traits. While Archer was discussing the development of gender role traits in children and adolescents, it is possible to extend the consequences of this socialization practice to adulthood. That is, because females have not been encouraged to inhibit their development of cross-sex gender traits and males have been punished for their display, males, when compared to females, may have a more restricted range of masculine-instrumental and/or feminine-expressive attributes (one of the three trait domains) across the life-span. This hypothesis can be tested through the creation of a variable called Latitude for Gender Role Development (LD).

Latitude for gender role development is a measure of the versatility with which one uses masculine-instrumental and feminine-expressive attributes in a wide variety of settings, contexts, or tasks. It can be explained in a simple fashion by comparing two adult developmental tasks: establishing parenthood and retirement. These situations are thought to command different gender role attributes (e.g., Feldman and her colleagues [e.g., Nash and Feldman, 1981] predict gender role bifurcation at the parenting stage while Gutmann [1975] and Sinnott [1977] hypothesize that bifurcation decreases in old age so that gender roles become balanced).

In its most conservative sense, LD is: 1) the difference between two self-reported levels of masculine-instrumentality (a maximum and a minimum); and 2) the differences between two levels of self-reported

Table 6-1: An example of the calculation of the variable Latitude for Gender Role Development.

| | First Context | Second Context | Third Context | Latitude for Development |
|---|---|---|---|---|
| Masculine-Instrumental | 20.60 | 22.95 | 25.15 | 25.15 - 20.60 = 4.55 |
| Feminine-Expressive | 21.10 | 25.55 | 19.90 | 25.55 - 19.90 = 5.65 |

feminine-expressivity (a maximum and a minimum). Both variables are independent measures of LD, one assessing the latitude for masculine-instrumentality, the other assessing the latitude for feminine-expressivity. Some individuals will show variability in their use of these attributes across contexts. Others will evidence the same, or similar, attribute usage across the same social contexts. An example is presented in Table 6-1.

The difference between the minimum and maximum score for the masculine-instrumentality or feminine-expressivity scale becomes the variable to be examined. By means of the Central Limit Theorem, the distribution of LD scores for greater than thirty subjects approaches normality and can be analysed using parametric statistics. Differences between masculine-instrumental and feminine-expressive latitude can be examined, as can the differences that are functions of other grouping factors.

In terms of life-span development, how is it possible to

determine an individual's LD without the use of a longitudinal design? Also, how is it possible to determine stereotypes of LD across the life-span? Although it would be optimal to measure an individual's responses to a gender role survey while they are actively engaged in a wide variety of developmental tasks across the life-span, this is impractical considering the diversity of the ages in question. An initial compromise would be to assess self-reports of individuals' expected gender roles in various situations. Through the use of multiple ratings of self-reported gender roles, one can ascertain projected minimum and maximum masculine-instrumentality and feminine-expressivity scores with which calculations of conservative estimates of self-perceived potential for gender role development across the examined contexts can be made. Stereotypes of LD can be attained by asking subjects to rate typical and ideal males and females in a variety of age-related social contexts.

There are several possibilities for the LD concept to be applied in the present analyses. In Studies 2-4, age-related developmental tasks are used as benchmarks against which to rate the gender role attributes of four stimulus persons. This design will give a conservative estimate of subjects' perceived LD across these tasks, as well as any differences that emerge as a function of the description of the stimulus persons. Further, in the prospective and retrospective studies (Studies 5-6), subjects rate themselves at the present and in two age-related developmental tasks. This also allows for a conservative estimate of self-perceived LD to be calculated.

As developmental tasks are not mutually exclusive, this concept allows for greater sensitivity toward the impact of multiple roles on the expected use and versatility of gender role attributes at the same chronological age. The hypothesis that individuals of the same age will respond differently to a gender role survey depending on the context in which they complete it, or expect to complete it, can be tested, as can the relationships between projected attributes and actual, context-contingent attributes.

However, there are some drawbacks to the LD concept. First, as it is conceived of and used in this research, it relies on a within-subjects design. It has been suggested that this type of design creates demand characteristics within the experimental session that may be responsible for a large portion of the variability in ratings (Kogan, 1979). One way of limiting these characteristics while retaining a within-sujects design may be to space the ratings across several weeks. Differences between responses gained from within- and between-subjects designs also should be examined.

A second possible confounding factor is social desirability. Although social desirability often is controlled for in questionnaire design, it also may influence responses in developmental task situations. For example, asking individuals to rate the personality attributes they believe they will have when they are a parent may introduce a response bias concerning which attributes are necessary to be a good parent. This would effect the LD scores by either inflating or deflating one or both attribute dimensions.

## 6.5 Methodological Considerations

There are several methodological and analytical issues that must be considered in order to interpret properly the studies presented in this thesis. As can be seen from the outlined descriptions of the studies, three sample populations were used: university students; elderly, retired adults; and adults from the Canterbury area. Demographic characteristics of each sample that may have influenced the data will be examined first. Finally, various analytical concerns will be discussed. These include the use of continuous versus categorical scoring of PAQ data, the effects of using a median split to categorize PAQ results, the use of the statistic epsilon to control for the homogeneity of covariance problem in repeated measures analyses of variance, examining main effects and interactions, and the use of the t-distribution.

### 6.5.1 The Samples

While the age and sex of those in the samples used in this thesis have been subject to experimental manipulation, several aspects of these samples have been left to vary randomly (e.g., demographic features such as socio-economic status and nationality). As with most university populations, socio-economic status (SES) is relatively homogeneous (Sears, 1986). However, it is possible that there will be differences between students of different nationalities that are the result of variablity in socialization experiences. This section will discuss the possible effects of randomizing the nationality factor.

Also discussed are the demographics of the group of elderly subjects that acted as respondents in all studies using an elderly population (with the exception of those in the cross-sectional study). The subpopulation from which these samples come is compared to national data in order to determine whether it is representative of the population of elderly, retired British adults.

a) The Effects of Randomizing Subject's Nationality

The question to be addressed by this subsection is, to what extent does the inclusion of subjects of different nationalities add unexplained, within-group variability to the analyses? To this end, it should be noted that cross-cultural differences in gender role attributes have not been explored thoroughly. Williams, Giles, Edwards, Best, and Daws (1977) examined the differences between self-reported gender role attributes in samples of American, British, and Irish students using the Adjective Checklist (ACL; Gough and Heilbrun, 1965). Their results indicated that there was a high degree of similarity between the three nationalities on both the masculinity and femininity items.

However, Williams et al. did note that gender roles in the Irish sample were not as differentiated as the British and American samples. This trend also was noted in a study of Irish university students using the BSRI (Ryan, Dolphin, Lundberg, and Myrsten, 1987). Ryan et al. found that Irish males reported significantly lower levels of masculine-instrumentality and significantly higher levels of feminine-

expressivity when they compared the Irish means to those of the BSRI's American norms.

In a study of gender role stereotypes in thirty nations, Williams and Best (1982) found much between-nation similarity in the items described as masculine and feminine. In a subsample of 25 nations that used the 300-item version of the ACL, Williams and Best were able to identify 49 male-associated items and 25 female-associated items that were categorized in these groups by at least 19 of 25 countries.

With regard to cross-cultural differences using the PAQ, Spence and Helmreich (1978) report studies of gender role attributes in Lebanese and Brazilian university students. In the Lebanese sample, there were no significant differences between males and females on the masculine-instrumentality scale, suggesting that instrumentality is not a differentiating characteristic in this culture. However, when the sample was categorized using American PAQ medians, the distribution of subjects into the four androgyny categories showed little difference between the American and Lebanese students.

In a sample of Brazilian university students, Spence and Helmreich note that the mean of the masculine-instrumentality scale was significantly lower that of the American average and that there was no difference between males and females on this scale. When subjects were categorized into androgyny categories (again using American medians), the distribution of females was similar to that of the American samples. However, the majority of males reported undifferentiated or feminine sex-typed gender roles. They also note

that, for the males, the masculine-instrumentality and masculinity-femininity scales were not significantly correlated.

Finally, in an examination of the PAQ in a German population, Runge, Frey, Gollwitzer, Helmreich, and Spence (1981) replicated Spence and Helmreich's (1978) American findings, indicating that there were no significant differences between the American and German samples.

Thus, there appear to be some cross-cultural differences in the possession of gender role attributes, but there also is a surprising degree of similarity. While not controlling for differences in nationality within a sample may predispose it toward a slightly greater degree of within-group variability, the results from these cross-cultural studies indicate that this would be a negligible finding as long as this factor was free to vary randomly.

b) Subject's Age: A Description of the SAGA Population

Age is an important factor in this thesis. In the person perception and self-perception studies, the use of elderly samples offers important comparisons to the traditionally studied university undergraduate. By looking at the two groups, it is possible to determine whether chronological age, birth cohort, or experience in the developmental tasks used as stimuli affected their perceptions of gender role stereotypes or their self-perceptions.

Sears (1986) has noted that, as a population, university undergraduates are a homogeneous group and generalizations across

groups of undergraduates are possible. However, what are the demographic characteristics of the elderly adults used in Studies 3 (Elderly Job Study), 4 (Cohort Analysis), and 6 (Retrospective Gender Roles)? Are those used in this research randomly drawn from (and, therefore comparable to) the population of elderly British adults, or are they a highly self-selected sample?

The samples of elderly British were taken from groups of retired adults who were visiting the University of Kent on vacations organized by SAGA plc, a national company specializing in holidays for those who are retired. SAGA offers a wide range of holidays ranging from month-long stays in Europe to one and two week visits to various parts of Britain, where the clients stay in university residences.

SAGA has not been very active in collecting demographic information (e.g., socio-economic status) about those who take part in their various packaged holidays. They do, however, collect information concerning the readership profile of their brochures. Table 6-2 contains this demographic profile and compares it to British national demographic data. These comparative data were collected by a national marketing agency and were presented in a book whose aim was to provide marketing directions for those who wish to aim their sales at a population older than 55 years of age (Marketing Direction Ltd., 1987).

As can be seen by looking at Table 6-2, the SAGA group follows the national trend with respect to the ages of its clients and their marital status. Unfortunately, there is an interaction between age,

Table 6-2: Demographic profile for the readership of SAGA plc brochures and a comparison to national (Nat) norms (Marketing Direction Ltd., 1987). All data are in percentage form.

| Age | | | Marital Status | | | Sex | |
|---|---|---|---|---|---|---|---|
| | SAGA | Nat | | SAGA | Nat[1] | | SAGA | Nat[2] |
| 45-54 | 1 | 11 | Married | 63 | 68 | Male | 52 | -- |
| 55-59 | 3 | 5 | Single | 11 | 8 | Female | 48 | -- |
| 60-64 | 21 | 6 | Widowed | 25 | 20 | | | |
| 65-69 | 31 | -- | | | | | | |
| 70-74 | 26 | 9[3] | | | | | | |
| 75 and up | 18 | 6 | | | | | | |

Notes: 1. Averaged over males and females across four age groups. Note that there is an interaction between sex, age, and marital status such that older women tend to be widowed while older men tend to be married. See Table 6-3 for the effect of this interaction on national data.

2. National data giving the average number of males and females in the 45 and up age range were not available.

3. The percentage of adults in the 65-69 year age range was combined with those of the adults in the 70-74 range in the national data. The percentage indicated for the national data at age 70-74 is that of adults between the ages of 65 and 74 years.

Table 6-3: Marital status and sex of British adults aged 45 and up. All data are in percentage form[1] (Marketing Direction, Ltd., 1987).

| | Married | Single | Widowed |
|---|---|---|---|
| Males | 78.5 | 7 | 11 |
| Females | 57.5 | 8 | 29.5 |

Note: 1. These numbers do not add up to 100% because two other categories were included in the original data.

marital status, and sex that confounds these data. With increasing age, the number of males decreases. This means that, in the higher age groups, females are more likely to be widowed while males are more likely to be married. As an example, Table 6-3 shows the interaction between sex and marital status (summed over chronological age) in the national data (Marketing Direction Ltd., 1987).

In summary, the SAGA population appears to be representative of the national elderly population with respect to age, sex, and marital status. Although socio-economic status (SES) may be a significant covariate, this data is not available for the SAGA population. However, the SES factor of one specific SAGA sample will be examined in Study 5 (Retrospective Gender Roles).

### 6.5.2 The Analyses

There are several issues concerning the statistical analyses that should be discussed. The first issue concerns the use of continuous and categorical methods for scoring the PAQ. The second issue expands on the first by discussing the median split method for androgyny categorization and why specific, population-oriented medians should be used in the analyses. Thirdly, there will be a discussion of repeated measures analyses of variance, the problems with it, and the ways in which these problems can be overcome. The last two issues concern the examination of main effects and interactions and the use of the t-distribution in determining statistical significance.

a) Continuous Versus Categorical Scoring

There are two established methods of reporting PAQ data, and they are not mutually exclusive. The first method is to report means and standard deviations for each scale (masculine-instrumentality, feminine-expressivity, and, sometimes, masculinity-femininity). In this way, mean differences between levels of the grouping factors can be examined using parametric statistics such as t-tests, analysis of variance, linear regression, etc. As the two main scales are conceptually independent, analyses are conducted for each scale separately although some authors use multivariate statistics in their reporting.

The use of parametric statistics, however, assumes that the data fit four basic assumptions: "the distribution of the dependent variable in the population from which the samples are drawn is normal ... the variances in the populations from which the samples are drawn are equal ... the effects of various factors on the total variation are additive" (Fergusson, 1981, pp 245-246); and that the data are of an interval scale. Although most real data sets only roughly satisfy these criteria (Fergusson, 1981), the robustness of parametric statistics, such as the analysis of variance, reduce the probability of error.

Other researchers classify their subjects into the four androgyny categories discussed in Chapters 2 and 3. Through the use of the median split technique, both the masculine-instrumentality and feminine-expressivity scales are changed from interval to nominal

variables, each with two categories: above and below the median. By combining the high/low categories for both scales, a four-group typology, as described in Chapter 2, is created (high/high [androgynous], high/low or low/high [sex-typed], and low/low [undifferentiated]). The frequency of subjects in each category are compared across levels of the various grouping factors using nonparametric techniques such as the chi-square test of independence. Alternatively, group membership (androgynous, sex-typed, undifferentiated) may be predicted using discriminant function analysis, although this type of analysis is rarely performed.

It is difficult to determine if one method of presentation is better than the other. The continuous scoring method, however, has two distinct advantages. First, it is the easiest to interpret because it is amenable to the use of ANOVAs and various other main-effect-types of statistics. The second advantage involves the interpretation of significant effects. Explaining main effects and interactions can be done easily with continuous data. However, interpreting marginally significant chi-square statistics can prove bothersome when the trends between observed and expected frequencies are not overt. Higher order chi-square statistics are even more difficult to explain as trend analyses and traditional a priori and a posteriori methods of comparison and decomposition cannot be utilized.

Taylor and Hall (1982; Hall and Taylor, 1985) suggest a way to gain power in the analysis of data which tests androgyny hypotheses (and therefore presents data categorically). As noted in Chapter 2, a

continuous scoring procedure examines masculine-instrumental and feminine-expressive main effects while a categorization procedure examines the interaction between masculine-instrumentality and feminine-expressivity. Thus, the categorized, bi-level masculine-instrumentality and feminine-expressivity scales represent a 2 (High/Low) X 2 (High/Low) between-subjects design and can be analysed with ANOVA statistics. If there is a significant interaction between the two gender role domains, post hoc comparisons can be used to test for differences for between androgynous (high/high), sex-typed (high/low), and undifferentiated (low/low) subjects.

As this thesis is concerned with the variability of masculine-instrumentality and feminine-expressivity across the life-span, both scoring methods are used to report the data. However, because the continuous data are more easily interpreted and have more power, chi-square analyses of categorical data will be presented only as a test of independence between the androgyny categories and the life contexts. Higher order interactions will not be presented in categorical form.

b) Median Split Method for Categorical Scoring

When an author categorizes a data set he/she calculates the medians for the masculine-instrumentality and feminine-expressivity scales of his/her dependent measure and applies a median split. As such, the categorization is representative only of that specific sample as other studies will have different medians and distributions.

Some authors (e.g., Sedney, 1981) have argued that, because a set of sample medians is descriptive only of that study, the use of sample-specific medians reduces the degree of cross-study comparability. However, unlike such standardized measures as intelligence and extroversion, no one has yet determined what percentage of the population should fall in each androgyny category. Therefore, there is no need for a set of standardized medians and Sedney's (1981) argument becomes redundant.

However, what should be done in a situation where it is impractical to use the the medians generated by that sample? For example, a study by Rossenwasser and Patterson (1984-86), examined gender roles in 14 males who had more than fifty percent of the childcare and household responsibilities. The authors of this study were presented with a dilemma. That is, their sample size was so small that the medians may not have been valid. To resolve this problem, they used a pair of external medians that were representative of both males and females in adulthood (i.e., those reported by Hyde and Phillis [1979]). In essence, Rossenwasser and Patterson regarded the Hyde and Phillis medians as BSRI norms for American adults, the immediate result being that their sample of 14 males was categorized within the parameters of Hyde and Phillis' "normative" distribution.

Thus, when external medians are used to categorize a data set, a distribution is created that conforms to an external basis of normality. If a researcher decides to use a pair of external medians, he/she should be confident that his/her sample is representative of

the population from which the original medians were drawn, otherwise the data will be interpreted as a function of the imposed normative baseline.

How have normative medians (versus sample medians) been used in the past? It should be recalled that, earlier in this chapter, studies examining the cross-cultural applications of the PAQ were reported by Spence and Helmreich (1978). When Spence and Helmreich presented breakdowns of the data into androgyny categories, they used American medians for the categorization. The result of this was to present the sample according to how it deviated from (or was similar to) the American norms. By presenting the sample categorized with the original medians, the data would have been representative of that nation's norms, which may be different from those collected in America.

The use of external medians is a pertinent issue in this thesis, as Studies 2 through 6 (see above) present categorized data in order to examine whether the frequency of stimulus persons or subjects in the four androgyny categories varied significantly as a function of the developmental tasks used as stimuli. External medians are necessary because of the within-subjects nature of the stimulus rating. If change is to be measured, then a baseline against which it can be measured must be established. Therefore, as each PAQ rating has the potential of eliciting different masculine-instrumentality and feminine-expressivity medians (resulting in different distributions of subjects in the three/four contexts), a pair of external, baseline medians should be used for all categorizations.

In the person perception studies, perceived variations in the distribution of subjects in the four categories were measured across four adult life contexts. As "adulthood" is used as a baseline from which to measure change, adult medians should be used. As British PAQ medians did not exist for adults, a small leap was performed and the medians used to categorize the four SP ratings were taken from the cross-sectional study of British adults (Chapter 14).

However, in the self-perception studies, the question of change is confounded by the age of the subjects. That is, although the main variable of interest is the variation in the frequencies across the rating contexts, the subjects are no longer rating a stimulus person; they are rating themselves. Thus, medians appropriate for the age group of the sample should be utilized. The result for the prospective study is to examine change as growth towards retirement (i.e., deviations from the present). For the retrospective study, using medians for an elderly sample gathered in Chapter 7 means that the comparison is the opposite and examines changes from the present to the past. Thus, the choice of which medians to use depends upon the questions to be asked and in which direction change is to be measured.

c) Repeated Measures Analyses of Variance

Experiments that utilize a within-subjects design are common in psychological research. By asking subjects to complete identical research procedures at more than one time, an experimenter eliminates a portion of error variance due to between-subject differences (i.e.,

the subject becomes his/her own control) and this decreases the magnitude of the error term calculated in an analysis of variance summary.

However, in many cases, repeated measures ANOVA's violate two assumptions of the ANOVA design, resulting in an F-ratio that is too liberal and an increase in the probability of Type 1 error. The first assumption is that of compound symmetry and it assumes that the variances of each level of a repeated factor are equal to the same population variance (Fergusson, 1981). The second assumption concerns the homogeneity of covariance which assumes that the "correlations among levels of the within-subjects variable are constant over all combinations of levels." (Tabachnick and Fidell, 1983, p. 228).

As noted earlier, the effect of violating these assumptions is an F-ratio that is too liberal. Greenhouse and Geisser (1959) proposed a three-step method that corrects for these violations. In the first step, the original F-ratio is tested in a normal manner. If it is not significant, then the testing stops. If the F-ratio is significant, a conservative F-test is performed by reducing the lower limits of the degrees of freedom in a manner similar to that of the Scheffe method of testing significant main effects. If the conservative F-test reveals a nonsignificant F-ratio, the statistic epsilon should be calculated. Epsilon is a metric between 0.0 and 1.0 and it is used as a multiplicative weight to correct the original F-critical value. Thus, values of epsilon that are near 1.0 are indicative of high levels of homogeneity and will effect the critical values very little.

Lower values of epsilon reveal the presence of heterogeneity and will effect the critical value to a higher degree.

In Studies 2 through 6, mixed between-within designs are used. In reporting all F-statistics that include the repeated factor, the corrected Greenhouse-Geisser probability level will be given. Owing to the corrective nature of the statistic epsilon, this is a more conservative result than would otherwise have been reported.

d) Examining Main Effects and Interactions

In those cases where significant main effects and interactions are reported, Tukey's Honestly Significantly Different (HSD) post hoc analyses were performed. Tukey's HSD tests examine the differences between pairs of means, comparing their difference to preset benchmarks that vary as a function of the degrees of freedom of the error term in an analysis of variance and the number of means being compared in the post hoc analysis.

e) Comments on the Use of the t-Distribution

In several cases, statistics that report probability values gathered from a t-distribution will be used. This is especially true of the test of the significance for correlation coefficients. In all cases where a t-distribution is used, a two-tailed test of significance was used in order that a more conservative estimate of the relationship or difference could be established. For each of these tests, the conventional 5% confidence limit was adopted as a minimum;

therefore, probability levels of 0.05 or less should be considered statistically significant. It should be remembered that, when using a two-tailed distribution at, for example, the five percent (i.e., $p < 0.05$) level, the five percent is divided equally among the two tails. This makes it harder to find a statistic significant than if the five percent were placed in only one tail (and thus reduces the probability of Type 1 error).

# CHAPTER 7

# THE MAIN MEASURE: ITS RELIABILITY IN AN ELDERLY AGE GROUP AND COMPARISON TO ESTABLISHED NORMS (STUDY 1)

## 7.1 Introduction

As noted in Chapter 2, there are several measures of gender role attributes from which to choose. The most popular measure is the BSRI (Bem, 1974); however, it has several faults that researchers have tended to overlook. First, there is a lack correspondence between Bem's conceptual and operational definitions of the masculinity and femininity constructs. Although Bem has stated that the BSRI is a global measure of instrumentality and expressivity, following the Parsons and Bales (1955) dichotomy, factor analyses continually have found more than two orthogonal factors, and correlations exist between the two scales where none are expected (see Chapter 2 for more details concerning the reliability and validity of the BSRI).

Another problem with the BSRI is the manner in which its items were chosen. It should be remembered that Bem chose items that were more likely to be found in one sex or the other. This emphasis on an item's ability to discriminate males from females is reminiscent of the way that items were chosen for M-F scales and does not reflect the assumption that each are equally likely to be found in either sex (although they may be stereotypically attributed to one sex more often than the other).

The Personal Attributes Questionnaire (PAQ; Spence and Helmreich,

1978) was chosen as the measure of gender role attributes to be used in this research programme because it is superior to the BSRI in the two aspects reported above. There is consistency between its conceptual and operational definitions which manifests itself in two ways. First, the results of factor analytic studies have shown that the PAQ has only two factors: masculine-instrumentality and feminine-expressivity (Helmreich, Spence, and Wilhelm, 1981). Secondly, Spence and Helmreich (1978) do not expect a strict degree of orthogonality between the two scales. Rather, they expect, and have shown empirically, that the two dimensions are slightly and positively correlated.

Also, the items from the PAQ's masculine-instrumentality (PAQM) and feminine-expressivity (PAQF) scales were selected because males and females believed that they were equally likely to be found in both the typical male and female, even though social norms may stereotypically attribute them to one sex more often than the other. The exception to this was the masculinity-femininity (PAQM-F) scale, whose items were chosen because of their ability to differentiate the sexes.

The PAQ was developed and validated using samples of American university undergraduates. However, throughout this thesis, the PAQ is used with British undergraduates as well as samples of elderly British adults. The use of this instrument in populations that are unlike those in which it was validated brings up the issues of reliability and construct validity. Specifically, is the PAQ a reliable and valid

measure in these two British populations?

Keyes (1984) addressed the PAQ's reliability and validity using a large sample of British adolescents. After determining that the instrument retained adequate levels of reliability, she asked comprehensive school students to indicate whether the adjectives used on the PAQ (Spence et al., 1974; 1975) were more characteristic of males, females, or if there was no difference between the two sexes. Her results showed that the adolescents were able to assign as many as 50 of the original 54 items to the appropriate sex. With regard to the short form version of the PAQ (Spence and Helmreich, 1978), these British adolescents were able to assign all 24 items to the appropriate sex. Although she did not replicate Spence et al.'s (1974; 1975) original item selection procedure, Keyes' results suggest that the prevalent American stereotypes which led to the original assignment of items to the PAQM, PAQF, and PAQM-F scales also exist in England.

As her sample was relatively similar to that of a university population in terms of chronological age (i.e., 15-16 versus 20-21) and many personality features (e.g., ego development), it may be argued that Keyes' data can be generalized and used as evidence that the PAQ is a valid and reliable measure of gender role attributes in university students. However, this is not the case for elderly adults. In fact, the PAQ has been used very infrequently in gerontological populations. Therefore, it has yet to be established that the PAQ is reliable and valid in this population. How can this be determined?

Reliability is easy to confirm as there are several statistical methods of verification (e.g., Cronbach, 1951). Construct validity can be established in two ways, each relying on specific predictions made by Spence and Helmreich (1978) concerning the psychometric properties of the PAQ. First, factor analysis can be used to determine the number of orthogonal factors (there should be only two). Secondly, correlational analyses can be used to assess the interrelationships among the scales (i.e., PAQM and PAQF correlated positively, PAQM and PAQM-F correlated positively, and PAQF and PAQM-F correlated negatively). Each of these methods establishes the correspondence between the conceptual and operational definitions that underlie the PAQ.

The use of the PAQ in British populations of university students and elderly adults also brings into question its comparability with established (i.e., American) norms. When comparing British samples to American norms, resulting differences may be due cross-cultural factors. However, as the existing American norms are derived mainly from high school and university students and their parents, significant differences are confounded with chronological age and direct, same age group comparisons are necessary. That is, in order to establish whether differences are due strictly to cross-cultural differences in socialization, one must compare samples from the same age cohort.

Keyes (1984; Study 2) noted a similarity between the medians in her sample of British students and those from Spence and Helmreich

(1978). Although it appears that she did not address this issue with much vigor (i.e, tests of mean differences), she attests to the similarity between American and British samples of students. There has been no other research examining British/American cross-national differences using the PAQ.

The goal of this chapter is to demonstrate the reliability and validity of the Personal Attributes Questionnaire (Spence and Helmreich, 1978) in an elderly British population. Although making the assumption that the PAQ is valid and reliable in the population of British undergraduates maybe somewhat tenuous (see above), there is nevertheless some existing research to support this view. Further, it was felt that the lack of research examining the PAQ in elderly adults was more important to address than establishing the psychometric properties of yet another questionnaire in yet another sample of students.

Thus, a study is presented in which elderly British adults rated themselves with the PAQ. The psychometric properties of the instrument (i.e., reliability and central tendency) in this population will be examined. Construct validity will be determined by establishing scale intercorrelations and comparing them with existing norms in several populations.

This study also addressed the issue of cross-cultural comparability of PAQ data. This was demonstrated by comparing PAQ data from the sample of elderly British adults to norms for American high school and university students, parents of students, and a sample of

elderly American adults. In order to determine further the presence of effects due to chronological age or birth cohort, the elderly British data also were compared to those from Keyes' large sample of British adolescents.

## 7.2 Method

### 7.2.1 Subjects

A total of 175 retired British adults (59 males and 116 females) volunteered to participate in the present study. The average age of the sample was 70.3 years (70.6 for the male subjects and 70.0 for the female subjects). The subjects were visiting the University of Kent as part of a holiday organized by SAGA plc, a group whose demographic charactersitics are described in Chapter 6.

### 7.2.2 Materials

The short form of the Personal Attributes Questionnaire (Spence and Helmreich, 1978) was used in this study. This form of the PAQ has 24 items: 8 masculine-instrumental (PAQM), 8 feminine-expressive (PAQF), and 8 masculinity-femininity (PAQM-F). Spence and Helmreich report that the masculine-instrumentality, feminine-expressivity, and masculine-feminine scales of this form are correlated 0.93, 0.93, and 0.91, respectively, with the original version of the PAQ (Spence, Helmreich, and Stapp, 1974; 1975). Spence and Helmreich (1978) also report that the internal consistency coefficients (Cronbach alphas) for each of the three scales are 0.85, 0.82, and 0.75, respectively. A

more detailed description of the psychometric properties of the PAQ can be found in Chapter 2. An example of the short form PAQ is located in Appendix A.

### 7.2.3 Procedure

The subjects were approached at an orientation meeting given by the vacation company's senior courier. The meeting took place on the subjects' first evening at the University of Kent, during the summer of 1986, and was designed to orient them to the facilities and the week's agenda. The experimenter was introduced at the beginning of the meeting. He explained that he was a doctoral student at the University and that he was interested in how retired adults answered a survey containing twenty-four personality attributes. He then asked for volunteers. Subjects volunteered by placing their name and room number on one of many sheets of paper which were distributed about the room.

The next morning, a PAQ and return envelope were distributed to each volunteer. To guarantee anonymity, subjects were instructed to place their completed questionnaire in the envelope and give the sealed envelope to the courier, who would then pass it on to the experimenter.

## 7.3 Results

### 7.3.1 Psychometric Properties of the PAQ

Three aspects concerning the PAQ's psychometric properties will

be examined: reliability, central tendency, and scale intercorrelations.

a) Reliability

Reliability was determined by Cronbach's alpha (Cronbach, 1951), a measure of a scale's item stability. Alpha is a metric between 0 and 1.0 and higher alpha coefficients are indicative of greater within-scale stability. Conservative interpretions of Cronbach's alpha suggest that coefficients greater than 0.80 are indicatative of high stability, while coefficients between 0.60 and 0.79 indicate moderate stability, and those below 0.60 indicate unacceptable stability. An alpha coefficient was calculated for each of the PAQ's three subscales. As the total PAQ score is meaningless, this alpha was not calculated.

The reliability for the PAQM scale was moderate (alpha = 0.712). Of the eight items that make up this scale, only one contributed negatively to the item-total analysis. Item 16, which asked the subjects about their "ability to make decisions easily" shared only six percent of its variance with the scale total. Dropping this item would have increased the scale's alpha to 0.757.

The reliability coefficient calculated for the PAQF scale showed that it was highly consistent (alpha = 0.867). Several items shared greater than forty percent of their variance with the scale total and the lowest squared multiple correlation coefficient was 0.234.

The PAQM-F scale was unreliable, with an alpha coefficient of

0.512. Several items had squared multiple correlations (with the scale total) of less than 0.150 and the highest shared variance estimate was 22%.

These alpha coefficients are similar to those found by Spence et al. (1974, 1975; see Chapter 2); however, they are not identical. Spence et al. (1975) reported alpha coefficients of 0.85, 0.82, and 0.69 for the PAQ's masculine-instrumentality, feminine-expressivity, and masculinity-femininity scales, respectively. The similarities between the two data sets lie in the high degree of stability for the feminine-expressivity scale and the low consistency of the M-F scale. The main difference is with regard to the masculine-instrumentality scale, in that Spence et al. found a much higher degree of stability for that scale than was found in the present study. It is felt, however, that this difference can be explained by the disparity between the two studies' sample sizes. If the present study were to have increased its sample size, it may be that the reliability of the masculine-instrumentality scale would have approached that found in Spence et al. (1975).

b) Central Tendency

The average PAQM score was was 20.35 (sd = 4.58) while the average PAQF score was 22.12 (sd = 5.26) and PAQM-F score was 14.63 (sd = 3.99). The median for each scale was 20, 22, and 15, respectively. There were no significant differences between males and females with respect to the scale means.

c) Scale Intercorrelations

Results of the correlational analyses indicated that, as expected, the PAQM and PAQF scales were significantly and positively correlated ($r = 0.292$, $p < 0.0001$), the coefficient of determination revealing that they shared only 8.5% of their variance. This correlation is similar to those found by Spence and Helmreich (1978) in their validation studies of the PAQ. In these studies, they found the PAQM and PAQF scales to have intercorrelations between 0.09 and 0.22. That is, they shared between 0.8% and 4.8% of their variance.

In order to determine if these correlations were similar to those reported by Spence and Helmreich (1978) for high school and university students, the coefficients were compared by means of Fischer's $z_r$ transformations (Fergusson, 1981; scale intercorrelations were not stated for the parents of these students). This statistic transforms correlation coefficients into z-scores in order to make use of the properties of the normal distribution. Once the transformations have been made, it is possible to determine if two correlation coefficients are significantly different by using a modified z-test. The coefficients used in these analyses are displayed in Table 7-1.

When comparing the present correlations between the PAQM and PAQF scales to those of Spence and Helmreich's high school students, a significant difference was found ($z = 2.23$, $p < 0.05$), indicating that high school students did not perceive as much of a relationship between the two attribute domains. There were no significant differences between the correlations for university students and the

elderly adults, or between Spence and Helmreich's two samples.

One of the most unexpected results was the correlation between the PAQM scale and the PAQM-F scale. In Spence and Helmreich's (1978) studies of more than 1,400 high school and university students, they found that these two scales were correlated approximately $r = 0.50$ (range = 0.44 - 0.56). This study, however, found a much lower correlation of only $r = 0.254$ ($p < 0.001$) between the two scales. This difference is made clearer by comparing the two coefficients of determination. In Spence and Helmreich's (1978) data, the PAQM and PAQM-F scales share approximately 25% of their variance (range = 19% to 31%). In this sample, only 6.4% of the two scales' variance is shared.

The differences between the correlations for each sample were examined using Fischer $z_r$ transformations. When comparing the high school students to the elderly sample, the latter group reported a significantly lower correlation between the PAQM and PAQM-F scales ($z = 2.78$, $p < 0.01$). The comparison between the elderly sample and the university sample revealed the same finding ($z = 4.38$, $p < 0.01$). In fact, testing for differences between Spence and Helmreich's two samples, the high school students reported a significantly lower correlation than the university students ($z = 2.60$, $p < 0.01$).

Congruent with Spence and Helmreich's (1978) results, the correlation between the PAQF and PAQM-F scales was negative. Again, there were differences in the magnitudes of the correlations. As reported by Spence and Helmreich (1978), the correlations between

Table 7-1: Comparison of correlations between three PAQ scales: Spence and Helmreich's (1978) data versus those from retired British adults.

| High School Students[1] | University Students[2] | British Retirees[3] | Difference |
|---|---|---|---|
| Masculine-Instrumentality versus Feminine-Expressivity | | | |
| 0.110 | 0.155 | 0.292 | 3 > 1* |
| Masculine-Instrumentality versus Masculinity-Femininity | | | |
| 0.460 | 0.560 | 0.254 | 2 > 1** > 3** |
| Feminine-Expressivity versus Masculinity-Femininity | | | |
| -0.260 | -0.210 | -0.412 | 3 >1*, 2** |

Notes: 1. Taken from Spence and Helmreich (1978; p. 51) and averaged for males and females.
2. Taken from Spence and Helmreich (1978; p. 50) and averaged for males and females.
3. Taken from the present sample, averaged for males and females.
* $p < 0.05$ ** $p < 0.01$

these two scales ranged from -0.17 to -0.31. In the present study, the PAQF and PAQM-F scales were correlated r = -0.412. The coefficients of determination for Spence and Helmreich's data indicated that the range of shared variability was 2.9% to 9.6%. For these data, the proportion of shared variance was 17.0%, a 77% increase over the upper range of Spence and Helmreich's coefficients. Fischers z, tranformations revealed that the elderly sample saw a significantly greater negative relationship between the two scales than did the high school ($z = 2.01$, $p < 0.05$) and university ($z = 2.62$, $p < 0.01$) samples.

### 7.3.2 Cross-Cultural and Age/Cohort Effects

In order to determine whether the results from this sample are generalizable across cultures, and to determine if developmental aspects are confounded with the use of American norms as a basis for comparison and generalization, statistical comparisons were performed between the scale means from Spence and Helmreich's (1978) three samples (high school and university students and their parents) and this sample of elderly British. Single sample t-tests assessing the differences between sample and population (i.e., standardized) means were used to test for these differences.

In these analyses, age/cohort and cross-cultural differences were confounded. It may be that any differences found while comparing elderly British subjects to Spence and Helmreich's American norms were the result of age/cohort effects and not cross-cultural variability. In order to test directly the hypothesis that there are differences between American and British populations with regard to gender role attributes, it was necessary to compare the present data with those of an American study using a same-aged population. Only one study reporting PAQ data in an elderly American population was located (Fischer, Hyland, McMahon, and England, 1985). In this instance, because their sample was not large enough to be considered normative, mean differences between British and American masculine-instrumentality and feminine-expressivity scores were examined using t-tests for independent samples.

In order to determine further if the PAQ was subject to

age/cohort effects, the elderly British data were compared to those of Keyes (1984). However, as she reported only the frequencies of subjects within each of the four androgyny categories, it was necessary to use chi-square tests of independence to compare her data to those of the present sample.

a) Comparison to American Norms

The means for the elderly sample's masculine-instrumentality, feminine-expressivity, and masculinity-femininity scales were compared to those from Spence and Helmreich's (1978) data, separately for high school students, university students, and parents. As Spence and Helmreich report significant differences between males and females on each of the three PAQ scales, single sample t-tests comparing the elderly British sample to each of the three normative samples were performed separately for males and females. However, as there were no significant differences between males and females in the elderly British sample, the data from the two sexes in this sample were combined to provide greater power to the analyses. Thus, when a comparison was made, for example, between Spence and Helmreich's adult males and the elderly sample, two tests were performed: one comparing the males in Spence and Helmreich's data to the entire present sample, and the second comparing the females in Spence and Helmreich's data to the entire present sample. The means and standard deviations used in the calculations of these t-tests are presented in Table 7-2.

i. High school students.

Compared to the males in Spence and Helmreich's high school normative sample, the elderly British sample rated themselves significantly less masculine-instrumental (means = 21.51 versus 20.35, respectively; $t(174) = 3.52$, $p < 0.001$). However, the elderly adults rated themselves significantly more masculine-instrumental in comparison to Spence and Helmreich's female high school students (mean = 19.31; $t(174) = 3.06$, $p < 0.01$).

On the feminine-expressivity scale, those in the elderly sample rated themselves significantly more expressive than the males in the normative sample (means = 22.13 versus 20.79, respectively; $t(174) = 4.47$, $p < 0.001$). There also was a significant difference between the mean for the British sample and that for the female high school students (mean = 24.05). The females in the normative group rated themselves significantly higher in feminine-expressivity than did those in the elderly sample ($t(174) = 6.40$, $p < 0.001$).

With regard to the masculinity-femininity scale, the elderly British sample rated themselves between the ratings for males and females. The average for the British sample was 14.66, while that for the females was 13.31 ($t(174) = 4.39$, $p < 0.001$) and 17.66 for the males ($t(174) = 10.00$, $p < 0.001$).

ii. University students.

On the PAQM scale, the male students rated themselves significantly higher than those in the elderly British sample (means =

Table 7-2: PAQ means and standard deviations (in parentheses) used in the comparison of Spence and Helmreich's (1978) norms to the sample of retired British adults.

| | High School Students[1] | University Students[2] | Parents[3] | British Retirees[4] |
|---|---|---|---|---|
| Masculine-Instrumentality | | | | |
| Males | 21.51 (4.31) | 21.69 (4.18) | 23.21 (4.24) | 20.35 (4.45) |
| Females | 19.31 (4.49) | 19.54 (4.32) | 19.58 (4.84) | |
| Feminine-Expressivity | | | | |
| Males | 20.79 (4.00) | 22.43 (3.73) | 21.06 (4.29) | 22.13 (5.28) |
| Females | 24.05 (3.90) | 24.37 (3.68) | 23.99 (4.26) | |
| Masculinity-Femininity | | | | |
| Males | 17.66 (3.96) | 16.69 (4.12) | 16.97 (3.79) | 14.66 (4.00) |
| Females | 13.21 (4.38) | 12.52 (4.25) | 12.88 (3.95) | |

Notes: 1. Taken from Spence and Helmreich (1978; p. 51)
2. Taken from Spence and Helmreich (1978; p. 50)
3. Taken from Spence and Helmreich (1978; p. 268)
4. The means for males and females were not significantly different from one another and were combined. The values reported here are the averages of the means and standard deviations.

21.69 versus 20.35, respectively; $t(174) = 4.19$, $p < 0.001$). The females (mean = 19.54) rated themselves significantly lower than the elderly adults ($t(174) = 2.38$, $p < 0.05$).

There was no significant difference between the elderly sample and Spence and Helmreich's university males on the PAQF scale. However, the elderly British rated themselves significantly lower on this dimension when compared to Spence and Helmreich's female university student norm (means = 22.13 and 24.37, respectively; $t(174) = 8.00$, $p < 0.001$).

The elderly sample rated themselves between Spence and Helmreich's male and female ratings on the PAQM-F scale. Those in the British sample averaged 14.66 on this scale. The average male in Spence and Helmreich's sample scored 16.69 ($t(174) = 6.50$, $p < 0.001$) and the average female scored 12.52 ($t(174) = 6.55$, $p < 0.001$).

iii. Parents.

Male parents in Spence and Helmreich's normative sample rated themselves significantly higher in masculine-instrumentality than did the retired British adults ($t(174) = 8.94$, $p < 0.001$). The elderly sample averaged only 20.35 on this scale while the male parents averaged 23.21. The females in the normative sample (mean = 19.58), however, did not rate themselves significantly different from the retired sample on the PAQM scale.

On the PAQF scale, the mean for the elderly British sample (mean = 22.13) was significantly higher than that for the males in Spence

and Helmreich's data (mean = 21.06; $t(174) = 3.34$, $p < 0.001$) and significantly less than that for the females (mean = 23.99; $t(174) = 5.81$, $p < 0.001$).

With regard to the masculinity-femininity scale, those in the elderly sample rated themselves significantly lower than the males (means = 14.66 versus 16.96, respectively; $t(174) = 7.97$, $p < 0.001$) and significantly higher than the females (mean = 12.88; $t(174) = 5.93$, $p < 0.001$).

iv. Elderly adults.

Fischer et al. (1985) sampled a group of 50 male and 50 female American adults recruited from community organizations. The group's ages ranged from 60 and 97 years (mean = 68.7 years). Fischer et al. report that the males in their sample averaged 19.68 (sd = 4.10) on the PAQM scale and 21.56 (sd = 4.59) on the PAQF scale while the females averaged 19.50 (sd = 4.31) on the PAQM scale and 25.08 (sd = 3.87) on the PAQF scale. Significant differences were found between males and females only on the PAQF scale. Fischer et al. do not state PAQM-F scale means.

There were no significant differences between the American males or females and the British sample with regard to masculine-instrumentality. However, the American females scored significantly higher than the British adults with regard to feminine-expressivity ($t(223) = 3.70$, $p < 0.001$). There was no significant difference between American males and the British sample on this scale.

b) British Norms

Keyes (1984) gathered adolescent norms from a sample of 391 students in two London-area comprehensives. The mean age of the sample was 16.0 years and she noted that the students came from predominantly middle class backgrounds.

Keyes (1984) did not report means for each of the PAQ scales. Rather, she reported the frequency with which males and females were classified into the four androgyny categories, based on the median split technique. Thus, this section will ask whether Keyes' data is representative of those collected from this sample of elderly British adults. In order to answer this question, the frequency of subjects in the two studies that fall in the four androgyny categories will be compared using a chi-square test of independence.

It first should be determined whether separate analyses must be performed for males and females. As Keyes reported the frequencies separately for each sex, it was assumed that there was a significant Sex of Subject by Androgyny Category interaction in her data. This was confirmed by calculating the chi-square statistic based on Keyes' published results (chi-square = 55.66, df = 3, $p < 0.001$). As there was not a significant Sex of Subject by Androgyny Category chi-square interaction for the the present sample, comparisons were made between frequencies of male adolescents and the entire elderly sample and frequencies of adolescent females and the entire elderly sample. Table 7-3 presents the percent frequency of subjects in the four androgyny categories.

Table 7-3: Percent frequency of subjects in four androgyny categories: Keyes (1984) versus the elderly British sample.

| | Keyes (1984)[1] | | Elderly British[2] |
|---|---|---|---|
| | Males | Females | |
| Androgynous | 26 | 23 | 40 |
| Masculine Sex-Typed | 42 | 12 | 24 |
| Feminine Sex-Typed | 12 | 41 | 17 |
| Undifferentiated | 20 | 24 | 19 |
| N | 190 | 191 | 175 |

Notes: 1. Percentages reported separately for males and females.
2. Percentages reported for males and females combined.

Comparing Keyes' adolescent males to the elderly adults, there was a significant effect for the two studies (chi-square = 15.25, df = 3, $p < 0.01$). The effect appears to be a function of the greater number of elderly adults reporting androgynous gender roles. However, there also were fewer masculine sex-typed and more feminine sex-typed subjects in the elderly sample than in Keyes' adolescent sample.

For Keyes' female subjects, there was an even greater effect (chi-square = 31.11, df = 3, $p < 0.001$). Again, more of the elderly sample was androgynous. Also, more were masculine sex-typed, and fewer were feminine sex-typed and undifferentiated.

## 7.4 Discussion

The data reported above revealed several psychometric aspects concerning the use of the PAQ in an elderly British population. First, the PAQ's masculine-instrumentality and feminine-expressivity scales retained a statistically reliable degree of internal consistency in

this population. However, the PAQM-F scale was found to be unreliable and should not be used to make statistical generalizations. In fact, the low levels of internal consistency suggest that dropping the scale altogether from test batteries is warranted, should there be a need to do so. It should be remembered that, because of its bipolar nature, the PAQM-F scale bears no conceptual relevance to the questions posed in this and the following research. As masculine-instrumentality and feminine-expressivity are conceived to be independent attribute clusters, the use of an unreliable bipolar measure of masculinity-femininity would be superfluous. Thus, based on these findings, the PAQM-F scale was dropped from all testing materials used in Chapters 8 through 14.

Not only was the PAQ reliable in this population, but it also retained its construct validity. That is, the PAQ's three scales were found to be correlated in the directions that had been predicted and revealed in previous empirical studies (Spence and Helmreich, 1978). The PAQM and PAQF scales were not expected to be orthogonal and, indeed, they were slightly, but significantly, and positively correlated. Also, the PAQM scale was positively correlated with the PAQM-F scale, upon which a high score reflects stereotypical masculinity and a low score stereotypical femininity. As expected, the PAQF scale was negatively correlated with the PAQM-F scale.

Thirdly, the PAQ appears to be sensitive to both cross-cultural age/cohort effects. Comparisons to PAQ data reported by Spence and Helmreich (1978) in samples of high school and university students and

their parents, as well as the sample of elderly American adults described by Fischer et al. (1985), have shown many significant differences between the British and American data.

The rest of this chapter will be devoted to an examination the the results from the correlational, cross-national, and age/cohort analyses.

### 7.4.1 Interpreting the Correlational Results

Most interesting were the findings suggesting that there were significant differences between the American and British data in terms of the magnitude of the relationships they perceived between the PAQ's three scales. That is, the elderly British perceived a greater positive correlation between masculine-instrumental and feminine-expressive attributes, a weaker positive relationship between masculine-instrumentality and masculinity measured on a bipolar continuum, and a greater negative relationship between feminine-expressivity and the masculine end of the M-F scale's bipolar continuum -- all when compared to American students.

However, what do correlational data show? In general, they show the degree of similarity between two constructs. When a group of individuals rate themselves on a number of conceptually independent scales, a correlation between two scales tells the researcher the degree to which one construct covaries with another, summed over all subjects. Another way of thinking of this is that a correlation represents the degree to which two variables are clustered within

individuals' self-concepts. Thus, the closer the coefficient is to approaching ±1.0, the more closely they are clustered. The closer a coefficient is to approaching zero, the more the two attribute domains are independent of one another and, therefore, the less they are clustered. By way of an analogy, each domain may be considered one of a pair of identical circles. The less correlated the two domains are, the less the circles are overlapped. The more highly correlated they are, the more they overlap until they become concentric. The former is representative of a low degree of clustering, the latter a high degree.

As an example of clustering, Costa and McCrae (1977) presented male subjects with measures of two stereotypically masculine traits: field independence and tough-mindedness. They found that these two variables were highly correlated in a group of younger males, suggesting that the two traits were clustered together for this group. However, there was not a significant correlation between the two in a sample of older males, suggesting that those in this age group did not cluster the two traits. Thus, males in the older group could possess one of the traits without possessing the other.

With regard to the present study, all scale intercorrelations were significant and in the appropriate direction. Thus, the validity of the instrument is not in question. However, there were significant differences in the magnitude of the relationships between Spence and Helmreich's (1978) samples and the elderly British sample, suggesting that British and Americans cluster masculine-instrumental and

feminine-expressive gender role attributes differently. That is, those in the elderly British sample appeared to believe that masculine-instrumentality and feminine-expressivity were less orthogonal (i.e., more mutually exclusive) than did those in Spence and Helmreich's (1978) high school sample. Similarly, the elderly group felt that there was less of a relationship between PAQM (i.e., masculine-instrumentality defined as an attribute that is found in both males and females but is more often stereotypically attributed to males) and PAQM-F (i.e., masculinity defined as attributes that differentiate males from females) and more of a negative relationship between PAQF and PAQM-F.

What leads to this difference in the clustering of these attributes? Unfortunately, it cannot be determined whether differences in the perceived magnitude of the relationship between the three attribute scales is a function of chronological age, birth cohort, or cross-national differences in socialization as Fischer et al.'s (1985) study of elderly American adults does not provide PAQ scale intercorrelations. Based on Costa and McCrae's study, however, it can be hypothesized that this greater lack of orthogonality between masculine-instrumentality and feminine-expressivity can be attributed to the age/cohort confound, as the present data offer indirect support for Costa and McCrae's thesis.

### 7.4.2 Interpreting the Cross-National and Age/Cohort Results

Comparing the findings from the sample of elderly British to the

existing data from a variety of American samples resulted in the emergence of a great deal of evidence suggesting that there exists some cross-national differences in the socialization of masculine-instrumental and feminine-expressive gender role attributes, but that this factor interacts with subjects' chronological age or birth cohort. The only direct evidence of cross-national differences was found when elderly British PAQ means were compared to those from a sample of elderly Americans. In this instance, the two nationalities did not differ in their self-ratings of masculine-instrumentality. However, there were significant differences in the self-perceptions of feminine-expressivity. American females rated themselves significantly higher than both American males and British males and females.

Assuming that these results are replicated in other studies, there are two possible ways of interpreting this finding. The first is to assume that American males and females of all ages self-report bifurcated gender roles and then ask what it is about American culture that inhibits the development of cross-sex gender role traits in males. This explanation also assumes that there are cross-national differences in the socialization of feminine-expressivity in that Americans report higher levels of feminine-expressivity than the British.

The second interpretation is that elderly males and females should not differ in their self-reported gender role attributes and that cross-national differences also should not exist (note that this does not state that age/cohort differences do not exist). The

possibility that this interpretation is correct is heightened by the fact that the American males did not differ from the British sample with regard to feminine-expressivity. Thus, if this expectation is to be considered correct, then the females in Fischer et al.'s (1985) sample were not representative of the population from which they were drawn.

This latter interpretation has theoretical support from Gutmann (1975) and Sinnott (1977), who predict that males and females become less sex-typed as they age by increasing their levels of cross-sex gender role attributes. It may be recalled from the studies presented in Chapters 3 and 5 that evidence for this claim of gender role balance exists but it is not consistent. Balance also may be represented as a lack of sex differences on these attribute scales (i.e., as males and females typically score higher than the opposite sex on gender-congruent scales, a lack of difference may indicate a balance). Thus, the lack of sex differences in the means for all three scales suggests that males and females in the elderly British sample have achieved a balance, or unisex, of gender roles in old age. However, this was not the case in the American sample vis a vis feminine-expressivity.

It may be that the lack of sex and/or cross-national differences on both PAQM and PAQF scales is a phenomenon found only in the elderly. For example, when comparisons were made between the elderly British data and those for American students and their parents (Spence and Helmreich, 1978), the American sample was most often bifurcated

with the means from the British sample falling between the two poles (i.e., on the PAQM scale, the American males scored the highest, the American females scored the lowest, and the elderly British scored in the middle; the poles were reversed for the PAQF scale).

Further evidence for an age-related shift in gender role attributes was found in the comparison between the elderly British and Keyes' (1984) sample of British comprehensive school students. Keyes' study revealed a greater majority of subjects reporting sex-typed gender roles while the majority of subjects in the present study reported androgynous or undifferentiated gender roles (i.e., a balance between masculine-instrumentality and feminine-expressivity).

Thus, there appears to be a great deal of evidence emerging from the comparisons between the present sample of elderly British and American and British samples of varying ages, suggesting that chronological age and/or birth cohort is a more important factor in the development of gender role attributes than nationality. However, it should be remembered that, in this study, age and cohort are confounded variables whose effects cannot be empirically extricated from one another.

Fortunately, the changes in what society deems acceptable for males and females can help in determining whether the development of more cross-sex gender roles in elderly adults is a function of age or birth cohort. Only recently has it been acceptable for males (especially) and females to adopt cross-sex gender roles without facing the ridicule of parents and peers. The male role has been

especially rigid and unmoving, with immense social pressure against the development of stereotypically feminine personal attributes (Brannon, 1976; O'Neil, Helms, Gable, David, and Wrightsman, 1986). That elderly males, who came from a cohort that stressed that men and women differentiated themselves by their display of only gender-congruent traits and that men who displayed cross-sex traits were deviant, should possess the same average number of feminine-expressive attributes as do elderly females (i.e., the cohort before the liberation movement) cannot be indicative of anything other than developmental variation.

In summary, this study has shown that the PAQ is a reliable and valid measure of masculine-instrumentality and feminine-expressivity in an elderly British population. There exists several differences between this sample and existing American norms, as well as a large sample of British adolescents, suggesting the possibility of both cross-national age/cohort effects. However, chronological age and/or birth cohort appeared to be more important than nationality in the development of cross-sex gender role attributes in old age.

# CHAPTER 8

## LIFE-SPAN GENDER ROLE STEREOTYPES: INTRODUCTION AND METHODS

As the studies utilizing a social role approach have demonstrated (e.g., Eagly and Steffen, 1984; Rhodes, 1986), people tend to alter their perceptions of others when given information other than a generic description such as "male" or "female". For example, Eagly and Steffen (1984) noted that the reasons given for a female stimulus person (SP) working in a full-time job significantly altered subjects' perceptions of the SP's gender role attributes. When subjects were led to believe that the SP was working out of need, they perceived her more traditionally (i.e., high in feminine-expressivity and low in masculine-instrumentality). However, when the SP was described as working because she liked to work, the subjects rated her higher in masculine-instrumentality than a male stimulus person described similarly.

The social role approach provides a rich supply of hypothesis-driven experimental manipulations. As this thesis is concerned with the effects of developmental tasks on the development of gender role attributes across the life-span, it is important to determine how stimulus persons are perceived when the social role information describing them pertains to normative life events (i.e., developmental tasks). That is, the majority of the population has an occupation, is a parent, and retires. How do people perceive the gender role attributes of those who are involved in these tasks? Once these

stereotypes are identified, a second assumption that needs clarification concerns differences in the stereotyped gender role attributes between the developmental tasks. Do individuals perceive stimulus persons described in different developmental tasks (e.g., work and parenthood) as possessing different gender role attributes?

Experimental manipulations also can take place within (versus between) developmental tasks. As noted in Chapter 6, developmental tasks contain many social roles. By varying the role information in one task situation, it is possible to examine the differences between qualitatively different methods of performing the same task on specific outcome measures (e.g., another researcher may wish to assess the outcomes of different child-rearing techniques on parents' level of emotional stability). In this context, the variation of social role information may be used to determine whether there are perceived differences in the possession of gender role attributes as a function of the provided role information. Also, if a within-subjects design is used, the effect of this manipulation on the perceptions of future developmental tasks may be examined.

One developmental task that varies in a socially prescribed manner is that of establishing oneself in an occupation. Individuals either do or do not have a paid occupation (other than housewife). If they do, then the type of job may vary from unskilled to professional (Reid, 1977). This continuum can be thought of in several ways and the first is in terms of socio-economic status (SES). Those at the unskilled end are of a lower SES than those at the professional end of

the distribution.

Second, some occupations can be considered to be high in social status (i.e., the job is highly desirable) while others can be thought of as low in social status. This distinction usually is similar to that of SES, such that low SES jobs are lower in social status, although it is subject to between-class variability (e.g., those in lower SES jobs may regard a low SES job as high in social status because it requires low input for a high reward, while higher SES individuals continue to view that job as low in social status).

Third, occupations can entail a great deal of upward mobility (i.e., from lower to higher levels of SES) or they may leave the individual in a similar SES level for the rest of his/her work life. Jobs that allow for mobility are usually available to those in the middle SES categories and are higher in social status than those that do not allow for mobility.

Fourth, occupations can be traditional or nontraditional. Traditionality can take two meanings in this context. One relates to the historical aspect of a job. Jobs that have survived for a long time (e.g., carpenters and other artisans) are said to be traditional. The second meaning relates to the acceptance that the job is performed by either a male or a female. Occupations that are male-oriented are usually higher in SES and social status, as well as providing greater upward mobility. Women traditionally have performed low SES, low status, low mobility, service-oriented jobs, although their ability to complete male-oriented, blue collar tasks has been demonstrated (e.g.,

World War Two's "Rosie the Riveter").

Thus, within this one developmental task there are several possible social role manipulations. One of these variables has been examined in previous research. Eagly and Steffen (1984, Studies 1 and 2) manipulated the social status of stimulus persons' occupations. They noted that expressivity was affected only slightly by variations in role status, while instrumentality was affected a great deal; i.e., those in high status occupations were perceived to be more instrumental than those in low status positions. As men typically are in high status positions more often than women, the elevated levels of instrumentality may be indicative of one way that individuals categorize their environment (i.e., high status equals male equals high masculine-instrumentality). But what about the majority of males who are in lower status positions? Why are they attributed lower levels of masculine-instrumentality? Thus, status cannot be interpreted as the only variable that effects perceptions of the gender role stereotypes attributed to those with differing occupations (i.e., status is confounded by the remaining three factors described above as well as biological sex).

This chapter provides an introduction to a series of studies that examined subject's attributions of gender role stereotypes toward male and female stimulus persons engaging in normative life contexts, as well as a discussion of the methods used in these examinations. The purpose of these studies was to indicate the presence of gender role stereotypes within each life context, examine differences in the

stereotypes between the contexts, and assess the effects of different role information in one task on the perceptions in future tasks.

## 8.1 The Job Studies: An Introduction

The set of three studies (Student Job Study, Elderly Job Study, and Cohort Analysis), which are described in this and the next two chapters, examined the perceptions of gender role attributes in three normative life tasks and incorporated a social role approach into the description of one of these tasks. In the Student and Elderly Job Studies, subjects were presented with sketches of one of four stimulus persons (two male and two female) described in each of four life contexts: one neutral task (taking an examination) and three developmental tasks (work, parenthood, and retirement). Within the work task, the four occupation-related factors discussed above were manipulated, and this was called the Traditionality-Mobility manipulation. Two stimulus persons (one male and one female) were presented in a high SES, high status, and very mobile job that was traditionally male-oriented. The other pair were described in low SES, low status, nonmobile jobs that were traditional for either a male or a female, depending upon the sex of the stimulus person.

Thus, the main questions asked in these studies concerned the differences in the perceptions of gender role attributes as a function of the developmental task and social role information presented to the subjects. First, does the presentation of different developmental task information lead to differences in perceived masculine-instrumentality

and feminine-expressivity, summed over all stimulus persons?. Second, are there differences between the four stimulus persons, summed over all developmental task situations? Third, does the presentation of different social role information in the work entry context lead to different perceptions of the stimulus persons? And finally, does the presentation of different social role information in the work entry context affect the perceptions of gender role attributes in the parenthood and retirement tasks?

There are several supplemental interests within these studies. The first concerns the effect of a bias in the perception of the stimulus persons. Some researchers (e.g., Urberg and Labouvie-Vief, 1976) have found that males and females perceive stimulus persons differently, and that males attribute female SPs with more traditional gender roles than women attribute either to female or male SPs. Thus the presence of this sex of subject by sex of stimulus person bias, and its effect on the results, will be examined.

Secondly, the relationship between the PAQM and PAQF scales will be examined. It should be remembered that Spence and Helmreich (1978) developed and validated their gender role instrument on the homogeneous population of American university students (Sears, 1986). Thus, do the scales retain their orthogonality when subjects, both university students and elderly adults, rate stimulus persons in contexts related to those used in its validation (i.e., the examination and work contexts) as well as those that are unrelated to the validation contexts (i.e., parenthood and retirement)? How are the

same scales correlated across contexts (e.g., PAQM in the work and parenthood contexts)? Finally, how do the PAQM and PAQF scales correlate across contexts (e.g., PAQM in the parenthood context with PAQF in the retirement context)?

Also, there is the question of latitude for gender role development. Does masculine-instrumentality have a more restricted latitude when compared to feminine-expressivity? Does the latitude of either of these dimensions interact with biological sex? That is, because they were not as restricted in their development of either masculine-instrumental or feminine-expressive gender role attributes (Archer, 1984), do females have more latitude than males in one or both gender role domains? A question also to be asked concerns the relationship between the traditionality-mobility manipulation and the latitude the stimulus persons are perceived to have. Are those in the low traditionality-high mobility category perceived to have more or less latitude for gender role development than those in the high traditionality-low mobility condition and does this interact with the sex of the stimulus person?

In order to avoid making inferences based on a homogeneous sample of university students, as well as to examine age/cohort differences in the perceptions of social stereotypes, two groups of subjects completed identical research protocols: a sample of university students and a sample of elderly, retired adults. Thus, the perceptions of each group can be examined independently and the two data sets can be integrated to provide an statistical examination of

their differences. In the elderly sample, however, three factors combine to confound the interpretation of any significant differences that may be found between the two cohorts: chronological age, birth cohort, and experience in the developmental tasks. Thus, any differences should be interpreted cautiously.

The next section presents a review of the methods used in the three studies: the Student and Elderly Job Studies and the Cohort Analysis. The results of the studies will be presented in Chapter 9 and their implications will be discussed in Chapter 10.

## 8.2 Student Job Study (Study 2): Methods

### 8.2.1 Subjects

The subjects were 57 male and 70 female university students of the University of Kent. Their ages ranged from 17 years to 44 years with a mean of 22.72 years (SD = 10.46). The students were pursuing both undergraduate and postgraduate degrees and they came from may different Faculties (e.g., Social Sciences, Life Sciences, Humanities).

### 8.2.2 Materials

a) Biographies

Structured biographies of four stimulus persons (SPs; two male, two female) were constructed to represent an initial context that was similar to the subjects' present environment, followed by three normative developmental tasks which individuals may confront as they

age (Havighurst, 1973):

1. a student taking an important examiniation;
2. an employee at the beginning of his/her career;
3. the first-time parent of a six-month old child;
4. at retirement.

The first context was designed to help the study's subjects (initially university students but expanded to the elderly, as will be discussed in the Elderly Job Study) identify with the SPs; hence, the context is that of an educational examination. The second situation was a developmental task: getting oneself established in the work force. The third context described what is perhaps the most important of the developmental tasks: establishing a family; i.e., parenthood. The fourth described a developmental task of the late adulthood era, retirement. The exact wording of the stimulus person descriptions can be found in the study protocols which are located in Appendix B.

The SP descriptions were built in the following manner. Three developmental tasks were identified as important normative events across the life-span. Two of these (work and parenthood) were taken from the same developmental era (Early Adulthood) while the third was taken from the Later Maturity era (Havighurst, 1973). A developmental task was not chosen from each of Havighurst's three adult eras because of the great deal of importance (and speculation) placed on the work-entry and parenthood tasks in the sparce theoretical and empirical literature concerning life-span gender roles (e.g., Cunningham and Antill, 1984; Feldman et al., 1981); Gutmann, 1975). Also, the

selection of these two developmental tasks allows for some basis of comparison to the previous work done in this area. Once the three tasks were selected, the neutral introductory context was chosen.

The work task was identified as the context in which to apply the social role (i.e., the Traditionality-Mobility) manipulation. Two of the SPs (one male and one female) were described in an occupation that had high mobility, high SES, high social status, and was traditionally male in orientation. These two were in the low traditionality-high mobility category. The remaining two SPs (one male and one female) were in the high traditionality-low mobility category. Their jobs were not mobile, of low SES, low social status, and were sex-typed.

In the latter two developmental tasks, each SP was described in an identical fashion. This would permit an examination of the interaction between the traditionality-mobility manipulation and the remaining developmental tasks. In the parenthood task, each stimulus person was described as the proud parent of a six month old child. In the retirement context, stimulus persons were described in a situation where they are living a comfortable distance from their children; i.e., though old, they were portrayed as being capable of living an independent life.

The four stimulus persons are described below. It should be noted that many assumptions were built into the stimulus person descriptions; however, they were not validated by manipulation checks. Thus, while it was hoped that the subjects would glean the appropriate

bits of information, it is not known whether they were successful at this or how they interpreted the descriptions.

i. Robert (low traditionality-high mobility).

In the student context, Robert was said to be in the upper sixth form and was studying for his A-Levels. In the second task description (i.e., the first developmental task), Robert was described as an executive for an influential multinational corporation and was in line for a promotion.

The third and fourth contexts were identical for all stimulus persons. In the parenting context, Robert (and the remaining three stimulus persons) was described as the very proud father (or mother) of a six month old child (the sex of the child was not stated). In the retirement context, Robert (et al.) was described as being at the end of his (her) working life. Subjects were told that his (her) children were married and living a reasonable distance away.

ii. Susan (low traditionality-high mobility).

The description of Susan was identical to that of Robert with the exception of the names and pronouns.

iii.Cathy (high traditionality-low mobility).

The stimulus person Cathy was described in a traditionally feminine manner. It was intended in the first context that Cathy should be described as a fifth form student studying for her CSEs. It

was hoped that this would have been indicative of a probable intention not to go to university (although a few students with CSEs do, of course, mangage to gain university places). Unfortunately, due to a typographical error, Cathy (and Jim) was described as taking her "CGEs", not her CSEs (the exam that indicates that Cathy and Jim are likely to leave school at sixteen). It may be that the term CGE has been interpreted as GCE O-Level and subjects may have mistaken the intent for this context (i.e., that Cathy and Jim are unlikely to complete their A-Levels and go to university). Thus, it is unclear whether the stimulus persons described in this context would be seen any differently than those described as taking their A-Levels.

In the work description, Cathy was described as working full-time as a cashier in the local Sainsbury's supermarket (a job traditionally held by females). In order to depict the lack of mobility in the types of jobs that women traditionally hold, it was noted that there was not a good opportunity for advancement or promotion and that Cathy could not expect a higher position in the store. The next two task descriptions (i.e., those of the parenting and retirement contexts) were the same as the two for Robert and Susan.

iv. Jim (high traditionality-low mobility).

Jim was described in a manner similar to Cathy. In the educational setting, Jim was noted to be studying for his CGEs (the same typographical error was present in this context). In the work condition, he was described as being a full-time mechanic (a job

traditionally held by males) in a local garage where there was no room for career advancement. There were two reasons for choosing this career for Jim. The first was that is it low in SES and social status, compared to Robert's. However, it is not at the same level of SES as Cathy's job. According to the Registrar General's 1971 taxonomy (Reid, 1977), Cathy's job is Level 4 (partly skilled) while Jim's job is Level 3b (skilled, manual). The second reason for the choice is that it is a sex-typed occupation. That is, there are very few female mechanics. The last two developmental task descriptions were identical to those of the previous stimulus persons.

b) Instrumentation

The PAQM and PAQF scales of the short form Personal Attributes Questionnaire (Spence and Helmreich, 1978) were the dependent measures. In this version of the questionnaire, however, the adjectives that each question was attempting to examine was stated first. Then, the subject was presented with the 5-point rating scale (see Appendix B for the complete protocols). Examples of these questions and their formats are given below.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Handling Pressure | goes to pieces | A | B | C | D | E | stands up |
| Independent | not at all | A | B | C | D | E | very much |
| Relations with others | very cold | A | B | C | D | E | very warm |
| Emotionality | not at all | A | B | C | D | E | very much |

The purpose for this type of presentation was so that subjects were able to identify the adjective easily and then rate the degree of that attribute they felt the SP possessed.

### 8.2.3 Procedure

The subjects were approached either individually or in small groups of 10-20. They were told that the experimenter was interested in their perceptions of the personality attributes they felt men and women required in order to be successful at various life tasks. They were given the "history" of one SP (instructions plus a description of one SP in each of the four contexts) and were asked to complete the PAQ items after reading each of the four task descriptions. The protocols were completed during the Lent Term, 1985-86.

## 8.3 Elderly Job Study (Study 3): Methods

The Elderly Job Study was a replication of the Student Job Study discussed above. The only difference between the two methodologies was that this study used a sample of elderly, retired adults instead of students.

### 8.3.1 Subjects

The subjects in this study were 74 male and 77 female retired adults. Their ages ranged from 47 to 84 years with a mean age of 70.0 years. Subjects were visiting the University as part of a

vacation arranged by SAGA plc, during the Summer, 1986. Their demographic characteristics were discussed in Chapter 6.

8.3.2 Procedure

The subjects were approached at an orientation meeting organized by the vacation company's senior courier. This meeting was designed to welcome the clients to the university and to describe the week's routine. At the beginning of the meeting, the senior courier introduced himself and then introduced the experimenter. The experimenter explained to the subjects that he was interested in their perceptions of the personality attributes people use in various situations. The potential subjects also were told that a group of university students had completed the same survey and that the experimenter was interested in examining whether there were any differences between those in the two age groups.

To volunteer to participate in the study, the subjects were required to put their name and room number on one of several sheets of paper which were distributed throughout the room. The following day, a questionnaire, return envelope, and instruction sheet were distributed to those who had volunteered. The volunteers were requested to complete the survey, seal it in the envelope (thus guaranteeing anonymity), and return it to the senior courier, who then passed the completed surveys to the experimenter.

## 8.4 Cohort Analysis (Study 4)

The cohort analysis involved merging the two data sets (Student and Elderly Job Studies) and analysing the differences in the responses between the two age cohorts. The demographics of each sample were discussed above. The average age of the combined Job Studies was 48.4 years.

# CHAPTER 9

## LIFE-SPAN GENDER ROLE STEREOTYPES: RESULTS

This chapter is divided into three sections, each examining the findings of one of the three Job Study analyses (Student, Elderly, and Cohort). Each section contains two types of analyses: those that are of major and secondary importance to the questions asked in Chapter 8. The main analyses examined the effects that the repeated factor, Life Context, had on the perceptions of the gender role attributes in the four target persons. First, the orthogonal dependent variables (PAQM and PAQF) were examined using analyses of variance for repeated measures. Secondly, the dependent variables were categorized using a median split technique, as analytical questions also concerned the independence of Life Context and the perceived Androgyny of the targets.

Secondary analyses involved testing for the presence of a possible bias in the perceptions of the male and female subjects as well as examining the relationship between the PAQM and PAQF scales within and across each rating context. Also of interest was the newly defined variable, Latitude for Gender Role Development, which was introduced and discussed in Chapter 6.

## 9.1 Results -- Student Job Study (Study 2)

### 9.1.1 Main Analyses

#### 9.1.1.1 Continuous Scoring Method

The results were analysed using two 2 (Sex of Subjects) X 4 (Stimulus Person Condition) X 4 (Life Context) analyses of variance for repeated measures; one for the results from the masculine-instrumentality scale, the other for the feminine-expressivity scale.

a) Masculine-Instrumentality

Analyses showed a significant main effect for the variable Sex of Subject ($F(1,119) = 5.25$, $p < 0.024$). Overall, the female subjects

Table 9-1: Mean masculine-instrumentality scores for four stimulus persons in four Life Contexts. Standard deviations in parentheses.

| | Life Contexts | | | | |
|---|---|---|---|---|---|
| | Exam | Work | Parent | Retire | Marginal |
| Robert | 23.05<br>(4.15) | 26.13<br>(3.66) | 20.53<br>(3.92) | 20.16<br>(4.77) | 22.47<br>(4.13) |
| Susan | 23.47<br>(2.78) | 27.16<br>(3.68) | 21.35<br>(3.81) | 21.94<br>(4.09) | 23.48<br>(3.59) |
| Cathy | 23.89<br>(3.43) | 18.70<br>(6.48) | 20.96<br>(3.06) | 21.95<br>(4.53) | 21.37<br>(3.58) |
| Jim | 23.17<br>(3.41) | 20.96<br>(5.55) | 21.60<br>(3.80) | 20.74<br>(3.97) | 21.62<br>(4.18) |
| Marginal | 23.32<br>(3.44) | 23.31<br>(4.84) | 21.21<br>(3.65) | 21.12<br>(4.34) | |

rated the stimulus persons (SPs) higher in masculine-instrumentality than did the male subjects.

A slight but significant main effect was found for the Condition manipulation ($F(3,119) = 2.89$, $p < 0.039$). The weakness of this effect was confirmed when post hoc analyses failed to find significant differences between any two pairs of means (see Table 9-1).

There was a significant main effect for the within subjects factor, Life Context ($F(3,357) = 18.64$, Greenhouse-Geisser $p < 0.00001$; see Table 9-1). Post hoc analyses were used to determine which pairs of means were significantly different and a trend analysis suggested that the linear model would best explain the main effect ($F(1,119) = 45.94$, $p < 0.00001$). PAQM was rated highly during the student context (mean = 23.32). There was no difference between this mean and that found in the work context (mean = 23.31). Masculine-instrumentality was seen to decrease significantly between the work and parenting contexts (mean = 21.21, $p < 0.01$) and there was not a significant difference between PAQM ratings in the parenting and retirement contexts (mean = 21.12). Thus, subjects perceived both the male and female SPs to be high in masculine-instrumentality when participating in student and work roles but to be relatively less masculine-instrumental in the roles of a parent and a retired person.

However, this main effect should be interpreted in light of a significant Life Context by Condition interaction ($F(9,357) = 13.49$, Greenhouse-Geisser $p < 0.00001$; see Table 9-1). Post hoc analyses tested for differences between the four SP Conditions in each Life

Context. In the Student Context, all the SPs were perceived to require similar levels of PAQM attributes in order to be successful at their exam. In the Work context, there was no difference between the stimulus persons Robert and Susan. There was, however, a significant difference between the SPs Cathy and Jim (18.70 versus 20.96, respectively; $p < 0.05$) with Jim being perceived as more masculine-instrumental than Cathy. Cathy and Jim also were perceived to be less instrumental than both Robert and Susan (both p's $< 0.01$). In the parenting and retirement contexts, all stimulus persons were viewed similarly.

b) Feminine-Expressivity

This analysis revealed a significant main effect for Sex of Subject ($F(1,119) = 6.77$, $p < 0.01$), such that the females rated the SPs higher in feminine-expressivity than did the males. The SP Condition manipulation did not reach significance.

The Sex of Subject main effect, however, should be interpreted in light of a slight but significant Sex of Subject by Condition interaction ($F(3,119) = 3.66$, $p < 0.02$). Post hoc tests examined the differences between males' and females' responses in each of the four SP conditions. The only significant difference was found in the perceptions of the stimulus person Jim. Male subjects rated Jim lower in feminine-expressivity than did female subjects (19.58 versus 23.27, repectively; $p < 0.01$). The difference for the SP Cathy approached significance (males = 19.43, females = 21.49; $p < 0.10$) with the

Table 9-2: Mean feminine-expressivity scores in four Life Contexts. Standard deviations in parentheses.

| Life Contexts | | | |
|---|---|---|---|
| Exam | Work | Parent | Retire |
| 15.33 (5.20) | 20.02 (4.36) | 26.03 (3.89) | 22.95 (3.95) |

females tending to rate the stimulus person higher than the males. There were no significant sex differences for the two remaining SPs (for Robert, males = 21.38 and females = 20.74; for Susan, males = 21.16 and females = 21.41).

There was a highly significant main effect for the repeated factor, Life Context ($F(3,357) = 162.39$, Greenhouse-Geisser $p < 0.00001$; see Table 9-2). Post hoc tests were used to determine significant differences between the four Life Context means, and these were found between all six combinations of the means (all p's $< 0.01$). A highly significant linear trend ($F(1,119) = 246.63$, $p < 0.00001$), however, indicated that this was the best model for explaining the data. The subjects perceived feminine-expressivity to be the lowest in the student context (mean = 15.33). PAQF was seen to increase in the work context (mean = 20.02) and peak in the parenting stage (mean = 26.03). Feminine-expressivity then was seen to decline significantly when the SPs were rated in the retirement context (mean = 22.95). This latter mean, however, was still significantly higher than the two

feminine-expressivity means reported in the student and work contexts. Thus, both males and females perceived that feminine-expressive attributes were not relatively useful for successful completion of the exam but were more useful in both the work and retirement contexts and most useful in the parenting context.

c) Traditionality-Mobility Manipulation.

The effect of the traditionality-mobility manipulation was studied in two ways. First, the differences between the two SP pairs were analysed. This was followed by analyses within each pair.

i. Between stimulus person pairs.

The low traditionality-high mobility stimulus persons, Robert and Susan, were combined and differences in masculine-instrumentality and feminine-expressivity ratings across the four life contexts were compared to those of the high traditionality-low mobility stimulus persons, Cathy and Jim. It should be recalled that this pairing of stimulus persons is based upon the descriptions of their occupations. Robert's and Susan's occupations were low in traditionality and high in mobility while the opposite was true for Cathy's and Jim's occupations (see Chapter 8 for a more thorough explication of this dichotomy). Of interest in these analyses would be a main effect for the traditionality-mobility manipulation and any interactions of which this variable is a significant part. PAQ scores were analysed using 2 (Sex of Subject) X 2 (Traditionality) X 4 (Life Context) repeated

Table 9-3: Mean ratings of masculine-instrumentality in two Traditionality groups across four Life Contexts. Standard deviations in parentheses.

| | Life Contexts | | | | |
|---|---|---|---|---|---|
| | Exam | Work | Parent | Retire | Marginal |
| Low Traditional | 23.20 (3.49) | 26.63 (3.75) | 20.84 (4.02) | 20.98 (4.50) | 22.91 (3.94) |
| High Traditional | 23.31 (3.74) | 19.81 (6.02) | 21.38 (3.48) | 21.21 (4.23) | 21.43 (4.37) |

measures analyses of variance.

For masculine-instrumentality, there was a significant main effect for the Traditionality-Mobility manipulation ($F(1,123) = 6.96$, $p < 0.009$) such that the low traditionality-high mobility pair was seen as possessing significantly more masculine-instrumental attributes than those in the opposite group.

There also was a significant interaction between Life Context and Traditionality ($F(3,369) = 37.64$, Greenhouse-Geisser $p < 0.00001$; see Table 9-3). Post hoc tests examined the differences between the two Traditionality-Mobility conditions in each of the four Life Contexts. There were significant differences between the two in only the work condition. Here, the low traditionality-high mobility SPs were rated significantly higher in masculine-instrumentality than were the high traditionality-low mobility SPs ($p < 0.01$).

There were no significant main effects or interactions in the feminine-expressivity ANOVA. There was, however, was a trend for the Sex of Subjects by Traditionality by Life Context interaction ($F(3,369) = 2.60$, Greenhouse-Geisser $p < 0.06$). Post hoc analyes revealed that the only significant difference between Traditionality conditions in all of the Life Contexts (examined separately for males and females) was for females in the student context. Here, females perceived the high traditionality-low mobility SPs to be significantly higher than the low traditionality-high mobility SPs in feminine-expressivity (means = 17.21 and 14.11, respectively; $p < 0.01$).

ii. Within stimulus person pairs.

In order to determine the variability within each stimulus person condition, 2 (Sex of Subject) X 2 (Stimulus Person Condition) X 4 (Life Context) repeated measures analyses of variance were performed separately for each pair of Traditionality stimulus persons (i.e., Robert versus Susan and Cathy versus Jim). The rationale for these analyses stems from Eagly and Steffen's (1984) assumption that perceived sex differences stem from social roles. Thus, the female stimulus person described in a traditionally male role may not have been perceived differently from her male counterpart, whereas the female SP described in a traditionally female role may have been seen as distinctly different from her male counterpart, who was described in a traditionally male role.

The masculine-instrumentality analysis showed that there were no

significant differences between the stimulus persons Robert and Susan. However, for Cathy and Jim, there was a slight but significant Life Context by Condition interaction ($F(3,177) = 3.03$, Greenhouse-Geisser $p < 0.05$; see means in Table 9-1). Post hoc tests compared Cathy's and Jim's masculine-instrumentality ratings in each of the four Life Contexts. The only significant difference occurred in the work context where Jim was perceived to be more masculine-instrumental than Cathy ($p < 0.01$).

With regard to feminine-expressivity, neither the analysis for Robert and Susan nor that for Cathy and Jim revealed significant effects. Thus, there appeared to be few within-pair differences with the exception of masculine-instrumentality in the work condition for the high traditionality pair of stimulus persons.

#### 9.1.1.2 Categorical Scoring Method

Using a median split technique, subjects' responses in each Life Context were classified as androgynous, masculine sex-typed, feminine sex-typed, or undifferentiated. External medians were used to reduce any biasing effect created by the within-subjects methodology.

There is a question concerning from where the medians should come. As the goal of the study is to reflect British stereotypes of gender roles in adult developmental tasks, appropriate British norms should be used. Thus, the medians have been taken from the cross-sectional data reported in a Chapter 14. These data represent a large, British, adult sample gathered from the Canterbury area. Responses to

the PAQ were gathered from 341 adults (157 males and 184 females) between the ages of 18 and 91 years. The masculine-instrumentality median for this sample was 21.0 and the median feminine-expressivity score was 23.0.

In order to determine if the frequency of subjects in each of the four androgyny categories varied as a function of the Life Context, a 4 (Androgyny Category) X 4 (Life Context) chi-square analysis was performed (observed frequencies are reported in Table 9-4). The result was a highly significant chi-square statistic (chi-square = 172.43, df = 9, $p < 0.001$). It appeared that few people perceived the stimulus persons in the exam context as androgynous. However, the number of androgynous SPs increased steadily, peaking in parenthood and declining (although still above the expected value) in the retirement context. Masculine sex-typing appeared to be the norm in the exam context, declining and reaching a low point in the parenthood context. Androgyny and masculine sex-typing appeared to be the two most popular categories and very few SPs were categorized as feminine sex-typed or undifferentiated. However, there were more feminine sex-typed individuals in the parenting context that expected and there were more undifferentiated subjects in the retirement context than expected (see Table 9-4).

### 9.1.2 Supplementary Analyses

#### 9.1.2.1 Sex of Subject/Sex of Stimulus Person Bias

Other researchers have found that males and females differed in

their ratings of same sex and opposite sex stimulus persons. To determine whether the Sex of Subject main effects reported above were confounded with the perceptual bias of rating a member of the opposite sex differently than a member of the same sex, the Condition variable was recoded to represent the sex of the SP. Sex of Subject by Sex of SP ANOVAs then were performed separately for masculine-instrumentality and feminine-expressivity. In these analyses, an interaction between Sex of Subject and Sex of Stimulus Person would indicate the presence of a perceptual bias.

The PAQM analysis revealed only a significant Sex of Subject by Sex of Stimulus Person by Life Context interaction ($F(3,369) = 3.77$, Greenhouse-Geisser $p < 0.02$). Post hoc tests examined the differences

Table 9-4: Observed frequencies of stimulus persons placed in four Androgyny categories across four Life Contexts[1].

| | Life Contexts | | | | |
|---|---|---|---|---|---|
| | Exam | Work | Parent | Retire | N |
| Androgynous | 11 | 32 | 65 | 41 | 149 |
| Masculine Sex-Typed | 85 | 56 | 7 | 27 | 175 |
| Feminine Sex-Typed | 1 | 10 | 39 | 23 | 73 |
| Undifferent-iated | 30 | 29 | 16 | 36 | 111 |

[1] Total N = 127 (57 males; 70 females)

between male and female subjects separately for male and female SPs in each of the four life contexts. These showed that, when rating a male stimulus person, females perceived the SP to be higher in masculine-instrumentality in the exam ($p < 0.05$) and work ($p < 0.01$) conditions than did the males. When rating a female SP, female subjects perceived the stimulus person to possess more masculine-instrumentality in the parenting condition ($p < 0.01$) than did the male subjects (see Table 9-5). There were no significant effects for the feminine-expressivity analysis.

Table 9-5: Male and female subjects' mean masculine-instrumentality ratings of male and female stimulus persons across four Life Contexts. Standard deviations in parentheses.

| | Life Contexts | | | | |
|---|---|---|---|---|---|
| | Exam | Work | Parent | Retire | Marginal |
| Male SP | | | | | |
| Male | 22.00 (4.46) | 21.97 (5.64) | 20.70 (3.56) | 20.30 (4.30) | 21.24 (4.49) |
| Female | 23.94 (3.41) | 24.78 (4.99) | 21.42 (4.14) | 20.50 (4.35) | 22.66 (4.23) |
| Female SP | | | | | |
| Male | 23.22 (2.98) | 23.26 (6.69) | 19.37 (3.87) | 21.48 (4.27) | 21.83 (4.45) |
| Female | 23.88 (3.39) | 22.97 (6.81) | 22.91 (3.15) | 22.21 (4.31) | 22.99 (4.42) |

9.1.2 Scale Intercorrelations

As stated in the literature concerning the development of the PAQ, the PAQM and PAQF scales of the instrument should be orthogonal. As the PAQ was developed and standardized on a university population, it was expected that there would be either no significant correlations between the two scales in those contexts which were similar to that of the university student (i.e., the exam situation and the work situation) or the correlations should be significant although small. The former expectation was confirmed as the correlation coefficients were not significant in either context ($r = 0.06$ and $r = 0.05$, respectively). However, there were highly significant correlations between the PAQM and PAQF scales in both the parenthood and retirement contexts ($r = 0.296$, $p < 0.001$ and $r = 0.278$, $p < 0.002$, respectively). The patterns of intercorrelations are illustrated in Tables 9-6 and 9-7.

It should be noted that PAQM and PAQF scores were correlated across contexts. That is, PAQF in the exam context was correlated with PAQM in the parent context ($r = 0.195$, $p < 0.028$). Feminine-expressivity in the work context was correlated with PAQM in both the parent ($r = 0.204$, $p < 0.02$) and retirement contexts ($r = 0.333$, $p < 0.0001$). PAQF in the parenthood context was positively correlated with masculine-instrumentality in the exam ($r = 0.359$, $p < 0.0001$), work ($r = 0.190$, $p < 0.03$), and retirement contexts ($r = 0.301$, $p < 0.001$). Finally, PAQF in the retirement context was correlated with PAQM in the exam ($r = 0.300$, $p < 0.001$) and parenthood ($r = 0.295$, $p < 0.001$)

Table 9-6: Pearson Product-Moment Correlation Coefficients between masculine-instrumentality and feminine-expressivity ratings in four Life Contexts[1].

| | Feminine-Expressivity | | | |
|---|---|---|---|---|
| | Exam | Work | Parent | Retire |
| Exam | | | 0.359 | 0.300 |
| Work | | | 0.190[2] | |
| Parent | 0.195[2] | 0.204[2] | 0.296 | 0.295 |
| Retire | | 0.333 | 0.301 | 0.301 |

Notes: 1. All reported coefficients significant at $p < 0.002$ or less, unless stated otherwise.
2. $p < 0.03$

Table 9-7: Pearson Product-Moment correlation coefficients between ratings of masculine-instrumentality or feminine-expressivity across four Life Contexts[1,2].

| | Exam | Work | Parent | Retire |
|---|---|---|---|---|
| Exam | 1.0 | 0.303 | 0.400 | 0.460 |
| Work | 0.268 | 1.0 | 0.291 | 0.272 |
| Parent | | 0.256 | 1.0 | 0.585 |
| Retire | 0.205[3] | 0.255 | 0.531 | 1.0 |

Notes: 1. Coefficients above the diagonal are correlations between masculine-instrumentality in the four contexts. Coefficients below the diagonal are correlations between feminine-expressivity in the four contexts.
2. All reported coefficients were significant at $p < 0.004$, or less, unless stated otherwise.
3. $p < 0.02$

contexts.

There were low to moderate positive correlations between masculine-instrumentality ratings in all contexts. PAQM in the student context was positively correlated with PAQM in the work ($r = 0.303$, $p < 0.001$), parenting ($r = 0.400$, $p < 0.0001$), and retirement contexts ($r = 0.460$, $p < 0.0001$). Masculine-instrumentality ratings in the work context were positively correlated with PAQM in both the parenting ($r = 0.291$, $p < 0.001$) and retirement stages ($r = 0.272$, $p < 0.002$). Also, PAQM in the parenting context was correlated with masculine-instrumentality in the retirement context ($r = 0.585$, $p < 0.001$).

Feminine-expressivity, for the most part, also was positively correlated with all other PAQF ratings. In the student context, PAQF was correlated with feminine-expressivity in the work ($r = 0.268$, $p < 0.002$) and retirement stages ($r = 0.205$, $p < 0.02$). PAQF in the work stage was positively correlated with feminine-expressivity in both the parenting ($r = 0.256$, $p < 0.004$) and retirement contexts ($r = 0.255$, $p < 0.004$). In the parenting context, feminine-expressivity was positively related to PAQF in the retirement stage ($r = 0.531$, $p < 0.0001$).

#### 9.1.2.3 Latitude for Gender Role Development

As noted in Chapter 8, the masculine-instrumental Latitude for Gender Role Development (LD) score is calculated by taking the highest of the PAQM context means and subtracting the lowest of the PAQM context means from it. Feminine-expressivity LD scores are calculated

by performing the same operation using the PAQF context means. Of special interest is determining whether the PAQM latitude score is significantly different from the PAQF latitude score. This finding would indicate that one gender role domain was perceived to be more restricted than the other domain vis a vis performance in the age-related developmental tasks used in this research programme. Also of importance is the examination of individual differences with regard to both masculine-instrumental and feminine-expressive LD.

a) Masculine-Instrumental Versus Feminine-Expressive

An independent groups t-test was performed to test the hypothesis that masculine-instrumentality had a more restricted latitude for development than feminine-expressivity. The mean latitude score for PAQM was 7.71 (sd = 3.78) while the average PAQF LD score was 12.0 (sd = 5.98). Results showed that, indeed, masculine-instrumentality was perceived by the subjects to have had a significantly narrower breadth for development, as compared to feminine-expressivity ($t(252) = 3.291$, $p < 0.001$, two-tailed).

b) Masculine-Instrumental Latitude

Masculine-instrumental latitude scores were examined using a 2 (Sex of Subject) X 4 (Stimulus Person Condition) analysis of variance. Neither the main effects nor the interaction terms were significant. Latitude scores for masculine-instrumentality did not vary significantly as a function of the sex of the subject or the stimulus

person condition the subject was rating.

Scores also were analysed according to the traditionality-mobility manipulation. Specifically, is one condition perceived to possess more or less latitude than the other (between-pairs) and are there differences within each manipulation pair.

The between-pairs 2 (Sex of Subject) X 2 (Traditionality) analysis of variance did not reveal any significant effects. However, the 2 (Sex of Subject) X 2 (Stimulus Person Condition) within-pairs ANOVA for Robert and Susan yielded a slight but significant interaction between the two independent variables ($F(1,60) = 3.88$, $p < 0.05$). Post hoc analyses revealed that the females perceived Susan to have a significantly greater latitude for gender role development ($p < 0.05$; see Table 9-8). The within-pair analysis for Cathy and Jim was not significant.

c) Feminine-Expressive Latitude

The 2 (Sex of Subject) X 4 (Stimulus Person Condition) ANOVA revealed that neither main effect was significant. However the interaction term approached significance ($F(3,119) = 2.31$, $p < 0.08$). Post hoc tests were used to examine the differences between males and females in each of the four SP conditions. The only significant difference occured in the perceptions of Cathy. The male subjects perceived Cathy to have a much greater degree of developmental latitude than did the female subjects (means = 14.48 and 9.11, respectively, $p < 0.05$; see Table 9-8).

With regard to the Traditionality-Mobility manipulation, the between-pairs analysis yielded a significant interaction between Sex of Subject and Traditionality ($F(1,123) = 5.21$, $p < 0.02$). Post hoc tests examined the differences between male and female subjects' perceptions in each of the two Traditionality conditions. The only significant difference occured in the high traditionality-low mobility condition. Here, the males perceived the stimulus persons to have a significantly greater degree of developmental latitude than did the females ($p < 0.05$).

Table 9-8: Mean masculine and feminine latitude scores for male and female subjects rating four Stimulus Person Conditions. Standard deviations in parenthese.

| | Masculine Latitude | | Feminine Latitude | |
|---|---|---|---|---|
| | Male | Female | Male | Female |
| Robert | 7.83<br>(3.04) | 8.80<br>(3.94) | 12.00<br>(5.51) | 13.70<br>(6.63) |
| Susan | 8.75<br>(3.00) | 6.50<br>(2.42) | 11.56<br>(4.68) | 12.69<br>(6.31) |
| Cathy | 8.91<br>(5.03) | 6.61<br>(4.45) | 14.82<br>(7.67) | 9.11<br>(5.30) |
| Jim | 7.00<br>(4.15) | 7.62<br>(3.58) | 12.17<br>(6.15) | 10.75<br>(4.96) |

The within-pairs ANOVAs revealed no differences in the perceptions of gender role latitude for Robert and Susan but there was a significant Sex of Subject by Condition interaction in the perceptions of Cathy and Jim ($F(1,59) = 5.45$, $p < 0.02$). Post hoc analyses revealed that the females perceived Cathy to be significantly more restricted in her developmental latitude when compared to the perceptions of the males ($p < 0.05$; see Table 9-8).

## 9.2 Results -- Elderly Job Study (Study 3)

### 9.2.1 Main Analyses

#### 9.2.1.1 Continuous Scoring Method

The main effects and interactions of the masculine-instrumentality and feminine-expressivity scales of the PAQ were examined using two 2 (Sex of Subject) X 4 (Stimulus Person Condition) X 4 (Life Context) analyses of variance for repeated measures, the latter variable being treated as the within-subjects factor.

a) Masculine-Instrumentality

This analysis of variance showed a significant main effect of Sex of Subject ($F(1,143) = 8.36$, $p < 0.004$). Overall, the female subjects rated the four stimulus persons higher in masculine-instrumentality than did the male subjects. There was neither a significant main effect for the Condition manipulation nor a Sex of Subject by Condition interaction.

The main effect for the repeated factor, Life Context, was highly

Table 9-9: Mean masculine-instrumentality scores for four stimulus persons in four Life Contexts. Standard deviations in parentheses.

| | Life Contexts | | | | |
|---|---|---|---|---|---|
| | Exam | Work | Parent | Retire | Marginal |
| Robert | 23.37<br>(3.28) | 27.07<br>(3.45) | 22.53<br>(4.12) | 20.92<br>(3.74) | 23.47<br>(3.65) |
| Susan | 23.23<br>(4.83) | 27.24<br>(3.12) | 22.44<br>(4.60) | 22.24<br>(4.63) | 23.79<br>(4.30) |
| Cathy | 23.00<br>(4.59) | 23.77<br>(3.30) | 23.90<br>(3.46) | 23.77<br>(4.11) | 23.61<br>(3.87) |
| Jim | 23.44<br>(4.35) | 22.87<br>(3.24) | 22.52<br>(3.90) | 21.34<br>(3.86) | 22.55<br>(3.84) |
| Marginal | 23.28<br>(4.26) | 25.31<br>(3.28) | 22.87<br>(4.02) | 22.09<br>(4.09) | |

significant ($F(3,429) = 33.01$, Greenhouse-Geisser $p < 0.00001$). Post hoc tests revealed that perceptions of masculine-instrumentality rose significantly from the student context (mean = 23.28), to peak in the work context (mean = 25.31; $p < 0.01$). PAQM attributes were perceived to decline when the SP was rated in the parenting context (mean = 22.87; $p < 0.01$). There was not a significant difference between mean parent scores and mean retirement scores (mean = 22.09). Orthogonal contrasts revealed that there was a significant quadradic trend in the data ($F(1,143) = 39.74$, $p < 0.00001$; see Table 9-9).

This main effect, however, should be interpreted in light of a significant Life Context by Condition interaction ($F(9,429) = 8.98$,

Greenhouse-Geisser $p < 0.00001$; see Table 9-9). Post hoc tests examined differences between the four stimulus persons in each of the four life contexts. In the student context, there were no significant differences between the four stimulus person conditions. In the work stage, Robert and Susan (means = 27.05 and 27.24, respectively) did not differ from one another and Cathy and Jim (means = 23.77 and 22.87, respectively) did not differ significantly from one another. However, both Robert and Susan were perceived to be significantly more masculine-instrumental than both Cathy and Jim (all p's $< 0.01$).

In the parenting stage, perceptions of masculine-instrumentality did not vary as a function of the stimulus person condition (PAQM range = 22.44 - 23.90). In the retirement context, however, Cathy (mean = 23.77) was perceived to be more masculine-instrumental than both Robert (mean = 20.92) and Jim (mean = 21.34; p's $< 0.01$).

b) Feminine-Expressivity

There was a significant main effect for Sex of Subject ($F(1,143) = 7.07$, $p < 0.009$). As with the masculine-instrumentality scale, the female subjects rated the stimulus persons higher in feminine-expressivity. There also was a slight but significant main effect for the Condition manipulation ($F(3,143) = 2.81$, $p < 0.04$). Post hoc analyses, however, found no significant differences between pairs of means, offering further evidence of the weakness of the effect.

There was a highly significant main effect for the repeated factor, Life Context ($F(3,429) = 141.62$, Greenhouse-Geisser $p <$

Table 9-10: Mean feminine-expressivity scores in four Life Contexts. Standard deviations in parentheses.

| Life Contexts | | | |
|---|---|---|---|
| Exam | Work | Parent | Retire |
| 18.09 (5.21) | 21.18 (4.48) | 26.15 (4.25) | 25.27 (4.38) |

0.00001). Orthogonal contrasts suggested that post hoc analyses could explain the main effect best using a linear model ($F(1,143) = 229.99$, $p < 00001$). Feminine-expressivity was seen at its lowest point in the student context (mean = 18.09) and it rose significantly to an average of 21.18 in the work description ($p < 0.01$). Perceived PAQF scores peaked in the parenting context (mean = 26.15; $p < 0.01$). There was not a significant difference between PAQF scores in the parenting and retirement contexts (see Table 9-10).

c) Traditionality-Mobility Manipulation

i. Between stimulus person pairs.

Two 2 (Sex of Subject) X 2 (Traditionality) X 4 (Life Context) ANOVAs were used to test for differences between the two low traditionality-high mobility SPs and the two high traditionality-low mobility SPs.

The analysis for masculine-instrumentality yielded a significant Life Context by Traditionality interaction ($F(3,441) = 22.22$,

Greenhouse-Geisser $p < 0.00001$). Post hoc tests were used to examine the differences between the two Traditionality conditions in each of the four Life Contexts. In the work context, the low traditionality-high mobility group was perceived to possess significantly greater levels of masculine-instrumentality ($p < 0.01$), but in the retirement context, the high traditionality-low mobility group was perceived to be more masculine-instrumental ($p < 0.05$). There were no significant differences in the remaining two contexts (see Table 9-11).

The analysis for feminine-expressivity revealed a Sex of Subject by Traditionality interaction that approached significance ($F(1,147) = 3.41$, $p < 0.067$). The weakness of this effect was indicated by the lack of significant differences between pairs of means when post hoc tests were used to assess the differences between the perceptions of males and females for each of the Traditionality groups.

Table 9-11: Mean ratings of masculine-instrumentality in two Traditionality groups across four Life Contexts. Standard deviations in parentheses.

| | Life Contexts | | | |
|---|---|---|---|---|
| | Exam | Work | Parent | Retire |
| Low Traditional | 23.31 (3.41) | 27.14 (4.05) | 22.49 (3.96) | 21.56 (3.95) |
| High Traditional | 23.22 (3.90) | 23.32 (4.59) | 23.22 (3.83) | 22.59 (4.06) |

ii. Within stimulus person pairs.

Four 2 (Sex of Subject) X 2 (Stimulus Person Condition) X 4 (Life Context) analyses of variance for repeated measures were used to examine the within stimulus person pairs. The Robert versus Susan analysis for masculine-instrumentality revealed a significant Life Context by Sex of Subject by Condition interaction ($F(3,219) = 3.39$, Greenhouse-Geisser $p < 0.02$). Post hoc tests examining the differences between Robert and Susan for both males and females in each of the Life contexts found that the only significant difference was for females in the retirement context. In this context, the female subjects rated Susan as more masculine-instrumental than Robert (means = 24.25 and 21.33, respectively; $p < 0.01$).

The masculine-instrumentality analysis for Cathy and Jim revealed a slight but significant interaction between Life Context and Condition ($F(3,210) = 2.96$, Greenhouse-Geisser $p < 0.04$; see Table 9-9). Post hoc analyses examined the differences between Cathy and Jim in each of the four life contexts. The only significant difference occurred in the retirement context. Here, subjects perceived Cathy to possess significantly more masculine-instrumentality than Jim ($p < 0.05$).

The feminine-expressivity analysis for Robert and Susan revealed a significant Life Context by Sex by Condition interaction ($F(3,219) = 2.84$, Greenhouse-Geisser $p < 0.05$). Post hoc analyses examined the differences between Robert and Susan separately for both males and females. For the males, the only significant difference occurred in

the parenting condition. Here, the males perceived Susan to be significantly more masculine-instrumental than Robert (means = 26.11 and 23.61, respectively; $p < 0.05$). The females rated the two stimulus persons differently in two contexts. In both the exam and work contexts, they rated Susan (exam = 19.75; work = 23.30) higher in masculine-instrumentality than Robert (exam = 17.05; work = 20.81; both p's $< 0.05$).

The feminine-expressivity analysis for Cathy and Jim showed that there was a significant main effect for Condition ($F(1,70) = 5.48$, $p < 0.02$) such that Cathy (mean = 23.80) was seen as more feminine-expressive than Jim (mean = 22.17).

9.2.1.2 Categorical Scoring Method

In order to determine if the frequency of stimulus persons perceived as androgynous, masculine sex-typed, feminine sex-typed, or undifferentiated varied across the four life contexts, the masculine-instrumentality and feminine-expressivity ratings were categorized into Androgyny groupings by a median split technique. In order for the medians to be representative of British adulthood, they were taken from the cross-sectional study reported in Chapter 14 (see section 9.1.1.2).

A 4 (Androgyny Category) X 4 (Life Context) chi-square test of independence was performed (observed frequencies are presented in Table 9-12). The result was a highly significant statistic (chi-square = 212.40, df = 9, $p < 0.001$). The trend was similar to that observed

in the Student Job Study. The androgyny and masculine sex-typed categories were the most prominant with 75% of the stimulus persons being categorized into these two groups. There were few androgynous stimulus persons in the exam context but the numbers grew, peaking in the parenthood context and declining (although still above the expected frequency) in the retirement context. Conversely, the numbers of masculine sex-typed stimulus persons declined from the exam context, although there were still a significantly greater number than expected in the first two contexts and fewer than expected in the latter two contexts (see Table 9-12).

According to this age cohort, the numbers of feminine sex-typed stimulus persons peaked in retirement, not parenthood, although the

Table 9-12: Observed frequencies of stimulus persons placed in four Androgyny categories across four Life Contexts[1].

| | Life Contexts | | | | |
|---|---|---|---|---|---|
| | Exam | Work | Parent | Retire | Marginal |
| Androgynous | 23 | 65 | 101 | 86 | 275 |
| Masculine Sex-Typed | 95 | 65 | 5 | 15 | 180 |
| Feminine Sex-Typed | 7 | 1 | 28 | 31 | 67 |
| Undifferent-iated | 26 | 20 | 17 | 19 | 82 |

[1] Total N = 151 (74 males; 77 females)

frequencies in the latter two contexts exceeds those expected by chance. The number of undifferentiated stimulus persons decreased from the exam context to the retirement context, but there was never a large deviation between the observed and expected values.

### 9.2.2 Supplementary Analyses

#### 9.2.2.1 Sex of Subject/Sex of Stimulus Person Bias

In order to determine whether the the perceptions of the stimulus persons were effected by an interaction between the subject's sex and the sex of the stimulus person, two 2 (Sex of Subject) X 2 (Sex of Stimulus Person) by 4 (Life Context) analyses of variance for repeated measures were calculated, one for masculine-instrumentality and the other for feminine-expressivity. An indication of the presence of this bias would be an interaction between the first two, or all three, grouping factors.

The PAQM analysis revealed no interaction for the two variables. However, the analysis for PAQF yielded a slight but significant Life Context by Sex of Subject by Sex of Stimulus Person interaction ($F(3,441) = 3.55$, Greenhouse-Geisser $p < 0.03$). Post hoc analyses were performed between male and female subjects rating both male and female stimulus persons in all four life contexts. For those rating a male stimulus person, the only significant difference occured in the parenting context. That is, the female subjects (mean = 26.55) rated the male stimulus person higher in feminine-expressivity than did the male subjects (mean = 24.43; $p < 0.05$). For those rating a female SP,

significant differences occurred in the exam and work contexts. In these contexts, the female subjects (exam = 20.39; work = 23.33) rated the stimulus persons higher in feminine-expressivity than did the male subjects (exam = 17.43; work = 20.16; both p's < 0.01).

9.2.2.2 Scale Intercorrelations

The elderly sample perceived PAQM and PAQF to be correlated with one another in most contexts. PAQF in the exam context was correlated with PAQM in the exam ($r = 0.146$, $p < 0.04$), parent ($r = 0.215$, $p < 0.004$), and retirement contexts ($r = 0.275$, $p < 0.0001$). Feminine-expressivity in the work context was related to PAQM in the exam ($r = 0.136$, $p < 0.05$), work ($r = 0.254$, $p < 0.001$), parenthood ($r = 0.384$, $p < 0.0001$), and retirement contexts ($r = 0.416$, $p < 0.0001$). PAQF in the parent context was correlated with masculine-instrumentality in the exam ($r = 0.327$, $p < 0.0001$), work ($r = 0.486$, $p < 0.0001$), parent ($r = 0.572$, $p < 0.0001$), and retirement contexts ($r = 0.454$, $p < 0.0001$). Finally, PAQF in the retirement context was related to PAQM in the exam ($r = 0.351$, $p < 0.0001$), work ($r = 0.495$, $p < 0.0001$), parenthood ($r = 0.536$, $p < 0.0001$), and retirement contexts ($r = 0.535$, $p < 0.0001$). The patterns of the scale intercorrelations can be found in Tables 9-13 and 9-14.

PAQM in the student context was correlated with PAQM in the work ($r = 0.518$, $p < 0.0001$) and parenting stages ($r = 0.402$, $p < 0.0001$). It also was correlated with masculine-instrumentality in the retirement context ($r = 0.255$, $p < 0.001$). PAQM scale ratings in the

Table 9-13: Pearson Product-Moment Correlation Coefficients between masculine-instrumentality and feminine-expressivity ratings in four Life Contexts[1].

| | Feminine-Expressivity | | | |
|---|---|---|---|---|
| | Exam | Work | Parent | Retire |
| Exam | 0.146[2] | 0.136[2] | 0.327 | 0.351 |
| Work | | 0.254 | 0.486 | 0.495 |
| Parent | 0.215 | 0.384 | 0.572 | 0.536 |
| Retire | 0.275 | 0.416 | 0.454 | 0.535 |

Notes: 1. All coefficients are significant at $p < 0.001$, or less, unless stated otherwise.
2. $p < 0.05$

Table 9-14: Pearson Product-Moment Correlation Coefficients between ratings of masculine-instrumentality or feminine-expressivity across four Life Contexts[1,2].

| | Exam | Work | Parent | Retire |
|---|---|---|---|---|
| Exam | 1.0 | 0.518 | 0.402 | 0.255 |
| Work | 0.395 | 1.0 | 0.518 | 0.362 |
| Parent | 0.136[3] | 0.464 | 1.0 | 0.608 |
| Retire | 0.234 | 0.421 | 0.722 | 1.0 |

Notes: 1. Coefficients above the diagonal are correlations between masculine-instrumentality in the four contexts. Coefficients below the diagonal are correlations between feminine-expressivity in the four contexts.
2. All coefficients are significant at $p < 0.002$, or less, unless stated otherwise.
3. $p < 0.05$

work context were correlated with PAQM in the parenting ($r = 0.518$, $p < 0.0001$) and the retirement contexts ($r = 0.362$, $p < 0.0001$). PAQM in the parenting stage was highly correlated with PAQM in the retirement context ($r = 0.608$, $p < 0.0001$).

PAQF ratings in the exam context were correlated with PAQF ratings in the work ($r = 0.395$, $p < 0.0001$), parenting ($r = 0.136$, $p < 0.05$), and retirement contexts ($r = 0.234$, $p < 0.002$). Feminine-expressivity in the work stage was strongly related to PAQF in the parenting ($r = 0.464$, $p < 0.0001$) and retirement contexts ($r = 0.421$, $p < 0.0001$). Also, PAQF in the parenting stage was correlated with feminine-expressivity in the retirement context ($r = 0.722$, $p < 0.0001$).

9.2.2.3 Latitude for Gender Role Development

Analyses identical to those reported in the Student Job Study were conducted. First, latitude scores were calculated for each individual. The hypothesis that masculine-instrumentality and feminine-expressivity latitude scores would differ significantly was tested via an independent groups t-test. Secondly, latitude scores for masculine-instrumentality and feminine-expressivity were examined separately, as functions of subjects sex and the stimulus person condition.

a) Masculine-Instrumental Versus Feminine-Expressive

The mean PAQM latitude score (mean = 6.73, sd = 3.40) was

compared with the mean PAQF latitude score (mean = 10.34, sd = 5.41). The result of the independent groups t-test showed that subjects perceived masculine-instrumentality to have a more restricted developmental range across the four life-span contexts ($t(300) = 6.69$, $p < 0.001$, two-tailed).

b) Masculine-Instrumental Latitude

A 2 (Sex of Subject) X 4 (Stimulus Person Condition) analysis of variance revealed a significant main effect for the Condition manipulation ($F(1,143) = 5.01$, $p < 0.003$; see Table 9-15). Post hoc tests showed that Robert and Susan were perceived to have similar latitude for the development of masculine-instrumental gender roles attributes. Both Robert's and Susan's latitude scores were significantly higher than both those for Cathy and Jim (all p's < 0.01). Subjects also perceived Jim to have a greater degree of PAQM latitude when compared to Cathy ($p < 0.05$).

The Traditionality-Mobility manipulation was assessed using both between- and within-pair analyses. A 2 (Sex of Subject) X 2 (Traditionality) ANOVA, comparing the perceptions masculine-instrumentality between the two Traditionality groups, revealed a significant main effect for the Traditionality-Mobility manipulation ($F(1,147) = 13.61$, $p < 0.0003$) such that the low traditionality-high mobility group was seen as having more developmental latitude than the SPs in the high traditionality-low mobility category.

The within-pairs analysis for Robert and Susan revealed no

Table 9-15: Masculine and feminine latitude scores for male and female subjects rating four Stimulus Person Conditions. Standard deviations in parentheses.

| | Masculine Latitude | | Feminine Latitude | |
|---|---|---|---|---|
| | Male | Female | Male | Female |
| Robert | 7.22 (3.04) | 8.19 (3.46) | 9.78 (4.32) | 11.57 (4.95) |
| Susan | 7.50 (4.26) | 5.74 (2.29) | 11.94 (6.21) | 8.90 (4.91) |
| Cathy | 5.74 (3.20) | 4.74 (2.85) | 10.47 (6.60) | 7.32 (3.48) |
| Jim | 6.00 (3.40) | 6.47 (3.57) | 9.58 (3.96) | 13.47 (6.72) |

significant main effects or interactions. The same occured with the analysis for Cathy and Jim. Thus, there appeared to be no differences in masculine-instrumental latitude within the traditionality-mobility manipulation pairs of stimulus persons.

c) Feminine-Expressive Latitude

There was a significant main effect for neither subject's sex nor the stimulus person manipulation. However, there was a significant Sex by Condition interaction ($F(3,143) = 4.24$, $p < 0.007$; see Table 9-15). Post hoc tests examined the differences between male and female ratings for each of the four stimulus persons. The only significant difference occured for the stimulus person Jim. In this condition, the

female subjects perceived Jim to have a greater degree of developmental latitude than did the male subjects (female's mean = 13.47; male's mean = 9.58, $p < 0.05$).

The analysis assessing the between-pairs effect for the traditionality-mobility manipulation revealed that there was no significant difference between the low traditionality-high mobility and high traditionality-low mobility stimulus persons vis a vis feminine-expressive latitude.

The within-pairs analysis revealed a slight but significant Sex by Condition interaction for Robert and Susan ($F(1,73) = 4.27$, $p < 0.04$). Post hoc analyses examined the differences between males' and females' perceptions for each of the two stimulus persons, however, no significant differences were found.

The analysis for Cathy and Jim revealed a significant main effect of Condition ($F(1,70) = 4.47$, $p < 0.04$) such that Jim was seen as having a greater degree of developmental latitude than Cathy. This, however, should be interpreted in the light of a significant Condition by Sex interaction ($F(1,70) = 8.03$, $p < 0.006$). Post hoc tests examined the differences between males and females in each of the two stimulus person conditions. There was no significant difference between the perceptions of males and females for the SP Cathy. However, the female subjects rated Jim as having a significantly greater degree of developmental latitude, when compared with the female subjects ($p < 0.05$).

## 9.3 Results -- Cohort Analysis (Study 4)

The data for the Student and Elderly Job Studies were combined and analyses searching for differences between the perceptions of the two cohorts were performed. Specifically, in what ways do the two cohorts differ? Also, are there significant main effects and interactions that are not found in both the Student and Elderly Job Studies, but appear to be strengthened when the data from the two studies are combined?

In order not to repeat effects reported in the two previous studies, two types of results will be presented in this section. First, all results that include the variable Cohort (and therefore differences between the two age groups) will be reported. Results without the Cohort variable will only be presented if the same findings were not found in both the Student and Elderly Job Studies.

Finally, a note on the use of the categorical scoring method to examine the relationships between age cohort, life context, and perceived androgyny category. A chi-square test breaks this three-way analysis into two two-way analyses. Thus, the method of examining the three-way table mentioned above would be to examine the relationship between life context and androgyny category separately for the two age cohorts. This has been done in the two previous results sections. Thus, the categorical scoring method will not be reported in this section.

9.3.1 Main Analyses

9.3.1.1 Continuous Scoring Method

Two 2 (Sex of Subject) X 2 (Cohort) X 4 (Stimulus Person Condition) X 4 (Life Context) analyses of variance for repeated measures were performed; one for the masculine-instrumentality scale, the other for the feminine-expressivity scale.

a) Masculine-Instrumentality

The analysis of variance for masculine-instrumentality yielded a slight but significant effect for the Condition manipulation ($F(3,262) = 3.12$, $p < 0.03$). The weakness of this effect was demonstrated when post hoc tests examining the differences between pairs of stimulus person means failed to find any significant differences.

A significant main effect for the variable Cohort was found ($F(1,262) = 9.52$, $p < 0.002$). Overall, those in the older cohort perceived the SPs to be significantly more masculine-instrumental than did those in the younger cohort.

This effect, however, should be interpreted in light of two interactions. The analysis yielded a significant Life Context by Cohort interaction ($F(3,786) = 6.37$, Greenhouse-Geisser $p < 0.0003$; see the row marginal means in Table 9-16). Post hoc analyses examined the differences between the two age Cohorts in each of the four Life Contexts. There was no significant difference between the two cohorts' ratings of masculine-instrumentality in the exam context; however, there were significant differences in all other contexts (all p's <

0.01). In all cases, the elderly cohort rated the stimulus persons higher in masculine-instrumentality than did the student cohort.

Finally, there was a slight but significant Life Context by Stimulus Person Condition by Cohort interaction ($F(9,786) = 2.31$, Greenhouse-Geisser $p < 0.02$; see Table 9-16). Post hoc tests examined the differences between the two cohorts for each of the four stimulus persons in each of the four life contexts. In the student context, there were significant differences between the two cohorts for three of the four stimulus persons. The elderly cohort perceived Robert as having more masculine-instrumentality than did the younger cohort ($p < 0.01$). The reverse, however, was true for the perceptions Susan ($p < 0.01$) and Cathy ($p < 0.05$).

In the work context, the elderly cohort rated Robert ($p < 0.05$), Cathy, and Jim ($p$'s $< 0.01$) higher in masculine-instrumentality but there were no significant differences between the two cohorts in their perceptions of Susan.

In the parent context, the elderly cohort again rated the SPs higher on the PAQM scale than did the student cohort (regarding Robert, Susan, and Cathy, $p < 0.01$; regarding Jim, $p < 0.05$). However, in the retirement context, there were significant differences between the cohorts only in their perceptions of the stimulus persons Robert ($p < 0.01$) and Cathy ($p < 0.05$). Again, the elderly cohort rated these SPs higher in masculine-instrumentality.

Table 9-16: Mean ratings of masculine-instrumentality for two age Cohorts across four Life Contexts and four Stimulus Persons. Standard deviations in parentheses.

| | | Stimulus Persons | | | | |
|---|---|---|---|---|---|---|
| | | Robert | Susan | Cathy | Jim | Marginal |
| Exam | Student | 22.87 (3.90) | 23.47 (2.78) | 23.89 (3.34) | 23.17 (3.41) | 23.35 (3.38) |
| | Elderly | 23.43 (3.58) | 23.23 (3.45) | 23.00 (4.12) | 23.44 (3.74) | 23.28 (3.72) |
| Work | Student | 26.08 (3.79) | 27.16 (3.68) | 18.70 (6.48) | 20.96 (5.55) | 23.23 (4.88) |
| | Elderly | 27.02 (4.73) | 27.24 (3.12) | 23.77 (4.60) | 22.87 (4.63) | 25.23 (4.27) |
| Parent | Student | 20.38 (3.34) | 21.35 (3.81) | 20.96 (3.06) | 21.60 (3.80) | 21.07 (3.50) |
| | Elderly | 22.47 (4.87) | 22.44 (3.30) | 23.90 (3.46) | 22.52 (4.11) | 22.83 (3.94) |
| Retire | Student | 19.80 (4.52) | 21.94 (4.09) | 21.95 (4.53) | 20.74 (3.97) | 21.11 (4.28) |
| | Elderly | 21.09 (4.47) | 22.24 (3.24) | 23.77 (3.90) | 21.34 (3.86) | 22.11 (3.87) |
| Marginal | | 22.89 (4.15) | 23.63 (3.43) | 22.49 (4.20) | 22.08 (4.13) | |

b) Feminine-Expressivity.

The analysis for feminine-expressivity revealed a significant main effect for Cohort ($F(1,262) = 15.93$, $p < 0.0001$) such that those in the older age group rated the subjects higher in feminine-expressivity than did those in the younger group.

This main effect should be interpreted in light of a slight but significant Condition by Cohort interaction ($F(3,262) = 2.60$, $p < 0.05$). Post hoc tests examined the differences between the perceptions of the two Cohorts for each Stimulus Person. These analyses revealed only two significant differences. The elderly cohort rated the both Susan ($p < 0.05$) and Cathy ($p < 0.01$) higher in feminine-expressivity than did the student cohort.

There also was a significant Sex of Subject by Condition by Cohort interaction ($F(3,262) = 4.01$, $p < 0.008$; see Table 9-17). Post hoc analyses examined the differences between the two cohorts in each of the four stimulus person conditions, separately for male and female subjects. Neither the males nor females in either cohort differed significantly in their perceptions of the stimulus person Robert. However, the females in the elderly cohort rated Susan significantly higher in feminine-expressivity than did the females in the student cohort ($p < 0.01$).

Both males and females in the elderly cohort rated Cathy significantly more feminine-expressive when compared to the males and females in the student cohort (both p's $< 0.01$). However, only males differed in their perceptions of Jim. The males in the elderly cohort

Table 9-17: Males' and females' mean ratings of feminine-expressivity in two age Cohorts across four Stimulus Persons. Standard deviations in parentheses.

| | Student | | Elderly | |
|---|---|---|---|---|
| | Male | Female | Male | Female |
| Robert | 21.09 (4.11) | 21.03 (4.73) | 20.75 (7.19) | 22.42 (4.52) |
| Susan | 21.16 (4.99) | 21.41 (3.93) | 21.42 (4.08) | 24.36 (3.37) |
| Cathy | 19.43 (4.30) | 21.49 (3.66) | 23.15 (4.46) | 24.46 (3.35) |
| Jim | 19.58 (4.61) | 23.27 (4.27) | 22.43 (3.85) | 21.91 (6.13) |

rated Jim significantly higher in feminine-expressivity than did the student cohort ($p < 0.01$).

The ANOVA also revealed a significant Life Context by Cohort interaction ($F(3,786) = 7.30$, Greenhouse-Geisser $p < 0.0003$; see Table 9-18). Post hoc analyses examined the differences between the two Cohorts in each Life Context. In three of the four contexts, the elderly cohort perceived higher levels of feminine-expressivity than did the student cohort (all p's $< 0.01$). However, in the parenting context, there were no significant differences between the two cohorts.

There was a slight but significant interaction between Life Context, Sex of Subject, and Stimulus Person Condition ($F(9,786) =$

Table 9-18: Mean ratings of feminine-expressivity across four Life Contexts for two age Cohorts. Standard deviations in parentheses.

| | Life Contexts | | | |
|---|---|---|---|---|
| | Exam | Work | Parent | Retire |
| Student | 15.33<br>(5.20) | 20.20<br>(4.36) | 26.03<br>(3.89) | 22.95<br>(3.95) |
| Elderly | 18.09<br>(5.20) | 21.17<br>(4.48) | 26.15<br>(4.34) | 25.27<br>(4.38) |

2.28, Greenhouse-Geisser $p < 0.03$). Post hoc analyses were used to test the differences between males and females, for each stimulus person, in each Life Context. In the student context, the males (mean = 16.41) rated Robert significantly higher in feminine-expressivity than did the females (mean = 15.34; $p < 0.05$). However, the females rated the two female SPs higher than did the males (for Susan, means = 17.19 versus 16.20, $p < 0.05$; for Cathy, means = 18.86 versus 15.01, $p < 0.01$). There was not a significant difference for the stimulus person Jim.

In the work context, males and females perceived Robert similarly but the females rated Susan (means = 21.75 versus 19.71), Cathy (means = 22.58 versus 20.06), and Jim (means = 21.73 versus 19.26) higher in feminine-expressivity than did the males (all p's $< 0.01$). The stimulus persons in the parenthood context were rated in a similair pattern. Robert (means = 26.97 versus 24.84), Susan (27.09 versus

25.96), and Jim (means = 26.69 versus 24.77) all were rated significantly higher in feminine-expressivity by the females (all p's < 0.01). Finally, in the retirement context, females rated Robert (means = 24.57 versus 22.59), Susan (means = 25.52 versus 23.28), and Jim (means = 24.77 versus 23.19) higher in feminine-expressivity than did males (all p's < 0.01).

c) Traditionality-Mobility Manipulation.

As with the previous studies, between traditionality pairs and within traditionality pairs analyses were performed to examine the effects of this manipulation.

i. Between stimulus person pairs.

Two 2 (Sex of Subject) X 2 (Traditionality) X 2 (Cohort) X 4 (Life Context) repeated measures analyses of variance were performed, one for the masculine-instrumentality scale and the other for the feminine-expressivity scale. Of specific interest is either an interaction between the traditionality-mobility manipulation and age cohort or an effect that was not present in both of the previous studies.

The ANOVA using the masculine-instrumentality scale as the dependent measure revealed a significant effect for Traditionality ($F(1,270) = 6.85$, $p < 0.009$). That is, the low traditionality-high mobility SPs (Robert and Susan) were perceived to be significantly more masculine-instrumental than the high traditionality-low mobility

SPs (Cathy and Jim).

There was a slight but significant interaction between Traditionality, Cohort, and Life Context ($F(3,810) = 3.89$, Greenhouse-Geisser $p < 0.01$). Post hoc tests examined the differences between the two Cohorts for each Traditionality pair in each of the four Life Contexts. For Robert and Susan, the only significant difference between the two cohorts occured in the parenting context. Here, the elderly cohort perceived this group to have significantly more masculine-instrumentality (mean = 22.43) than did the student cohort (mean = 20.83; $p < 0.01$). For Cathy and Jim, however, the two cohorts differed significantly in all contexts but that of the examination, with the elderly cohort consistantly rating the two SPs higher in masculine-instrumentality (all p's $< 0.01$).

The ANOVA for the feminine-expressivity scale revealed a significant Sex of Subject by Traditionality by Cohort interaction ($F(1,270) = 8.42$, $p < 0.004$). Post hoc tests examined the differences between the two Cohort groups for each Traditionality pair, separately for males and females. The only difference to emerge between the two cohorts was among the male subjects. That elderly males perceived the high traditionality-low mobility pair of stimulus persons to be significantly more feminine-expressive (mean = 22.79) than the low traditional-high mobility pair (mean = 19.52; $p < 0.05$).

ii. Within stimulus person pairs.

Each Traditionality pair of stimulus persons was examined

separately using two 2 (Sex of Subject) X 2 (Cohort) X 2 (Stimulus Person Condition) X 4 (Life Context) analyses of variance for repeated measures.

For the analyses comparing Robert and Susan, neither those for masculine-instrumentality nor feminine-expressivity revealed significant effects. However, for Cathy and Jim, several differences emerged. With regard to the masculine-instrumentality scale, there was a slight but significant Cohort by Stimulus Person Condition by Life Context interaction ($F(3,387) = 2.69$, Greenhouse-Geisser $p < 0.05$).

Post hoc tests examined the differences between the two Cohorts in each Life Context, separately for Cathy and Jim. The elderly cohort perceived Cathy to be significantly more masculine-instrumental than the student cohort in the work (mean = 23.77 versus 18.70; $p < 0.01$), parenthood (means = 23.90 versus 20.96; $p < 0.01$), and retirement contexts (means = 23.77 versus 21.95; $p < 0.05$). For Jim, the only significant difference between the two cohorts emerged in the work context. Here, the elderly cohort rated Jim higher in PAQM attributes (mean = 22.87) than did the student cohort (mean = 20.96; $p < 0.05$).

The feminine-expressivity analysis revealed that there was a significant Cohort by Condition interaction ($F(1,129) = 6.91$, $p < 0.01$). Post hoc tests examined the differences between the two cohorts for each condition. The only significant difference occured in the perceptions of the stimulus person Cathy. For this target, the elderly cohort perceived Cathy to be significantly more feminine-expressive (mean = 23.81) than did the student cohort (mean = 20.46 $p < 0.05$).

There also was a slight but significant Sex by Condition by Life Context interaction ($F(3,387) = 3.16$, Greenhouse-Geisser $p < 0.04$). Post hoc tests examined the differences between the two Conditions in each Life Context, for males and females separately. The only significant difference between the conditions occured amongst the males when they rated the SPs in the examination context. In this context, they perceived Jim to have significantly greater feminine-expressivity (mean = 16.83) than Cathy (mean = 15.01; $p < 0.05$).

9.3.2 Supplementary Analyses

9.3.2.1 Sex of Subject/Sex of Stimulus Person Bias

Two 2 (Sex of Subject) X 2 (Sex of Stimulus Person) X 2 (Cohort) X 4 (Life Context) analyses of variance for repeated measures were performed, one for the PAQM scale, the other for the PAQF scale. Of specific interest would be an interaction between Sex of Subject, Sex of Stimulus Person and Cohort, or any higher order interaction of which these variables are a part.

The PAQM ANOVA did not reveal any significant findings of interest. However, the PAQF analysis yielded a significant interaction between Sex of Subject, Sex of Stimulus Person, and Life Context ($F(3,810) = 3.86$, Greenhouse-Geisser $p < 0.02$). Post hoc tests examined the differences between male and female perceptions in each of the four Life Contexts separately for the male and female stimulus persons. For the male stimulus persons, female subjects perceived them to be more feminine-expressivity in the work (means = 20.81 versus

19.43; $p < 0.05$), parenthood (means = 26.87 versus 24.70; $p < 0.01$), and the retirement contexts (means = 24.68 versus 22.77; $p < 0.01$). For female stimulus persons, female subjects rated female stimulus persons higher in the examination (means = 17.99 versus 15.83; $p < 0.01$), work (means = 22.04 versus 19.88; $p < 0.01$), and the retirement contexts (mean = 25.00 versus 23.67; $p < 0.05$). Interestingly, no significant differences were found between men and women in the parenthood context.

9.3.2.2 Scale Intercorrelations

The patterns of the scale intercorrelations are illustrated in Tables 9-19 and 9-20. PAQF and PAQM were correlated in several contexts. In the student context, PAQF was related to PAQM in both the parenthood ($r = 0.247$, $p < 0.0001$) and retirement contexts ($r = 0.232$, $p < 0.0001$). In the work context, feminine-expressivity was related to masculine-instrumentality in the exam ($r = 0.117$, $p < 0.05$), work ($r = 0.170$, $p < 0.005$), parenthood ($r = 0.321$, $p < 0.0001$), and retirement contexts ($r = 0.386$, $p < 0.0001$). In the parenthood context, PAQF was correlated with PAQM in the exam ($r = 0.339$, $p < 0.0001$), work ($r = 0.337$, $p < 0.0001$), parenthood ($r = 0.451$, $p < 0.0001$), and retirement contexts ($r = 0.385$, $p < 0.0001$). Finally, in the retirement context, PAQF was correlated with masculine-instrumentality in the exam ($r = 0.317$, $p < 0.0001$), work ($r = 0.341$, $p < 0.0001$), parent ($r = 0.462$, $p < 0.0001$), and retirement contexts ($r = 0.433$, $p < 0.0001$).

Table 10-19: Pearson Product-Moment Correlation Coefficients (for two ages cohorts combined) between masculine-instrumentality and feminine-expressivity ratings in four Life Contexts.

| | Feminine-Expressivity | | | |
|---|---|---|---|---|
| | Exam | Work | Parent | Retire |
| Exam | | 0.117[2] | 0.339 | 0.317 |
| Work | | 0.170 | 0.337 | 0.341 |
| Parent | 0.274 | 0.321 | 0.451 | 0.462 |
| Retire | 0.232 | 0.386 | 0.385 | 0.433 |

Notes: 1. All reported coefficients are significant at $p < 0.005$, or less, unless stated otherwise.
2. $p < 0.05$

Table 9-20: Pearson Product-Moment Correlation Coefficients (for two age cohorts combined) between ratings of masculine-instrumentality or feminine-expressivity in four Life Contexts[1,2].

| | Exam | Work | Parent | Retire |
|---|---|---|---|---|
| Exam | 1.0 | 0.398 | 0.392 | 0.347 |
| Work | 0.355 | 1.0 | 0.422 | 0.327 |
| Parent | | 0.377 | 1.0 | 0.604 |
| Retire | 0.270 | 0.368 | 0.631 | 1.0 |

Notes: 1. Coefficients above the diagonal are correlations between masculine-instrumentality ratings in the four contexts. Coefficients below the diagonal are correlations between feminine-expressivity ratings in the four contexts.
2. All reported coefficients are significant at $p < 0.0001$, or less.

Masculine-instrumentality ratings in the student context were related to PAQM scores in the work ($r = 0.398$, $p < 0.0001$), parenthood ($r = 0.392$, $p < 0.0001$), and retirement contexts ($r = 0.347$, $p < 0.0001$). PAQM in the work context was correlated with PAQM ratings in the parenthood ($r = 0.422$, $p < 0.0001$) and retirement contexts ($r = 0.327$, $p < 0.0001$). Also, PAQM ratings in the parenthood context were significantly correlated with those in the retirement context ($r = 0.604$, $p < 0.0001$)

Ratings of feminine-expressivity in the student context were significantly correlated with PAQF ratings in the work ($r = 0.355$, $p < 0.0001$) and retirement contexts ($r = 0.232$, $p < 0.0001$). PAQF in the work context was related to ratings of feminine-expressivity in both the parenthood ($r = 0.377$, $p < 0.0001$) and retirement contexts ($r = 0.369$, $p < 0.0001$). Also, PAQF in the parenthood context was correlated with feminine-expressivity in the retirement context ($r = 0.631$, $p < 0.0001$).

9.3.2.3 Latitude for Development

a) Masculine-Instrumental Versus Feminine-Expressive

In order to examine whether there was a significant difference between the two age cohorts in the perceptions of masculine-instrumental and feminine-expressive latitude for gender role development, the latitude scores were subjected to a 2 (Cohort) X 2 (Latitude Type) analysis of variance. An interaction between the two would indicate that there were cohort influences in one dimension but

not another.

The analysis revealed significant main effects for both Cohort and Latitude Type. For the Cohort effect ($F(1,552) = 15.49$, $p < 0.001$), the younger group perceived the SPs to have a significantly greater degree of developmental latitude when compared to the elderly cohort (means = 9.86 and 8.54, respectively). The main effect for Latitude Type ($F(1,552) = 95.63$, $p < 0.001$) revealed that feminine-expressivity was perceived to have a significantly greater degree of variability than masculine-instrumentality (means = 7.22 and 11.17, respectively). There was not a significant interaction between the two grouping factors.

b) Masculine-Instrumental Latitude

A 2 (Sex of Subject) X 2 (Cohort) X 4 (Stimulus Person Condition) analysis of variance revealed a slight but significant main effect for the Stimulus Person Condition manipulation ($F(3,262) = 2.87$, $p < 0.04$). Post hoc tests examined the differences between the condition means. The only significant difference occured in the perceptions of Robert and Cathy. Subjects felt that, when compared to Cathy (mean = 6.50), Robert (mean = 8.07) had a significantly greater degree of masculine-instrumental latitude ($p < 0.05$).

The analysis also revealed a significant main effect for Cohort ($F(1,262) = 6.28$, $p < 0.01$) such that the elderly cohort perceived the stimulus persons to have a more restricted degree of latitude.

The traditionality-mobility manipulation was examined by

conducting the above analyses for Robert and Susan and then for Cathy and Jim (i.e., within-pairs). Also, the effect of the manipulation was examined by comparing Robert and Susan with Cathy and Jim (i.e., between-pairs).

The between-pairs analysis revealed a significant main effect for the traditionality manipulation ($F(1,270) = 9.72$, $p < 0.002$) such that the nontraditional, highly mobile stimulus persons were rated as having a significantly greater degree of masculine-instrumental latitude.

c) Feminine-Expressive Latitude.

In this 2 X 2 X 4 analysis, there was a significant main effect for Cohort ($F(1,262) = 6.70$, $p < 0.01$) such that the elderly cohort perceived a more restricted degree of feminine-expressive latitude, compared to the students.

There also was a significant Sex of Subject by Stimulus Person Condition interaction ($F(3,262) = 4.07$, $p < 0.008$). Post hoc analyses examined the differences between males' and females' mean latitude scores for each of the four stimulus person conditions. The females (mean = 12.68) perceived Robert to have a significantly greater degree of developmental latitude compared to the males (mean = 11.04; $p < 0.05$). However, for Cathy, the trend was reversed such that the males (mean = 12.65 versus 8.22) perceived the stimulus person to have a significantly greater degree of developmental latitude ($p < 0.01$).

The traditionality-mobility manipulation was tested in the same

manner as for masculine-instrumental latitude. There were no significant effects in the between-pairs analysis. However, the within-pairs analysis for Cathy and Jim yielded a significant interaction between Sex of Subject and Stimulus Person Condition ($F(1,129) = 8.46$, $p < 0.004$). Post hoc analyses examined the differences between the males' and females' perceptions for the two stimulus persons. The males (mean = 12.65) perceived Cathy to have a greater degree of latitude for the development of feminine-expressive attributes, compared to the females' perceptions (mean = 8.22; $p < 0.01$). There was no significant difference in their perceptions of Jim.

# CHAPTER 10

## LIFE-SPAN GENDER ROLE STEREOTYPES: DISCUSSION

The results of the studies examining life-span gender role stereotypes have shown the diverse nature of these social expectations. Stimulus persons were perceived by male and female subjects in two age cohorts to vary in their average level of masculine-instrumental and feminine-expressive gender role attributes as a function of the four social contexts in which they were described. These gender role attributes also were perceived to vary as a function of the different social roles in which the stimulus persons were detailed. However, the effect of this manipulation, when it was significant, often was so weak that post hoc analyses were unable to find significant differences between pairs of stimulus persons.

As the stimulus persons were described differently in only the first two contexts (the second being the most important), it is not surprising that this effect was so weak. Thus, the presence of significant interactions between the developmental tasks and the stimulus person descriptions were the best indications that there were perceived gender role differences resulting from the stimulus person manipulation. However, these interactions were significant only for perceived masculine-instrumentality. Feminine-expressivity was not affected to as great a degree by the differences between the four SPs.

Perceptions of life-span gender roles also were greatly affected by the age/cohort of the subject. Elderly subjects often differed from

younger students in their perceptions of the same stimulus persons described in the same developmental contexts under the same rating instructions. This effect, however, was additive (as opposed to multiplicative) and indicated that the elderly cohort consistently perceived these SPs to require more masculine-instrumentality and/or feminine-expressivity in the four tasks. There were very few instances in which significantly different perceptions deviated from this general trend.

The remainder of this chapter examines the effects of the developmental contexts, stimulus person manipulation, scale intercorrelations, latitude for gender role development, and differences between the two age cohorts in greater detail.

## 10.1 Perceptions of Developmental Tasks

Subjects in both age cohorts perceived both masculine-instrumental and feminine-expressive gender role attributes to vary significantly as a function of the developmental tasks in which each stimulus person was described. Masculine-instrumental attributes were perceived to be at their highest in the examination and work contexts and this was consistent across both age cohorts. In fact, the elderly cohort perceived these attributes to rise from the examination context to peak in the work context. Masculine-instrumentality was perceived to be significantly lower than these previous ratings in both the parenthood and retirement contexts. Feminine-expressivity, on the other hand, was perceived to rise in a linear fashion from the

examination to the work context, peaking in the parenthood context, and declining slightly into retirement.

Thus, it appears that the masculine-instrumentality and feminine-expressivity attribute domains were perceived to vary across these developmental contexts using two separate pathways. Masculine-instrumentality was perceived to be at a premium in the first two contexts and less influential in the latter two. Feminine-expressivity rose linearly across the age-related tasks, indicating that it was more important in the latter two contexts than in the former two.

Androgyny categorizations also revealed that perceptions of gender role attributes varied across the four life contexts. These showed that the SPs were placed most frequently in the masculine sex-typed and androgynous categories. However, the majority of masculine sex-typed classifications were found in the examination and work contexts while the majority of those in the androgynous category were in the parenthood and retirement contexts. This further confirms the above finding that masculine-instrumentality and feminine-expressivity are perceived to follow differential developmental pathways.

It is interesting to note that these perceptual data are congruent with the theoretical expectations for (self-reported) gender role development in later adulthood, as postulated by Gutmann (1975) and Sinnott (1977). It should be recalled that both of these authors believe that gender roles will reach a balance, or a "unisex", in old age. The high number of androgynous stimulus persons (i.e., those high in both masculine-instrumentality and feminine-expressivity) in the

latter context, compared to the first two contexts, supports this position.

However, Gutmann also believes that gender roles reach this equilibrium from an unbalanced, or sex-typed, state that is a result of the parenthood context. Even though preparenthood adults may subscribe to balanced gender roles, Gutmann expects the onset of parenthood to cause the supression of cross-sex gender role traits until this developmental task has been completed. This trend was not found in these person perception studies. Even though a large number of subjects perceived the SPs to be feminine sex-typed in the parenthood context, this number was minimal compared to the number of SPs that were rated androgynous. Further, while this context should elicit feminine sex-typing in females, it also should evoke the perceptions of a large number of masculine sex-typed males. This, however, was not found.

Are there methodological aspects to this study that could have elicited these results? For example, the differences in the perceptions of masculine-instrumentality and feminine-expressivity between the four life contexts could be the result of demand characteristics fostered by the within-subjects design employed in these studies (Kogan, 1979). That is, subjects could have developed implicit hypotheses that, since the experimenter was asking them to rate the same stimulus person described in different situations, using the same list of adjectives, he expected the SP to differ as a function of these adjectives. This may have been the case for some,

although the presence of the same trends in two different age cohorts suggests that actual stereotypes were being tapped, not idiosyncratic expectations as to what the experimenter was hoping to find.

A second possibility is that the differences between the developmental contexts were mediated by social desirability. While social desirability often is controlled for in questionnaire design, asking subjects for their perceptions of stimulus persons described in varying developmental contexts may have evoked a social desirability response set concerning performance in those tasks. For example, asking someone to rate a SP engaged in the parenthood task may have engaged a set of responses that described the positive personal attributes necessary for performing the parenthood task. As the current social belief is that males and females develop bifurcated gender roles, especially in the parenthood task (e.g., see the work of Gutmann, 1975 and Livson, 1983), finding an elevated number of androgynous parents may be indicative of this social desirability response bias.

Finally, the lack of situational exclusivity between the developmental tasks used in this study should be examined. That is, as these tasks are not age-dependent, individuals can perform in one or all of these tasks simultaneously. Most commonly, individuals in real life combine the work and parenthood developmental tasks. The significant differences between these two contexts with regard to both masculine-instrumentality and feminine-expressivity indicate that these attributes are perceived to be situationally variable, as

opposed to developing sequentially throughout the life-span.

It should be remembered that, using this methodology, it is not possible to posit that gender role attributes develop across the life-span. Rather, it is only possible to note that perceptions of masculine-instrumentality and feminine-expressivity varied as a function of the age-related developmental tasks in which the stimulus persons were described. If stimulus persons were perceived to possess different gender role attributes in the retirement context than in the parenthood or work contexts (two young adult developmental tasks), then life-span variability can be inferred, but not life-span sequencing.

## 10.2 Perceptions of the Stimulus Persons

Even though the stimulus persons were described differently in the examination and work contexts, in addition to differences regarding their sex, main effects for the SP manipulation were not consistently found. However, there were significant interactions between the developmental contexts and stimulus person conditions, although this was true only for the masculine-instrumentality scale. That is, both age cohorts perceived significant differences between the four stimulus persons only in the work context (although the elderly cohort also perceived Cathy to be more masculine-instrumental in the retirement context).

When masculine-instrumentality was examined in the work context, the effect appeared to be a function of the differences between the

two Traditionality-Mobility stimulus person pairs. For both cohorts, the low traditionality-high mobility SPs (Robert and Susan) were perceived to be more masculine-instrumental than the highly traditional, nonmobile SPs (Cathy and Jim). This between-pair finding was confirmed when the data were analysed directly for this effect. Within-pair analyses that examined whether Robert was perceived differently from Susan and Cathy differently from Jim revealed that the low traditionality-high mobility pair were perceived similarly. The student subjects perceived Jim to be more instrumental than Cathy in the work context, but this finding was not replicated in the elderly sample.

There are three possible explanations for this finding in the work context. First, Eagly and Steffen's (1984) assumption that stereotypes of males and females are derived from their social roles may offer a clarification. They believe that, since males work while females look after the family, males are perceived to develop more instrumental/agentic attributes while females are perceived to develop more expressive/communal attributes. Eagly and Steffen further note that, when a female is perceived to be working because she likes to work, she is rated higher in instrumentality. If she is perceived to be working out of need, she is rated lower in instrumentality. This latter effect is what appears to have been replicated in the traditionality-mobility manipulation. That is, if perceptions were based solely on the fact that males are more instrumental than females, Robert and Jim would have been perceived as more instrumental

than Susan and Cathy. However, as Susan was depicted in an occupation that one must work hard to attain, it is likely that she was perceived to have been working because she wished to. This would explain why both cohorts perceived Robert and Susan to have similar masculine-instrumental attributes. Cathy, on the other hand, was working in a position that women traditionally hold. This may explain why the students perceived Cathy to have fewer masculine-instrumental attributes than Jim. Thus, this offers an explication as to why Susan was perceived to have been more instrumental than Cathy and on par with Robert, but it does not offer a reason why Jim was perceived as less instrumental than Robert.

A second explanation for the perceived differences between the SPs described in different occupational roles may stem from the social status of the occupations in which each SP was depicted. Eagly and Steffen note that stimulus persons described in high status jobs were rated significantly higher in masculine-instrumentality than those in lower status jobs. It is highly probable that the executive occupation in which Robert and Susan were described was perceived to be of high social status. The occupations in which Cathy and Jim were described were lower in social status when compared to Robert and Susan. However, Cathy's and Jim's two jobs (mechanic and cashier) are not of the same status as a mechanic (a male-dominated occupation) is higher in status than a cashier (a female-dominated occupation). Thus, Robert and Susan should have been perceived to be more instrumental than Cathy and Jim, as was the case. Further, as Jim's job was of higher

status than Cathy's, Jim should have been rated as more masculine-instrumental than Cathy. In this instance, only the student's perceived this relationship.

A third possibility for the perceived similarities and differences between the four SPs in the occupational context may be their degree of role similarity, or lack thereof. In Chapter 2 it was noted that Gerber and Balkin (1977) presented a study which revealed that, when stimulus persons were described as sharing the same social roles, they were perceived to be more similar than if they were described differently. In these studies, Robert and Susan were described in an identical fashion and, therefore, share a great deal of role similarity. Cathy and Jim, however, were described quite differently and were not similar. Thus, Gerber and Balkin would predict that Robert and Susan would be described similarly while Cathy and Jim would be described differently. Further, they predict that there would be significant differences when comparing the two traditionality-mobility groups. These predicted effects were found, although only the student cohort perceived significant differences between Cathy and Jim.

Again, it should be noted that these effects were found consistently only for masculine-instrumentality and, with one exception, only in the work context. Perhaps manipulating the stimulus persons along another dimension, such as parenting, may cause expressive attributes to vary more consistently.

In Chapter 8, the following question was asked: if two stimulus

persons were described differently in one developmental context, would that alter subjects' perceptions of those stimulus persons in a future rating situation where they were described identically? The answer appears to be "no". By manipulating the descriptions of the stimulus persons in the work context, perceptions of the masculine-instrumental and feminine-expressive attributes subjects indicated were necessary for the SPs to complete the developmental tasks of parenthood and retirement did not vary in a consistent fashion. Thus, for example, subjects did not perceive Susan (an upwardly mobile, obviously working mother) differently from Cathy in the parenthood context.

Were there perceptual biases in these findings? It was noted earlier that males and females tend to perceive male and female targets differently. Thus, was this the case in these data? Indeed, when the data were recoded so that Sex of Subject by Sex of Stimulus Person ANOVAs could be employed, significant interactions between the two did emerge, although student and elderly cohorts varied in their biases. Also, these biases were not present in all developmental contexts.

Males and females in the student sample differed in their perceptions of male stimulus persons only in the examination and work contexts. In both of these tasks, female subjects rated the male SPs higher in masculine-instrumentality than did the male subjects. Those in the elderly sample, however, perceived the opposite. The females in this group rated female SPs in the examination and work contexts higher in masculine-instrumentality than did the male subjects. In the

parenting context, the female subjects in the student sample rated the female SPs higher in masculine-instrumentality than the male subjects. The elderly subjects, on the other hand, rated the male SPs higher in feminine-expressivity than the male subjects.

Thus, it appears that males and females do differ in their perceptions of male and female targets. However, this is underscored by the differences in this bias between the two age cohorts, especially when rating stimulus persons in the examination and work contexts. That is, the female students students perceived the male SPs in the first two tasks to be have more gender-congruent attributes while the females in the eldery cohort perceived the female SPs in the same contexts to have more cross-sex traits. In the latter contexts the trend was somewhat similar, with the female elderly attributing more cross-sex traits to the males and the female students attributing more cross-sex traits to the females.

## 10.3 Scale Intercorrelations

Spence and Helmreich (1978) note that, although they are considered to be conceptually orthogonal, the PAQ's masculine-instrumentality and feminine-expressivity scales should be slightly and positively correlated. However, the findings revealed in the examination of the Job Study intercorrelations indicate that their magnitude varies as a function of the developmental task in which subjects rated the four stimulus persons. In the examination and work contexts (i.e., the two contexts most resembling the educational

setting in which scale intercorrelations have traditionally been examined), the PAQM and PAQF scales were either uncorrelated or slightly and positively correlated. In the parenthood and retirement contexts, however, the magnitude of these correlations rose. For example, in the elderly sample, the masculine-instrumentality and feminine-expressivity scales were correlated only 0.146 and 0.254 in the exam and work contexts, respectively. In the parenthood and retirement contexts, their intercorrelations rose to 0.572 and 0.535, respectively.

Thus, the assumption that these attributes are orthogonal in all contexts has been challenged by these data. Adding to this call for a more thorough examination of the orthogonality of the PAQ's two scales are the data that show that masculine-instrumental attributes in one developmental context were correlated with feminine-expressive attributes in another context.

The reason for this lack of statistical orthogonality, both within and between the four developmental contexts, is unknown. What causes the attributes from two conceptually independent domains to cluster more closely when subjects rate stimulus persons engaged in developmental tasks such as parenthood and retirement? The only previous study examining differences in the degree of a relationship between two sex-typed variables as a function of chronological age has been that of Costa and McCrae (1977; see Chapters 5 and 7). However, there are two differences between Costa and McCrae's study and the present Job Studies. First, Costa and McCrae examined the relationship

between two stereotypically masculine attributes, as opposed to masculine and feminine attributes. Secondly, even though their findings suggest that the two domains of stereotypical masculinity become orthogonal as subjects age, this study found an increasing relationship between masculine-instrumentality and feminine-expressivity in the perceptions of SPs engaged in age-related developmental tasks.

10.4 Latitude for Gender Role Development

Latitude for gender role development (LD) is a new variable conceived for use with the Stereotype and Self-Perception Studies (Studies 2-6). It grew out of Archer's (1984) assumption that males and females are socialized differentially with regard to the display of cross-sex gender role traits, in that females are typically allowed a greater degree of latitude than males in their display. Although Archer was discussing latitude with respect to children and adolescents, his assumption was extended to adulthood so that in these studies, differences between males and females in their perceptions (both self-report and stereotypes) of both masculine-instrumental and feminine-expressive latitude could be examined.

LD utilizes the within-subjects design inherent in each of the Stereotype and Self-Perception Studies in order to examine the differences between a stimulus person's highest and lowest masculine-instrumentality or feminine-expressivity scores. If a stimulus person, for example, was perceived to vary his/her use of masculine-

instrumentality across four developmental contexts to a great degree, the LD would be high. If there was little variability, the LD would be low.

The results revealed that both age cohorts perceived masculine-instrumentality to be more restricted than feminine-expressivity in its latitude across the four age-related developmental contexts used in the present studies. Further, although there was a great degree of variability in the latitude of masculine-instrumental and feminine-expressive attributes, there were very few main effects resulting from either the subject's sex or the stimulus person manipulation. Most significant effects were due to interactions between these two factors.

There were few significant effects in the perception of masculine-instrumental latitude. The female students perceived Susan to have more latitude than did the male students, while those in the elderly sample perceived the low traditionality-high mobility pairs, Robert and Susan, to have a greater degree of latitude than their high traditionality-low mobility counterparts, Cathy and Jim. The elderly subjects also perceived Jim to have more latitude than Cathy.

The majority of the significant effects were found in the perceptions of feminine-expressive latitude. Male students perceived Cathy to have more latitude than Jim, but they also perceived Robert and Susan to have more latitude than Cathy and Jim. Elderly males, on the other hand, perceived Jim to have more latitude than Cathy.

There appears to be few consistent trends to these stereotypes

concerning the stimulus person's latitude for gender role development. Most of the interactions between the sex of the subject and the stimulus persons has shown that subjects perceive a SP of the opposite sex to have more latitude than someone of their own sex. This suggests that these stereotypes may represent a bias in the perceptions of the variability of masculine-instrumental and feminine-expressive gender role attributes across social contexts. Female subjects tend to perceive male stimulus persons to possess more latitude than female SPs while the opposite is true for male subjects.

10.5 Differences Between the Two Age Cohorts

Overall, the elderly subjects rated the stimulus persons higher in both masculine-instrumentality and feminine-expressivity. This was done independently of the sex of the stimulus person and, therefore, not in a stereotypic manner. That is, the elderly adults systematically did not rate male SPs higher in masculine-instrumentality and female SPs higher in feminine-expressivity, although they did perceive Cathy and Susan to be higher in feminine-expressivity than Robert and Jim. The Cohort variable also interacted with the other independent variables in such a way that showed that the elderly adults perceived the female SPs to be stereotyped in one context. When rating Cathy and Susan in the examination context, the elderly cohort perceived them to have fewer masculine-instrumental attributes than the male SPs.

In Chapter 2, it was noted that there were no studies examining

the variability of gender role stereotypes across adulthood. As most surveys are given to university undergraduates, it is unknown whether this population's stereotypes differ from those of other age cohorts. If differences do exist, explanations would centre around either differential cohort socialization practices or ontogenetic effects.

Consider the former possibility. Those who are currently in the late adulthood era come from a cohort that emphasized the gender role dichotomy. Males and females were rewarded for displaying gender congruent traits and punished for displaying gender incongruent traits. Only recently have the social traditions changed so that males and females have more leeway for the expression of cross-sex traits. If differences between two age cohorts in the differential reporting of gender role stereotypes were to be attributed to cohort socialization practices, then the elderly cohort should perceive the targets in a stereotypic manner: males highly masculine-instrumental and females highly feminine-expressive.

However, if gender role stereotypes do develop across the life-span in an ontogenetic fashion, they are more likely to reflect a merging of current social attitudes and one's own experience. Also, they are less likely to reflect traditional stereotypes. Thus, those in the late adulthood era should display less stereotypic gender role perceptions; i.e., males and females should be perceived to possess similar levels of masculine-instrumentality and feminine-expressivity. It should be remembered that Cutler (1983) offers evidence for this hypothesis with respect to gender role attitudes. He found that

elderly adults reported more positive attitudes to the feminist movement than those in a younger age cohort when the latter is what would be expected if attitudes were not expected to change across the life-span.

As the elderly cohort in these studies tended to rate the SPs higher in both attributes domains more often than they reported stereotypic perceptions, this second hypothesis best explains the findings reported in Chapter 9. It would appear that stereotypes do, indeed differ across the life-span. However, the catalyst for this change has yet to be determined. Could it be that experience in certain developmental tasks alters one's viwpoint of traditional gender role stereotypes?

In conclusion, this chapter summarized the findings reported in Chapter 9, concerning stereotypes of masculine-instrumentality and feminine-expressivity in four age-related developmental tasks. It was shown that both attributes were perceived to vary across the four contexts and that variations in social role descriptions in one task altered perceptions of stimulus persons only in that target. This manipulation did not effect the perceptions of SPs in later developmental contexts. Overall, the trend appears to be one of gender role balance in parenthood and old age.

# CHAPTER 11

# LIFE-SPAN GENDER ROLES AND SELF-PERCEPTION: INTRODUCTION AND METHODS

## 11.1 Introduction

The previous three chapters examined the stereotypes associated with the presence of masculine-instrumental and feminine-expressive gender role attributes in three developmental tasks. It was shown that both PAQM and PAQF attributes varied significantly as a function of both the adult life contexts and the descriptions of the four stimulus persons. In the Cohort Analysis, it was shown that elderly adults and university students shared similar stereotypes about the variability of gender role attributes in the four rating contexts, but that they differed significantly in the magnitude of the masculine-instrumentality and feminine-expressivity they attributed to the stimulus persons.

These data, however, represent only stereotypes about the possible relationships between masculine-instrumentality, feminine-expressivity and these social contexts. They say nothing about actual self-reports of males and females in work, parenthood, or retirement. Although it should be remembered that Spence et al. (1975) and Storms (1979) report moderate positive correlations between self-reports and those for "typical" stimulus persons, a direct test of the assumption that gender role attributes vary as a function of these developmental tasks should be made.

Two methods are available to examine actual use of gender role attributes in these varied developmental tasks. The most obvious is the use of a developmental methodology such as a longitudinal, short-term longitudinal, cohort-sequential, or cross-sectional design. With the exception of the cross-sectional design, each of these methods involves the use of multiple ratings, preferably one in each of the developmental tasks. The cross-sectional design would examine each of the tasks by asking every subject questions pertaining to the presence or absence of each task in their day to day living and/or the position of the subject on a continuum ranging from the initial stages of each task to its completion.

The second approach is to use a design that asks subjects to rate their gender roles in either a prospective or retrospective direction. For example, young subjects would rate their expected levels of instrumental and expressive attributes in future situations while older adults would rate these attributes as they believed them to be at various points in the past. This method was used in the present set of studies (i.e., the Self-Perception Studies: the Prospective Gender Role Study [Study 5] and the Retrospective Gender Role Study [Study 6]), and a developmental method was used in a later study (see Chapter 15).

Only one study has examined gender roles using a prospective/retrospective approach. Puglisi (1983) asked male and female subjects in three age groups (young, middle, and old adult) to rate themselves as if at 20, 45, and 70 years of age. Thus, the young

adults reported prospectively, the elderly adults retrospectively, and the middle-aged adults responded using both methods. Puglisi found that the effect for projected age was significant only for masculine-instrumentality. That is, males and females in the three different adult developmental eras perceived only instrumentality to vary as a function of the targeted chronological ages.

There are, however, three questions about this study that must be addressed. The first concerns the use of chronological ages as targets for the subjects. As noted in earlier chapters, there is no rationale for using age as an independent variable as it has very little predictive ability. Also, it is problematic to assume that everyone has a stereotype or expectation concerning their gender role attributes for every chronological age. Hence, as the target ages covered such a large range, subjects making either retrospective and prospective ratings may have responded using global prototypes of how males or females in three developmental eras would respond to the gender role instrument.

Secondly, Puglisi confounded prospective beliefs about the use of masculine-instrumentality and feminine-expressivity at one chronological age with retrospective reconstructions of the same attributes. That is, the young adults (university students approximately 18-20 years) were asked to rate themselves in one context similar to their own (i.e., how they would respond to the BSRI at 20 years of age) and two prospective contexts (45 and 70 years); the middle-aged adults rated one context retrospectively, one

prospectively, and one in approximately their current developmental era; similarly, the older adults rated themselves at 70 and twice retrospectively. Using this type of design, it is not possible to determine whether those using retrospective recall of their actual gender roles at those past ages are using the same strategies as those responding with their prospective beliefs (which may or may not be similar,to stereotypes). By breaking down the retrospective and prospective ratings into two separate studies, or two experimental conditions of the same study, the effects of each type of self-perception can be examined and differences between the two may be assessed.

The third problem expands on the second and concerns the confounding of chronological age, birth cohort, and type of rating (prospective versus retrospective) in the responses of Puglisi's three age groups. For example, the young adults, who used a prospective response set, are younger in age and of a different birth cohort than those in the other two age categories. Conversely, those in the oldest adult group are of a different cohort and used a retrospective response set. Thus, birth cohort could have influenced the other two factors and should be considered when interpreting Puglisi's findings.

The present set of studies used both prospective and retrospective designs separately in order to correct two of the problems in Puglisi's study (the last problem, however, cannot be rectified using this type of design). First, in order to untangle responses that are prospective beliefs from those that are

retrospective reconstructions, two separate studies were completed: in the first (Prospective Gender Role Study [Study 5]), students rated themselves at the present and in two future contexts; in the second (Retrospective Gender Role Study [Study 6]), elderly adults rated themselves at the present and in two past contexts.

In order to avoid the use of chronological age as a target, subjects rated themselves at the present and in specific, age-related, developmental tasks. These were the same tasks that were used in the Job Studies reported in Chapters 8, 9, and 10. In the Prospective study, students used the parenthood and retirement tasks. In the Retrospective study, retired adults used the work-entry and parenthood tasks. The same developmental tasks could not be used for both studies because it would have been unreasonable to assume that a majority of the elderly adults had had some university education. Also, the students were nearing the time when they would be entering the work force and it was felt that there would be too little distance between the present self-ratings and those at the projected work entry. These dilemmas could have been avoided by using three independent social contexts instead of mixing self-ratings with social contexts; however, it was felt that having the subjects rate their present gender role attributes would generate a deeper level of cognitive involvement in the task. Thus, the two Self-Perception studies cannot be compared directly, as were the Job Studies.

Before expanding on the methods used in these two studies, the differences between the developmental and self-perception models

should be examined. Also, what are the problems with the self-perception method? First, what kind of data do self-perception studies provide and how do they differ from those elicited by a developmental method? Self-perception data are those that refer to an individual's perceptions or beliefs of possible, or actual, variability of PAQM and/or PAQF attributes that result from asking them to rate their attribute levels in the present, and in one or more developmental task that is a future or past event. The results stemming from these data should be prefaced by a phrase similar to the following: "Subjects perceived their masculine-instrumental (or feminine-expressive) gender role attributes to vary (or not) as a function of the developmental tasks used as stimulus material in this study."

Inferences that refer to the "development" of gender role attributes across the life-span are inappropriate when data are gathered with this type of methodology. When using most of the developmental methods mentioned above (e.g., a longitudinal design, but not a cross-sectional one), a researcher is more likely to make inferences that statistically significant differences between self-ratings in various age-related contexts are a result of developmental change.

Secondly, what is it about self-perception data that create this lack of ability to attribute change to a life-span developmental cause? The answer to this question lies in the way prospective and retrospective ratings are described in the paragraphs above. A subject rating the gender role attributes that they feel they will possess in

a given developmental task is not the same type of self-rating that a researcher obtains when he/she asks the same subject to rate his/her gender roles "at the present moment". The former ratings are likely to represent a subject's stereotype about which attributes an individual should have in that developmental task (i.e., they are of a hypothetical nature) while the latter may be more indicative of the self-concept.

Similarly, an individual rating gender role attributes retrospectively may not be indicating the state of their self-concept at that past time, but a distorted reconstruction of the self-concept. This distortion may not be a deliberate falsification but, rather, a result of faulty memory, or the salience of stereotypes and/or social desirability related to the developmental task situation itself. The farther away in time a rating task is, the more likely that memory may be distorted or affected by these factors.

Thus, both prospective and retrospective ratings should be interpreted with care. They do, however, offer unique and valuable insights (e.g., those that might not be found using a more direct developmental model) into the integration of social stereotypes and expectations for the self in the normative developmental tasks used as rating contexts. It may be that both prospective and retrospective ratings are more similar to ratings of stereotypes and bear no, or little, resemblance to those found in cross-sectional or longitudinal studies. Alternatively, the two design types (self-perception and developmental) may yield similar findings.

As with the Job Studies, the main interests of the Self-Perception Studies concern the variability of masculine-instrumentality and feminine-expressivity across the self- and retrospective/prospective ratings as well as the independence between the rating context and psychological androgyny. Of secondary importance are the intercorrelations between the two PAQ scales within and between each of the three rating contexts and self-perceived latitude for gender role development. Also of interest are the descriptions of the subjects' life paths, both prospective and retrospective, that were gained through the questions used to elicit the appropriate response set.

The rest of this chapter is devoted to the explication of the methods used in the Prospective Gender Role Study (Study 5) and the the Retrospective Gender Role Study (Study 6).

## 11.2 Prospective Gender Role Study (Study 5): Methods

### 11.2.1 Subjects

The subjects were 32 males and 32 females, most of whom were students of the University of Kent, Canterbury. The average age of the sample was 20.6 years. As a condition to be eligible for inclusion in this study, all 64 subjects were unmarried (although four reported that they presently were in a cohabiting relationship) and did not have children. The reason for this specification was the use of parenthood as a prospective rating condition. For subjects already experiencing this developmental task, responses would not be in the

form of the prospective expectations that the remainder of the sample may be using.

11.2.2 Materials

In order to examine gender role attributes in a prospective fashion, a two-part questionnaire was constructed (see Appendix C). The first section contained questions which asked the respondent for information in the following areas:

1. demographics;
2. future career expectations;
3. future marriage and/or family expectations; and
4. ideas about their retirement.

These questions were not developed for standarized usage. Rather, they were used to place subjects in a prospective frame of mind (i.e., a future-oriented response-set) thinking about their future and the possibilites of what type of employment they will find, how long it will take them to find it, how long they will stay in this job, if they expect to make a career change, at what age they expect to retire, and what leisure activities they expect to perform when they are retired. Questions also concerned marriage (e.g., yes/no, at what age) and the onset of parenthood (e.g., at what age).

The second section of the survey contained three separate short form Personal Attributes Questionnaires (PAQs; Spence and Helmreich, 1978), each with its own instructional set. It should be noted that only the PAQM and PAQF scales were used in this study. The first PAQ

asked subjects to rate themselves at the present, using the standard rating instructions. Specifically, the subjects were told that the "items below inquire about what kind of person you think you are AT THIS POINT IN YOUR LIFE" (the block letters were included in the questionnaire's instructions).

For each subsequent rating, the PAQ instructions were altered so that, for the second PAQ rating the subjects were given the following instructions:

> Would you now please think ahead to the point in time that you have designated to have children. If you decide not to have children, would you think ahead to the point in time that you believe most of your friends will have children. Below, you will find the same 16 attributes on which you just rated yourself. Would you please re-rate yourself, indicating the degree to which you feel you will need these attributes in order to be a good parent.

The third rating asked subjects to respond to the PAQ as follows:

> Finally, I would like you to think ahead to the point in time when you will retire. Again, I have listed the 16 attributes on which you have rated and re-rated yourself. For the last time, would you please re-rate yourself, idicating the degree to which you believe you will require these attributes in order to have a rewarding retirement.

Subjects were not asked to indicate if they considered that they may not have changed. Thus, this methodology may contain a response-set bias which could enhance any differences between ratings or may in fact have created differences where none would have occurred in a completely between-subjects design.

11.2.3 Procedure

An initial group of 36 subjects was taken from a Developmental Social Psychology class. Each of these students was told that the experimenter was interested in whether people perceive their personality attributes to vary as a function of the demands of various developmental tasks, or whether people see them as stable and not varying across these contexts. They also were told that the results of the study would become part of a future lecture on adult development.

The subjects were given two protocols at the beginning og Michaelmas Term, 1986, and were asked to complete one themselves and have the other completed by a friend of the opposite sex. Each pair of protocols was coded with the same identity number to aid in checking that both had been returned and that they had been completed by a male and a female. The subjects were instructed further to complete the questionnaire individually and to return them at the next lecture (i.e., in one week) without their names on their protocol. Envelopes were provided and anonymity was ensured.

## 11.3 Retrospective Gender Role Study (Study 6): Methods

### 11.3.1 Subjects

Subjects were 15 males and 17 females, all of whom were visiting the University of Kent as part of a vacation organized by SAGA plc in the Summer of 1986. The average age of the subjects was 72.8 years for the males and 65.5 years for the females. Only one criteria for inclusion in this study was imposed: subjects had to have children so that they would be able to answer the questions concerning parenthood. The demographics of this population are presented in Chapter 6.

### 11.3.2 Materials

In order to examine gender role attributes in a retrospective manner, a structured interview was combined with a self-report response format. The Retrospective Attributes Interview Schedule (RAIS) was designed to integrate both of these methods (see Appendix D for a copy of the RAIS).

Interview questions asked for information in the following areas:

1. limited demographics;
2. the individual's entrance into the full-time work force;
3. the individual's initial commitment to marriage and family; and
4. the launching of the children.

As with the Prospective Gender Role Study protocol, these questions were not designed for standardized use, but rather to put the subject in a retrospective frame of mind, thinking about how it was to have been a young adult entering the full-time work force,

becoming engaged, marrying, starting a family, and watching those children leave home to start families of their own.

The structured aspect of the interview was combined with a self-report format. Subjects used the PAQM and PAQF scales from the short form Personal Attributes Questionnaire (PAQ; Spence and Helmreich, 1978) to assess their self-perceived gender role attributes at three point in their life: the present (at the beginning of the interview), when they first entered the work-force, and when their first child was approximately six months old.

The PAQ was used in the RAIS with a slight modification. Instead of putting all 16 items of the two scales on a single sheet of A4 paper, the items were split into two halves (items 1 through 8 and 9 through 16) and a larger space was made between each of the items. The two halves then were photo-enlarged onto one sheet of A3 paper which was backed with cardboard. To rate themselves, subjects pointed to the appropriate letter (A to E) using cut-out arrows made from two different colours of cardboard. In the first rating, the self rating at the present time, the subjects used blue arrows. For subsequent re-ratings, the subjects used red arrows. Their responses were transcribed onto a master interview protocol by the interviewer who sat behind the subject during the ratings.

After the subjects responded to the interview questions concerning their entrance into the work force, they were asked if they believed they would have answered any of the PAQ items differently at that time (i.e., at work-entry). They then were given a number of red

arrows and were asked to go through the questionnaire again. If they thought they would have answered any of the questions differently, they were asked to use a red arrow to indicate how they believed they would have responded at that time. If they did not think they would have changed on any one item, they were instructed to go on to the next item until they had finished the re-rating. It is important to note that at all times subjects had access to their initial self-ratings (i.e., the blue arrows remained in place on the board) and they were using these as benchmarks against which to measure any change.

After the subjects re-rated themselves, the interviewer went through each item where a change was indicated and put that change into words for the subject. This was done in order to verify that the subjects had indicated the direction of the change correctly. For example, if the subject indicated, by using a red arrow, that he/she was less independent when he/she entered the work force, the interviewer would have said the following: "According to this, you believe that you were less independent when you were (age at work-entry) than you are now at age (present age). Is this correct?" For each altered item, subjects also were asked if the change from the past rating to the present rating had been a positive change, a negative change or if it was neutral in character (e.g., "You believe you are more independent now than you were at age (age at work-entry). Is this a good thing, a bad thing, or is it neutral in character?").

This format was repeated after subjects answered questions about

their marriage and the start of their family. More specifically, they were asked to think back to the time that their first child was approximately six months old. The red arrows from the previous re-rating were removed and subjects were asked to respond to the PAQ items as they believed they would have responded at that retrospective point in time. Again, their present ratings were available as reference points and they were instructed to pass over any items on which they did not feel they had changed.

This was the last re-rating. Subjects were asked about the beginning of the empty nest phase (i.e., when their first children began to leave home) and about whether there were any other ways in which they believed they had changed that were not covered in the interview. Thus, the structure of the previous questions gave way to a free-format-type question at the end.

11.3.3 Procedure

a) Piloting the RAIS

The RAIS was piloted initially on two male and two female postgraduate students and/or research assistants at the University of Kent. This resulted in the rewording of some items and a radical reduction in the number of items in the interview. The original draft of the RAIS contained a third PAQ re-rating at the beginning of the empty nest phase plus a 15-item self-esteem scale. All pilot subjects felt that the initial length of the RAIS was too long and all agreed that the final draft was appropriate in length. This version was re-

piloted with one female vacationer before being used in the study. There were no difficulties in the re-piolting. In its final form, the RAIS took approximately 25 minutes to administer.

b) Recruiting Volunteers

Subjects were introduced to the experimenter at an introductory meeting at which the vacation company's senior courier explained about the week's agenda. At the beginning of this meeting (i.e., before his own talk), the courier introduced the experimenter. It was explained to those in the group that the experimenter was examining how people's personality traits have or have not changed throughout their lives. They were told that the experimenter was conducting interviews throughout the week and that these lasted approximately 25 minutes. To volunteer, subjects were asked to place their name and room number on one of many sheets of paper that were circulated about the room.

Those volunteering were contacted the next morning and asked to give four or five times they expected to be available during the week. These were then collated and a schedule was made. Subjects were notified of their final interview time and that the interviewer would come to their room.

c) The Interview

All interviews took place in the subjects' rooms in the University dormitory in which they and their group were staying. Owing to the schedule of the vacation company, most interviews were

conducted in the early morning, while the rest took place in the early evening.

# CHAPTER 12

## LIFE-SPAN GENDER ROLES AND SELF-PERCEPTION: RESULTS

This chapter presents the results from the Prospective and Retrospective Gender Role Studies. Each results section is divided into two types of analyses: main and supplementary. The main analyses examined the variability of gender role attributes across the three ratings, using both analyses of variance and chi-square tests of independence. In the supplementary analyses, scale intercorrelations and latitude for development are examined, as well as the subjects perceptions of their life paths (as determined from their responses to the questions used to elicit prospective and retrospective response sets). The implications of these findings are discussed in Chapter 13.

### 12.1 Results -- Prospective Gender Role Study (Study 5)

Of the 36 pairs of surveys that were distributed initially, one set was not returned, two sets were discarded because the subjects were married mature students, and one set was eliminated because both questionnaires were completed by females. This left 32 sets available for analysis. The protocols from the mature students were not used because one of this study's goals was to ask students to indicate the gender role attributes they expected to have when they were parents. To these married mature students, parenthood was a reality and, as such, they would not be reporting their gender roles in the same prospective manner as the students.

12.1.1 Main Analyses

12.1.1.1 Continuous Scoring Method

One set of main anavlses involved calculating the PAQM and PAQF scale scores and performing two 2 (Sex of Subject) X 3 (Life Context) repeated measures analyses of variance, one for masculine-instrumentality and the other for feminine-expressivity.

a) Masculine-Instrumentality

There was a highly significant main effect for Life Context ($F(2,124) = 19.78$, Greenhouse-Geisser $p < 0.00001$) suggesting that subjects perceived their masculine-instrumental attributes to vary across these adult developmental tasks. Post hoc tests revealed that there were significant differences between the present ratings (mean = 20.19) and each of the two prospective ratings, parenthood (mean = 23.55; $p < 0.01$) and retirement (mean = 23.34; $p < 0.01$), but not between the two prospective ratings themselves. Thus, subjects perceived their masculine-instrumental gender role attributes to rise from their present life context to that of parenthood. Their perceptions of parenthood, however, were not significantly different from those of retirement.

b) Feminine-Expressivity

There was a slight but significant main effect for subject's sex ($F(1,62) = 4.97$, $p < 0.03$). Overall, the female subjects tended to rated themselves higher in feminine-expressivity than did the male

subjects.

The analysis also revealed a significant main effect for Life Context ($F(2,124) = 40.33$, Greenhouse-Geisser $p < 0.00001$), indicating that feminine-expressive attributes were perceived to vary across the life-span. Post hoc tests showed that the present, self-ratings (mean = 21.67) differed significantly from the two prospective ratings, parenthood (mean = 25.98; $p < 0.01$) and retirement (mean = 23.42; $p < 0.01$) and that the two prospective ratings also differed significantly from each other ($p < 0.01$). Subjects expected their feminine-expressive gender role attributes to increase in the parenthood context and then decline to a level that, while higher than that of their present self-rating, is lower than the level expected in parenthood.

12.1.1.2 Categorical Scoring Method

The four androgyny categories were calculated using the median split method with the sample's own medians from the self-rating. This was done so that variability in the frequency of subjects perceived in the four androgyny categories could be measured against the their self-ratings at the present. The medians used were 20 (PAQM) and 22 (PAQF). This resulted in the following distributions: for the present rating, 16 androgynous, 19 masculine sex-typed, 16 feminine sex-typed, and 13 undifferentiated; for the parent rating, 56 androgynous, 4 masculine sex-typed, 4 feminine sex-typed, and zero undifferentiated; and for the retirement rating, 38 androgynous, 16 masculine sex-typed,

Table 12-1: Observed distribution of subjects in four Androgyny categories across three Life Contexts[1].

| | Life Contexts | | | |
|---|---|---|---|---|
| | Present | Parent | Retire | Marginal |
| Androgynous | 16 | 56 | 38 | 110 |
| Masculine Sex-Typed | 19 | 4 | 16 | 39 |
| Feminine Sex-Typed | 16 | 4 | 3 | 23 |
| Undifferentiated | 13 | 0 | 3 | 16 |

Total N = 74 (32 males; 32 females)

3 feminine sex-typed, and 3 undifferentiated.

A chi-square analysis showed that androgyny and life context were significantly dependent upon one another (chi-square = 63.13, df = 9, $p < 0.001$; see Table 12-1). In the present rating, there appeared to be fewer androgynous subjects than expected and more masculine sex-typed, feminine sex-typed, and undifferentiated subjects. However, the trend was reversed in the parenthood and retirement contexts, with most of the subjects expecting to be androgynous.

12.1.2 Supplementary Analyses

12.1.2.1 Scale Intercorrelations

Present masculine-instrumentality scores were correlated only

Table 12-2: Pearson Product-Moment Correlation Coefficients between masculine-instrumentality or feminine-expressivity ratings in three Life Contexts[1,2].

| | Present | Parent | Retire |
|---|---|---|---|
| Present | 1.0 | 0.317[3] | |
| Parent | 0.518 | 1.0 | 0.601 |
| Retire | 0.431 | 0.460 | 1.0 |

Notes: 1. Coefficients above the diagonal are correlations between masculine-instrumentality ratings in the three contexts. Coefficients below the diagonal are correlations between feminine-expressivity ratings in the three contexts.
2. All reported coefficients are significant at $p < 0.0001$ unless stated otherwise.
3. $p < 0.01$

with expected PAQM scores as a parent ($r = 0.317$, $p < 0.01$). There was no significant relationship between present ratings and those expected in retirement. Expected PAQM scores in the parenting context were correlated with expected PAQM scores in retirement ($r = 0.601$, $p < 0.0001$). They also were correlated with PAQF scores in both the parenting and retirement contexts ($r = 0.295$, $p < 0.02$, for both relationships).

Present PAQF ratings were highly correlated with feminine-expressivity scores in the parenting and retirement contexts ($r = 0.518$, $p < 0.0001$ and $r = 0.431$, $p < 0.0001$, respectively). Also, PAQF in the parenting context was correlated with PAQF in the retirement context ($r = 0.460$, $p < 0.001$). The relationship between PAQM and PAQF

in the expected retirement context is only a trend ($r = 0.213$, $p < 0.09$). PAQ correlations are illustrated in Table 12-2.

12.1.2.2 Latitude for Gender Role Development

Consistent with the latitude for gender role analyses reported in Chapter 10, latitude scores were calculated for each subject. The latitude for masculine-instrumentality was compared to the latitude for feminine-expressivity via an independent groups t-test. Secondly, the two latitude dimensions were analysed using a one-way analysis of variance, with Sex of Subject as the grouping factor, and two-way ANOVAs contrasting subject's sex and androgyny categorization in the present self-rating task.

a) Masculine-Instrumental Versus Feminine-Expressive

The mean latitude score for the PAQM scale was 6.22 (sd = 4.14); for the PAQF scale, 5.83 (sd = 3.18). The independent groups t-test used to examine the difference between the two means did not reveal a significant mean difference. Thus, subjects did not see their masculine-instrumental attributes to vary significantly more or less than their feminine-expressive attributes.

b) Sex of Subject Analyses

The two one-way analyses of variance revealed no significant difference between males' and females' perceived latitude for the PAQM scale. However, there was a significant main effect for the PAQF

analysis ($F(1,62) = 6.23$, $p < 0.02$). Male subjects (mean = 6.78) expected to have a significantly greater degree of feminine-expressive latitude than did the female subjects (mean = 4.88).

c) Androgyny Categories

The analysis of variance examining whether the masculine-instrumental latitude scores varied significantly as a function of androgyny categorization revealed a slight but significant main effect for the Androgyny factor ($F(3,56) = 2.70$, $p < 0.05$; see Table 12-3). Post hoc tests revealed that feminine sex-typed subjects expected to have a greater degree of masculine-instrumental latitude than the masculine sex-typed subjects ($p < 0.01$). There was neither a main effect of Sex of Subject nor an interaction between the two grouping variables.

The femininine-expressive latitude ANOVA yielded a significant main effect for subject's sex ($F(1,56) = 4.49$, $p < 0.04$; see Table 12-3), suggesting that male subjects perceived more latitude for feminine-expressivity than did female subjects. The analysis also revealed a significant main effect for the Androgyny factor ($F(3,56) = 3.19$, $p < 0.03$). Post hoc tests showed that masculine sex-typed subjects expected a greater degree of feminine-expressive latitude than androgynous subjects ($p < 0.05$) and those with undifferentiated gender roles perceived a greater degree of latitude when compared to androgynous subjects ($p < 0.01$).

Table 12-3: Mean masculine-instrumental and feminine-expressive latitude scores as a function of four Androgyny categories. Standard deviations in parentheses.

| | Masculine-Instrumental | Feminine-Expressive |
|---|---|---|
| Androgynous | 5.59 (3.34) | 4.12 (2.71) |
| Masculine Sex-Typed | 4.06 (3.12) | 6.94 (3.06) |
| Feminine Sex-Typed | 8.56 (3.26) | 5.06 (2.02) |
| Undifferentiated | 7.15 (5.67) | 7.46 (3.91) |

12.1.2.3 Life Path Expectations

The following are the descriptions of the life paths which the subjects indicated they expect to follow. None of these questions were significantly related to either masculine-instrumentality, feminine-expressivity, or androgyny categorization.

a) Careers

The average subject expected to graduate from university in approximately 1.7 years from the time of measurement. Upon graduation, 62.5% expected to find employment which they felt would lead to a career.

Approximately one half of the subjects (48%) expected to make a career change at some point in their work life. The most frequently

anticipated age of retirement was 60 years. The majority of subjects expected to be glad to retire (72.6%).

b) Marriage and Family

Most subjects anticipated marriage. Ten percent of the sample, however, expected that they would not marry. For those subjects who saw marriage as a viable expectancy, the average number of years they expected to wait was 14.4, with a mean length of engagement of 19 months.

Ninety-one percent of the sample expected to have children. This figure included those subjects who expected not to marry. The average number of expected children was 2.75 and subjects predicted that they would be an average of 31.6 years old when their first child was born.

Eighty-six percent of those who expected to have children also expected to be a working parent.

## 12.2 Results -- Retrospective Gender Role Study (Study 6)

A total of 40 subjects were interviewed. As one of the developmental contexts during which subjects were asked to rate their gender role attributes was parenthood, it was felt that those subjects who were childless would not respond in the same manner as those who had children. Thus, eight subjects were dropped from the analyses. Of the remaining thirty-two, 15 were male and 17 were female.

12.2.1 Main Analyses

12.2.1.1 Continuous Scoring Method

The PAQM and PAQF scores were analysed using two 2 (Sex of Subject) X 3 (Life Context) analyses of variance for repeated measures, one each for masculine-instrumentality and feminine-expressivity.

a) Masculine-Instrumentality

The analysis did not reveal a main effect for subject's sex but did show a significant main effect for Life Context ($F(2,60) = 5.57$, Greenhouse-Geisser $p < 0.006$). Post hoc tests were used to examine the differences between masculine-instrumentality ratings in each of the three life contexts. These revealed that the present, retirement ratings (mean = 22.47) were significantly higher than those reported retrospectively for the work-entry context (mean = 19.16; $p < 0.01$). The difference between the present ratings and those in the parenting context (mean = 20.13) only bordered on significance ($p < 0.10$). There was not a significant difference between the two retrospective ratings.

b) Feminine-Expressivity

There was a significant main effect for the repeated factor, Life Context ($F(2,60) = 11.27$, Greenhouse-Geisser $p < 0.0001$). Post hoc analyses showed that subjects perceived their feminine-expressive attributes to increase from their work-entry levels (mean = 19.88) to

those in the parenthood (mean = 23.84) and present (mean = 23.28) contexts (both p's < 0.01). There was not a significant difference between the parenthood and present self-rating means.

12.2.1.2 Categorical Scoring Method

Androgyny scores were calculated using the median split technique. The pair of medians from the study of the PAQ's reliability in an elderly population (Chapter 7) were used. The reason for this is that the question concerns variability in androgyny category membership from previous life contexts to the present self-rating. If medians that are representative of elderly British adults are used, then this retrospectively-framed question can be addressed. The present sample's medians were not used because it was believed that error created by the size of this interview sample may have distorted them. The medians for the PAQM and PAQF scales were 21 and 23, respectively.

Table 12-4 illustrates the breakdown of subjects in each of the four androgyny categories in each life context. The distribution of subjects in each of the four categories was as follows: in the work context, 7 androgynous, 7 masculine sex-typed, 5 feminine sex-typed, and 13 undifferentiated; in the parent context, 17 androgynous, 6 masculine sex-typed, 5 feminine sex-typed, and 4 undifferentiated; and in the present, 15 androgynous, 6 masculine sex-typed, 5 feminine sex-typed, and 6 undifferentiated.

Table 12-4: Distribution of subjects in four Androgyny categories across three Life Contexts.

| | Life Contexts | | | |
|---|---|---|---|---|
| | Work | Parent | Present | Marginal |
| Androgynous | 7 | 17 | 15 | 39 |
| Masculine Sex-Typed | 7 | 6 | 6 | 19 |
| Feminine Sex-Typed | 5 | 5 | 5 | 15 |
| Undifferent-iated | 13 | 4 | 6 | 23 |

An Androgyny by Life Context chi-square was calculated to determine whether the androgyny categories varied as a function of the life context. The analysis revealed a nonsignificant finding. That is, Androgyny Category and Life Context were statistically independent of one another.

12.2.2 Supplementary Analyses

12.2.2.1 Change and Connotation

When the subjects re-rated their gender role attributes, the experimenter asked whether the change from that rating period to the present was positive, negative, or neutral in character. It should be remembered that the subjects were constantly reminded of their present rating because the colour-coded arrows for each item (blue for the

present self-rating and red for each subsequent re-rating) were continuously in view and acted as benchmarks against which each subject was encouraged to measure change.

This section examined the patterns of change for each item (whenever possible), or group of items, across the two re-ratings and asked questions relating to the relationship between item category (masculine-instrumentality and feminine-expressivity) and both change (yes-no; increase-decrease) and connotation (positive, negative, neutral).

a) Change

When subjects re-rated themselves at the work-entry and parenthood contexts, they were stating that they believed they had changed on each attribute that they marked. Thus, two comparsions were made to assess this change: work-entry to the present and parenthood to the present. Each item was coded for the presence of either no change between the retrospective rating and the present, an increase from the retrospective rating to the present, or a decrease from the retrospective rating to the present. This was done for both comparisons and was accomplished using the following transformational rules. If, when the present rating (for each item) was subtracted from the retrospective rating, the difference between the two ratings was greater than zero (i.e., the individual noted an increase over time on that rating), a dummy variable called Change was assigned the value 1. If the difference between the two ratings was less than zero (i.e.,

the individual noted a decrease over time), the variable Change was assigned the value 2. The default for this variable was 0, which indicated that there was no change.

The values of Change were calculated for each subject across all PAQ items and included the differences between the present and work-entry ratings and between the present and parenthood ratings. Frequencies were calculated for those who increased in attribute level, decreased in attribute level, and perceived no change in attribute level. It was assumed that an equal probability existed for subjects to increase, decrease, or remain the same for each attribute. Chi-square tests of goodness of fit were performed to assess whether the Change scores were evenly distributed among these three possibilities. The results are illustrated in Tables 12-5 and 12-6.

In these tables, it can be seen that, for the vast majority of PAQ items, subjects most often perceived no change in their levels of these gender role attributes between both the work-entry and parenthood contexts and the present. This was true for both masculine-instrumental and feminine-expressive items in both comparisons.

However, for those items upon which change was reported, did subjects report changes more often for PAQM items than for PAQF items? To test this, PAQM and PAQF items were grouped according to whether 50% or less of the subjects reported no change or whether greater than 50% reported change. Four masculine-instrumental and six feminine-expressive items were not perceived to change while four PAQM and two PAQF items did show change. Thus, it appears that approximately equal

Table 12-5: Frequencies of subjects who reported no change, an increase, and a decrease in masculine-instrumental and feminine-expressive gender role attributes from work-entry to retirement.

| | None | Increase | Decrease | Chi-Square | p |
|---|---|---|---|---|---|
| Masculine-Instrumental | | | | | |
| Independence | 9 | 22 | 1 | 21.06 | 0.01 |
| Active | 17 | 7 | 8 | 5.69 | ns |
| Competetive | 17 | 5 | 10 | 6.81 | 0.05 |
| Decide Easily | 12 | 15 | 5 | 4.94 | ns |
| Does Not Give Up | 26 | 3 | 3 | 33.05 | 0.01 |
| Self-Confident | 8 | 20 | 4 | 13.00 | 0.01 |
| Superior | 16 | 14 | 2 | 10.75 | 0.01 |
| Stands Up/Pressure | 24 | 6 | 2 | 25.74 | 0.01 |
| Feminine-Expressive | | | | | |
| Emotional | 18 | 3 | 11 | 10.81 | 0.01 |
| Devoted/Others | 16 | 15 | 1 | 13.18 | 0.01 |
| Gentle | 20 | 9 | 3 | 13.93 | 0.01 |
| Helpful | 19 | 12 | 1 | 15.43 | 0.01 |
| Kind | 23 | 6 | 3 | 21.80 | 0.01 |
| Aware/Others | 11 | 19 | 2 | 13.56 | 0.01 |
| Understanding | 12 | 19 | 1 | 15.44 | 0.01 |
| Warm/Others | 28 | 1 | 3 | 42.43 | 0.01 |

Table 12-6: Frequencies of subjects who reported no change, an increase, and a decrease in masculine-instrumental and feminine-expressive gender role attributes from parenthood to retirement.

| | None | Increase | Decrease | Chi-Square | p |
|---|---|---|---|---|---|
| Masculine-Instrumental | | | | | |
| Independence | 22 | 9 | 1 | 21.05 | 0.01 |
| Active | 19 | 4 | 9 | 10.93 | 0.01 |
| Competetive | 23 | 4 | 5 | 21.43 | 0.01 |
| Decide Easily | 18 | 10 | 4 | 9.25 | 0.01 |
| Does Not Give Up | 29 | 1 | 2 | 47.31 | 0.01 |
| Self-Confident | 18 | 13 | 1 | 14.32 | 0.01 |
| Superior | 22 | 5 | 5 | 18.05 | 0.01 |
| Stands Up/Pressure | 25 | 6 | 1 | 30.06 | 0.01 |
| Feminine-Expressive | | | | | |
| Emotional | 18 | 3 | 11 | 10.81 | 0.01 |
| Devoted/Others | 15 | 6 | 11 | 4.06 | ns |
| Gentle | 18 | 1 | 13 | 14.31 | 0.01 |
| Helpful | 22 | 6 | 4 | 18.24 | 0.01 |
| Kind | 25 | 2 | 5 | 29.31 | 0.01 |
| Aware/Others | 24 | 7 | 1 | 26.68 | 0.01 |
| Understanding | 24 | 5 | 3 | 24.77 | 0.01 |
| Warm/Others | 23 | 6 | 22 | 22.56 | 0.01 |

numbers of both PAQM and PAQF items showed both change and no change.

Unfortunately, it was not possible to examine this relationship as the chi-square test of independence is unreliable if the expected frequency of at least one of a four cell contingency table is less than five. If there are more than four cells in the analysis, this is less of a problem, although it is still advisable to use another test if one or more cells has an expected frequency of less than five.

b) Connotation

When subjects reported a change, they were asked to place a subjective label upon that change; was it good or bad that that change had taken place, or was it neutral? These connotations were examined in many ways. Are each of the three options used equally? Are different connotations given to changes in masculine-instrumental and feminine-expressive items? Is connotation related to the type of change (increase or decrease)? Is the relationship between connotation and change the same for both masculine-instrumental and feminine-expressive items?

First, connotations were examined by determining whether one type of connotation (positive, negative, or neutral) occurred more often than was expected by chance alone. It was assumed that there was an equal probability that a change would be seen as either positive, negative, or neutral. A chi-square test of goodness of fit for the work-entry to present comparison revealed that, when change occurred, subjects overwhelmingly believed that it was positive (chi-square =

258.23, df = 2, $p < 0.01$). Of the 236 instances of change in this comparison, 83% believed the change was positive, while 8% believed it was negative, and 11% believed it to be neutral.

In the comparison from parenthood to the present, subjects again believed that change was most often positive (chi-square = 69.97, df = 2, $p < 0.01$). Of the 174 instances of change in this comparison, 63% believed it to be positive, 18% negative, and 19% neutral.

In order to determine whether changes in masculine-instrumentality and feminine-expressivity were perceived to have different connotations, chi-square tests of independence were performed separately for the work-entry to present and parenthood to present comparisons. For the former comparison, Connotation and PAQ Scale were significantly dependent upon one another (chi-square = 7.48, df = 2, $p < 0.05$). In this instance, changes in masculine-instrumentality were perceived to be more often negative or neutral and less often positive than was expected by chance. Conversely, changes in feminine-expressivity were perceived to be more often positive and less often negative or neutral than was expected by chance. In the parenthood to present comparison, PAQ Scale and Connotation were independent of one another.

The third question asked whether the type of connotation was related to the type of change (an increase or decrease). In the work-entry to present comparison, a chi-square analysis showed that the two variables were significantly related to one another (chi-square = 72.31, df = 2, $p < 0.01$). Similarly, the two variables were related in

the parenthood to present comparison (chi-square = 62.11, df = 2, p < 0.01). Decreases in an attribute were most likely perceived to be negative or neutral and increases were most likely seen as positive.

The analyses were repeated separately for masculine-instrumental and feminine-expressive attributes in order to determine whether this relationship was the same in both domains. In the work-entry to present comparison, both the PAQM and PAQF chi-square analyses were significant (chi-square's = 61.03 and 11.49, respectively; df's = 2, p's < 0.01). Again, increases in attributes were most often perceived as positive while decreases were seen as negative or neutral. This finding was replicated in the parenthood to present comparison (chi-square's = 40.26 and 26.06, respectively; df's = 2, p's < 0.01).

12.2.2.2 Scale Intercorrelations

PAQM and PAQF scale scores were uncorrelated in all rating contexts, and thus were orthogonal. Present ratings of masculine-instrumentality were positively correlated with PAQM ratings in both the work-entry (r = 0.407, p < 0.01) and the parenthood (r = 0.532, p < 0.001) contexts. The masculine-instrumentality ratings in the two retrospective contexts also were positively correlated (r = 0.467, p < 0.002). See Table 12-7.

Feminine-expressivity scores in the present self-rating context were positively correlated with PAQF scores in the work-entry (r = 0.364, p < 0.02) and the parenthood (r = 0.342, p < 0.03) contexts. PAQF scores in the parenthood context were positively correlated with

Table 12-7: Pearson Product-Moment Correlation Coefficients between masculine-instrumentality or feminine-expressivity ratings in three Life Contexts[1,2].

| | Work | Parent | Present |
|---|---|---|---|
| Work | 1.0 | 0.467 | 0.407 |
| Parent | 0.456 | 1.0 | 0.532 |
| Present | 0.364 | 0.342[3] | 1.0 |

Notes: 1. Coefficients above the diagonal are correlations between masculine-instrumentality ratings in the three contexts. Coefficients below the diagonal are correlations between feminine-expressivity ratings in the three contexts.
2. All reported coefficients are significant at $p < 0.02$, or better, unless stated otherwise.
3. $p < 0.03$

those in the work-entry context ($r = 0.456$, $p < 0.004$). See Table 12-7.

12.2.2.3 Latitude for Gender Role Development

a) Masculine-Instrumental Versus Feminine-Expressive

In order to determine whether the subjects perceived their masculine-instrumental attributes to have a greater degree of developmental latitude (or a more restricted degree of latitude) than their feminine-expressive attributes, an independent groups t-test was used to compare the mean latitude scores for the PAQM and PAQF scales.

The average PAQM latitude score was 6.88 (sd = 4.35) and the average PAQF latitude score was 6.63 (sd = 4.05). There was not a

significant difference between the two latitude scores. Thus, neither masculine-instrumentality or feminine-expressivity were seen to have varied more than the other across the life-span.

b) Masculine-Instrumental Latitude

A one-way analysis of variance was performed to examine whether there were significant differences between males and females in their perceived degree of masculine-instrumental latitude. The results suggested a trend ($F(1,20) = 3.16$, $p < 0.09$) such that the female subjects (mean = 8.12) perceived a greater degree of developmental latitude compared to the males (mean = 5.47).

c) Feminine-Expressive Latitude

An identical analysis was completed for the PAQF latitude variable. However, there were no significant differences between the male and female subjects.

d) Androgyny Categories

Latitude scores were compared by androgyny categories in two one-way analyses of variance, one for masculine-instrumental latitude and the other for feminine-expressive latitude. Neither masculine-instrumental nor feminine-expressive latitude scores differed significantly across the four androgyny categories.

12.2.2.4 Life Course Descriptions

Each subject answered several questions concerning their entry into the work force, the onset of parenthood and the empty nest, as well as questions concerning their situation at retirement. This section examines the answers to these structured questions and the open-ended question at the end of the interview that asked subjects about other ways in which they felt they had changed that wasn't covered in the interview.

a) Occupations

i. Mobility.

In order to determine if the subjects were upwardly mobile throughout their life-span, and if there were any sex differences in this aspect, subjects' occupations (i.e., the ones from which they retired as well as their first full-time job) were examined in many different ways. First, in order to develop an understanding as to their present social class (as determined by their occupation at retirement), their occupation at retirement was coded for social class based on the Registrar General's classification system (R.G. 70; Reid, 1977).

Reid (1977) described the five-tiered system which ranks jobs according to whether they are Professional (Level 1; e.g., doctor, lawyer, university lecturer), Intermediate (Level 2; e.g., aircraft pilot, Member of Parliament, school teacher), Skilled (Level 3; clerical worker, bus driver, waiter, miner), Partly Skilled (Level 4;

e.g., barman, machine sewer, postman, telephone operator), and Unskilled (Level 5; e.g., kitchen hand, messenger, window cleaner). Further, Level 3 is divided into: a) Skilled Non-Manual and b) Skilled Manual, the former being considered higher in status than the latter.

There were no Professionals in this sample. Of the 32 subjects, half left jobs in the Level 2 (Intermediate) category and the remaining 16 left jobs in the Skilled Non-Manual category (Level 3a). Thus, the sample was very middle class (see Table 12-8).

These frequencies were compared with the social class ratings of the subjects first full-time job (see Table 12-8). Of those jobs, only 6 started out in a Level 2 position. Fourteen were considered Skilled Non-Manual (Level 3a) and 2 were Skilled Manual (Level 3b). Eight jobs were categorized as Partly Skilled (Level 4) and 2 jobs were considered Unskilled (Level 5).

A Social Class by Time (Begin/End) chi-square analysis was used to test the hypothesis that the subjects had been upwardly mobile in their careers. As there were no Professionals in either the first or last jobs, this category was not included as a cell in the analysis. The hypothesis was confirmed (chi-square = 16.67, df = 5, $p < 0.01$). As there were only 17 women and 15 men, separate chi-squares were not performed for males and females, although it may be hypothesized that there was less mobility for women than for men.

Table 12-8: Subjects' occupations at work-entry and retirement.

| Occupations at Career Beginning | |
|---|---|
| Sewing Machine Operator | Chemist's Shop Assistant |
| Shorthand Typist | Clerk |
| Librarian | Maid |
| Statistician | Apprentice Pharmacist |
| Apprentice Engineer | Apprentice Printer |
| Apprentice Artilleryman | Apprentice Woodworker |
| Apprentice Plumber | Cabinet Maker |
| Local Government Officer, Junior Level | |
| Fitter and Turner | |

| Occupations at Career Ending | |
|---|---|
| Director of Technical Training | Housewife |
| Administrator, Tourist Information | Nurse |
| Management Secretary | Market Researcher |
| Civil Servant | Teacher, Primary |
| Teacher, Elementary | Teacher, Adult Education |
| Telecommunications Troubleshooter | Sales, High Fashion |
| Secretary | Health Inspector |
| Public Housing Officer | Headmaster |
| Teacher, Woodworking | Fire Prevention Officer |
| Chartered Engineer | |
| Civil Servant, National Security | |
| Real Estate, Selling and Developing | |
| Local Government, Financial Department | |
| Local Government, Educational Department | |
| Civil Servant, Executive Officer | |
| Foreman, Docks Engineering Works | |
| Principal Hospital Officer (Prison Service) | |
| Owner, Art Gallery and Photography Shop | |

ii. Sex-typing.

The sex-typing of the subjects' jobs also was examined. Specifically, did men and women start and finish their work career in jobs that were most often associated with their sex? In order to accomplish this, it was necessary to have the subjects' jobs (both first and last) rated as to whether it was most appropriate for men, women, or both men and women. This was done by collating the jobs and having a group of 10 first year introductory students (five males and five females) rate the jobs according to whether they felt they were more likely to find a male or a female in the job, or whether they felt they were more likely to find either sex in the job. They were given the three options (Male, Female, Both) and were instructed to mark only one box for each occupation.

An occupation was considered sex-typed if seven out of ten students felt that Men or Women were more likely to be found in that job. Forty-percent of the occupations were classified. Of these, 29% were typed Male, 7% were typed female, and 64% were typed sex-neutral. (That is, seven out of the ten students felt that these items were sex-neutral. Here I am making a distinction between the rating of an occupation as sex-neutral by choice as opposed to by default. An occupation about which the subjects cannot agree is not necessarily sex-neutral but is often assigned to that category as a default mechanism.) The remaining 60% of the occupations were not classified as sex neutral by default. Rather, they remained Unclassified.

The frequency of males who retired from masculine sex-typed

occupations were collected, as was the number of females who retired from a feminine sex-typed occupation. As only one female retired from a cross-sex-typed job and no males did, the four categories (Masculine-typed, Feminine-typed, Sex-Neutral, and Unclassified) were collapsed into two: sex-typed and non-sex-typed.

A chi-square analysis was performed to test the hypothesis that males and females were more likely to have retired from sex-typed jobs. This hypothesis was not confirmed. The same procedure was carried out for those occupations in which the subjects began their career. Again, the hypothesis was not confirmed. Thus, it appeared that the sample was not one who began or ended their career in predominantly sex-typed jobs.

b) Length of Time in First Job

Most of the subjects entered their first long term job (a minimum of one year's full-time employment was the criterion) in their teens. The average age was 17.7 years for the males and 18.8 years for the females. As stated previously, these jobs were scattered throughout the Registrar General's classification of social classes, with quite a number in the lower ends of the scale. The reason for the discrepancy between males' and females' age of entry into the full-time work force is unknown. Common sense would suggest that women in the earlier part of the Twentieth Century would leave school before men and would be more likely to begin work at an earlier age. It may be that social forces propelled women to delay their work-entry or men to enter

early. A more complete explanation is not possible using the existing data.

When asked how long they spent in their first job, subjects' responses ranged from the one year minimum to 51 years with an average length of employment of 10.3 years. Men spent an average of 16.3 years in their first job, women an average of 4.9 years. A t-test for independent samples revealed that men remained in their first job for a significantly longer amount of time than women ($t(30) = 2.30$, $p < 0.05$, two-tailed). Although the two means were significantly different, it should be noted that the variance in the men's scores was approximately eight times that of the women's variance.

The length of time subjects spent in their first job appeared to be mediated, at least in part, by whether the subjects felt that there was room for advancement in the employment setting. Sixty-six percent of the sample believed that they were not able to advance their skills in this job. For this group, the average stay was 3.71 years. For those with advancement potential (34%), the mean length of employment was 22.9 years. There was a statistically significant difference between the number of years the two groups spent in their first job ($t(30) = 4.32$, $p < 0.0001$).

c) Marriage and Family

Most subjects were married in their twenties, the average age being 25.6 years (males married at a mean age of 27.0 years and the females at 24.4). The marriages were preceded by an average engagement

of 19.4 months. This distribution was skewed in the positive direction with approximately 25% of the sample reporting engagements lasting greater than two years. This, however, must be viewed in light of the social climate at the time. The Depression was coming to an end for some and World War Two was in full swing for others. Both of these factors served to lengthen engagements as the former made financial security difficult and the latter separated men and women for lengthy periods of time.

When the subjects began their families, the first child was more often a boy (63%). This child stayed stayed with the family for an average of 20.37 years, leaving an average of 1.4 siblings behind (range = 0 to 7). At this point, the fathers were an average of 49.4 years old and the mothers were an average of 47.6 years old. In approximately 77% of the cases, the eldest child leaving was not a stressful event.

d) Change in PAQ Items

In light of the substantial effect of the Life Context variable reported in the main analyses, it was interesting to note what the subjects said when they were asked, after their first (present-time) rating on the PAQ, whether or not they thought they had changed with respect to the 16 gender role items. One person was unsure whether he had changed, while 37.5% (i.e., 12 people) believed that they had not changed. It was observed that the males were more likely to state that they had not changed while the females tended to state that they had

changed. A chi-square analysis was performed to test this observation. The result proved significant (chi-square = 6.48, df = 1, $p < 0.039$).

Two 2 (Change) X 3 (Life Context) repeated measures analyses of variance were performed to examine whether those who felt they had changed on the PAQ scored differently on the masculine-instrumental and feminine-expressive scales when compared to those who felt that they had not changed. The one subject who was unsure whether he had changed was not included in the analysis. With regard to the masculine-instrumentality scale, there was not a main effect for Change, however, there there was a significant Life Context by Change interaction ($F(2,54) = 3.08$, Greenhouse-Geisser $p < 0.05$). Post hoc analyses revealed that the only significant difference between the two groups was in the work stage ($p < 0.05$) where those who felt they had changed rated themselves significantly less masculine-instrumental than those who felt that they had not changed. The analysis for the feminine-expressivity scale revealed no significant effects.

The differences between the two groups were examined further by comparing the latitude scores of those who felt that they had changed with those who felt that they had not. There was no difference between the two groups on masculine-instrumental latitude but there was a trend on feminine-expressivity latitude ($F(1,29) = 2.99$, $p < 0.09$) indicating that those who felt they had changed tended to have a higher degree of latitude than those who felt they had not changed.

e) "Are There Any Other Ways in Which You Feel You Have Changed?"

At the end of the structured interview, subjects were asked if there were any other ways in which they felt they had changed over the years; ways that the interview did not cover. In response to this, subjects noted a total of 35 different areas in which they had changed. Some subjects reported several aspects of change while others reported none (range = 0-4). These areas are presented in Table 12-9.

In order to determine the percentage of these items that could be categorized as sex-typed, the adjectives and adjective phrases were collated and a group of 10 introductory psychology undergraduates were asked to indicate whether each was most representative of males, females, or both males and females. In order for an item to have been classified as most representative of one or both sexes, a minimum of seven of the ten students would have had to agree about its sex-typing. Of the 35 items, 40% (14) were classified in one of the three categories.

Four items were perceived to be most representative of males. Three of these were personality attributes (aggressiveness, achievement, and dictatorial) while the other was a consciousness of politics. Only one item was rated as feminine-typed (interest in the home) while nine items were rated as equally representative of both sexes (see Table 12-9). As some subjects gave several aspects of change while others gave none, as well as the fact that very few items were classified as sex-related, it was not possible to determine whether males and females reported sex-typed aspects of change.

However, the low frequency of items that were sex-typed indicate that there was considerable heterogeneity in their responses to this question.

Table 12-9: List of responses to the question "Are there any other ways in which you feel you have changed?".

| | |
|---|---|
| Shy[3] | Withdrawn |
| Lots of Friends | Optomistic |
| Have Morbid Thoughts | Lack of Focus |
| Achievement[1] | Independent |
| Naive[3] | Aggressive[1] |
| Insight Into Self | Handles Situations |
| Self Confident | Sensitive |
| Happy[3] | Active in Community Affairs |
| Lonely | Tolerant |
| Sense of "Inner Calmness" | Stubborn |
| Cynical | Active in Church |
| Conscious of Politics[1] | Interest in Gardening[3] |
| Appreciation for Married Life[3] | Interest in Home[3] |
| Concern for Family Relations | Tire Easily |
| Difficulty Making New Friends[3] | Sense of Helplessness |
| Health Worries[3] | Dictatorial[1] |
| Worries About Physical Deterioration[3] | Dogmatic |
| Worries About Declining Mental Ability[3] | |

[1] Masculine-typed [2] Feminine-typed [3] Representative of both sexes

# CHAPTER 13

## LIFE-SPAN GENDER ROLES AND SELF-PERCEPTION: DISCUSSION

The findings reported in Chapter 12 have shown that individuals perceived their masculine-instrumental and feminine-expressive gender role attributes to vary significantly as a function of their participation in age-related developmental tasks. That is, when undergraduates and retired adults rated their gender roles at the present and in two prospective or retrospective developmental tasks, they perceived significant changes in these attributes across the three contexts. These two studies also revealed that the degree of within- and between-context intercorrelations between the PAQ's masculine-instrumentality and feminine-expressivity scales diminished from those observed in the studies of life-span gender role stereotypes (Chapters 8 through 10, inclusive).

The remainder of this chapter is devoted to a more thorough explication of the findings reported in Chapter 12. Examined in greater detail are results that showed: 1) that gender role attributes varied across the three rating contexts; 2) the relationship between the PAQM and PAQF scales; and 3) the latitude for gender role development.

### 13.1 The Developmental Tasks

Both retrospective and prospective gender role studies revealed significant variability in subjects' perceptions of their self-

reported masculine-instrumentality and feminine-expressivity. In the prospective study, undergraduate students expected their masculine-instrumental attributes to be at their lowest in the present self-rating. Instrumentality in both the parenthood and retirement contexts was perceived to be significantly higher than in the initial self-rating but there was not a significant difference between perceptions of expected masculine-instrumentality in these latter two developmental tasks. Feminine-expressive attributes, on the other hand, were expected to rise in a linear fashion, being at their lowest in the self-rating and rising significantly across the two prospective ratings.

In general, there were no consistent sex differences in either self-ratings or perceptions of masculine-instrumentality and feminine-expressivity in the prospective developmental contexts. The one exception to this, however, was that females in this study rated themselves significantly higher than males in feminine-expressivity in all contexts except retirement, where the two sexes did not differ in their self-perceptions.

The male and female adults rating their gender role attributes retrospectively did not differ in their self-perceptions of either masculine-instrumentality or feminine-expressivity in any of the three rating contexts. When rating their masculine-instrumental attributes, subjects perceived these attributes to be at their lowest in the work-entry and parenthood contexts, rising to their present levels at retirement. Self-perceptions of feminine-expressivity also rose across

the life-span. However, the elderly adults perceived their PAQF attributes to rise from work-entry to the parenthood context, where they were not perceived to differ from their present self-rating.

With regard to categorical scoring, it should be remembered that, in Chapter 10, it was shown that there exists life-span gender role stereotypes suggesting that, as males and females age they become more androgynous (i.e., their gender roles become balanced). This finding was partially replicated in the Self-Perception Studies. In both the prospective and retrospective studies, the trend was for a greater number of androgynous individuals in the parenting and retirement contexts. However, the Androgyny by Life Context statistic was significant only in the prospective study.

### 13.1.1 Relation to Previous Studies

The self-perceptions reported in the prospective and retrospective gender role studies differed from those reported in the Job Studies, especially with regard to perceptions of masculine-instrumentality. That is, in the Job Studies, masculine-instrumentality was perceived to be highest in the examination and work contexts, dropping when subjects rated the stimulus persons in the parenthood and retirement contexts. In both of these present studies, however, masculine-instrumentality was perceived to rise from the earliest of the age-related tasks, to peak in the retirement context. Thus, students expected that they will be most effective when they are older and the retired adults concurred with this hypothesis,

suggesting that masculine-instrumentality does develop/vary in this fashion.

How does one explain this distinction between the gender role stereotypes associated with three developmental tasks and individuals' self-perceptions of variability in those same tasks? First, however, it should be noted that this explanation is directed solely at masculine-instrumentality as feminine-expressivity appears to have been rated similarly in both the person perception and self-perception studies. That is, in studies using both paradigms, feminine-expressive attributes were perceived/expected to rise in a linear fashion, being at their lowest in the earlier life contexts, and at their highest in the latter contexts (even though feminine-expressivity in the Job Studies was perceived to fall from a peak in parenthood, it was still at a higher level than those ratings in the examination and work-entry contexts).

An explanation for the differences between the person perception and self-perception studies, with regard to masculine-instrumentality, can be found in Eagly and Steffen's (1984) examination of gender role stereotypes. As noted earlier, these authors believe that gender role stereotypes are created by the distribution of males and females into social roles. Thus, males and females perceived in different social roles will be perceived differently. The stereotypes concerning the use of instrumentality in various social situations appeared to vary as a function of the instrumentality deemed inherent in the social roles of those who will complete the task. Variability occurred

because subjects perceived that the different social roles in each social context required different levels of masculine-instrumentality. Thus, as subjects perceived masculine-instrumentality to be highest in the first two contexts, they believed that the social roles accompanying the successful completion of that context (and, therefore, the stimulus persons performing those roles) should be perceived as highly instrumental. In other words, perceptions were context-dependent.

Self-perceptions, on the other hand (even those that are more likely to resemble implicit assumptions and retrospective reconstructions, as a prospective and retrospective study may elicit) may be less sensitive to the demands of the social context. In this instance, individuals rating themselves in a context that demands high levels of instrumentality may not perceive themselves to be as highly instrumental as a "typical" or "ideal" self or other. Other factors (which remain unknown at the present time) may mediate an individual's perceptions of the masculine-instrumental (and possibly feminine-expressive) attributes he/she expects to use in a certain developmental context. These mediators may lessen the context-dependence of the ratings, making them distinct from the stereotypes elicited in the Job Studies.

The linear increase in masculine-instrumentality across the three rating contexts is not only contrary to the results reported in the Job Studies, but also to those reported in Puglisi's (1983) prospective/retrospective study. Puglisi revealed that young, middle-

aged, and older adults all expected their instrumentality to peak in middle-age (45 years old) and decline into old age (70 years old), often to a level that was lower than they had perceived for their young adulthood (20 years old). That there is an altogether different developmental trend reported in the two present studies may be indicative of the stereotypical nature of Puglisi's study. It also may be that asking subjects for their self-rating, as was done in the present studies, may have made the exercise more real and meaningful to these subjects.

An alternative explanation for the differences between Puglisi (1983) and the present studies may be the use of developmental tasks, instead of chronological age, as the target contexts. It may have been that asking someone to rate their gender role attributes while performing specific developmental tasks induced a more salient response set than was elicited in Puglisi's study where he asked subjects to rate their attributes at specific chronological ages to which there is no special significance attached. That is, asking someone to rate their gender roles at a specific age is similar to asking them about a diffuse global prototype for someone of middle-age, old age, etc. By attaching social role information, a researcher is more apt to elicit a specific, well defined stereotype that has been integrated with the self-concept. This effect was shown by Uleman and Weston (1986), who revealed significant differences between self-ratings and those made when subjects were asked to respond in terms of their role as a parent.

Finally, increases in self-perceived masculine-instrumentality, as was observed in the present studies, may have been related to the subjects' upward mobility (expected and actual) across their life-span. It should be remembered that those in higher SES occupations are more likely to have higher status jobs. Eagly and Steffen (1984) have shown that those with higher status jobs are perceived to have higher levels of masculine-instrumentality, a finding that was replicated in the gender role stereotype studies presented earlier. Thus, it may be that an individual's self-perceptions of increased instrumentality across the life-span may be related to their actual or expected occupational status and SES.

In the retrospective study, it was shown that all subjects were upwardly mobile and that their first full-time job was their lowest on the SES scale and of the least status. At the same time, their perceived levels of masculine-instrumentality also was at its lowest. At retirement, these individuals were at their peak vis a vis status and SES. So was their self-reported level of masculine-instrumentality. If the same amount of (expected) mobility can be attributed to the students in the prospective study, then this may be a possible explanation for the differences between the two developmental pathways that were observed for masculine-instrumentality and feminine-expressivity.

### 13.1.2 Relation to Developmental Theories

With regard to the developmental theories reported in Chapters 3

and 4, the prospective and retrospective findings both offer further, albeit partial, confirmation of Gutmann's (1975) and Sinnott's (1977) gerontological approaches to life-span gender role development, as well as Levinson's (1978) model of adult development, which suggests that males come to terms with their expressive attributes in the mid-adulthood era and are more likely to display them.

Both Gutmann's and Sinnott's theories stress that the balancing of masculine-instrumental and feminine-expressive attributes in old age is expected and desirable. As noted earlier in this thesis, if one begins with the assumption that males and females possess more gender-congruent attributes, a balance can be assumed if males and females do not differ with respect to either masculine-instrumentality or feminine-expressivity.

In the retrospective study, males and females reported similar levels of masculine-instrumental attributes in all contexts, including retirement. However, in the prospective gender roles study, males and females differed (in a sex-typed manner) with regard to their perceptions of feminine-expressivity in the self-rating and parenthood contexts. This difference disappeared when the subjects rated their expected gender roles in the retirement context. Thus, at least with respect to feminine-expressivity, male and female students expected to have divergent gender roles until they retire (at the latest), at which point the men expected to increase their expressive traits to a level equal to that of the women.

This effect observed in the prospective study also was predicted

by Levinson's model of adult development; i.e., variable levels of masculine-instrumentality across the age-related social contexts, but higher levels of feminine-expressivity only after they have come to terms with the feminine side of their self-concept (i.e., at least by retirement).

There are two points, however, upon which the developmental theories are not supported. The first is the lack of overall sex differences in the self-perceptions. Both Gutmann and Sinnott expect males and females to be distinct from one another with regard to their self-reported levels of both masculine-instrumentality and feminine-expressivity (at least in the chronologically earlier tasks). However, with the one exception, males and females in neither of these samples reported divergent gender roles in their earlier ratings.

The second point concerns Gutmann's Parental Imperative. This theory assumes that gender roles become balanced in old age after they become bifurcated as a function of the demands of the parenting context. Neither of these studies revealed that subjects expected or perceived their gender roles to become sex-typed in this specific developmental context. The most common self-perception was one of androgyny; i.e., high levels in both attribute domains. Thus, while one aspect of Gutmann's theory has been consistently validated in both the person perception and self-perception studies (i.e., that gender roles become balanced in old age), the main tenet (i.e., that parenthood polarizes gender roles) has been consistently disconfirmed.

13.1.3 Issues Relating to Experimental Design

In general, the self-perceptions of these adults did not appear to vary as a function of the type of response set that was induced (i.e., prospective or retrospective). That is, masculine-instrumentality and feminine-expressivity in both studies were perceived to increase from the earliest to the latest age-related rating contexts, irrespective of whether the subjects were rating in a prospective or retrospective direction. The noticeable differences, however, were the pathways that the two gender role attribute domains were perceived to follow across the life-span. Masculine-instrumentality in the prospective study was perceived to be at its lowest in the present self-rating context. It then was expected to be higher in the two prospective rating contexts. In the retrospective study, masculine-instrumentality was perceived to be at its highest in the present self-rating (at retirement) and equally low in the two retrospective ratings. Feminine-expressivity followed a different route, rising linearly in the prospective study and varying within the two retrospective rating contexts.

Thus, it appears that differences in masculine-instrumentality may result from a "present versus future/past" dichotomy, biasing the findings. The only rating context, however, that is truly affected by this bias is parenthood. The students perceived this developmental task to be indicative of high levels of masculine-instrumentality while the elderly were of the opposite opinion.

To what extent does this apparent bias in the perceptions of

masculine-instrumentality effect the validity of the findings reported in Chapter 12? The answer appears to be "very little". While this finding has been shown to exist, the fact remains that both the prospective and retrospective studies revealed that masculine-instrumentality is perceived to increase across these age-related developmental tasks. This convergence strengthens the validity of the findings that both masculine-instrumentality and feminine-expressivity are perceived to vary across the life-span.

Another methodological issue concerns the possibility of a positive halo surrounding the perceived variability of instrumental and expressive attributes. This effect was revealed in the retrospective study, during the examination of the relationship between gender role change and the personal connotations of that change. When individuals indicated a change in their self-perceived levels of masculine-instrumentality and/or feminine-expressivity, they were more likely to say that the change was a positive one, especially if it was an increase in that gender role domain.

Thus, the positive connotations associated with an increase in an attribute domain appears to be a social desirability bias. Whether this bias stems solely from the question that elicited the connotation statistic ("has this change been positive, negative, or neutral...") has yet to be determined. However, it seems plausible that change usually means betterment, and the decrease of an attribute which indicates that one is less instrumental than at a previous time may

not be a desirable (i.e., better) outcome; hence the possibility of a confounded relationship between change and connotation.

13.2 Scale Intercorrelations

The prospective and retrospective studies revealed two features concerning the relationship between PAQM and PAQF, both within and between each of the three developmental contexts in which individuals rated their gender role attributes. First, self-ratings of masculine-instrumentality and feminine-expressivity were orthogonal in each of the three rating contexts in both studies; the one exception being the parenthood context in the prospective study where the two scales were slightly correlated. Secondly, PAQM and PAQF scales were orthogonal across the developmental contexts. For example, ratings of masculine-instrumentality in the parenthood context were not correlated with feminine-expressivity ratings in the retirement context. Finally, significant correlations were found only between: 1) masculine-instrumentality ratings across the three contexts; and 2) feminine-expressivity across the three contexts.

This pattern of scale intercorrelations indicates that, unlike those found in the gender role stereotypes studies, subjects in two widely separated age cohorts perceived masculine-instrumentality and feminine-expressivity to remain orthogonal outside of the developmental contexts in which the constructs originally were validated. That is, where the Job Studies revealed that subjects perceived PAQM and PAQF to be moderately correlated in the parenthood

and retirement contexts, this effect disappeared when subjects rated themselves as opposed to stimulus persons.

Reasons for this variability in the pattern of scale intercorrelations are elusive. It may be that applying the scales to the self elicits different perceptions of a relationship than if the target of the scales was directed outward. A more likely explanation, however, concerns the size of the prospective and retrospective samples compared to those from the Job Studies. In the present studies, the samples were significantly smaller than those in Job Studies. Smaller sample sizes reduces the probability of a correlation being found significant, thus reducing the number of significant coefficients. If one were to return to Chapter 9 and examine the magnitude of the correlations between PAQM and PAQF scales, it would be clear that the cross-scale coefficients were smaller than those reporting same scale correlations across contexts. This effect also was found in the present studies. As the sizes of the student and elderly Job Studies were two to four times those of the present studies, it is clear that this may have influenced the number of significant correlation coefficients that were found.

## 13.3 Latitude for Gender Role Development

In both the prospective and retrospective gender role studies, subjects perceived masculine-instrumentality and feminine-expressivity to have similar developmental latitudes. When the two latitude domains were examined separtately, male students expected to have a greater

degree of feminine-expressive latitude and elderly females believed that they have had more masculine-instrumental latitude than elderly males.

When subjects were grouped into the four androgyny categories, based on their present self-ratings, and analyses of gender role latitude were performed as a function of category membership, differences occured only in the prospective study. Students who were feminine sex-typed expected to have more masculine-instrumental latitude than masculine sex-typed students. Also, both masculine sex-typed and undifferentiated subjects expected more feminine-expressive latitude than androgynous (i.e., high in feminine-expressivity) individuals.

Thus, the trend appears to be one that subjects perceive that they will have, or have had, a greater degree cross-sex gender role development across the age-related developmental tasks. For example, subjects who perceived themselves to be masculine sex-typed expected to have more variability with regard to feminine-expressive traits (i.e., those traits that they currently were not reporting) than those who were feminine sex-typed.

Why subjects expect to have a relatively greater degree of latitude for cross-sex gender role attributes is unknown. It may be indictative of a social perception that males and females are restricted in their display of gender roles at some ages but that they are allowed greater social freedom at a later point in the life cycle. This is the view that has emerged from person perception studies of

life-span gender roles. For example, Neugarten and Gutmann (1968) have shown that, when asked to determine who was dominant in an elderly male-female pair, young subjects believed that the older man was the dominant figure whereas the older subjects perceived that the old woman to dominant. This reversal in dominance suggests that subjects perceive that gender roles can vary but that the degree of this variability may be age-related.

# CHAPTER 14

# LIFE-SPAN GENDER ROLES: A CROSS-SECTIONAL STUDY

## 14.1 Introduction

There are many possible ways to examine the variability of gender role attributes across the life-span. As shown in Chapter 12, males and females perceived their gender role attributes to vary across three age-related developmental tasks. However, although asking for a subject's self-perceptions of his/her attributes in various age-related developmental tasks is a novel approach to the study of gender role development in adulthood, some researchers may feel that the possibly hypothetical nature of prospective ratings and/or the possibility of distortion in retrospective accounts may taint the data gathered in these studies, thus limiting their generalizability.

A more traditional approach to examining the life-span gender role question has been to use the developmental model. Of the many designs within this model, the cross-sectional method has been employed most frequently. As noted in Chapter 5, the majority of these studies have asked subjects of differing ages to respond to a gender role questionnaire in the hopes that there would be differences between two or more age categories on the masculine-instrumentality and/or feminine-expressivity scales.

There are, however, several problems with studies employing this type of design (aside from the confounding of chronological age with birth cohort). The first problem concerns the lack of a life-span

perspective in the research. Although the goal of this type of research is to present a description of the possible sequences of gender role development across the life-span, this theme has not always been addressed and its lack of emphasis is evidenced by examining the age ranges experimenters have used in their studies. Some studies offer a true life-span perspective (e.g., Hyde and Phillis, 1979; Puglisi and Jackson, 1980-81) by examining masculine-instrumentality and feminine-expressivity in ages ranging across the adulthood continuum. Others, however, only compare various subgroups within or between one or two developmental eras (e.g., Fischer and Narus, 1981).

The second problem is the apparent over-reliance on chronological age as a predictor of gender role development in adulthood, a problem that is accentuated by the use of a cross-sectional design (i.e., cross-sectional designs traditionally have blocked subjects on the age factor and have looked at differences between subjects falling in different age categories). For example, most of the cross-sectional studies reported in Chapter 5 used chronological age as the independent variable so that mean differences between 'k' levels of that grouping factor could be examined using the masculine-instrumentality and feminine-expressivity scales of a gender role questionnaire as the dependent variables. Considering that chronological age is not a valid predictor of adult development (Whitbourne, 1986), there appears to be little reason for using this independent variable as the one and only explanatory factor of adult

variability of gender role attributes.

This leads to the third problem of cross-sectional research: i.e., the lack of theoretical guidance in the development of cross-sectional gender role studies. There is no theoretical reason that chronological age should be considered the major organizing feature of adult gender role development. Rather, the choice of using age as a grouping factor appears to be more intuitive than scientific. Researchers have believed that there must be differences between the young and old with respect to masculine-instrumentality and feminine-expressivity (despite the lack of theory concerning this point) and have used the most obvious difference between the two groups: their chronological age.

Only two studies reported in Chapter 5 (Banta Chinn [1984] and Keane [1986]) examined differences in males and/or females with a theoretical question to test (i.e., a test of the gender role assumptions built into Levinson's hierarchical model of adult development). However, one reason for this is that very few existing models offer theoretical support for those studying life-span gender role development. The gerontological approach (Gutmann, 1975; Sinnott, 1977) provides a rationale for making "young versus old" and "parenthood versus empty nest" comparisons. Unfortunately, the other models (see Chapters 3 and 4) state neither the catalyst nor the mechanism for adult gender role change.

With the emphasis on chronological age as the variable that supposedly precipitates adult development, cross-sectional studies

have neglected other possible developmental variables that may influence gender roles in adulthood. Two of these factors are the developmental tasks manipulated in the Job Studies (Chapters 8 through 10) and the Self-Perception Studies (Chapters 11 through 13): the work and parenthood developmental tasks. However, in order to study the effects that these tasks have on gender role development, it is necessary to establish whether work and parenthood consist of a dichotomy (yes/no) or whether each is a developmental continuum ranging from a beginning point to an end point, and if they can be described in stages. The former description is amenable to analysis using mean difference statistics while the latter can be examined using both parametric and nonparametric statistics.

Duvall (1977) has examined the family life cycle and has proposed an eight stage theory of (normative) family development that extends from being married with no children to the empty nest stage, which implies the parents become grandparents and eventually die. Before reviewing these stages, there are some comments regarding the content of the stages that Duvall proposes. The first comment concerns the emphasis on the "normative" aspect of family development. For example, Duvall considers the stage process to have begun when the male and female are married but childless. Someone who is not married but has a child will not be included in this first stage. Another example concerns her definition of the "empty nest"; i.e. it does not take into consideration the fact that the child may return home after having left.

This leads to a second criticism of the theory; i.e., it does not allow for within-culture changes to occur. For example, in troubled economic times, many "children" may move back home if they are unable to support their own household. Is it still the empty nest stage if the "child" becomes an autonomous individual living under their parent's roof? What if the "child" and parents retain the old parent-child roles where the "child" is not an autonomous person but appears to be extending his/her adolescence?

The first of Duvall's (1977) stages is that of being married but childless. Duvall indicates that these people are usually in their twenties (it appears that she does not include couples who remain voluntarily childless or who delay the parenting process for various [usually occupational] reasons). In the next two stages, individuals are the parents of infants and small children (i.e., the oldest child is 30 months and six years, respectively). These are what she calls childbearing families and families with preschool children.

The fourth stage of the family cycle is the family with school-aged children and involves the eldest child being elementary school-aged (7-13 years old). This merges with the fifth stage, the family with teenagers. In this stage, the eldest child is a teenager (14-20 years old).

In the last three stages, Duvall describes the various phases of the empty nest period. In the first of these (stage six), the eldest child has moved out and the last child is getting ready to leave (i.e., families launching young adults). Next (stage seven) is the

period of the middle-aged parent in which all children have left and they (the children) are attempting to establish a family of their own. Finally, the eighth stage is that of the aging family members. It involves the retirement of the parents and the beginning of grandparenting. This period ends with the death of both spouses.

It can be seen that the concept of the family cycle is intrinsically related to chronological age. That is, unless a person has chosen to remain childless (even an infertile couple can opt to adopt or attain more controversial services) or delay the parenting process, they usually begin to start a reproductive family in their twenties. Very few choose to start a family before this age. Once the process is started, it usually follows a typical (i.e. a societally normative) course.

However, normative life events are not age dependent. Rather, they are only age-related. This concept is similar to what Neugarten (1968) calls the Social Clock. That is, some couples may start a family in their late teens (early) while others may wait until their mid-to-late thirties (late). Neugarten suggests that those who are early or late consider themselves out of sync with their social clock, and thus find themselves to be out of sync with the rest of the family life cycle; i.e., they see themselves as too young or old to be parents and/or grandparents at their current chronological age.

How the terms "young" and "old" are defined is a social standard and may vary with time or as a function of period effects. This may also be related to social class and mobility. That is, with the

increase in the number of women attaining upwardly mobile professional positions, it may be that the normative age to begin childbearing for this social group is increasing. Conversely, the lack of attention on birth control in schools combined with a reduced number of years in education, may find lower class individuals in a reproductive family "early" (Neugarten, 1968).

A similar, seven stage model of the occupational cycle can be proposed. Although a developmental sequence that includes both part-time and full-time jobs would be more inclusive, this model is concerned only with those who have held full-time jobs. The reason for this limitation is twofold. First, most occupations are careers and entail long-term employment and commitment in one area while part-time jobs are usually casual in nature and individuals may vary the types of work they perform in the jobs they hold. Secondly, there may be demographic differences between those who work full-time and part-time (e.g., women usually work part-time, men full-time). By limiting the discussion to one type of employment, within-category variability is reduced.

The first stage of this model of the occupational cycle would consist of those who have never held a full-time job, while those who have just begun working full-time (i.e., less than one year) would be in the second stage. The subsequent stages would be concerned with the duration of the individual's full-time employment (1 to 5 years, 6 to 20 years, 21 to 35 years, 36 to fifty years, and greater than 50 years). This type of model is similar to that proposed by Super

(1974). Super's (1974) model contains five qualitatively defined occupational stages (Implementation, Establishment, Maintainance, Deceleration, and Retirement) and normative chronological ages to which individuals in these stages should correspond.

A new model of the occupational cycle was created because of Super's dependence on chronological age to signal the beginning and end of each stage. As noted above, the family and occupational cycles are not age dependent. Thus, some may start their full-time careers "early" or "late" in relation to the social norm. By asking individuals to rate their position in each cycle as a function of the time since they began their first full-time job (or the time since the birth of their first child), a more reliable estimate of those in each of Super's five stages can be attained. Further, by using this type of rating, comparability to Duvall's (1977) stages of the family life cycle is maintained.

There are problems, however, with measuring the occupational cycle. First, unlike the family cycle, it has been traditional that only males develop an occupation or career. While women will work full-time as a young adult (see the Retrospective Gender Role Study, Chapter 12. All women worked full-time before they were married), they have traditionally given up their full-time employment when they have had children. Thus, the measurement of the occupational cycle (especially using a full-time only criteria) may be biased.

The present study attempted to overcome some of the faults of the previous cross-sectional research. This study used a survey method to

examine gender role attributes in a sample of British males and females between 18 and 91 years old. It offers a life-span perspective of gender role development in adulthood that complements the results found in the Self-Perception Studies reported in Chapters 11 through 13.

There were three questions asked in this study:

1. do gender role attributes vary as a function of chronological age?
2. do gender role attributes vary as a function of position in the family life cycle? and
3. do gender role attributes vary as a function of position in the occupational cycle?

## 14.2 Method

### 14.2.1 Subjects

Three hundred forty-one adults (157 males and 184 females) volunteered to participate in this study during the Summer, 1987. Subjects' average age was 48.5 years (range = 18 to 91 years, sd = 16.1 years). A t-test showed that there was no significant difference between the mean ages of male and female respondents. The sample had the following demographic characteristics: 82% were married, 8% were single, 4% were widowed, and 6% were unclassified by the coding system for marital status (e.g., separated, divorced); 20% had no children, 20% had an eldest child less than 13 years old, 13% had an eldest

child who was an adolescent (i.e., between 13 and 20 years old), and 47% were experiencing an emptying of the nest and/or the beginning of grandparenthood; 3% of the sample had never had a full-time job, 6% had started working full-time less than 5 years ago, 54% were in the middle of their occupational/work cycle, and 36% were at the end of their work cycle.

14.2.2 Materials

The subjects responded to a survey which contained the following: a) a request for limited background/demographic data and b) the masculine-instrumentality and feminine-expressivity scales from the short form Personal Attributes Questionnaire (Spence and Helmreich, 1978). A copy of the survey can be found in Appendix E.

The demographic information included the subject' age, sex and marital status (single, married, widowed, other). Also included were questions concerning their position in the family (taken from the work of Duvall [1977]), and occupational cycles.

With regard to their position in the family life cycle, subjects were asked to circle the stage that best described their family of reproduction. If more than one item was circled, the highest number (i.e., the most advanced stage) was to be used in the analyses. The subject's options were:

1. without children;
2. oldest child 30 months old, or less;
3. oldest child between 31 months and 6 years old;

4. oldest child between 7 and 13 years;

5. oldest child between 14 and 20 years;

6. oldest child has moved out;

7. all children have moved out on their own;

8. most children have families of their own;

There were seven options to the question asking respondents to rate their position in the occupational cycle. Again, respondents were asked to circle the number that best suited them. These options were:

1. have never had a full-time job;

2. began their first full-time job less than one year ago;

3. began between one and five years ago;

4. began between six and twenty years ago;

5. began between 21 and 35 years ago;

6. began between 36 and 50 years ago; and

7. began more than 50 years ago.

14.2.3 Procedure

a) Electoral Register

A mail survey methodology was used to solicit responses from a wide age range of males and females in the general (i.e., non-student) population. The electoral register for the Canterbury voting area was used to select the survey sample. The Electoral Register is the list of eligible voters within a prescribed area. This list is updated regularly and the last issue was dated 16th February, 1987 (i.e., five months before the study selection procedure).

In theory, there are several reasons for using the Electoral Register over the telephone directory or a door-to-door survey method. First, all of those in the Register are at least 18 years old, a criteria that is important when wishing to study an adult population. Second, all are British subjects or have been in Britain long enough to have been granted citizenship. Age and citizenship cannot be controlled for if a telephone directory or door-to-door methodology is used. Also, some homes do not have telephones and other homes have numbers that are not listed in the directory, the latter group tending be middle/upper-middle class in nature.

The drawback to using the Electoral Register is that it is also a somewhat selective and biased representation of the population. That is, although all citizens are expected to register to vote, the Electoral Register is based solely on those who returned the information slips that were sent to each home. Thus, those who are apolitical, or politically apathetic, as well as those who are forgetful or lazy will not be represented in the survey.

Still, the Electoral Register is the best method available when wishing to select an all-British adult sample.

b) Selection Procedure

The Electoral Register labels smaller towns with single-letter codes (e.g., A, B, C, etc.), and larger towns and the city of Canterbury itself with double-letter codes (e.g., BB, CC, DD, etc.). Each small town usually represents one electoral district, but this is

not a hard-and-fast rule. However, each electoral district is one individual letter (whether it is presented singly or doubly), therefore a larger town may be represented by more than one letter or pair of letters.

Within each electoral district, names are catalogued according to the street on which an individual lives. The streets are listed alphabetically and each person is listed according to the position of their house on that street. For example, if the street uses odd numbers on one side and even numbers on the other, then names are listed for those living in numbers 1, 3, 5, etc. followed by 2, 4, 6, etc.

The selection procedure was as follows. Only those who lived in the towns surrounding Canterbury were sampled (i.e., those living in a single-letter electoral district). The first house on each street was selected, and the first name in the list of eligible voters living in that house was chosen. Every second house on that street was selected. When the end of the names for that street was reached, the same criteria was used to select names from those living on the next street.

In order to select an equal number of males and females, the sex of those in the initial sample was counterbalanced by choosing a male in one house and a female in the next. A simple rule was followed to ensure this balance. If the selected house did not have someone of the desired sex, then the next house on that street (or, if necessary, the first house on the next street) was selected. This procedure was

employed until someone of the desired sex was chosen. If there was confusion concerning whether the name was a male's or a female's, someone else in that house (of the right sex) or the next was selected. The second house after the one with the subject of the appropriate sex was the next chosen.

Another rule was employed to ensure that the sample was representative of the adult, nonstudent population living in the Canterbury area. If a house was chosen which contained a family (e.g., four Smiths) plus someone whose name was not the family name (i.e., appeared to be a boarder), and the apparent boarder was meant to be chosen, the first male or female (corresponding to the desired sex for that selection) from the family was chosen. Again, the reason for this rule was that Canterbury has a high proportion of students who live off-campus. As the survey was taking place during the summer vacation, and the Electoral Register was compiled during term time, it was hoped that the proportion of surveys returned because the person no longer lived at the address would be minimized. Also, one of the reasons for this survey was to address the questions to a non-academic/student population. By using this selection rule, it was hoped that the probability of an artificially inflated number of students in the sample would be reduced.

c) Survey Procedure

The subjects were selected, in the manner described above, from the following towns: Adisham, Barham, Kingston, Womenswold,

Hackington, and Chartham. Each person in the initial sample was sent a letter of introduction, a survey form, a return envelope, and a prepaid return-post sticker. The letter of introduction explained that the author was engaged in a survey of adults in the Canterbury area and that their name had been randomly chosen from the Electoral Register. It also explained that the purpose of the survey was to examine whether people's personalities change as they age and that adults of all ages were being asked to complete the survey. They were instructed to place the completed survey in the envelope, attach the sticker, and return the survey a soon as possible. A copy of the letter can be found in Appendix E.

A four week cut-off point was established, after which no more questionnaires were accepted. As the test packets were mailed to Canterbury's surrounding area, it was assumed that they would have arrived after two or three days and that those who had not returned their completed surveys after four weeks would not have returned them at all. Also, no record was made of those who were sent a survey. Thus it was not possible to send reminders to those who had not returned their questionnaires.

## 14.3 Results

A total of 924 questionnaires were distributed, of which 341 (37%) were returned. As with most postal surveys, it should be noted that there may be biases inherent in those questionnaires that were

returned. For example, there may have been uneven response rates among the various electoral districts (which also may have been related to social class; i.e., some districts may have been middle class, others working class). This must be kept in mind when interpreting the results of the survey which are presented below.

### 14.3.1 Sample Demographics

Below are the results of the questions that asked for information about age, marital status, and family and occupational cycles. These data, broken down by age category, are presented in Table 14-1.

#### a) Age

Of the 341 surveys which were returned, 157 were from males and 184 were from females. The average age of the sample was 48.5 years (range = 18 to 91 years, sd = 16.1 years). Chronological age was categorized into four groups that were determined by a quartile split: 18-36 years (early adulthood), 37-48 years (middle adulthood), 49-61 years (late adulthood), and 62-91 years (late-late adulthood). These ages, and their labels, are representative of those given by adult developmentalists (e.g., Levinson, 1978). Males and females were equally represented in each of these age categories (assessed via a chi-square test of independence). See Table 14-1 for a breakdown.

#### b) Marital Status

Eight percent of the sample were single, 82% were married, 4%

Table 14-1: Percent frequency (and N's) of subjects in four age categories, broken down by sex, marital status, and position in the family life cycle and the occupational cycle.

| Variable | | N[1] | Young Adult | Middle Adult | Late Adult | Late-Late Adult |
|---|---|---|---|---|---|---|
| N[1] | | | 89 | 88 | 80 | 82 |
| Sex | Male | 157 | 43 | 46 | 48 | 49 |
| | Female | 184 | 57 | 54 | 52 | 51 |
| Marital Status* | Single | 28 | 79 | 14 | 7 | 0 |
| | Married | 279 | 22 | 27 | 26 | 25 |
| | Widowed | 14 | 0 | 7 | 7 | 86 |
| | Other | 19 | 33 | 44 | 17 | 6 |
| Family Cycle* | No Children | 66 | 61 | 17 | 15 | 7 |
| | Less Than 13 | 68 | 60 | 37 | 2 | 1 |
| | Adol/Home | 92 | 9 | 51 | 36 | 4 |
| | Empty Nest | 109 | 0 | 5 | 30 | 65 |
| Work Cycle[2]* | Never F-T | 11 | 36 | 0 | 27 | 37 |
| | Beginning | 21 | 81 | 14 | 5 | 0 |
| | Middle | 184 | 37 | 46 | 16 | 1 |
| | End | 123 | 0 | 1 | 37 | 62 |

Notes: 1. N's may not add up to 341 because of missing data.
2. A Sex of Respondent by Work Cycle chi-square analysis found these two variables to be dependent (chi-square = 11.81, df = 3, $p < 0.008$).
* Significant relationship with the Age Categories variable, $p < 0.00001$.

were widowed, and 6% were unable to be coded using the present system (e.g., separated, divorced). A chi-square analysis showed that the sex of the respondent and marital status were independent of one another. Another chi-square analysis was used to examine whether marital status was age dependent. In this instance, a highly significant relationship

was found between the two variables (chi-square = 79.12, df = 9, p < 0.00001). The majority of those who were single were found in the early adulthood era, while most of those who were widowed were from the late-late adulthood era. There appeared to be an equal number of married respondents in all four age categories, but most of those whose marital status was not codable were from the young and middle adult eras (see Table 14-1).

c) Position in the Family Life Cycle

With regard to the position in the family cycle, 20% of the sample reported having no children and 4% noted that their eldest child was 30 months old or less. Those whose eldest was between 31 months and 6 years represented only 5% of the sample while 11% had an eldest between 7 and 13 years old. Parents whose eldest was between 14 and 20 years old made up 13% of the sample. Thus, 53% of the sample reported having no children or children who were under 20 years old.

The remainder of the sample were in the process of the empty nest stage or had completed this aspect of the family cycle. A total of 10% of respendents had an eldest child who had moved out and all of the children had moved out in the families of 13% of the sample. Nineteen percent had children with their own families and were experiencing grandparenthood.

In all, 4% of the sample was not classified according to the coding system for this variable. These represented families in which the eldest had stayed at home while the youngest children had moved

out. Some families, however, reported that all of their children were over 20 years of age and still living at home. Also, there were instances of children who had moved out of the house but had returned.

This eight stage continuum was divided into four discrete categories based on the age of the eldest child. The first category represented those who did not have children and contained 20% of the sample. The second grouping was for those whose eldest was under 13 years (i.e., not a teenager) and 20% of the sample fell in this category. The third level of this variable represented those whose eldest was a teenager or had moved out (28%) while the fourth contained those who were experiencing the empty nest or grandparenthood. Those whose responses were not codable were classified in group three. This decision was made under the assumption that the majority of these people still had their children living at home with them.

A Family Cycle X Sex of Respondent chi-square was performed to examine whether the two variables were independent of one another. The chi-square was not significant. Thus there were roughly equal numbers of males and females in each of the four family cycle categories.

In order to assess whether position in the family life cycle was independent of the four age categories, a chi-square analysis was performed. The chi-square was highly significant (chi-square = 278.74, $df = 9$, $p < 0.00001$). The majority of those without children were from the early adulthood era, while those with young children were found in both the early and middle adulthood categories. Those whose children

were adolescents or were still living at home were found mostly in the middle and late adulthood eras, while the majority of those experiencing the empty nest are in the late or late-late adulthood categories (see Table 14-1).

d) Position in the Work Cycle

The majority of the sample indicated that they had started out in the work force more than 5 years ago. Only 3% of the respondents had never been employed on a full-time basis. One percent had been employed for less than one year and five precent had been begun their first full-time job between one and five years previously. Twenty-nine percent had begun their employment cycle between six and twenty years ago (1967-1981) and 26% had begun their first full-time job between 1952 and 1966 (21-35 years from the year of the survey). Twenty percent began their first full-time job between 36 and 50 years ago (1937-1951) and 16% began before 1937.

The work cycle was collapsed into a four category nominal variable with the following labels: Never had a full-time job, beginning of the work cycle (five years or less), middle of the work cycle (between 6 and 35 years), and the end of the work cycle (greater that 35 years). Only nine percent of the sample fell within the first two categories with 55% and 36%, respectively, in the latter groups.

The latter three of these categories are similar to the five stage theory of occupational development proposed by Super (1974) in terms of the ages of the subjects in each. That is, those at the

beginning of the work cycle correspond to those in the Implemenation stage, while those in the middle of the work cycle are similar to those in the Establishment and Maintenance stages. Finally, those at the end of the work cycle correspond to those in Super's Deceleration and Retirement stages.

A chi-square analysis was performed to test the assumption that males and females were equally represented in each of the four Work Cycle categories. The statistic was small but highly significant (chi-square = 11.81, df = 3, $p < 0.008$). The distribution suggested that the effect came from the "Never Worked" category. None of the male respondents reported that they had never worked; i.e., all of the respondents in that category were female. There appeared to be no major discrepancies between observed and expected values in the other categories.

A chi-square analysis also examined whether position in the work cycle was independent of the age categories. As with the other grouping factors, the statistic was highly significant (chi-square = 260.66, df = 9, $p < 0.00001$). It appeared that the majority of those who were at the beginning of the work cycle were from the early adulthood era. Those in the middle of the work cycle were from the early and middle adult eras and those at the end of the cycle were from the late or late-late adulthood eras. Those who had never held a full-time job were found in the early, late, and late-late age categories (see Table 14-1).

e) Relationship Between Maritial Status, Family Cycle, and Work Cycle

In order to examine the relationship between marital status, position in the family cycle, and position in the work cycle, two types of analyses were performed. First, correlational analyses were performed between the original, continuous forms of the age, family and work cycle questions. Secondly, because maritial status is a nominal variable, the relationships between it and the family and work cycle categories were examined using chi-square analyses. The relationship between the family and work cycle categories also was examined using a chi-square test of independence.

i. Correlational analyses.

Correlational analyses were used to assess the relationships between chronological age and the family and occupational cycles. In order to perform Pearson Product-Moment correlation coefficients, these variables were analysed in their original, continuous/ordinal form. Chronological age was highly positively correlated with positions in both the family and work cycles ($r = 0.709$ and $r = 0.711$, respectively, both p's $< 0.0001$), each sharing approximately 50% of their variability with the age variable. Also, positions in the family and work cycles were positively correlated, although not as highly as with age ($r = 0.512$, $p < 0.0001$).

ii. Chi-square analyses.

The first test of independence was between the four marital

status and the four family life cycle categories. This analysis was highly significant (chi-square = 141.40, df = 9, $p < 0.00001$) and indicated that most (96%) of those who were single did not have children while most (92%) of those who were widowed had reached the emptynest/grandparent stage.

The independence between the marital status and work cycle categories also was examined using a chi-square. This statistic also was highly significant (chi-square = 113.55, df = 9, $p < 0.00001$). Most of those who were single were in the beginning or middle of their occupational cycle, while those who were unable to be classified using the marital status coding system were at the onset of the middle stage.

Finally, the relationship between the family cycle and occupational cycle categories was examined. This chi-square analysis resulted in a highly significant statistic (chi-square = 196.71, df = 9, $p < 0.00001$). Those with no children were likely to be at the beginning or the end of the occupational cycle. Those whose eldest was still living at home (either as a teen or preteen) were more likely to be in the middle of the occupational cycle while those who were experiencing the empty nest were at the end of their careers.

### 14.3.2 Gender Role Attributes

Consistent with the previous techniques used to analyse the results from the PAQ, two scoring methods were used to test the assumption that masculine-instrumentality and feminine-expressivity

varied across the life-span: continuous and categorical. However, before these data can be presented, the reliability of the PAQ in British adult population must be established. Therefore, the two PAQ scales were analysed using Cronbach's (1951) measure of internal consistancy (coefficient alpha) and correlational analyses were performed to examine the assumption of scale orthogonality.

a) Instrument Reliability

Cronbach's coefficient alpha (Cronbach, 1951) was used to assess the internal consistency of the two PAQ scales. The eight items of the masculine-instrumentality scale had an alpha of 0.703. Although this does not reach the recommended (albeit conservative) cut-off of 0.80 (see Chapter 7), it does approach it and can be considered moderately reliable. Only one item contributed negatively to the scale's reliability. Question 10, which asked subjects about their ability to make decisions easily, contributed less than 10% of its item-total variance and would have increased the scale's alpha to 0.737 if it had been deleted.

The alpha coefficient for the feminine-expressivity scale surpassed the recommended 0.80 cutoff (alpha = 0.813) and can be considered stable and reliable. Only one item (emotionality) contributed less than 20% of item-total variation and would have increased the scale's alpha if it was deleted.

b) Scale Intercorrelations

To test the assumption that the PAQM and PAQF scales are moderately orthogonal, a Pearson Product-Moment correlation coefficient was calculated between the two scales. It should be remembered that Spence and Helmreich (1978) do not predict the lack of a significant correlation between the two scales. Rather, they predict a small, but significant relationship. The analyses showed that the two scales were significantly positively correlated ($r = 0.113$, $p < 0.04$). The coefficient of determination revealed that these two scales shared approximately one percent of their variability.

c) Continuous Scoring Method

i. Age Categories

The mean masculine-instrumentality score was 20.29 (sd = 4.58) and the mean feminine-expressivity score was 22.81 (sd = 4.63). Two 2 (Sex of Respondent) by 4 (Age Categories) analyses of variance were performed, one each for the masculine-instrumentality and feminine-expressivity dependent variables.

With regard to the PAQM ANOVA, there was a significant main effect for respondent's sex ($F(1,331) = 17.64$, $p < 0.0001$). That is, the males tended to rate themselves significantly higher on this scale than did the females. There was neither a significant main effect for Age Categories nor a significant interaction between Sex and Age. Means and standard deviations are presented separately for males and females in Table 14-2.

Table 14-2: Mean masculine-instrumentality and feminine-expressivity scale scores as a function of respondent's sex. Standard deviations are in parentheses.

| | Masculine-Instrumentality | Feminine-Expressivity |
|---|---|---|
| Male | 21.43 (4.43) | 21.77 (4.67) |
| Female | 19.32 (4.48) | 23.69 (4.42) |

The ANOVA using feminine-expressivity as the dependent variable also reported a significant main effect for respondent's sex ($F(1,331) = 16.33$, $p < 0.0001$). In this instance, the females rated themselves significantly higher than the males on the PAQ's feminine-expressivity scale. Again, there was neither a significant main effect for Age Categories nor a significant interaction between the two variables (see Table 14-2).

ii. Family cycle categories.

With regard to the family cycle measure, two 2 (Sex of Respondent) X 4 (Age Categories) X 4 (Family Cycle Categories) ANOVA's initially were performed to test whether there were any differences in masculine-instrumentality and feminine-expressivity scores as a function of the position in the family life cycle or an interaction between the grouping factors. However, this analysis was only able to calculate main effects and the ANOVA interactions were supressed. The reason for this supression was the statistical dependence between the

two grouping factors, Age and Family Cycle categories. This dependence created a singularity in the matrix used in the computer algorithm. Singularity is when the matrix inverse cannot be calculated and its determinant is equal to zero. Singularity occurs when two variables (i.e., matrix rows and columns) are linearly related. As noted earlier, there were substantial (linear) correlations between chronological age and position in the family life cycle.

As such, two 2 (Sex of Respondent) X 4 (Family Cycle Categories) analyses of variance were calculated, one for masculine-instrumentality scores and the other for feminine-expressivity scores. The masculine-instrumentality ANOVA revealed only the significant main effect for respondent's sex reported above. There was neither a significant main effect for Family Cycle Categories nor a significant interaction between the two.

However, the analysis using feminine-expressivity as the dependent variable revealed a small but significant main effect for the family cycle categories ($F(3,327) = 3.16$, $p < 0.03$). Post hoc tests showed that respondents with no children (mean = 21.50) scored significantly lower on feminine-expressivity than did those who were in the empty nest/grandparenting stage (mean = 23.43) of the family cycle ($p < 0.05$). No significant differences were found between other pairs of means. There was no interaction between Sex and Family Cycle (see Table 14-3).

Table 14-3: Mean masculine-instrumentality and feminine-expressivity scale scores as a function of family cycle and work cycle categories. Standard deviations in parentheses.

| | | Masculine-Instrumentality | Feminine-Expressivity |
|---|---|---|---|
| Family Cycle[1] | No Children | 20.53 (4.77) | 21.50 (4.93)[2] |
| | Less Than 13 | 20.16 (4.16) | 22.34 (3.94) |
| | Adol/Home | 20.15 (4.94) | 23.29 (4.60) |
| | Empty Nest | 20.46 (4.28) | 23.43 (4.58)[2] |
| Work Cycle[1] | Never F-T | 18.63 (6.62) | 22.36 (7.71) |
| | Beginning | 19.29 (6.49) | 22.19 (4.70) |
| | Middle | 20.17 (4.21) | 22.35 (4.58) |
| | End | 20.85 (4.51) | 23.67 (4.29) |

Notes: 1. Significant main effect for feminine-expressivity.
2. Significant difference between these two pairs of means, $p < 0.05$.

iii. Work cycle categories.

As with the Family Cycle analyses, two 2 (Sex of Respondent) X 4 (Age Categories) X 4 (Work Cycle Categories) analyses of variance initially were calculated, one for masculine-instrumentality and the other for feminine-expressivity. Again, a singularity, caused by the high correlation between chronological age and the occupational cycle, supressed higher order interactions. Thus, the age variable was removed from the analysis.

The 2 X 4 ANOVA using masculine-instrumentality as the dependent variable did not reveal a significant main effect for the Work Cycle categories or an interaction with respondent's sex. However, the

feminine-expressivity ANOVA yielded a small but significant main effect for the Work Cycle Categories ($F(3,338) = 3.03$, $p < 0.03$). Post hoc tests examining the differences in PAQF scores between the four work cycle categories, however, found no significant differences between pairs of means (see Table 14-3).

d) Categorical Scoring Method

PAQM and PAQF scores were categorized into androgyny, masculine sex-typed, feminine sex-typed, and undifferentiated categories using the median split method. The masculine-instrumentality scale median was 21 and the feminine-expressivity scale median was 23. The resulting distribution is presented in Table 14-4. A chi-square analysis showed that respondent's sex and androgyny categories were not independent of one another (chi-square = 36.90, df = 3, $p < 0.00001$). That is, more males were observed in the masculine sex-typed category and more females were observed in the feminine sex-typed category.

Table 14-4: Percent frequency of males and females in four androgyny categories (Total N = 341).

| | Androgyny | Masculine Sex-Typed | Feminine Sex-Typed | Undifferentiated |
|---|---|---|---|---|
| Male | 51 | 70 | 22 | 46 |
| Female | 49 | 30 | 78 | 54 |

i. Relationship between the androgyny and age categories.

The relationship between the Androgyny and Age Categories was examined with a chi-square statistic. This analysis revealed only a trend (chi-square = 14.25, df = 9, $p < 0.11$) such that there were more androgynous individuals than expected in the Late Adult and the Late-Late Adult age categories and fewer androgynous individuals than expected in the two earlier Age Categories. With regard to those in the masculine sex-typed category, there were fewer than expected in the two older age categories and more than expected in the younger two age categories.

Alternatively, this relationship can be examined by comparing the mean ages of subjects in each of the four androgyny categories. As such, a one-way ANOVA was performed using chronological age (in its continuous form) as the dependent variable. A significant main effect was found ($F(3,338) = 3.10$, $p < 0.03$). Those in the masculine sex-typed group were the youngest (mean = 44.83 years), followed by the undifferentiated (mean = 47.41 years), the feminine sex-typed (mean = 48.21 years), and the androgynous (mean = 52.10 years). Post hoc analyses revealed that those in the androgyous category were significantly older than those in the masculine sex-typed category ($p < 0.05$).

ii. Relationship between the androgyny and family cycle categories.

The relationship between the four androgyny categories and the four family life cycle categories was examined using a 4 X 4 chi-

square test of independence. The result was only a trend (chi-square = 14.14, df = 9, $p < 0.12$) suggesting that those without children were more often in the masculine sex-typed category and less often in the androgyny category than expected. Also, those in the empty nest/grandparenting stage of the family life cycle were categorized androgynous more than expected and masculine sex-typed less often than expected.

Alternatively, variability in the position in the family life cycle (using the 8-point scale), as a function of the androgyny categories, can be examined using an analysis of variance. When this test is performed, a significant main effect for androgyny is revealed ($F(3,334) = 3.59$, $p < 0.01$). Those in masculine sex-typed category had the lowest position in the family cycle (mean = 4.19), followed by those in the undifferentiated (mean = 4.96), feminine sex-typed (4.99), and androgynous categories (mean = 5.51). Tukeys post hoc tests showed that androgynous respondents were significantly more advanced in the family cycle than the masculine sex-typed respondents.

iii. Relationship between androgyny and work cycle categories

The relationship between the four work cycle categories and the androgyny categories also was examined using a 4 X 4 chi-square test of independence. This resulted in a significant chi-square statistic (chi-square = 20.28, df = 9, $p < 0.02$) indicating that the two variables were dependent. Those who had never worked full-time (all of whom were females, as was noted above) were more likely to be feminine

Table 14-5: Percent frequencies of respondents in four work cycle categories as a function of representation in four androgyny categories (Total N = 339).

| | Androgyny | Masculine Sex-Typed | Feminine Sex-Typed | Undifferentiated |
|---|---|---|---|---|
| Never | 18 | 55 | 9 | 18 |
| Begin | 28 | 24 | 24 | 24 |
| Middle | 25 | 26 | 25 | 24 |
| End | 21 | 22 | 14 | 43 |

sex-typed. More respondents than expected in the middle of their occupational cycle were masculine sex-typed while fewer than expected were androgynous. More than expected at the end of their work cycle were androgynyous while fewer than expected were masculine sex-typed (see Table 14-5).

The differences between the four androgyny categories in their mean position in the work cycle was examined using analysis of variance and a slight but significant main effect was found ($F(3,338) = 2.94$, $p < 0.03$). Those in the androgynous group had the highest position in the work cycle (mean = 5.31) while those in the undifferentiated (mean = 4.88), masculine sex-typed (mean = 4.81), and feminine sex-typed (mean = 4.79) categories followed. Post hoc tests showed that the four group means were not significantly different from one another.

## 14.4 Discussion

This study sought to examine whether masculine-instrumental and feminine-expressive gender role attributes varied significantly as a function of chronological age, position in the family life cycle, and/or position in the occupational cycle. The data gathered from this large nonacademic adult sample revealed that: 1) mean levels of masculine-instrumentality did not vary as a function of any of the independent variables utilized in this study while mean levels of feminine-expressivity showed a significant amount of variability with respect to only the family and work cycles; 2) when significant mean differences in feminine-expressivity did occur, the trend was a linear one, similar to the linear trends found in the Gender Role Stereotypes and Self-Perception studies (Studies 2-6); and 3) subjects who were more advanced with respect to chronological age, as well as positions in both the family and occupational cycles, were more likely to report androgynous (as opposed to masculine sex-typed) gender roles.

More specifically, the results of this study showed that the attributes measured by the PAQF scale varied significantly as a function of membership in both the family cycle and work cycle categories. With regard to the family cycle, those without children and those whose children were less than thirteen years old were significantly less expressive than those in the empty nest and grandparenthood stage of the family cycle. While the PAQF analysis for the work cycle was significant, no significant mean differences could be found. The trend, however, was for those at the end of the work

cycle to be more expressive than those in the three previous categories.

When the respondents were grouped into the four androgyny categories, only a trend emerged when the relationship between androgyny and age was assessed. That is, there tended to be more androgynous, and fewer masculine sex-typed, respondents in the late-late adulthood age group while the opposite was true for those in the early adulthood group. When this relationship was examined using an ANOVA, it was found that those with androgynous gender roles were significantly older than the masculine sex-typed respondents.

The relationships between membership in the four androgyny categories and both the family and occupational cycle measures were similar to those of chronological age. In the family life cycle, those with no children and those whose youngest was less than thirteen years old were more often masculine sex-typed while respondents in the empty nest/grandparenthood category were more often androgynous. The work cycle yielded similar results: those in the middle of the work cycle (between 6 and 35 years ago) reported masculine sex-typed gender roles more often while those at the end of their work cycle were more often androgynous. When both cycles were analysed using ANOVA statistics, androgynous respondents were in more advanced positions on the continuums than their masculine sex-typed peers, although this was just a trend for the work cycle analysis.

The findings from this study are qualitatively different from those reported in the person perception and self-perception studies

(Chapters 8 through 13) in one important aspect. That is, in both the Job Studies and the Self-Perception Studies, both masculine-instrumentality and feminine-expressivity were perceived to vary as a function of perceived participation in the age-related developmental tasks. However, in the present study, only feminine-expressivity varied as a function of age and position in both the family and occupational cycles.

A possible explanation for the lack of masculine-instrumental variability in this cross-sectional study centres around the instrumental and expressive stereotypes that are associated with the contexts used in the Job and Self-Perception Studies. That is, as noted earlier, the former studies used developmental contexts that have differential instrumental and expressive stereotypes associated with them. It may have been that, when subjects were rating either a stimulus person or themselves in a particular context, they responded more toward the demands of the contexts than toward how they actually felt they would have responded in them. The present study's lack of overt emphasis on developmental contexts and its covert reliance upon personal organizational factors surrounding the family and work contexts may have been responsible for this difference.

If this were so, then it appears that only masculine-instrumentality was affected, as feminine-expressivity was perceived to rise in the same linear fashion as in the previous studies. This is an important similarity in that one of the goals of this research programme is to determine the developmental pathways of masculine-

instrumentality and feminine-expressivity. If six studies using three different methodologies find the same linear trend for feminine-expressivity, then there is very strong evidence that this variable does develop across the life-span. The next step is to determine the "hows and whys".

Apart for the linear trend discussed above, there is one consistent similarity between the findings reported here and those revealed in the previous studies (Chapters 8-13). In the present study, the trend was for respondents in the latter age, family cycle, and work cycle groups to report androgynous (versus masculine sex-typed) gender roles more often than those in earlier categories. Thus, "older", more experienced repondents were more often androgynous than "younger", less experienced respondents. In the person perception studies, stimulus persons were described as androgynous more often in the retirement context than in the work context. In the self-perception studies, the same trend was found although the statistic was significant only in the prsospective study. The consistency of this finding, and its prevalence in other, external, research (see Chapter 5) offers strong evidence towards Gutmann's (1975) and Sinnott's (1977) predictions that gender roles do, indeed, balance in old age.

The findings from the present study also are congruent with many of the previous studies that have used a cross-sectional approach to examine gender role attributes across the life-span. As noted in Chapter 5, most of these studies have shown that gender roles become

more balanced in old age; however, the pathway to this balanced state has not been consistent. In several studies, those in older age groups report an increase in the mean levels of cross-sex traits (e.g., Foley and Murphy, 1977; Hubbard et al., 1979). Other studies report a decrease in the mean levels of gender-congruent traits (e.g., Suzuki, 1979). Many of the studies reporting their results using androgyny terminology have noted that older adults report more androgynous (i.e., balanced) gender roles than younger adults (e.g., Fischer and Narus, 1981; Hyde and Phillis, 1979; Keane, 1986).

While the categorical analyses from the present study support the findings from previous studies (i.e., that older respondents, as well as those in more advanced stages of the family and occupational cycles, reported more androgynous gender roles), there are two aspects concerning the display of balanced gender roles that must be examined. First, it is difficult to compare the results from this study's continuous analyses with those already a part of the scientific literature (see Chapter 5). The reason for this is that many of those studies have noted the existence of differential pathways for males and females with regard to the development of a gender role balance. This was not the case in the present study. While males and females did report higher levels of gender-congruent attributes (i.e., males reported higher levels of masculine-instrumentality than females and vice versa for the females and feminine-expressivity), this pattern did not vary as a function of the respondents' age, family, or occupational categories (in ANOVA terminology, there was no

interaction between the respondent's sex and their level on the independent variable). For example, males in both the early and the late-late adulthood groups reported lower levels of feminine-expressivity than the females in those same categories.

Also, since masculine-instrumentality did not vary as a function of any of the three independent variables, males could not have achieved a balance by decreasing their levels of masculine-instrumentality and females could not have balanced their gender roles by increasing their masculine-instrumentality. Thus, any balancing would have had to have been a function of males increasing, and females, decreasing their levels of feminine-expressivity -- an effect that was not present.

The second point concerns the relationship between chronological age and the family and occupational cycle measures. Which independent variable best describes the relationship between a gender role balance and position along each cycle's continuum? As noted earlier in this chapter, the three variables are conceptually independent; however, the work and family cycles are strongly related to chronological age, as was shown by their high intercorrelations. Both the family and occupational cycles allow for a great deal of variability in the chronological age of those at each point on the continuum, but this variation has two controlling features: biology, which places physical limitations on when a female can begin and end the procreative process and when someone of either sex must stop working; and, more importantly, social norms which limit the degree of variability by

constructing socially recognized, although variable, age parameters concerning the desirability of being at a certain point of each continuum at a certain chronological age.

When one considers the strong relationship between chronological age and position in both the family and occupational cycles, it is not surprising that the analyses revealed similar findings (i.e., that those in latter groups tended to be more expressive than those in former groups -- unfortunately, post hoc analyses examining the work cycle main effect were impeded by the large differences in the number of subjects in each of the cells and, hence, were not significant). However, age shares only 50% of its variance with both the family and occupational variables. Further, the family and work cycles share only 25% of their mutual variability. This leaves much room for individual differences to effect one's Social Clock (Neugarten, 1968).

Which of the three social organizing factors can best explain life-span gender role development in the present sample? The answer to that question can be determined by examining the ineffectiveness of grouping respondents according to their chronological age as well as the inability to find mean differences between respondents at various levels of the work cycle. Therefore, these findings suggest that the family life cycle most effectively explains the life-span gender role data in this study.

Previous attempts to examine the variability of gender role attributes as a function of the family life cycle have been few and restrictive in their range, severely limiting their ability to

generalize their findings to the latter stages (e.g., Abrahams, Feldman, and Nash, 1978; Cunningham and Antill, 1984). Only one previous study has examined variability across the entire family life cycle (Feldman, Biringen, and Nash, 1981) and it revealed some findings similar to those in the present study. That is, Feldman et al. (1981) found that feminine-expressivity varied significantly across the family life cycle, rising in a linear fashion for females but remaining relatively stable for males. However, this study also revealed that masculine-instrumentality varied significantly across the family cycle for both sexes, with males increasing and females decreasing their masculine-instrumentality in a linear manner. Thus, Feldman et al. report that their subjects did not achieve a gender role balance in the latter stages of the family cycle, a finding that is contradictory to those from the present study.

In summary, the present study reveals the ineffectiveness of chronological age to explain gender role variability in a large sample of British adults and suggests that position in the family life cycle is a better explanatory factor when using a cross-sectional design. Most studies of life-span gender roles rely on chronological age as the main independent variable, even though there is no rationale in the developmental literature for doing so. Thus, it is hoped that this study will offer evidence that more practical methods of categorizing the social context in which adult development takes place are necessary and that the family and occupation may be a place to start.

# CHAPTER 15

## CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

The purpose of this thesis has been to evaluate empirically the hypothesis that gender role attributes develop or vary across the life-span. Seven studies, in all, tested this assumption. The first of these examined the reliability and validity of the main measure in an elderly population. Once this was established, a trio of studies investigated the perceived variability of masculine-instrumental and feminine-expressive gender role attributes in four stimulus persons in each of four age-related social contexts. In both the student and elderly populations from which samples were drawn, subjects perceived these attributes to vary significantly across the four contexts. This fluctuation is indictative of the multidimensional nature of social stereotypes (Ashmore and Del Boca, 1979). That is, there appears not to be just one stereotype of gender roles in adulthood but many stereotypes representing the numerous social contexts and roles in which individuals perform (Eagly and Steffen, 1984).

These gender role stereotypes varied on two levels. The first represented differences in the ratings of each stimulus person as a function of their description in the four social contexts, indicating the situational nature of gender role stereotypes. These stereotypes showed that males and females were perceived to be more masculine-instrumental in the examination and work contexts than in the parenthood and retirement contexts. The opposite was true for

stereotypes of feminine-expressivity. Subjects perceived the stimulus persons to be low in feminine-expressivity in the examination and work contexts, peaking in the parenthood context, and declining somewhat in the retirement context.

The second level presented an example of stereotypic perceptions based on the stimulus person manipulations; i.e., differences in the descriptions of how the stimulus persons performed in each social context. That is, SPs differed as a function of their role descriptions. Each stimulus person was described identically in the parenthood and retirement contexts. However, in the work context, Robert and Susan were described as executives for a multinational corporation, a job that is highly mobile and not traditionally held by women. Cathy and Jim, on the other hand, were described in a sex-typed nonmobile fashion, with Jim being described as a mechanic and Cathy as a cashier.

Gender role stereotypes did not often vary as a function of the overall stimulus person descriptions. Rather, only perceptions of masculine-instrumentality varied significantly and mostly as the result of the traditionality-mobility manipulation. That is, those in an occupation that is high in mobility and status were perceived to be more masculine-instrumental than those in nonmobile and lower status jobs (with no difference perceived between the high status male and female SPs). Further, those in the lower status jobs were viewed in a sex-typed fashion with the female stimulus person perceived to be less instrumental than the male SP. Unlike the perceptions of the social

contexts, feminine-expressivity was not seen to vary between stimulus persons.

Thus, the overall conclusion to be drawn from the Job Studies is that gender role stereotypes are multidimensional and vary as a function of both social context and social roles within each context. This confirms the findings of other social role studies in which it was shown that stereotypes differ based on the information given to the perceiver (e.g., Eagly and Steffen, 1984; see Chapter 2 for a more complete discussion of the social role approach).

Once the stereotypes that described the pathways in which masculine-instrumentality and feminine-expressivity were expected to follow (i.e., as a function of participation in the age-related developmental tasks) were established, the next two studies examined perceptions of the self in those same contexts. Students rated themselves at present and then in two prospective developmental tasks (parenthood and retirement). Retired adults rated themselves at present and retrospectively in two comparable developmental tasks (work-entry and parenthood). Subjects in both age cohorts perceived their masculine-instrumental and feminine-expressive gender role attributes to rise in a linear fashion from the chronologically earliest to the latest rating contexts.

These findings differed from the gender role stereotypes in two ways. First, the trend for masculine-instrumentality was reversed. In the Job Studies, these attributes were perceived to decrease in the parenthood and retirement contexts where, in the Self-Perception

Studies, they were perceived to be at their peaks in these contexts. Secondly, in both the prospective and retrospective studies feminine-expressivity was perceived to be at its peak in the retirement context. However, in the Job Studies, feminine-expressivity was perceived to peak in the one context that has exemplified the female role: parenthood. This distinction between stereotypes and self-perceptions of participation in identical contexts appears to confirm the assumtion that, while stereotypes portray social expectations (similar to the "ideal" male/female rating condition seen in many person perception studies), self-perceptions display an integration of stereotypes and self-concept.

Markus (1977) refers to this integrative process when she discusses self-schemata, which she defines as "cognitive generalizations about the self...that organize and guide the processing of self-related information contained in the individual's social experiences." (p. 64) Self-schemata are related to the integration of social stereotypes into the self-concept in that they represent cognitive generalizations about how one is expected act in various contexts. Expanding on this idea, it is easy to see that once these stereotypes are assimilated into the self-concept or self-schemata, they are altered so that they become consonant with each individual's perceptions of him/herself. In other words, self-schemata "can be viewed as a reflection of the invariances people have discovered in their own social behaviour." (p. 64)

What evidence exists to support the notion that stereotypes

become integrated with self-schemata? The most significant confirmation comes from those studies that have examined the differences between perceptions of the "real", "typical", and "ideal" self with respect to possession of gender role attributes (e.g., Garnets and Pleck, 1979; Spence et al., 1975.). That is, when asked to rate themselves on a gender role scale, individuals will respond differently if they are asked for their (real) self-ratings or how they would typically or ideally like to respond. Garnets and Pleck (1979), for example, have examined the distinction between real and ideal self-ratings and have referred to the difference between these ratings as gender role strain. The more strained an individual, the more they predict that individual to be at risk for low self-esteem.

Thus, it appears likely that differences between the person and self-perception studies with regard to the pathways that masculine-instrumentality and feminine-expressivity were perceived to follow across the age related developmental tasks can be explained adequately using a self-schema approach. In the instance of the prospective gender role study, the students' perceptions were combinations of attributes they had seen their parents (among others) display as well as attributes they expected to be necessary to be successful in that context. Both of these should become assimilated into a cognitive structure that represents to the individual how he/she will or should respond in that situation.

The retrospective situation is easier to explain as Markus places great emphasis on past experience in the formation of self-schemata.

In this case, past experience combines with social expectations to form the self-schemata. However, one element that needs to be examined is the differential weighting of these two components as a function of age and/or distance (in years) from the social context in which information is being elicited. As Vaillant and McArthur (1972) have noted, "maturation makes liars of us all." (p. 420)

There has been only one other study that asked subjects for their self-perceptions of gender role changes across the life-span (Puglisi, 1983). However, the methodological differences between these two studies and Puglisi's means that the only conclusion that can be drawn is that individuals do indeed perceive their gender role attributes to vary significantly across the life-span and that different pathways for that development are elicited when developmental tasks (versus chronological age) are used.

The final study was a cross-sectional examination of gender role attributes in adulthood. Variability in masculine-instrumentality and feminine-expressivity was explored in the traditional manner (i.e., as a function of chronological age) and as a function of position in both the occupational and family cycles. The findings revealed that masculine-instrumentality varied across neither of the grouping factors while feminine-expressivity was higher in the later levels of the age and family cycle variables than in their earlier levels.

These findings were different from those in the Job and Self-Perception Studies in that masculine-instrumentality in this study did not vary as a function of the developmental variables. However, there

were similarities between this and the person and self-perception analyses. In each of the studies that examined the perceived variability of the gender role attributes, those in the elderly age groups (as well as those in the latter levels of the famly and occupational cycles) showed a greater frequency of androgyny than those in the younger (or earlier) age categories. This finding also was revealed in the reliability study when the data from the retired British adults were compared to those from a sample of British adolescents.

Thus, in an overall conclusion to these empirical studies, it should be noted that there were two features that were consistent across all studies. The first was increased number of androgynous subjects in the latter age/family cycle/work cycle groups. Secondly was a the presence of a positive linear trend in the development of feminine-expressivity. This trend was present for masculine-instrumentality only in the self-perception studies (it was negative in the Job Studies and nonexistent in the cross-sectional study).

Future research, naturally, should address these two issues. For example, is the relationship between masculine-instrumentality and self-esteem and/or feminine-expressivity and social desirability (Marsh et al., 1987; Taylor and Hall, 1982) confounding the prospects of developmental trends revealed in these studies? It should be noted again that, because of the nature of the methods used, it is not possible to infer a developmental reason for the differences subjects perceived between the developmental tasks or those that emerged from

the cross-sectional study. These data only offer evidence for the perceived situational variability of masculine-instrumental and feminine-expressive attributes. The presence of actual development can only be determined using other methodologies.

Future research also should address five topics that have emerged as salient issues in the perception of gender role variability across the life-span: the contextual versus developmental nature of masculine-instrumentality and feminine-expressivity; the differential relationship between masculine-instrumentality and feminine-expressivity in respondents of different ages; individual differences in the perception of latitude for gender role development; the relationship between life-span development and gender role theory; and the use of more diverse methods to examine the gender role variability hypothesis.

Research examining the contextual versus developmental issue should address differences in self-reported gender roles as a function of participation in age-graded social contexts. For example, one method may be to ask subjects in various stages of family life cycle to respond to a gender role survey. In order to control for the high correlation between chronological age and position in the family life cycle (see Chapter 14), respondents should be matched with someone of the same age but who is not a parent. Contextual differences between those in the family and occupational cycles could be examined by matching working parents with nonworking parents (presumably it would be easier if the subjects were all female as the availability of

nonworking males is low; however, this would incorporate a bias into the data and would limit the generalizations of the findings) and adults of the same age who work but are childless.

The second point concerns the differential relationship between masculine-instrumentality and feminine-expressivity in subjects of different ages. In their cross-sectional study of androgyny in adulthood, Hyde and Phillis (1979) suggested that the BSRI was a biased instrument in that it depicted instrumentality as an overly physical dimension. That is, they believe that the items Bem chose to measure masculine-instrumentality were unnecessarily active in their content and, thus, were avoided by the elderly for possible health reasons. Although the PAQ is substantially less physically instrumental in character, its items may be biased towards a younger population and may not be valid for those of either a different age or cohort. This could be tested by replicating Spence et al.'s initial item selection procedure in an elderly population. The original PAQ items could be included (if they were not selected by the subjects themselves) in an attempt to examine if they have sufficient reliability in a "new" gender role measure.

The third issue that future research should address is the presence of individual differences in the perceptions of latitude for gender role development. This new variable examined the life-span issue in a different light and showed that subjects perceived both stimulus persons and themselves to vary in their gender role latitude. Usually this difference in latitude scores referred to a perception of

greater variability with regard to cross-sex gender role attributes. This was especially the case with subjects who reported limited gender roles at the present. Research should examine the covariates of perceptual latitude in an attempt to understand the processes involved in the perception of life-span gender role variability.

The fourth issue concerns the relationship between life-span gender role development and the theories that are used to explain the process. As noted in Chapter 3, theories of gender role development are severely limited in their ability to cope with gender role development beyond childhood/adolescence. Most that acknowledge life-span developmental issues centre on the attribute content and the importance of gender-congruent or gender-noncongruent attributes at different points in the life-span. Those that do not acknowledge life-span issues describe not only content but the process of that leads to gender role development. A reexamination and reorientation of these theories are needed in order to confirm that they represent gender role development in a life-span framework.

The final issue concerns the reliance upon a small number of methods in the examination of life-span gender roles. Most studies have used a cross-sectional approach. However, not only does this method tell very little about the development of masculine-instrumentality and feminine-expressivity, it does not address the variety of questions that this issue provokes. That is, it does not allow for the examination of stereotypes or the self-perception of gender role variability. The self-perception approach is especially

significant in this era of increased emphasis on social cognition and cognitive processes.

The developmental process has been largely ignored in gender role research. While this thesis did not contribute to the further understanding of the theory of gender role development, it is hoped that if offered a starting point from which to reassess both the need for such a theory as well as the necessity to develop a multimethod approach in order to study its content and process.

# APPENDIX A

## PERSONAL ATTRIBUTES QUESTIONNAIRE

## (24-ITEM VERSION; STUDY 1)

PERSONAL ATTRIBUTES QUESTIONNAIRE

The items below inquire about what kind of person you think you are.

Each item consists of a pair of characteristics, with the letters A-E in between. For example:

Not at all artistic A B C D E Very artistic

Each pair describes characteristics that are at opposite ends of a continuum - that is, you cannot be both at the same time, such as very artistic and not at all artistic.

The letters form a scale between the two extremes. You are to choose a letter which describes where you fall on the scale. For example, if you think you have no artistic ability, you would choose A. If you think you are pretty good, you might choose D. If you are only medium, you might choose C, and so forth.

| | | | |
|---|---|---|---|
| 1. | Not at all aggressive | A B C D E | Very Aggressive |
| 2. | Not at all independent | A B C D E | Very independent |
| 3. | Not at all emotional | A B C D E | Very emotional |
| 4. | Very submissive | A B C D E | Very dominant |
| 5. | Not at all excitable in a major crisis | A B C D E | Very excitable in a major crisis |
| 6. | Very passive | A B C D E | Very active |
| 7. | Not at all able to devote self completely to others | A B C D E | Able to devote self completely to others |
| 8. | Very rough | A B C D E | Very gentle |
| 9. | Not at all helpful to others | A B C D E | Very helpful to others |
| 10. | Not at all competitive | A B C D E | Very competitive |
| 11. | Very home oriented | A B C D E | Very worldly |
| 12. | Not at all kind | A B C D E | Very kind |
| 13. | Indifferent to others' approval | A B C D E | Highly needful of others' approval |

| | | | |
|---|---|---|---|
| 14. | Feelings not easily hurt | A B C D E | Feelings easily hurt |
| 15. | Not at all aware of feelings of others | A B C D E | Very aware of feelings of others |
| 16. | Can make decisions easily | A B C D E | Has difficulty making decisions |
| 17. | Gives up very easily | A B C D E | Never gives up easily |
| 18. | Never cries | A B C D E | Cries very easily |
| 19. | Not at all self-confident | A B C D E | Very self-confident |
| 20. | Feels very inferior | A B C D E | Feels very superior |
| 21. | Not at all understanding of others | A B C D E | Very understanding of others |
| 22. | Very cold in relations with others | A B C D E | Very warm in relations with others |
| 23. | Very little need for security | A B C D E | Very strong need for security |
| 24. | Goes to pieces under pressure | A B C D E | Stands up well under pressure |

# APPENDIX B

## JOB STUDY PROTOCOLS (STUDIES 2-4)

1. Instructions
2. Protocols for Robert
3. Protocols for Susan
4. Protocols for Cathy
5. Protocols for Jim

INSTRUCTIONS -- FEMALE STIMULUS PERSON

Personal Attributes Study - 1

On the following pages, you will be asked to determine the degree to which a woman should have certain personal attributes in order to be successful at various life tasks. You will follow this woman through her life-span and assess her whilst a student, at her job, as a parent, and at retirement.

Each item consists of a characteristic, with the letters A-E inbetween, forming a continuum. For example:

Ability to Have Fun  none  A  B  C  D  E  a lot

The letters form a scale between two extremes. You are to chose a letter which describes where you think this woman should fall on the scale in order to be successful at the task at hand. For example, if you think that, to be successful in a game of bridge, this woman needs no ability to have fun, then you would circle 'A'. If you think she needs "a lot" then you should circle 'E', and so forth.

CIRCLE ONLY ONE LETTER PER QUESTION, PLEASE

This questionnaire is meant to be anonymous. DO NOT put your name anywhere in the booklet.

Would you please fill in the following information before proceeding:

Sex  M  F  (circle where appropriate)

Age  ____

INSTRUCTIONS -- MALE STIMULUS PERSON

Personal Attributes Study - 1

On the following pages, you will be asked to determine the degree to which a man should have certain personal attributes in order to be successful at various life tasks. You will follow this man through his life-span and assess him whilst a student, at his job, as a parent, and at retirement.

Each item consists of a characteristic, with the letters A-E in between, forming a continuum. For example:

Ability to Have Fun  none  A  B  C  D  E  a lot

The letters form a scale between two extremes. You are to chose a letter which describes where you think this man should fall on the scale in order to be successful at the task at hand. For example, if you think that, to be successful in a game of bridge, this man needs no ability to have fun, then you would circle 'A'. If you think he needs "a lot" then you should circle 'E', and so forth.

CIRCLE ONLY ONE LETTER PER QUESTION, PLEASE

This questionnaire is meant to be anonymous. DO NOT put your name anywhere in the booklet.

Would you please fill in the following information before proceeding:

Sex  M  F  (circle where appropriate)

Age  ____

PROTOCOL FOR ROBERT -- PART 1

Robert is an upper sixth form student. At the moment, he is studying for his A levels. Below is a list of personal attributes. Would you please indicate, using the scoring system provided, to what extent you feel Robert should have these attributes in order to be successful at the exams.

| | | |
|---|---|---|
| 1. | Handling Pressure | goes to pieces A B C D E stands up well |
| 2. | Independent | not at all A B C D E very much |
| 3. | Relations with others | very cold A B C D E very warm |
| 4. | Emotionality | not at all A B C D E very much |
| 5. | Understanding of others | not at all A B C D E very much |
| 6. | Passivity | very passive A B C D E very active |
| 7. | Inferiority | feels inferior A B C D E feels superior |
| 8. | Devote self to others | not able A B C D E very able |
| 9. | Self-Confidence | not at all A B C D E very much so |
| 10. | Roughness | very rough A B C D E very gentle |
| 11. | Gives up easily | often A B C D E never |
| 12. | Helpful to others | not at all A B C D E very much |
| 13. | Making decisions | easily done A B C D E has difficulty |
| 14. | Competitiveness | not at all A B C D E very much |
| 15. | Aware of others' feelings | not at all A B C D E very much |
| 16. | Kindness | not at all A B C D E very much |

Would you please make sure you have answered ALL questions on this page before you move on to the next.

PROTOCOL FOR ROBERT -- PART 2

Robert is now a an executive for an influential multinational corporation. In fact, he is in line for a major promotion. Below is a list of personal attributes. Would you please indicate, using the scoring system provided, to what extent you feel Robert should have these attributes in order to be successful at his job.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1. Handling Pressure | goes to pieces | A | B | C | D | E | stands up well |
| 2. Independent | not at all | A | B | C | D | E | very much |
| 3. Relations with others | very cold | A | B | C | D | E | very warm |
| 4. Emotionality | not at all | A | B | C | D | E | very much |
| 5. Understanding of others | not at all | A | B | C | D | E | very much |
| 6. Passivity | very passive | A | B | C | D | E | very active |
| 7. Inferiority | feels inferior | A | B | C | D | E | feels superior |
| 8. Devote self to others | not able | A | B | C | D | E | very able |
| 9. Self-Confidence | not at all | A | B | C | D | E | very much so |
| 10. Roughness | very rough | A | B | C | D | E | very gentle |
| 11. Gives up easily | often | A | B | C | D | E | never |
| 12. Helpful to others | not at all | A | B | C | D | E | very much |
| 13. Making decisions | easily done | A | B | C | D | E | has difficulty |
| 14. Competitiveness | not at all | A | B | C | D | E | very much |
| 15. Aware of others' feelings | not at all | A | B | C | D | E | very much |
| 16. Kindness | not at all | A | B | C | D | E | very much |

Would you please make sure you have answered ALL questions on this page before you move on to the next.

PROTOCOL FOR ROBERT -- PART 3

Robert is now the very proud father of a six month old baby. Below is a list of personal attributes. Would you please indicate, using the scoring system provided, to what extent you feel Robert should have these attributes in order to be a good father to his child.

| | | |
|---|---|---|
| 1. | Handling Pressure | goes to pieces A B C D E stands up well |
| 2. | Independent | not at all A B C D E very much |
| 3. | Relations with others | very cold A B C D E very warm |
| 4. | Emotionality | not at all A B C D E very much |
| 5. | Understanding of others | not at all A B C D E very much |
| 6. | Passivity | very passive A B C D E very active |
| 7. | Inferiority | feels inferior A B C D E feels superior |
| 8. | Devote self to others | not able A B C D E very able |
| 9. | Self-Confidence | not at all A B C D E very much so |
| 10. | Roughness | very rough A B C D E very gentle |
| 11. | Gives up easily | often A B C D E never |
| 12. | Helpful to others | not at all A B C D E very much |
| 13. | Making decisions | easily done A B C D E has difficulty |
| 14. | Competitiveness | not at all A B C D E very much |
| 15. | Aware of others' feelings | not at all A B C D E very much |
| 16. | Kindness | not at all A B C D E very much |

Would you please make sure you have answered ALL questions on this page before you move on to the next.

PROTOCOL FOR ROBERT -- PART 4

Robert is now at the end of his working life and his children are now married and living a reasonable distance away. Below is a list of personal attributes. Would you please indicate, using the scoring system provided, to what extent you feel Robert should have these attributes in order to have a rewarding retirement.

| | | |
|---|---|---|
| 1. | Handling Pressure | goes to pieces A B C D E stands up well |
| 2. | Independent | not at all A B C D E very much |
| 3. | Relations with others | very cold A B C D E very warm |
| 4. | Emotionality | not at all A B C D E very much |
| 5. | Understanding of others | not at all A B C D E very much |
| 6. | Passivity | very passive A B C D E very active |
| 7. | Inferiority | feels inferior A B C D E feels superior |
| 8. | Devote self to others | not able A B C D E very able |
| 9. | Self-Confidence | not at all A B C D E very much so |
| 10. | Roughness | very rough A B C D E very gentle |
| 11. | Gives up easily | often A B C D E never |
| 12. | Helpful to others | not at all A B C D E very much |
| 13. | Making decisions | easily done A B C D E has difficulty |
| 14. | Competitiveness | not at all A B C D E very much |
| 15. | Aware of others' feelings | not at all A B C D E very much |
| 16. | Kindness | not at all A B C D E very much |

Would you please make sure you have answered ALL questions.

THANK YOU.

PROTOCOL FOR SUSAN -- PART 1

Susan is an upper sixth form student. At the moment, she is studying for her A levels. Below is a list of personal attributes. Would you please indicate, using the scoring system provided, to what extent you feel Susan should have these attributes in order to be successful at the exams.

| | | |
|---|---|---|
| 1. | Handling Pressure | goes to pieces A B C D E stands up well |
| 2. | Independent | not at all A B C D E very much |
| 3. | Relations with others | very cold A B C D E very warm |
| 4. | Emotionality | not at all A B C D E very much |
| 5. | Understanding of others | not at all A B C D E very much |
| 6. | Passivity | very passive A B C D E very active |
| 7. | Inferiority | feels inferior A B C D E feels superior |
| 8. | Devote self to others | not able A B C D E very able |
| 9. | Self-Confidence | not at all A B C D E very much so |
| 10. | Roughness | very rough A B C D E very gentle |
| 11. | Gives up easily | often A B C D E never |
| 12. | Helpful to others | not at all A B C D E very much |
| 13. | Making decisions | easily done A B C D E has difficulty |
| 14. | Competitiveness | not at all A B C D E very much |
| 15. | Aware of others' feelings | not at all A B C D E very much |
| 16. | Kindness | not at all A B C D E very much |

Would you please make sure you have answered ALL questions on this page before you move on to the next.

PROTOCOL FOR SUSAN -- PART 2

Susan is now a an executive for an influential multinational corporation. In fact, she is in line for a major promotion. Below is a list of personal attributes. Would you please indicate, using the scoring system provided, to what extent you feel Susan should have these attributes in order to be successful at her job.

| | | |
|---|---|---|
| 1. | Handling Pressure | goes to pieces A B C D E stands up well |
| 2. | Independent | not at all A B C D E very much |
| 3. | Relations with others | very cold A B C D E very warm |
| 4. | Emotionality | not at all A B C D E very much |
| 5. | Understanding of others | not at all A B C D E very much |
| 6. | Passivity | very passive A B C D E very active |
| 7. | Inferiority | feels inferior A B C D E feels superior |
| 8. | Devote self to others | not able A B C D E very able |
| 9. | Self-Confidence | not at all A B C D E very much so |
| 10. | Roughness | very rough A B C D E very gentle |
| 11. | Gives up easily | often A B C D E never |
| 12. | Helpful to others | not at all A B C D E very much |
| 13. | Making decisions | easily done A B C D E has difficulty |
| 14. | Competitiveness | not at all A B C D E very much |
| 15. | Aware of others' feelings | not at all A B C D E very much |
| 16. | Kindness | not at all A B C D E very much |

Would you please make sure you have answered ALL questions on this page before you move on to the next.

PROTOCOL FOR SUSAN -- PART 3

Susan is now the very proud mother of a six month old baby. Below is a list of personal attributes. Would you please indicate, using the scoring system provided, to what extent you feel Susan should have these attributes in order to be a good mother to her child.

| | | |
|---|---|---|
| 1. | Handling Pressure | goes to pieces A B C D E stands up well |
| 2. | Independent | not at all A B C D E very much |
| 3. | Relations with others | very cold A B C D E very warm |
| 4. | Emotionality | not at all A B C D E very much |
| 5. | Understanding of others | not at all A B C D E very much |
| 6. | Passivity | very passive A B C D E very active |
| 7. | Inferiority | feels inferior A B C D E feels superior |
| 8. | Devote self to others | not able A B C D E very able |
| 9. | Self-Confidence | not at all A B C D E very much so |
| 10. | Roughness | very rough A B C D E very gentle |
| 11. | Gives up easily | often A B C D E never |
| 12. | Helpful to others | not at all A B C D E very much |
| 13. | Making decisions | easily done A B C D E has difficulty |
| 14. | Competitiveness | not at all A B C D E very much |
| 15. | Aware of others' feelings | not at all A B C D E very much |
| 16. | Kindness | not at all A B C D E very much |

Would you please make sure you have answered ALL questions on this page before you move on to the next.

PROTOCOL FOR SUSAN -- PART 4

Susan is now at the end of her working life and her children are now married and living a reasonable distance away. Below is a list of personal attributes. Would you please indicate, using the scoring system provided, to what extent you feel Susan should have these attributes in order to have a rewarding retirement.

| | |
|---|---|
| 1. Handling Pressure | goes to pieces A B C D E stands up well |
| 2. Independent | not at all A B C D E very much |
| 3. Relations with others | very cold A B C D E very warm |
| 4. Emotionality | not at all A B C D E very much |
| 5. Understanding of others | not at all A B C D E very much |
| 6. Passivity | very passive A B C D E very active |
| 7. Inferiority | feels inferior A B C D E feels superior |
| 8. Devote self to others | not able A B C D E very able |
| 9. Self-Confidence | not at all A B C D E very much so |
| 10. Roughness | very rough A B C D E very gentle |
| 11. Gives up easily | often A B C D E never |
| 12. Helpful to others | not at all A B C D E very much |
| 13. Making decisions | easily done A B C D E has difficulty |
| 14. Competitiveness | not at all A B C D E very much |
| 15. Aware of others' feelings | not at all A B C D E very much |
| 16. Kindness | not at all A B C D E very much |

Would you please make sure you have answered ALL questions.

THANK YOU.

PROTOCOL FOR CATHY -- PART 1

Cathy is a fifth year student. At the moment, she is studying for her CSE's. Below is a list of personal attributes. Would you please indicate, using the scoring system provided, to what extent you feel Cathy should have these attributes in order to be successful at the exams.

| | | |
|---|---|---|
| 1. | Handling Pressure | goes to pieces A B C D E stands up well |
| 2. | Independent | not at all A B C D E very much |
| 3. | Relations with others | very cold A B C D E very warm |
| 4. | Emotionality | not at all A B C D E very much |
| 5. | Understanding of others | not at all A B C D E very much |
| 6. | Passivity | very passive A B C D E very active |
| 7. | Inferiority | feels inferior A B C D E feels superior |
| 8. | Devote self to others | not able A B C D E very able |
| 9. | Self-Confidence | not at all A B C D E very much so |
| 10. | Roughness | very rough A B C D E very gentle |
| 11. | Gives up easily | often A B C D E never |
| 12. | Helpful to others | not at all A B C D E very much |
| 13. | Making decisions | easily done A B C D E has difficulty |
| 14. | Competitiveness | not at all A B C D E very much |
| 15. | Aware of others' feelings | not at all A B C D E very much |
| 16. | Kindness | not at all A B C D E very much |

Would you please make sure you have answered ALL questions on this page before moving to the next.

PROTOCOL FOR CATHY -- PART 2

Cathy is now working full-time as a cashier in the local Sainsbury's where there isn't much of an opportunity for promotion. Below is a list of personal attributes. Would you please indicate, using the scoring system provided, to what extent you feel Cathy should have these attributes in order to be successful at her job.

| | | |
|---|---|---|
| 1. | Handling Pressure | goes to pieces A B C D E stands up well |
| 2. | Independent | not at all A B C D E very much |
| 3. | Relations with others | very cold A B C D E very warm |
| 4. | Emotionality | not at all A B C D E very much |
| 5. | Understanding of others | not at all A B C D E very much |
| 6. | Passivity | very passive A B C D E very active |
| 7. | Inferiority | feels inferior A B C D E feels superior |
| 8. | Devote self to others | not able A B C D E very able |
| 9. | Self-Confidence | not at all A B C D E very much so |
| 10. | Roughness | very rough A B C D E very gentle |
| 11. | Gives up easily | often A B C D E never |
| 12. | Helpful to others | not at all A B C D E very much |
| 13. | Making decisions | easily done A B C D E has difficulty |
| 14. | Competitiveness | not at all A B C D E very much |
| 15. | Aware of others' feelings | not at all A B C D E very much |
| 16. | Kindness | not at all A B C D E very much |

Would you please make sure you have answered ALL questions on this page before moving to the next.

PROTOCOL FOR CATHY -- PART 3

Cathy is now the very proud mother of a six month old baby. Below is a list of personal attributes. Would you please indicate, using the scoring system provided, to what extent you feel Cathy should have these attributes in order to be a good mother to her child.

| | | |
|---|---|---|
| 1. | Handling Pressure | goes to pieces A B C D E stands up well |
| 2. | Independent | not at all A B C D E very much |
| 3. | Relations with others | very cold A B C D E very warm |
| 4. | Emotionality | not at all A B C D E very much |
| 5. | Understanding of others | not at all A B C D E very much |
| 6. | Passivity | very passive A B C D E very active |
| 7. | Inferiority | feels inferior A B C D E feels superior |
| 8. | Devote self to others | not able A B C D E very able |
| 9. | Self-Confidence | not at all A B C D E very much so |
| 10. | Roughness | very rough A B C D E very gentle |
| 11. | Gives up easily | often A B C D E never |
| 12. | Helpful to others | not at all A B C D E very much |
| 13. | Making decisions | easily done A B C D E has difficulty |
| 14. | Competitiveness | not at all A B C D E very much |
| 15. | Aware of others' feelings | not at all A B C D E very much |
| 16. | Kindness | not at all A B C D E very much |

Would you please make sure you have answered ALL questions on this page before moving to the next.

PROTOCOL FOR CATHY -- PART 4

Cathy is now at the end of her working life and her children are now married and living a reasonable distance away. Below is a list of personal attributes. Would you please indicate, using the scoring system provided, to what extent you feel Cathy should have these attributes in order to have a rewarding retirement.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1. Handling Pressure | goes to pieces | A | B | C | D | E | stands up well |
| 2. Independent | not at all | A | B | C | D | E | very much |
| 3. Relations with others | very cold | A | B | C | D | E | very warm |
| 4. Emotionality | not at all | A | B | C | D | E | very much |
| 5. Understanding of others | not at all | A | B | C | D | E | very much |
| 6. Passivity | very passive | A | B | C | D | E | very active |
| 7. Inferiority | feels inferior | A | B | C | D | E | feels superior |
| 8. Devote self to others | not able | A | B | C | D | E | very able |
| 9. Self-Confidence | not at all | A | B | C | D | E | very much so |
| 10. Roughness | very rough | A | B | C | D | E | very gentle |
| 11. Gives up easily | often | A | B | C | D | E | never |
| 12. Helpful to others | not at all | A | B | C | D | E | very much |
| 13. Making decisions | easily done | A | B | C | D | E | has difficulty |
| 14. Competitiveness | not at all | A | B | C | D | E | very much |
| 15. Aware of others' feelings | not at all | A | B | C | D | E | very much |
| 16. Kindness | not at all | A | B | C | D | E | very much |

Would you please make sure you have answered ALL questions.

Thank You.

PROTOCOL FOR JIM -- PART 1

Jim is a fifth year student. At the moment, he is studying for his CSE's. Below is a list of personal attributes. Would you please indicate, using the scoring system provided, to what extent you feel Jim should have these attributes in order to be successful at the exams.

| | | |
|---|---|---|
| 1. | Handling Pressure | goes to pieces A B C D E stands up well |
| 2. | Independent | not at all A B C D E very much |
| 3. | Relations with others | very cold A B C D E very warm |
| 4. | Emotionality | not at all A B C D E very much |
| 5. | Understanding of others | not at all A B C D E very much |
| 6. | Passivity | very passive A B C D E very active |
| 7. | Inferiority | feels inferior A B C D E feels superior |
| 8. | Devote self to others | not able A B C D E very able |
| 9. | Self-Confidence | not at all A B C D E very much so |
| 10. | Roughness | very rough A B C D E very gentle |
| 11. | Gives up easily | often A B C D E never |
| 12. | Helpful to others | not at all A B C D E very much |
| 13. | Making decisions | easily done A B C D E has difficulty |
| 14. | Competitiveness | not at all A B C D E very much |
| 15. | Aware of others' feelings | not at all A B C D E very much |
| 16. | Kindness | not at all A B C D E very much |

Would you please make sure you have answered ALL questions on this page before you move on to the next.

PROTOCOL FOR JIM -- PART 2

Jim is now working full-time as a mechanic in a local garage where there isn't much of an opportunity for promotion. Below is a list of personal attributes. Would you please indicate, using the scoring system provided, to what extent you feel Jim should have these attributes in order to be successful at his job.

| | |
|---|---|
| 1. Handling Pressure | goes to pieces A B C D E stands up well |
| 2. Independent | not at all A B C D E very much |
| 3. Relations with others | very cold A B C D E very warm |
| 4. Emotionality | not at all A B C D E very much |
| 5. Understanding of others | not at all A B C D E very much |
| 6. Passivity | very passive A B C D E very active |
| 7. Inferiority | feels inferior A B C D E feels superior |
| 8. Devote self to others | not able A B C D E very able |
| 9. Self-Confidence | not at all A B C D E very much so |
| 10. Roughness | very rough A B C D E very gentle |
| 11. Gives up easily | often A B C D E never |
| 12. Helpful to others | not at all A B C D E very much |
| 13. Making decisions | easily done A B C D E has difficulty |
| 14. Competitiveness | not at all A B C D E very much |
| 15. Aware of others' feelings | not at all A B C D E very much |
| 16. Kindness | not at all A B C D E very much |

Would you please make sure you have answered ALL questions on this page before you move on to the next.

PROTOCOL FOR JIM -- PART 3

Jim is now the very proud father of a six month old baby. Below is a list of personal attributes. Would you please indicate, using the scoring system provided, to what extent you feel Jim should have these attributes in order to be a good father to his child.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1. Handling Pressure | goes to pieces | A | B | C | D | E | | stands up well |
| 2. Independent | not at all | A | B | C | D | E | | very much |
| 3. Relations with others | very cold | A | B | C | D | E | | very warm |
| 4. Emotionality | not at all | A | B | C | D | E | | very much |
| 5. Understanding of others | not at all | A | B | C | D | E | | very much |
| 6. Passivity | very passive | A | B | C | D | E | | very active |
| 7. Inferiority | feels inferior | A | B | C | D | E | | feels superior |
| 8. Devote self to others | not able | A | B | C | D | E | | very able |
| 9. Self-Confidence | not at all | A | B | C | D | E | | very much so |
| 10. Roughness | very rough | A | B | C | D | E | | very gentle |
| 11. Gives up easily | often | A | B | C | D | E | | never |
| 12. Helpful to others | not at all | A | B | C | D | E | | very much |
| 13. Making decisions | easily done | A | B | C | D | E | | has difficulty |
| 14. Competitiveness | not at all | A | B | C | D | E | | very much |
| 15. Aware of others' feelings | not at all | A | B | C | D | E | | very much |
| 16. Kindness | not at all | A | B | C | D | E | | very much |

Would you please make sure you have answered ALL questions on this page before you move on to the next.

PROTOCOL FOR JIM -- PART 4

Jim is now at the end of his working life and his children are now married and living a reasonable distance away. Below is a list of personal attributes. Would you please indicate, using the scoring system provided, to what extent you feel Jim should have these attributes in order to have a rewarding retirement.

| | |
|---|---|
| 1. Handling Pressure | goes to pieces A B C D E stands up well |
| 2. Independent | not at all A B C D E very much |
| 3. Relations with others | very cold A B C D E very warm |
| 4. Emotionality | not at all A B C D E very much |
| 5. Understanding of others | not at all A B C D E very much |
| 6. Passivity | very passive A B C D E very active |
| 7. Inferiority | feels inferior A B C D E feels superior |
| 8. Devote self to others | not able A B C D E very able |
| 9. Self-Confidence | not at all A B C D E very much so |
| 10. Roughness | very rough A B C D E very gentle |
| 11. Gives up easily | often A B C D E never |
| 12. Helpful to others | not at all A B C D E very much |
| 13. Making decisions | easily done A B C D E has difficulty |
| 14. Competitiveness | not at all A B C D E very much |
| 15. Aware of others' feelings | not at all A B C D E very much |
| 16. Kindness | not at all A B C D E very much |

Would you please make sure you have answered ALL questions.

THANK YOU.

# APPENDIX C

## PROSPECTIVE GENDER ROLE STUDY PROTOCOL

## (STUDY 5)

PROSPECTIVE ATTRIBUTES STUDY

The following is a study of how young adults see (or would like to see) their future.

Please complete one questionnaire yourself and give the second one to a friend of the opposite sex. It is hoped that you would do your questionnaires individually. You can compare afterwards if you so desire.

When you have finished, please seal it in the envelope provided and return them to the next Developmental Psychology lecture. The lecture on December 19 is to be based on the results obtained from this study.

Finally, a reminder that this questionnaire is completely anonymous. Please make sure that your name is no where to be found. The two digit code on the front is your case number and is for ease of analysis only.

Thank you.

Don McCreary
ISAP
Beverley Farm
extn. 3084

PROSPECTIVE ATTRIBUTES STUDY

Introduction: On the following pages, you will be asked to answer questions pertaining to the way that you EXPECT your future years to be. Please answer the questions as realistically as possible. When you have finished, please seal it in the envelope which was provided with the protocol. Total anonymity is guaranteed. Thank you.

1. Gender: Male |__| Female |__| (please tick appropriate box)

2. Age: ___ years

3. Marital status: single |__| married |__| cohabiting |__|

separated/divorced |__| other _____
(please state)

4. Did you work full-time for at least ONE year before coming to UKC?

Yes |__| No |__|

4a) if you answered yes, what was the job (i.e., a title) and would you give a brief description below:

5. What year of your undergraduate degree are you presently in?

First |__| Second |__| Third |__| Fourth |__|

6. In how many more years do you expect to graduate?: ____ years

7. What kind of job do you plan on doing after you graduate? Please give its title and a brief description below.

8. Is this what you expect your career ultimately to be?:

Yes |__| No |__|

NOTE: If you answered YES, please continue; if you answered NO please skip ahead to question (12)

9. If you answered YES to question (8), how long after graduation do expect to have to wait to get this job?:

Less than 1 year |__| Between 1 and 2 years |__|

Between 2 and 5 years |__| More than 5 years |__|

9a). What will you do in the meantime?:

i) Work at a similar job? |__|

ii) Work at a different job? |__|

iii) Stay unemployed until the job you want comes along? |__|

iv) Travel? |__|

v) Other?: _____
(please describe)

10. Can you give an estimation as to how long you expect to stay in this type of job?:

_____ years

11. Do you expect to change careers at any point in the future?:

Yes |__| No |__|

NOTE: If you answered YES to question (8) and have just completed the previous questions, please skip ahead to question (15)

12. If you answered NO to question (8), how long after graduation do you expect to have to wait in order to get a job in the career that you desire?:

Less than 1 year |__| Between 1 and 2 years |__|

Between 2 and 5 years |__| More than 5 years |__|

12a) What will you do in the meantime?:

i) Work at a similar job? |__|

ii) Work at a different job? |__|

iii) Stay unemployed until the job you want comes along? |__|

iv) Travel? |__|

v) Other?: _____
(please describe)

13. Can you give an estimation as to how long you expect to stay in this type of job?:

_____ years

14. Do you expect to change careers at any point in the future?:

Yes |__| No |__|

15. At what age do you expect to retire?: _____ years

16. Do you expect that you will be looking forward to retirement?:

Yes |__| No |__|

17. Please state three (3) things that, at this point in your life, you think you might do once you have retired:

18. Do you think this list will change at all?: Yes |__| No |__|

19. Please state three (3) things that, at this point in your life, you do NOT want to do once you have retired:

20. Do you think this list will change at all?: Yes |__| No |__|

21. Do you expect to marry (if you are not already)?:

Yes |__| No |__|

NOTE: If you answered YES to question (21), please continue; if you answered NO, please skip ahead to question (25)

22. If you answered YES to question (21), in approximately how many years from now would you LIKE to get married?:

_____ years

23. Do you believe this to be a realistic estimate?:

Yes |__| No |__|

24. How long would you estimate the engagement to be?: _____ months

NOTE: If you answered YES to question (21), please skip the next question ONLY

25. If you answered NO to question (21), can you explain briefly why do not intend to get married?:

26. Irregardless of whether you plan to be married, do you expect to have children?:

Yes |__| No |__|

NOTE: If you answered YES to question (26), please continue; if you answered NO, please skip ahead to question (30)

27. If you answered YES to question (26), how many children do you expect to have?: _____

28. How old do you realistically expect to be when you have your first child?:

_____ years

29. Will you continue to work after your children are born?:

Yes |__| No |__|

30. The items below inquire about what kind of person you think you are AT THIS POINT IN YOUR LIFE.

Each item consists of a pair of characteristics, with the letters A-E in between. For example:

Not at all artistic A B C D E Very artistic

Each pair describes characteristics that are at opposite ends of a continuum - that is, you cannot be both at the same time, such as very artistic and not at all artistic.

The letters form a scale between the two extremes. You are to choose a letter which describes where you fall on the scale. For example, if you think you have no artistic ability, you would choose A. If you think you are pretty good, you might choose D. If you are only medium, you might choose C, and so forth.

| | | | |
|---|---|---|---|
| 1. | Not at all independent | A B C D E | Very independent |
| 2. | Not at all emotional | A B C D E | Very emotional |
| 3. | Very passive | A B C D E | Very active |
| 4. | Not at all able to devote self completely to others | A B C D E | Able to devote self completely to others |
| 5. | Very rough | A B C D E | Very gentle |
| 6. | Not at all helpful to others | A B C D E | Very helpful to others |
| 7. | Not at all competitive | A B C D E | Very competitive |
| 8. | Not at all kind | A B C D E | Very kind |
| 9. | Not at all aware of feelings of others | A B C D E | Very aware of feelings of others |
| 10. | Can make decisions easily | A B C D E | Has difficulty making decisions |
| 11. | Gives up very easily | A B C D E | Never gives up easily |
| 12. | Not at all self-confident | A B C D E | Very self-confident |
| 13. | Feels very inferior | A B C D E | Feels very superior |
| 14. | Not at all under-standing of others | A B C D E | Very understanding of others |
| 15. | Very cold in relations with others | A B C D E | Very warm in relations with others |
| 16. | Goes to pieces under pressure | A B C D E | Stands up well under pressure |

31. Would you now please think ahead to the point in time that you have designated to have children. If you decided not to have children, would you think ahead to the point in time that you believe most of your friends will have children. Below you will find the same 16 attributes on which you just rated yourself. Would you please re-rate yourself, indicating the degree to which you feel you will need these attributes in order to be a good parent.

| | | | |
|---|---|---|---|
| 1. | Not at all independent | A B C D E | Very independent |
| 2. | Not at all emotional | A B C D E | Very emotional |
| 3. | Very passive | A B C D E | Very active |
| 4. | Not at all able to devote self completely to others | A B C D E | Able to devote self completely to others |
| 5. | Very rough | A B C D E | Very gentle |
| 6. | Not at all helpful to others | A B C D E | Very helpful to others |
| 7. | Not at all competitive | A B C D E | Very competitive |
| 8. | Not at all kind | A B C D E | Very kind |
| 9. | Not at all aware of feelings of others | A B C D E | Very aware of feelings of others |
| 10. | Can make decisions easily | A B C D E | Has difficulty making decisions |
| 11. | Gives up very easily | A B C D E | Never gives up easily |
| 12. | Not at all self-confident | A B C D E | Very self-confident |
| 13. | Feels very inferior | A B C D E | Feels very superior |
| 14. | Not at all understanding of others | A B C D E | Very understanding of others |
| 15. | Very cold in relations with others | A B C D E | Very warm in relations with others |

| | | | |
|---|---|---|---|
| 16. | Goes to pieces under pressure | A B C D E | Stands up well under pressure |

32. Finally, I would like you to think ahead to the point in time when you will retire. Again, I have listed the 16 attributes on which you have rated and re-rated yourself. For the last time, would you please re-rate youself, indicating the degree to which you believe you will require the attributes in order to have a rewarding retirement.

| | | | |
|---|---|---|---|
| 1. | Not at all independent | A B C D E | Very independent |
| 2. | Not at all emotional | A B C D E | Very emotional |
| 3. | Very passive | A B C D E | Very active |
| 4. | Not at all able to devote self completely to others | A B C D E | Able to devote self completely to others |
| 5. | Very rough | A B C D E | Very gentle |
| 6. | Not at all helpful to others | A B C D E | Very helpful to others |
| 7. | Not at all competitive | A B C D E | Very competitive |
| 8. | Not at all kind | A B C D E | Very kind |
| 9. | Not at all aware of feelings of others | A B C D E | Very aware of feelings of others |
| 10. | Can make decisions easily | A B C D E | Has difficulty making decisions |
| 11. | Gives up very easily | A B C D E | Never gives up easily |
| 12. | Not at all self-confident | A B C D E | Very self-confident |
| 13. | Feels very inferior | A B C D E | Feels very superior |
| 14. | Not at all understanding of others | A B C D E | Very understanding of others |
| 15. | Very cold in relations with others | A B C D E | Very warm in relations with others |

| | | | |
|---|---|---|---|
| 16. | Goes to pieces under pressure | A B C D E | Stands up well under pressure |

Thank you for taking the time to complete this survey. If you are in Dr Durkin's Developmental Psychology class, the results will become part of the lecture which Don McCreary is scheduled to give on December 16. The scoring and analysis is harder than you think, so please return your completed envelopes (yours and a member of the opposite sex's) by the next lecture. Thank you again.

# APPENDIX D

## RETROSPECTIVE ATTRIBUTES INTERVIEW SCHEDULE

## (STUDY 6)

RETROSPECTIVE ATTRIBUTES INTERVIEW SCHEDULE

A. Demographics:

1. Sex: Male Female 2. Age: _____ years

3. Present marital status: M C S D NM W

4. Have you ever been divorced?: Yes No

5. Previous occupation: _____
Description:

B. Self Rating - Present

1. Using the enlarged scale and pointers provided, ask the subject to rate him/herself on the following sixteen items. Read the following instructions first:

The items below inquire about what kind of person you think you are.

Each item consists of a pair of characteristics, with the letters A-E in between. For example:

Not at all artistic A B C D E Very artistic

Each pair describes characteristics that are at opposite ends of a continuum -- that is, you cannot be both at the same time, such as very artistic and not at all artistic.

The letters form a scale between the two extremes. You are to choose a letter which describes where you fall on the scale. For example, if you think you have no artistic ability, you would choose A. If you think you are pretty good, you might choose D. If you are only medium, you might choose C, and so forth.

| | | | |
|---|---|---|---|
| 1. | Not at all independent | A B C D E | Very independent |
| 2. | Not at all emotional | A B C D E | Very emotional |
| 3. | Very passive | A B C D E | Very active |
| 4. | Not at all able to devote self completely to others | A B C D E | Able to devote self completely to others |

| | | | |
|---|---|---|---|
| 5. | Very rough | A B C D E | Very gentle |
| 6. | Not at all helpful to others | A B C D E | Very helpful to others |
| 7. | Not at all competitive | A B C D E | Very competitive |
| 8. | Not at all kind | A B C D E | Very kind |
| 9. | Not at all aware of feelings of others | A B C D E | Very aware of feelings of others |
| 10. | Can make decisions easily | A B C D E | Has difficulty making decisions |
| 11. | Gives up very easily | A B C D E | Never gives up easily |
| 12. | Not at all self-confident | A B C D E | Very self-confident |
| 13. | Feels very inferior | A B C D E | Feels very superior |
| 14. | Not at all under-standing of others | A B C D E | Very understanding of others |
| 15. | Very cold in relations with others | A B C D E | Very warm in relations with others |
| 16. | Goes to pieces under pressure | A B C D E | Stands up well under pressure |

2. Globally, do you think you have changed in the degree to which you have expressed the attributes on which have just rated youself? That is, if I asked you to answer the above questions some years ago, do you think you would have answered them differently?

Yes No Unsure

3. You answered Yes to Question B2. Do you feel that this change has been a positive one for you?

4. Do you think that changing over time is good or bad?

5. Is it good for people to change these types of attributes or should they remain permanent traits in the individuals personality?

C. First Full-Time Employment

1. How old were you when you got the first full-time job that you kept for at least one year?: _____ years

2. What was it as?: _____
Description:

3. Was there much room for advancement?: Yes No

4. For how long did you stay at that job?: _____
weeks/months/years

5. Ask subject to think back to how he/she was as a person during those days. Go back to the original self-ratings and ask the subject to point out any questions which he/she thinks he/she would have answered differently when he/she was first employed. Ask him/her to re-rate themself on the indicated question(s).

| | | | |
|---|---|---|---|
| 1. | Not at all independent | A B C D E | Very independent |
| 2. | Not at all emotional | A B C D E | Very emotional |
| 3. | Very passive | A B C D E | Very active |
| 4. | Not at all able to devote self completely to others | A B C D E | Able to devote self completely to others |
| 5. | Very rough | A B C D E | Very gentle |
| 6. | Not at all helpful to others | A B C D E | Very helpful to others |
| 7. | Not at all competitive | A B C D E | Very competitive |
| 8. | Not at all kind | A B C D E | Very kind |
| 9. | Not at all aware of feelings of others | A B C D E | Very aware of feelings of others |
| 10. | Can make decisions easily | A B C D E | Has difficulty making decisions |
| 11. | Gives up very easily | A B C D E | Never gives up easily |

| | | | |
|---|---|---|---|
| 12. | Not at all self-confident | A B C D E | Very self-confident |
| 13. | Feels very inferior | A B C D E | Feels very superior |
| 14. | Not at all under-standing of others | A B C D E | Very understanding of others |
| 15. | Very cold in relations with others | A B C D E | Very warm in relations with others |
| 16. | Goes to pieces under pressure | A B C D E | Stands up well under pressure |

6. Go back to those attributes marked as differing in Question C5 from the original self-ratings. Ask the subject the following question about those changes:

   a) Was the change (from then to now) a positive one, a negative one, or was it neutral in character (i.e., "you are more/less now than you were. Is this change a positive or negative one?)? Mark a '+', '-', or 'N' for each item changed.

D. Marriage/First Child

1. How old were you when you first married?: _____ years

2. How long were you engaged for prior to the wedding?:

   _____ weeks/months/years

3. After you were married, where did you live? With your parents, with your spouse's parents, on your own, other?:

4. How long after the wedding was your first child born?:

   _____ weeks/months/years

5. Was it a boy or a girl?: Boy Girl

6. Were you working at the time? Yes No

7. If Yes regarding Question D6, was it at the same job as you were talking about earlier?

Yes No

8. If No regarding Question D7, then what kind of job was it?:

a) full-time Yes No

b) inside or outside the home

c) what was it as (title and description)

9. Ask subject to think back to how he/she was as a person during those days. Go back to the original self-ratings and ask the subject to point out any questions which he/she thinks he/she would have answered differently when he/she was a first-time parent. Ask him/her to re-rate themself on the indicated question(s).

| | | | |
|---|---|---|---|
| 1. | Not at all independent | A B C D E | Very independent |
| 2. | Not at all emotional | A B C D E | Very emotional |
| 3. | Very passive | A B C D E | Very active |
| 4. | Not at all able to devote self completely to others | A B C D E | Able to devote self completely to others |
| 5. | Very rough | A B C D E | Very gentle |
| 6. | Not at all helpful to others | A B C D E | Very helpful to others |
| 7. | Not at all competitive | A B C D E | Very competitive |
| 8. | Not at all kind | A B C D E | Very kind |
| 9. | Not at all aware of feelings of others | A B C D E | Very aware of feelings of others |
| 10. | Can make decisions easily | A B C D E | Has difficulty making decisions |

| | | | |
|---|---|---|---|
| 11. | Gives up very easily | A B C D E | Never gives up easily |
| 12. | Not at all self-confident | A B C D E | Very self-confident |
| 13. | Feels very inferior | A B C D E | Feels very superior |
| 14. | Not at all under-standing of others | A B C D E | Very understanding of others |
| 15. | Very cold in relations with others | A B C D E | Very warm in relations with others |
| 16. | Goes to pieces under pressure | A B C D E | Stands up well under pressure |

10. Go back to those attributes marked as differing in Question D9 from the original self-ratings. Ask the subject the following question about those changes:

    a) Was the change (from then to now) a positive one, a negative one, or was it neutral in character (i.e., "you are more/less now than you were. Is this change a positive or negative one?)? Mark a '+', '-', or 'N' for each item changed.

E. Beginning of Empty-Nest Phase and 'Other' Change

1. How old was your first child when he/she left home?: _____ years

2. How many children did that leave at home?: _____

3. How old were those children that were still at home?:

4. How old were you at the time?: _____ years

5. Did it affect the family unit very much when your eldest left?
Yes No

6. I am interested in how you have changed over the years with respect to these specific characteristics. Are there any other ways in which you feel you have changed?

7. What reasons can you give for these changes?

# APPENDIX E

## CROSS-SECTIONAL GENDER ROLES (STUDY 7)

1. Letter of Introduction

2. Survey

LETTER OF INTRODUCTION

University Letterhead

16 July, 1987

Dear Sir/Madam,

We are conducting a survey of adults in the Canterbury area and your name has been randomly selected from the Electoral Register. We would be very grateful if you would take a few moments and complete the short, 16-item survey attached to this letter and then return the completed form using the envelope and return sticker provided.

The goal of the survey is to examine whether people's personalities change as they grow older. We have identified 16 personality characteristics and we are asking adults of all ages to complete the survey.

Thank you very much indeed for your help.

Yours sincerely,

Don McCreary
Research Psychologist

ADULT PERSONALITY STUDY

Background Information

Age: _____ years

Gender (please circle): Male Female

Marital Status (please circle): Single Married Widowed Other

Family (please circle the right number):

1. Without children;
2. Oldest child 30 months old, or less;
3. Oldest child between 31 months and 6 years old;
4. Oldest child between 7 and 13 years;
5. Oldest child between 14 and 20 years
6. Oldest child has moved out;
7. All children have moved out on their own;
8. Most children have families of their own.

First Full-Time Job (please circle the right number):

1. Have never had a full-time job;
2. Began less than 1 year ago;
3. Began between 1 year and 5 years ago;
4. Began between 6 and 20 years ago;
5. Began between 21 and 35 years ago;
6. Began between 36 and 50 years ago;
7. Began more than 50 years ago.

Personality Traits

The items below inquire about what kind of person you think you are.

Each item consists of a pair of characteristics, with the letters A to E in between. For example:

Not at all artistic A B C D E Very artistic

Each pair describes characteristics that are opposites of one another - that is, you cannot be both at the same time, such as very artistic and not at all artistic.

The letters form a scale between two extremes. You are to choose a letter which describes where you fall on the scale. For example, if you think you have no artistic ability, you would choose A. If you think you are pretty good, you might choose D. If you are only medium, you might choose C, and so forth.

| | | | |
|---|---|---|---|
| 1. | Not at all independent | A B C D E | Very independent |
| 2. | Not at all emotional | A B C D E | Very emotional |
| 3. | Very passive | A B C D E | Very active |
| 4. | Not at all able to devote self completely to others | A B C D E | Able to devote self completely to others |
| 5. | Very rough | A B C D E | Very gentle |
| 6. | Not at all helpful to others | A B C D E | Very helpful to others |
| 7. | Not at all competitive | A B C D E | Very competitive |
| 8. | Not at all kind | A B C D E | Very kind |
| 9. | Not at all aware of feelings of others | A B C D E | Very aware of feelings of others |
| 10. | Can make decisions easily | A B C D E | Has difficulty making decisions |
| 11. | Gives up very easily | A B C D E | Never gives up easily |
| 12. | Not at all self-confident | A B C D E | Very self-confident |
| 13. | Feels very inferior | A B C D E | Feels very superior |
| 14. | Not at all understanding of others | A B C D E | Very understanding of others |
| 15. | Very cold in relations with others | A B C D E | Very warm in relations with others |
| 16. | Goes to pieces under pressure | A B C D E | Stands up well under pressure |

Please stick the address label on the provided envelope and return the survey as soon as possible.

Thank you.

Don McCreary
Institute of Social and Applied Psychology.

REFERENCES

Abrahams, B.; Feldman, S.S.; and Nash, S.C. (1978). Sex role self-concept and sex role attitudes: Enduring personality characteristics or adaptations to changing life situations? *Developmental Psychology, 14*, 393-400.

Ahammer, I.M. and Baltes, P.B. (1972). Objective versus perceived age differences in personality: How do adolescents, adults, and older people view themselves and each other? *Journal of Gerontology, 27*, 46-51.

Albrecht, S.L.; Bahr, H.M.; and Chadwick, B.A. (1979). Changing family and sex roles: An assessment of age differences. *Journal of Marriage and the Family, 41*, 41-50.

Antill, J.K. and Cunningham, J.D. (1979). Self-esteem as a function of masculinity in both sexes. *Journal of Consulting and Clinical Psychology, 47*, 783-785.

Antill, J.K. and Cunningham, J.D. (1980). The relationship of masculinity, femininity, and androgyny to self-esteem. *Australian Journal of Psychology, 32*, 195-207.

Archer, J. (1984). Gender roles as developmental pathways. *British Journal of Social Psychology, 23*, 245-256.

Archer, J. and Lloyd, B. (1985). *Sex and gender, 2nd edn.* Cambridge: Cambridge University Press.

Ashmore, R.D. and Del Boca, F.K. (1979). Sex stereotypes and implicit personality theory: Toward a cognitive-social psychological conceptualization. *Sex Roles*, *5*, 219-248.

Ashmore, R.D.; Del Boca, F.K.; and Wohlers, A.J. (1986). Gender stereotypes. In R.D. Ashmore and F.K. Del Boca (Eds.), *The social psychology of female-male relations: A critical analysis of central concepts*. London: Academic.

Bailey, W.T. (1987). *Longitudinal stability of the PAQ and AWS in parents of young children*. Paper presented at the annual meeting of the Southwestern Psychological Association, New Orleans.

Bakan, D. (1966). *The duality of human existence*. Chicago: Rand McNally.

Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall.

Banta Chinn, K.A. (1984). *Women, sex role socialization, and stress*. Unpublished doctoral thesis, George Washington University.

Barry, H.; Bacon, M.K.; and Child, I.L. (1957). A cross-cultural survey of some sex-differences in socialization. *Journal of Abnormal and Social Psychology*, *55*, 527-534.

Beere, C.A.; King, D.W.; Beere, D.B.; and King, L.A. (1984). The Sex-Role Egalitarianism Scale: A measure of attitudes toward equality between the sexes. *Sex Roles*, *10*, 563-576.

Bem, S.L. (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology*, *42*, 155-162.

Bem, S.L. (1975). Sex-role adaptability: One consequence of psychological androgyny. *Journal of Personality and Social Psychology, 31*, 634-643.

Bem, S.L. (1977). On the utility of alternative procedures for assessing psychological androgyny. *Journal of Consulting and Clinical Psychology, 45*, 196-205.

Bem, S.L. (1981). Gender schema theory: A cognitive account of sex-typing. *Psychological Review, 88*, 354-364.

Bem, S.L. and Lenney, E. (1976). Sex-typing and the avoidance of cross-sex behaviour. *Journal of Personality and Social Psychology, 33*, 48-54.

Bernard, L.C. (1981). The multidimensional aspects of masculinity-femininity. *Journal of Personality and Social Psychology, 41*, 797-802.

Berzins, J.I.; Welling, M.A.; and Wetter, R.E. (1978). A new measure of psychological androgyny based on the Personality Research Form. *Journal of Consulting and Clinical Psychology, 46*, 126-138.

Block, J.H. (1973). Conceptions of sex role: some cross-cultural and longitudinal perspectives. *American Psychologist, 28*, 512-526.

Boser, M.L. (1985). *Self-perceptions of sex-role and androgyny in Catholic sisters and secular women: A cross-sectional, comparative study in adult development.* Unpublished doctoral thesis, University of California, Berkeley.

Bozett, F.W. (1985). Male development and fathering throughout the life cycle. *American Behavioural Scientist, 29*, 41-54.

Brannon, R. (1976). The male sex role: Our culture's blueprint of manhood, and what it's done for us lately. In D.S. David and R. Brannon (Eds.), *The forty-nine percent majority: The male sex role*. Reading, MA: Addison-Wesley.

Brouse, S.H. (1985). Effect of gender role identity on patterns of feminine and self-concept scores from late pregnancy to early postpartum. *Advances in Nursing Science, 7*, 32-48.

Broverman, I.K.; Vogel, S.R.; Broverman, D.M.; Clarkson, F.E.; and Rosenkrantz, P.S. (1972). Sex-role stereotypes: A current appraisal. *Journal of Social Issues, 28*, 59-78.

Browing, D.L. (1985). Developmental aspects of authoritarian attitudes and sex role conceptions in men and women. *The High School Journal, 68*, 177-182.

Bryntwick, S.A. (1983). *Sex-role salience in the self-concept and in the perception of others: Implications for sex-role consistency and psychological adjustment*. Unpublished doctoral thesis, Concordia University, Montreal, Canada.

Cameron, P. (1976). Masculinity/femininity of the generations: As self-reported and stereotypically appraised. *International Journal of Aging and Human Development, 7*, 143-151.

Carter, D.B. (1985). Relationships between cognitive flexibility and sex-role orientation in young adults. *Psychological Reports, 57*, 763-766.

Clifton, A.; McGrath, D.; and Wick, B. (1976). Stereotypes of women: A single category? *Sex Roles, 2*, 135-148.

Constantinople, A. (1969). An Eriksonian measure of personal development in college students. *Developmental Psychology, 1*, 357-372.

Constantinople, A. (1973). Masculinity-femininity: An exception to a famous dictum? *Psychological Bulletin, 80*, 389-407.

Cooper, K.L. and Gutmann, D.L. (1987). Gender identity and ego mastery style in middle-aged, pre- and post-empty nest women. *Gerontologist, 27*, 347-352.

Costa, P.T., Jr. and McCrae, R.R. (1977). *Cross-sectional differences in masculinity-femininity in adult men.* Paper presented at the annual meeting of the Gerontological Society.

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

Cunningham, J.D. and Antill, J.K. (1984). Changes in masculinity and femininity across the family life cycle: A reexamination. *Developmental Psychology, 20*, 1135-1141.

Cutler, S.J. (1983). Aging and changes in attitudes about the women's liberation movement. *International Journal of Aging and Human Development, 16*, 43-51.

Deaux, K. (1984). From individual differences to social categories: Analysis of a decade's research on gender. *American Psychologist, 39*, 105-116.

Deaux, K. and Lewis, L.L. (1984). Structure of gender stereotypes: Interrelationships among components and gender label. *Journal of Personality and Social Psychology, 46*, 991-1004.

Deaux, K.; Kite, M.E.; and Lewis, L.L. (1985). Clustering and gender schemata: An uncertain link. *Personality and Social Psychology Bulletin, 11*, 387-397.

Dixon, P.N. and Strano, D. (1984-85). The effects of abortion on perceived sex role. *Psychology and Human Development, 1*, 51-56.

Dreyer, N.A.; Woods, N.F.; and James, S.A. (1981). ISRO: A scale to measure sex-role orientation. *Sex Roles, 7*, 173-182.

Duvall, E.M. (1977). *Marriage and family development, 5th edn.* Philadelphia: Lippincott.

Eagly, A.H. and Steffen, V.J. (1984). Gender stereotypes stem from the distribution of men and women into social roles. *Journal of Personality and Social Psychology, 46*, 735-754.

Edwards, A, and Ashworth, C.A. (1977). A replication study of item selection for the Bem Sex-Role Inventory. *Applied Psychological Measurement, 1*, 501-507.

Edwards, V.J. and Spence, J.T. (1987). Gender-related traits, stereotypes, and schemata. *Journal of Personality and Social Psychology, 53*, 146-154.

Emmerich, W. (1973). Socialization and sex-role development. In P.B. Baltes and K.W. Schaie (Eds.), *Life-span developmental psychology: Personality and socialization.* New York: Academic.

Erdwins, C.J.; Tyer, Z.E.; and Mellinger, J.C. (1983). A comparison of sex role and related personality traits in young, middle-aged, and older women. *International Journal of Aging and Human Development, 17*, 141-152.

Erikson, E.H. (1963). *Childhood and society, 2nd edn.* New York: Norton.

Fagot, B.I. (1985). Changes in thinking about early sex role development. *Developmental Review, 5*, 83-98.

Feldman, S.S. and Aschenbrenner, B. (1983). Impact of parenthood on various aspects of masculinity and femininity: A short-term longitudinal study. *Developmental Psychology, 19*, 278-289.

Feldman, S.S.; Biringen, Z.C.; and Nash, S.C. (1981). Fluctuations of sex-related self-attributions as a function of stage in the family life cycle. *Developmental Psychology, 17*, 24-35.

Fergusson, G.A. (1981). *Statistical analysis in psychology and education, 5th edn.* London: McGraw-Hill.

Fischer, J.L. and Narus, L.R., Jr. (1981). Sex-role development in late adolescence and adulthood. *Sex Roles, 7*, 97-106.

Fischer, S.M.; Hyland, D.T.; McMahon, P.M.; and England, E.M. (1985). *Masculinity and femininity in early, middle, and late adulthood: Perceptions of self and peers.* Paper presented at the 56th meeting of the Eastern Psychological Association, Boston. (ERIC Documentation Reproduction Service number ED 259 271)

Fiske, S.T. and Taylor, S.E. (1984). *Social cognition.* New York: Random House.

Foley, J. and Murphy, D. (1977). *Sex-role identity in the aged.* Paper presented at the annual meeting of the Gerontological Society.

Ford, M.R. and Lowery, C.R. (1986). Gender differences in moral reasoning: A comparison of the use of justice and care orientations. *Journal of Personality and Social Psychology, 50*, 777-783.

Freiberg, K.L. (1987). *Human development: A life-span approach, 3rd edn.* Boston: Jones and Bartlett.

Freud, S. (1927). Some psychical consequences of the anatomical distinction between the sexes. *International Journal of Psychoanalysis, 8*, 133-142.

Garnets, L. and Pleck, J.H. (1979). Sex role identity, androgyny, and sex role transcendence: A sex role strain analysis. *Psychology of Women Quarterly, 3*, 270-283.

Garske, J.P. (1975). Role variation as a determinant of attributed masculinity and femininity. *Journal of Psychology, 91*, 31-37.

Geis, F.L.; Brown, V.; Jennings, J.; and Corrado-Taylor, D. (1984). Sex versus status in sex-associated stereotypes. *Sex Roles, 11*, 771-785.

Gerber, G.L. and Balkin, J. (1977). Sex-role stereotypes as a function of marital status and role. *Journal of Psychology, 95*, 9-16.

Gilbert, L.A.; Deutch, C.J.; and Strahan, R.F. (1978). Feminine and masculine dimensions of the typical, desirable, and ideal woman and man. *Sex Roles, 4*, 767-778.

Gillett, N; Levitt, M.; and Antonucci, T. (1977). *The relationship between masculinity, femininity, and social competence in three generations of women.* Paper presented at the annual meeting of the Gerontological Society.

Gilligan, C. (1982). *In a different voice.* Cambridge, MA: Harvard University Press.

Glazer, C.A. and Dusek, J.B. (1985). The relationship between sex-role orientation and resolution of Eriksonian developmental crises. *Sex Roles, 13,* 653-661.

Gould, R.L. (1972). The phases of adult life: A study in developmental psychology. *American Journal of Psychiatry, 129,* 521-531.

Gould, R.L. (1978). *Transformations: Growth and change in adult life.* New York: Simon and Schuster.

Gough, H.G. (1952). Identifying psychological femininity. *Educational and Psychological Measurement, 12,* 427-439.

Gough, H.G. (1966). A cross-cultural analysis of the CPI femininity scale. *Journal of Consulting Psychology, 30,* 136-141.

Gough, H.G. and Heilbrun, A.B. (1965). *Joint manual for the adjective check list and the needs scales for the ACL.* Palo Alto: Consulting Psychologists' Press.

Greenhouse, S.W. and Geisser, S. (1959). On methods in the analysis of profile data. *Psychometrika, 24,* 95-112.

Guilford, J.P. and Zimmerman, W.S. (1949). *The Guilford-Zimmerman Temperament Survey: Manual of instructions and interpretations.* Beverly Hills: Sheridan Supply, 1949.

Gutmann, D. (1975). Parenthood: A key to the comparative study of the life cyle. In N. Datan and L.H. Ginsberg (Eds.), *Life-span developmental psychology: Normative life crises.* New York: Academic.

Gutmann, D. (1978). *Personal transformations in the postparental period: A cross-cultural view.* Paper presented at the Meetings of the American Association for the Advancement of Science, Washington.

Hall, J.A. and Halberstadt, A.G. (1980). Masculinity and femininity in children: Development of the Children's Personal Attributes Questionnaire. *Developmental Psychology, 16,* 4, 270-280.

Hall, J.A. and Taylor, M.C. (1985). Psychological androgyny and the masculinity X femininity interaction. *Journal of Personality and Social Psychology, 49,* 429-435.

Hall, J.L. and Frederickson, W.A. (1979). Sex-role stereotyping, a function of age and education, as measured by a perceptual-projective device. *Sex Roles, 5,* 77-84.

Hargreaves, D.J. (1986). Psychological theories of sex-role stereotyping. In D.J. Hargreaves and A.M. Colley (Eds.), *The psychology of sex roles.* London: Harper and Row.

Hathaway, S.R. and McKinly, J.C. (1943). *The Minnesota Multiphasic Personality Inventory.* New York: Psychological Corporation.

Havighurst, R.J. (1973). *Human development and education, 2nd edn.* New York: David McKay.

Havighurst, R.J. (1983). Sex role development. *Journal of Research Development in Education, 16*, 60-65.

Heilbrun, A.B., Jr. (1976). Measurement of masculine and feminine sex-role identities as independent dimensions. *Journal of Consulting and Clinical Psychology, 44*, 183-190.

Hefner, R.; Rebecca, M.; and Oleshansky, B. (1975). Development of sex-role transcendence. *Human Development, 18*, 143-158.

Helmreich, R.L.; Spence, J.T.; and Gibson, R.H. (1982). Sex-role attitudes: 1972-1980. *Personality and Social Psychology Bulletin, 8*, 656-663.

Helmreich, R.L.; Spence, J.T.; and Holahan, C.K. (1979). Psychological androgyny and sex role flexibility: A test of two hypotheses. *Journal of Personality and Social Psychology, 37*, 1631-1644.

Helmreich, R.L.; Spence, J.T.; and Wilhelm, J.A. (1981). A psychometric analysis of the Personal Attributes Questionnaire. *Sex Roles, 7*, 1097-1108.

Hoffman, L.W. (1977). Changes in family roles, socialization, and sex differences. *American Psychologist, 32*, 644-657.

Hoffman, L.W. (1984). Maternal employment and the young child. In M. Perlmutter (Ed.), *Parent-child interaction and parent-child relations in child development. The Minnesota Symposia on Child Development, vol. 17*. Hillsdale, NJ: Lawrence Erlbaum.

Hubbard, R.; Santos, J.F.; and Farrow, B.J. (1979). *Age differences in sex role diffusion: A study of middle aged and older adult married couples.* Paper presented at the annual meeting of the Gerontological Society.

Hyde, J.S. and Phillis, D.E. (1979). Androgyny across the life span. *Developmental Psychology, 15,* 334-336.

Kagan, J. (1964). Aquisition and significance of sex-typing and sex-role identity. In M.L. Hoffman and L.W. Hoffman (Eds.), *Review of child development research, vol. 1,* New York: Russell Sage.

Katz, P.A. (1979a). The development of female identity. In C.B. Kopp (Ed.), *Becoming female: Perspectives on development.* New York: Plenum.

Katz, P.A. (1979b). The development of female identity. *Sex Roles, 5,* 155-178.

Katz, P.A. (1986). Gender identity: Development and consequences. In R.D. Ashmore and F.K. Del Boca (Eds.), *The social psychology of female-male relations: A critical analysis of central concepts.* New York: Academic.

Keane, V.A. (1986). *Psychological androgyny and locus of control in relationship to a sequence of age-linked development in women.* Unpublished doctoral thesis, University of Pittsburgh.

Kelly, J.A.; Furman, W.; and Young, V. (1978). Problems associated with the typological measurement of sex roles and androgyny. *Journal of Consulting and Clinical Psychology, 46,* 1574-1576.

Keyes, S. (1984). Gender stereotypes and personal adjustment: Employing the PAQ, TSBI and GHQ with samples of British adolescents. *British Journal of Social Psychology, 23*, 173-180.

Kogan, N. (1979). Beliefs, attitudes, and stereotypes about old people: A new look at some old issues. *Research on Aging, 1*, 11-36.

Kohlberg, L. (1966). A cognitive-developmental analysis of children's sex-role concepts and attitudes. In E.E. Maccoby (Ed.), *The development of sex differences*. Stanford: Stanford University Press.

Kohlberg, L. (1969). *Stages in the development of moral thought and action*. New York: Rinehart and Winston.

Lamb, M.E. and Urberg, K.A. (1978). The development of gender role and gender identity. In M.E. Lamb (Ed.), *Social and personality development*. New York: Rinehart and Winston.

Levinson, D.J. (1978). *The seasons of a man's life*. New York: Knopf.

Levinson, D.J. (1986). A conception of adult development. *American Psychologist, 41*, 3-13.

Levinson, D.J.; Darrow, C.M.; Klein, E.B.; Levinson, M.H.; and McKee, B. (1974). The psychosocial development of men in early adulthood and the mid-life transition. In D. Ricks, A. Thomas, and M. Roff (Eds.), *Life history research in psychopathology, vol. 3*. Minneapolis: University of Minnesota Press.

Livson, F.B. (1983). Gender identity: A life-span view of sex-role development. In R.B. Weg (Ed.), *Sexuality in the later years: Roles and behaviour*. New York: Academic.

Loevinger, J. (1966). The meaning and measurement of ego development. *American Psychologist, 21*, 195-206.

Loevinger, J. (1976). *Ego development*. San Francisco: Jossey-Bass.

Lubinski, D.; Tellegen, A.; and Butcher, J.N. (1981). The relationship between androgyny and subjective indicators of emotional well-being. *Journal of Personality and Social Psychology, 40*, 722-730.

Lubinski, D.; Tellegen, A.; and Butcher, J.N. (1983). Masculinity, femininity, and androgyny viewed and assessed as distinct concepts. *Journal of Personality and Social Psychology, 44*, 428-439.

Lueptow, L.B. (1985). Conceptions of femininity and masculinity: 1974-1983. *Psychological Reports, 57*, 859-862.

Luszcz, M.A. (1985-86). Characterizing adolescents, middle-aged, and elderly adults: Putting the elderly into pespective. *International Journal of Aging and Human Development, 22*, 105-121.

MacDonald, N.E.; Ebert, P.D.; and Mason, S.E. (1987). Marital status and age as related to masculine and feminine personality dimensions and self-esteem. *Journal of Social Psychology, 127*, 289-298.

Marketing Direction Limited (1987). *55 Plus*. London.

Markus, H. (1977). Self-schemata and processing information about the self. *Journal of Personality and Social Psychology, 35*, 63-78.

Markus, H.; Crane, M.; Bernstein, S.; and Siladi, M. (1982). Self-schemas and gender. *Journal of Personality and Social Psychology, 42*, 38-50.

Marsh, H.W.; Antill, J.K.; and Cunningham, J.D. (1987). Masculinity, femininity, and androgyny: Relations to self-esteem and social desirability. *Journal of Personality, 55*, 661-683.

McBroom, W.H. (1984). Changes in sex-role orientations: A five-year longitudinal comparison. *Sex Roles, 11*, 583-592.

McBroom, W.H. (1987). Longitudinal change in sex role orientations: Differences between men and women. *Sex Roles, 16*, 439-452.

McGee, J. and Wells, K. (1982). Gender typing and androgyny in later life. *Human Development, 25*, 116-139.

McKee, J.P. and Sherriffs, A.C. (1957). The differential evaluation of males and females. *Journal of Personality, 25*, 356-371.

Minnigerode, F.A. and Lee, J.A. (1978). Young adults' perceptions of social sex roles across the life span. *Sex Roles, 4*, 563-569.

Mischel, W. (1966). A social learning view of sex differences. In E.E. Maccoby (Ed.), *The development of sex differences*. Stanford: Stanford University Press.

Mischel, W. (1970). Sex-typing and socialization. In P.H. Mussen (Ed.), *Carmichael's manual of child psychology, 3rd edn, vol. 2*. New York: John Wiley.

Monge, R.H. (1975). Structure of the self-concept from adolescence through old age. *Experimental Aging Research, 1*, 281-291.

Moreland, J. (1980). Age and change in the adult male sex role. *Sex Roles, 6*, 807-818.

Myers, A. and Gonda, G. (1982). Empirical validation of the Bem Sex-Role Inventory. *Journal of Personality and Social Psychology, 43*, 304-318.

Nash, S.C. and Feldman, S.S. (1981). Sex role and sex-related attributions: Constancy and change across the family life cycle. In M.E. Lamb and A.L. Brown (Eds.), *Advances in developmental psychology, vol. 1*. Hillsdale, NJ: Lawrence Erlbaum.

Nettles, E.J. and Loevinger, J. (1983). Sex role expectations and ego level in relation to problem marriages. *Journal of Personality and Social Psychology, 45*, 676-687.

Neugarten, B.L. (1968). Adult personality: Toward a psychology of the life cycle. In B.L. Neugarten (Ed.), *Middle age and aging: A reader in social psychology*. Chicago: University of Chicago Press.

Neugarten, B.L. and Gutmann, D.L. (1968). Age-sex roles and personality in middle-age: A thematic apperception study. In B.L. Neugarten (Ed.), *Middle age and aging: A reader in social psychology*. Chicago: University of Chicago Press.

O'Neil, J.M.; Helms, B.J.; Gable, R.K.; David, L.; and Wrightsman, L.S. (1986). Gender-role conflict scale: College men's fear of femininity. *Sex Roles, 14*, 335-350.

Orlofsky, J.L. (1981). Relationship between sex role attitudes and personality traits and the Sex Role Behaviour Scale-1: A new measure of masculine and feminine role behaviours and interests. *Journal of Personality and Social Psychology, 40,* 927-940.

O'Connell, A.N. and Rotter, N.G. (1979). The influence of stimulus age and sex on person perception. *Journal of Gerontology, 34,* 220-228.

Parsons, T. and Bales, R.F. (1955). *Family, socialization, and interaction process.* Glencoe, IL: Free Press.

Pedhazur, E. and Tetenbaum, T. (1979). Bem Sex Role Inventory: A theoretical and methodological critique. *Journal of Personality and Social Psychology, 37,* 996-1016.

Pepe, E.A. and Wyly, M.V. (1977). Age and sex-role identity. In I.M. Hulicka (Abs.), *Empirical studies in the psychology and sociology of aging.* New York: Crowell.

Perry, D.J. and Bussey, K. (1979). The social learning theory of sex differences: Imitation is alive and well. *Journal of Personality and Social Psychology, 37,* 1699-1712.

Peterson, M.J. (1975). The asymmetry of sex-role perceptions. *Sex Roles, 1,* 267-282.

Piaget, J. (1947). *The psychology of intelligence.* London: Routledge, Kegan Paul.

Prager, K.J. and Bailey, J.M. (1985). Androgyny, ego development, and psychosocial crisis resolution. *Sex Roles, 13,* 525-536.

Pratt, M.W. and Royer, J.M. (1982). When rights and responsibilities don't mix: Sex and sex-role patterns in moral judgement orientation. *Canadian Journal of Behavioural Science, 14,* 190-204.

Pratt, M.W.; Golding, G.; and Hunter, W.J. (1984). Does morality have a gender? Sex, sex role, and moral judgement relationships across the adult lifespan. *Merrill-Palmer Quarterly, 30,* 321-340.

Puglisi, J.T. (1983). Self-perceived age changes in sex role self concept. *International Journal of Aging and Human Development, 16,* 183-191.

Puglisi, J.T. and Jackson, D.W. (1980-81). Sex role identity and self esteem in adulthood. *International Journal of Aging and Human Development, 12,* 129-138.

Ramanaiah, N.V. and Martin, H.J. (1984). Convergent and discriminant validity of selected masculinity and femininity scales. *Sex Roles, 10,* 493-504.

Rebecca, M.; Hefner, R.; and Oleshansky, B. (1976). A model of sex-role transcendence. *Journal of Social Issues, 32,* 197-206.

Reid, I. (1977). *Social class differences in Britain: A source book.* London: Open Books.

Rhodes, N.D. (1986). *Gender stereotypes of ideal and typical man, woman, and person: The impact of role inferences.* Unpublished masters thesis, Texas A&M University.

Ripley, D.J. (1984). *Parental status, sex role, and gender mastery style among working class fathers.* Unpublished doctoral thesis, Illinois Institute of Technology.

Robinson, B.E. and Green, M.G. (1981). Beyond androgyny: The emergence of sex-role transcendence as a theoretical construct. *Developmental Review, 1,* 247-265.

Robinson, B.E.; Skeen, P.; and Flake-Hobson, C. (1982). Sex role endorsement among homosexual men across the life span. *Archives of Sexual Behaviour, 11,* 355-359.

Robinson, E.A. and Follingstad, D.R. (1985). Development and validation of a behavioural sex-role inventory. *Sex Roles, 13,* 691-713.

Rosencranz, H.A. and McNevin, T.E. (1969). A factor analysis of attitudes towards the aged. *Gerontologist, 9,* 55-59.

Rosenkrantz, P.; Vogel, S.; Bee, H.; Broverman, I; Broverman, D.M. (1968). Sex-role stereotypes and self-concepts in college students. *Journal of Consulting and Clinical Psychology, 32,* 287-295.

Rosenwasser, S.M. and Patterson, W. (1984-86). Nontraditional male: Men with primary childcare/household responsibilities. *Psychology and Human Development, 1,* 101-111.

Ruble, D.N. and Stangor, C. (1986). Stalking the elusive schema: Insights from developmental and social psychological analyses of gender schemas. *Social Cognition, 2,* 227-261.

Ruble, T.L. (1983). Sex stereotypes: Issues of change in the 1970's. *Sex Roles, 9,* 397-402.

Runge, T.E.; Frey, D.; Gollwitzer, P.M.; Helmreich, R.L.; and Spence, J.T. (1981). Masculine (instrumental) and feminine (expressive) traits: A comparison between students in the United States and West Germany. *Journal of Cross-Cultural Psychology, 12,* 142-162.

Ryan, G.; Dolphin, C.; Lundberg, U.; and Myrsten, A.L. (1987). Sex role patterns in an Irish student sample as measured by the Bem Sex Role Inventory (Comparisons with an American sample). *Sex Roles, 17,* 17-29.

Schiedel, D.G. and Marcia, J.E. (1985). Ego identity, intimacy, sex role orientation, and gender. *Developmental Psychology, 21,* 149-160.

Sears, D.O. (1986). College sophmores in the laboratory: Influences of a narrow data base on social psychology's view of human nature. *Journal of Personality and Social Psychology, 51,* 515-530.

Sedney, M.A. (1981). Comments of median split procedures for scoring androgyny measures. *Sex Roles, 7,* 217-222.

Sedney, M.A. (1985). Growing more complex: Conceptions of sex roles across adulthood. *International Journal of Aging and Human Development, 22,* 15-29.

Serbin, L.A.; Connor, J.M.; and Citron, C.C. (1981). Sex-differentiated free play behaviour: Effects of teacher modelling, location, and gender. *Developmental Psychology, 17,* 640-646.

Sharp, K.C.; Candy, S.G.; and Troll, L.E. (1980). Gender and generation effects on person perception. *International Journal of Aging and Human Development, 11*, 307-318.

Sherman, N.C. and Gold, J.A. (1978-79). Perceptions of ideal and typical middle and old age. *International Journal of Aging and Human Development, 9*, 67-73.

Sherman, S.R. (1985). Sex role stereotypes of middle and old age. *Journal of Social Service Research, 8*, 23-35.

Silverman, M. (1977). The old man as woman: Detecting stereotypes of aged men with a femininity scale. *Perceptual and Motor Skills, 44*, 336-338.

Silvern, L.E. and Ryan, V.L. (1983). A reexamination of masculine and feminine sex role ideals and conflicts among the ideals for the man, woman, and person. *Sex Roles, 9*, 1223-1248.

Sinnott, J.D. (1977). Sex-role inconsistancy, biology, and successful aging: A dialectical model. *Gerontologist, 17*, 459-463.

Sinnott, J.D. (1982). Correlates of sex roles of older adults. *Journal of Gerontology, 37*, 587-594.

Sinnott, J.D. (1986). *Sex roles and aging: Theory and research from a systems perspective*. Basel: Karger.

Slaby, R.G. and Frey, K.S. (1975). Development of gender constancy and selective attention to same-sex models. *Child Development, 46*, 849-856.

Smetana, J.G. (1984). Morality and gender: A comment on Pratt, Golding, and Hunter. *Merrill-Palmer Quarterly, 30*, 341-348.

Spence, J.T. (1984). Masculinity, femininity, and gender related traits: A conceptual analysis and critique of current research. In B.A. Maher (Ed.), *Progress in Experimental Personality Research, vol. 13.* New York: Academic.

Spence, J.T. (1985). Gender identity and its implications for the concepts of masculinity and femininity. In T.B. Sonderegger (Ed.), *Nebraska Symposium on Motivation: Psychology and Gender, vol. 32.* Lincoln, NB: University of Nebraska Press.

Spence, J.T. and Helmreich, R.L. (1978). *Masculinity and femininity: Their psychological dimensions, correlates, and antecedents.* Austin, TX: University of Texas Press.

Spence, J.T. and Helmreich, R.L. (1979). Comparison of masculine and feminine personality attributes and sex-role attitudes across age groups. *Developmental Psychology, 15,* 583-584.

Spence, J.T.; Helmreich, R.L; and Stapp, J. (1974). The Personal Attributes Questionnaire: A measure of sex-role stereotypes and masculinity-femininity. *JSAS Catalogue of Selected Documents in Psychology, 4,* 43.

Spence, J.T.; Helmreich, R.L; and Stapp, J. (1975). Ratings of self and peers on sex-role attributes and their relation to self-esteem and conceptions of masculinity and femininity. *Journal of Personality and Social Psychology, 32,* 29-39.

Spence, J.T. and Sawin, L.L. (1985). Images of masculinity and femininity: A reconceptualization. In V.E. O'Leary, R.K. Unger, and B.S. Wallston (Eds.), *Women, Gender, and Social Psychology.* Hillsdale, NJ: Lawrence Erlbaum.

Storms, M.D. (1979). Sex role identity and its relationship to sex role attributes and sex role stereotypes. *Journal of Personality and Social Psychology, 37,* 1779-1789.

Strahan, R.F. (1975). Remarks on Bem's measurement of psychological androgyny: Alternative methods and a supplementary analysis. *Journal of Consulting and Clinical Psychology, 43,* 568-571.

Strong, E.K. (1936). Interests of men and women. *Journal of Social Psychology, 7,* 49-67.

Suzuki, T.F. (1979). *A conceptual analysis of sex-role identity and its interaction with gender and chronological age.* Unpublished doctoral thesis, University of Florida.

Tabachnick, B.G. and Fidell, L.S. (1983). *Using multivariate statistics.* New York: Harper and Row.

Taylor, A. (1986). Sex roles and aging. In D.J. Hargreaves and A.M. Colley (Eds.), *The psychology of sex roles.* London: Harper and Row.

Taylor, M.C. and Hall, J.A. (1982). Psychological androgyny: Theories, methods, and conclusions. *Psychological Bulletin, 92,* 347-366.

Terman, L. and Miles, C.C. (1936). *Sex and personality.* New York: McGraw-Hill.

Uleman, J.S. and Weston, M. (1986). Does the BSRI inventory sex roles? *Sex Roles, 15*, 43-62.

Ullian, D.Z. (1976). The development of conceptions of masculinity and femininity. In B. Lloyd and J. Archer (Eds.), *Exploring sex differences*. London: Academic.

Urberg, K.A. (1979). Sex role conceptualizations in adolescents and adults. *Developmental Psychology, 15*, 90-92.

Urberg, K.A. and Labouvie-Vief, G. (1976). Conceptualizations of sex roles: A life-span developmental study. *Developmental Psychology, 12*, 15-23.

Unger, R.K. (1979). Toward a redefinition of sex and gender. *American Psychologist, 34*, 1085-1094.

Vaillant, G.E. and McArthur, C.C. (1972). Natural history of male psychologic health, 1: The adult life cycle from 18-50. *Seminars in Psychiatry, 4*, 415-427.

Weinraub, M.; Clemens, L.P.; Sockloff, A.; Ethridge, T.; Gracely, E.; and Myers, B. (1984). The development of sex role stereotypes in the third year: Relations to gender labeling, gender identity, sex-typed toy preference, and family characteristics. *Child Development, 55*, 1493-1503.

Whitbourne, S.K. (1986). *Adult development*. New York: Praeger.

White, M.S. (1979). Measuring androgyny in adulthood. *Psychology of Women Quarterly, 3*, 293-307.

Williams, J.E. and Best, D.L. (1982). *Measuring sex stereotypes: A thirty nation study*. London: Sage.

Williams, J.E.; Giles, H.; Edwards, J.R.; Best, D.L.; and Daws, J.T. (1977). Sex-trait stereotypes in England, Ireland, and the United States. *British Journal of Social and Clinical Psychology, 16*, 303-310.

Wilson, F.R. and Cook, E.P. (1984). Concurrent validity of four androgyny instruments. *Sex Roles, 11*, 813-837.

Windle, M. (1986). Sex role orientation, cognitive flexibility, and life satisfaction among older adults. *Psychology of Women Quarterly, 10*, 263-173.

Wong, F.Y. (1986). *A multitrait-multimethod study of the Bem Sex Role Inventory*. Unpublished masters thesis, State University of New York at Geneseo.

Worell, J. (1981). Life-span sex roles: Development, continuity, and change. In R.M. Lerner and N.A. Busch-Rossnagel (Eds.), *Individuals as producers of their development: A life-span perspective*. New York: Academic.

Yanico, B.J. (1985). BSRI scores: Stability over four years for college women. *Psychology of Women Quarterly, 9*, 277-283.

Zaks, P; Domurath, J.; Labouvie-Vief, G. (1979). *Sex role orientation across the adult life-span*. Paper presented at the annual meeting of the Gerontological Society.

Zey-Ferrel, M.; Tolone, W.L.; and Walsh, R.H. (1978). The intergenerational socialization of sex-role attitudes: A gender or generation gap? *Adolescence, 13*, 95-108.