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THE PERCEIVED INTER-RELATION OF PHYSICAL ATTRACTIVENESS,
LIKEABILITY, AND PERCEIVED AGE IN WOMEN

by

Anne Burns

A dissertation submitted to the Graduate Faculty in Psychology
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Abstract

THE PERCEIVED INTER-RELATION OF PHYSICAL ATTRACTIVENESS,
LIKEABILITY, AND PERCEIVED AGE IN WOMEN

by

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Advisor: Professor William King

The present study examined the perceived inter-relation of physical attractiveness, likeability and perceived age when impressions are formed of women. Of interest was how individual women perceived the inter-relation of these three variables. The study was also designed to evaluate the effects of the subjects' own age and their feminist orientation.

The study sample consisted of 90 women from three age groups of young, middle and older women. Each age group was composed of women with traditional and non-traditional attitudes toward the women's role. The subjects rated target photographs of women on the characteristics of physical attractiveness, likeability and perceived age.

The results were presented in two parts. First, simple correlations were used to examine the inter-relation of the studied

variables for individual subjects. As predicted, a significant proportion of the subjects perceived a significant correlation between each pair of variables: physical attractiveness and perceived age, physical attractiveness and likeability, and likeability and perceived age. Looking at the mean values of the correlations for the sample as a whole, it was found that the sample perceived a low negative correlation between physical attractiveness and perceived age; a moderate positive correlation between physical attractiveness and likeability; and a slightly negative, but significant correlation between likeability and perceived age.

In the second part, the data was analyzed within an analysis of variance framework. Perceived mean differences in physical attractiveness and likeability were examined as a function of the subjects' age and feminist orientation and as a function of the perceived age of the target photographs. The target photographs were categorized into the perceived young, middle-aged and older groups in the statistical analysis.

The results showed, as predicted, that there were no mean differences in physical attractiveness and likeability ratings as a function of the subjects' age. There was an effect, however, due to feminist orientation. The non-traditional subjects rated the target photographs more favorably than did the traditional subjects. With physical attractiveness, the non-traditional subjects perceived the photographs as more attractive than did the traditional subjects. With likeability, it was only the middle-aged, non-traditional subjects who rated the photographs more favorably than the middle-aged traditional subjects.

The most significant findings of the study concern the mean differences in physical attractiveness and likeability as a function of the perceived age of the target photographs. With physical attractiveness, the results showed that the young women were seen as most attractive; however, there was no significant difference in the perceived physical attractiveness of the middle-aged and older groups. Similarly, with likeability, the results showed that the young were seen as most likeable, while there was no significant difference in the likeability ratings of the middle-aged and older groups. In the present-day youth-oriented culture, it is not surprising that the perceived young were rated most favorably. The unexpected finding concerned the fact that there was no significant difference in the ratings of the middle-aged and older groups of women.

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CHAPTER I

Introduction

The intent of the present study is to examine the perceived inter-relation of physical attractiveness, likeability and perceived age when impressions are formed of women. Of interest is how individual women perceive the inter-relation of these three variables. The study is designed to evaluate the effects, if any, of the women's own age and their feminist orientation.

The variables of physical attractiveness and likeability are closely related in the process of forming initial impressions of others. This has been clearly demonstrated in the research on the physical attractiveness stereotype, reviewed by Berscheid and Walster (1974). What has not been demonstrated, however, is how the variable of perceived age is related to either perceived physical attractiveness or perceived likeability. Also, the effect of the age of the perceiver and the effect of feminist orientation has not yet been examined.

It is probably the case that physical attractiveness is important in forming impressions of both men and women. However, the emphasis in the psychological literature on physical attractiveness has been on the importance of this variable to women. There is a strong cultural belief that physical attractiveness is more important to women. It follows that there might also be a cultural belief that the changes in physical attractiveness related to aging are more traumatic for women. Because the effects of these cultural beliefs

are likely to be damaging to women, it is important to document and explore them in detail. For this reason, the present study is an investigation of how individual women perceive the variables of physical attractiveness, likeability and perceived age in their initial impressions of other women.

Physical attractiveness from a developmental perspective

The variable of physical attractiveness has not yet been studied within a developmental framework. In fact, it has only recently been studied as a factor influencing the perception of self and others. Aronson (1969) suggests that the reason attractiveness was ignored until recently is due to the belief that it is undemocratic to evaluate a person based on physical appearance. In spite of this belief, there is an increasing amount of research which shows that physical attractiveness is an important variable in forming impressions of others (Berscheid and Walster, 1974). Simply stated, the physical attractiveness stereotype is the belief that people who are more attractive also possess other positive social attributes.

Of interest in the present review is the significance of physical attractiveness from a developmental perspective. Although the variable of physical attractiveness has been studied in various age groups, there has not yet been a systematic comparison of the significance of physical attractiveness at different phases of development. The present investigation is primarily interested in the significance of physical attractiveness in relation to aging; however, it is recognized that the significance of attractiveness at earlier stages of development is an important factor in determining

the significance at a later stage. Thus, it is thought to be important here to examine and contrast the psychological significance of physical attractiveness to different age groups, starting with children.

The following review will show how each age group has been studied, or left unstudied, in its own characteristic way. Both similarities and differences have been found in response to physical attractiveness at different phases of development. This reflects two possibilities. First, physical attractiveness may be concerned with different developmental issues at different phases of the life span. Or, second, there may be methodological and theoretical differences in the way the various age groups are studied. The eventual goal is to construct a developmental framework that will provide a context for understanding the meaning of physical attractiveness in relation to aging. The following discussion will begin with the research on physical attractiveness in children and then continue on through each developmental phase to later adulthood. This will provide some insight both into how the connotations of physical attractiveness change with age and also how researchers have focused in different ways on different age groups.

Physical attractiveness and early development

With children, research indicates that the variable of physical attractiveness influences both adults' perception of children as well as children's perception of other children. For example, Dion (1972) looked at the response of adult females to pictures of attractive and unattractive children along with descriptions of different types of behavior. The subjects were asked to evaluate

the behavior of the children. The results showed that disruptive behavior was thought to be more typical of unattractive children, while excuses were made for the disruptive behavior of the attractive children and thought to be atypical. In a related study, Clifford and Walster (1973) showed teachers report cards and photographs of fifth graders and asked them to evaluate the children. In general, the more attractive children were thought to be more intelligent and better liked. Both of these studies involve adult evaluations of children and show the influence of physical attractiveness on their impressions of children.

It is probably the case that children are aware of the importance of physical attractiveness at an early age. If their teachers are responding to the physical attractiveness stereotype, and perhaps even their parents, it would not be surprising that children would also pick up this social information. Dion and Berscheid (1972, Note 1) found that with nursery school children, the variable of physical attractiveness influenced children's perception of other children. With boys, the unattractive boys were liked reliably less by the other children than were the more attractive boys. With the girls, however, the findings were somewhat more complex. The younger girls, age 4.4 to 5.4 years, found the unattractive girls to be more likeable than the attractive girls; while the older girls, age 5.5 to 6.1 years, found the more attractive girls to be more likeable.

There is some indication of a developmental difference between the younger and older girls in the Dion and Berscheid study. The authors suggest that physical attractiveness may be related to the development of sex-role identity in girls and that it takes on a

different significance at different phases of development. The interpretation is offered that with increasing age, the girls became more aware of the social value of attractiveness. However, since there is very little research in this area, the relation between physical attractiveness and the development of sex-role identity remains unclear.

Cavior (1970) also found an interesting effect with fifth grade girls in relation to how they perceived physical attractiveness in themselves. Cavior found that when asked to rank their classmates on physical attractiveness, 75% of the girls ranked themselves as the least physically attractive girl in the class. The author suggests that the girls were using an absolute standard of attractiveness rather than a relative standard, and that they were emphasizing their deficiencies. From this, it appears that the relation between physical attractiveness and perception of self is possibly an issue for fifth grade girls.

In summary, it appears that physical attractiveness is important in children's interaction with each other as well as with adults; there is some speculation but little evidence that physical attractiveness may be important in the development of sex-role identity in children; and there is virtually no research on the importance of physical attractiveness to individual children and the impact that it may have on self-concept. It would be interesting to see how individual children perceive and interpret the relation between self-value and physical attractiveness. It is perhaps during childhood that for some individuals, physical attractiveness becomes an integral part of their self concept.

The research with children is important to the present investigation because it offers some perspective on how the topic of physical attractiveness is conceptualized in the psychological literature. First, physical attractiveness is not seen as a topic that is particularly relevant to children. This may be due to the fact that physical attractiveness is often associated with sexual attractiveness, which is rarely studied in children. However, the little research that has been done appears to indicate that children are not only aware of physical attractiveness, but that it also influences their perception of self and others.

Physical attractiveness and adolescence

There has been little empirical research on adolescence and the significance of physical attractiveness, although this may be an age at which attractiveness is of most importance. During adolescence, there are sometimes dramatic changes in physical appearance. Due to this rapid change in physical appearance, adolescents often experience self-consciousness in relation to their physical appearance. Frazier and Lisonbee (1950) asked high school students to check off adjectives (e.g., fat, thin, tall, short, etc.) that described their own physical appearance. The subjects were also asked if they would like to change their appearance in any way. The results showed that many of the subjects admitted that they worried about "defects" such as blemishes, prominent noses, receding chins, and irregular teeth. Two-thirds of the subjects felt that they would like to change or improve their appearance. The girls wanted "curvier" figures, while the boys wanted more "masculine"

physiques. Significantly more girls than boys expressed dissatisfaction with their looks.

According to Erikson (1968), adolescence is the time that an individual goes through identity changes. The physical development that occurs during adolescence is closely related to identity changes, particularly changes in sex-role identity. For boys, the importance of physical appearance is found in the literature on early versus late maturing. Mussen and Jones (1958) found that boys who attain a "masculine" physique early, are more self-confident as adolescents and even later as adults. On the other hand, the late maturing boys showed more feelings of inadequacy and emotional conflict.

For girls, the research finding on early versus late maturing is more complicated. It appears that the effects of time of maturing is not as great as for boys. Also, according to Faust (1960) the advantages or disadvantages of early versus late maturing may be different at different ages. Faust looked at peer nomination of prestige-associated traits in adolescent girls ranging from the sixth to the ninth grade. With the six graders, early maturation, as measured by the age of menarche, tended to be a social handicap. However, beginning with the seventh grade, the post-puberal girls scored most favorably; and at the eighth and ninth grade level girls in late adolescence scored most favorably. The authors suggest that as adolescent girls get older, they begin to deal with changes in their social-sexual roles. As a result, physical development and maturity become increasingly important.

Minahan (1971) holds that for girls, facial attractiveness is more important than figure development in relation to self-

esteem and sex-role identity. She investigated this topic with tenth and twelfth grade girls. She found that facial attractiveness was more strongly related, than either actual or perceived figure attractiveness, to such variables as age at first date, number of dates, and number and prestige of extracurricular activities. High school girls who perceived their bodies as attractive tended to have higher self-esteem and more satisfactory social interactions.

Another finding of interest in the Minahan study is that perceived figure attractiveness turned out to be a better predictor of personality factors and behavior than actual figure attractiveness. This is interesting in light of the fact that several studies have found very low correlations between external and self-ratings of attractiveness. For example, Murstein (1972) found a correlation of .24 between self-ratings and external ratings in women. Stroebe et al. (1971) found a very low correlation of .17 . These findings point to the complex relationship between attractiveness and self-concept. Because there is a substantial difference between actual and perceived attractiveness for many individuals, this may be an indication that attractiveness is an issue for these individuals.

Although childhood is the time that physical attractiveness first becomes important, adolescence is the time that physical attractiveness becomes a most significant issue. Again, there is little research on the developmental significance of physical attractiveness during adolescence. However, it appears that physical appearance becomes significant in the adolescent's change in identity from a child to an adult. This topic is important to the present investigation, because it is the time that the adolescent female

begins to make the transition in self-image from a girl to a woman. Thus, physical attractiveness is crucial to the changes in sex-role identity that occur during adolescence. Although there are individual differences as to the importance of physical attractiveness; still, it would be interesting to see if success in achieving an identity as a woman is related to self-perception of attractiveness in adolescence.

Physical attractiveness and young adults

The variable of physical attractiveness has been studied most extensively with young adults of college age. This may be partly due to the availability of this age group for experimental research. However, it may also be the age group that is most often associated with the characteristic of physical attractiveness. Much of the research in this area deals with romantic interaction, interpersonal attraction and dating. When young adults were asked how important they felt physical attractiveness was in various situations, Miller and Rivenbark (1970) found that the subjects agreed that physical attractiveness was of moderate importance. Considering that the college environment has many situations for meeting new people, it is not surprising that first impressions and physical attractiveness become important factors. It might seem that physical attractiveness is somewhat of a superficial characteristic; however, many of the meeting situations that are common place for the college age group are also relatively superficial. As a key example, there is the research with "computer dances" and blind dates. This is a fairly unique situation to be in, as far as interpersonal attraction is

concerned. Also it is mostly late adolescents and young adults who find themselves in this type of pressured situation where first impressions are important in beginning personal relationships.

The first computer dance study was set up by Walster et al. (1966) in which college freshmen were randomly coupled. Questionnaires were administered during intermission to see if there was a relation between satisfaction with a date and her/his score on measures of personality, intelligence, social skills and physical attractiveness. To the authors' surprise, the only significant predictor of satisfaction was the date's physical attractiveness. Also attractiveness was the only predictor of whether partners were invited for subsequent dates.

In another study with college students, Dion, Berscheid and Walster (1972) examined the physical attractiveness stereotype which they described as "What is beautiful is good. . ." (Sappho, Fragments, No. 101). The authors wanted to study the perception of attractive and unattractive stimulus persons, to see whether attractive individuals are thought to have more socially desirable personality traits and are expected to lead better lives. The results showed that attractive individuals were seen as more socially desirable, more likely to have happy professional and social lives, and more likely to secure prestigious jobs. In a similarly designed study, Miller (1970) asked college men and women to rate persons depicted in photographs on 17 different adjective dimensions. He contrasted impressions formed of attractive and unattractive stimulus persons and found differences on 15 of the 17 dimensions. A consistent pattern emerged in which the physically unattractive person was

associated with the negative pole of the dimension. Both of these studies demonstrate the physical attractiveness stereotype, in that the more attractive individuals were seen as more socially desirable.

Other research with young adults has looked at the physical attractiveness stereotype in relation to personal interaction. In one study, Sigall and Landy (1973) looked at the halo effect of association with a beautiful woman. These authors paired a male confederate with a female confederate who was made to appear either extremely attractive or unattractive. The woman was presented to the subjects as either the man's "girlfriend" or as unassociated with the man. Sigall and Landy found that when the subjects were asked to give their impression of the man, the most favorable impressions resulted when the man was with a very attractive "girlfriend." The least favorable impression resulted when the unattractive woman was associated with the man as his "girlfriend."

In a related study, Kiesler and Baral (1970) manipulated the self-esteem of male students. The experimenter then introduced the subject to a female confederate who was made to appear either attractive or unattractive. The subjects in the high esteem condition were more likely to speak to the attractive woman while subjects in the low esteem condition were more likely to speak to the unattractive woman. In both of these studies, physical attractiveness is shown to be an important factor in heterosexual attraction. Also, the unstated assumption is made in the design of these studies that physical attractiveness is more directly related to the woman's sex role. It is the physical attractiveness level of the woman that was operationalized and varied.

Other research shows how college women have internalized the value of physical attractiveness. Kaats and Davis (1970) found a correlation between a woman's level of physical attractiveness and how she described herself. Women who were more attractive described themselves as more self-confident, likeable and as having an engaging personality. The authors also found that attractive women were more likely to say that they had been in love and reported having more sexual experiences than less attractive women. Other research supports the finding that physical attractiveness is a social advantage for women. Elder (1969) found that a woman's physical attractiveness is positively correlated with upward mobility. Elder examined the relative influence of attractiveness and educational attainment in marriage mobility in a longitudinal sample of women. The women were born in the 1920's and were studied in adult follow-ups. The initial ratings were made in adolescence. Girls who became upwardly mobile through marriage were characterized by physical attractiveness, while intelligence and academic aptitude were not directly predictive of marriage mobility.

In another study related to physical attractiveness and self-concept, Secord and Jourard (1953) found high correlations between self-concept and body cathexis, which is a measure of the degree of satisfaction with various parts and functions of the body. Interestingly, Jourard and Secord (1955) found that with female college students, positive feelings toward body parts were linked with smallness in size of such parts (i.e., waist, hands, hips and height). Also the greater the discrepancy between the subject's estimated ideal size and her own estimated size, the more negative

was the cathexis rating assigned by her. Jourard and Secord interpret this finding as reflecting a correlation between body cathexis and perceived similarity to an ideal female figure.

Summary

In the studies reviewed so far, the variable of physical attractiveness has been shown to influence the perceptions and behavior of children, adolescents and young adults. There has been little research, however, on the developmental significance of physical attractiveness. There is some indication that physical attractiveness and physique are related to the development of sex-role identity. Physical attractiveness becomes especially important in the image of the young adult woman, since the media and the culture at large tends to place much social value on the physical and sexual attractiveness of the young woman. Research shows that girls and young women have internalized this social value, and that it influences their self-perception and self-esteem. It is of interest in the present investigation to determine whether this stereotype of the young woman also influences the perception of middle-aged and older women. If one age group is especially valued, does it necessarily follow that other age groups will be seen as less valued?

One point that is not clearly made in the research reviewed so far is that the findings are age-specific. That is, most of the research on physical attractiveness has been done with young adults. It is not clear yet exactly how the research findings with young adults can be generalized to other age groups. It may be the case

that the connotations of physical attractiveness for young adults are different than for middle adults or older adults. In other words, the developmental significance of physical attractiveness may change as a person gets older.

Physical attractiveness and aging

It is only recently that the variable of perceived age has been examined in relation to physical attractiveness. Many of the studies look at the comparison between women and men, with the hypothesis that the sexes have different experiences with aging. Waters and Denmark (1974) note that in advertising, the upper limit on the age range for sexual desirability and physical attractiveness is higher for men than women. This corresponds with an increase in status that men often experience in middle age which women experience less often. Thus what may be seen as character lines for men are seen as wrinkles for women. Also grey hair is more likely to be seen as distinguished for men than women.

Nowak (1975) studied physical attractiveness in relation to what she termed the "appearance signal" in mid-life. She defined this as the age-related changes in appearance which signal the onset of aging. Here we see that physical attractiveness takes on a different significance as compared with the other research reviewed on attractiveness with young people. This study is important because it is the first to look at the significance of physical attractiveness in relation to aging. The assumption here is that one's attitude toward changes in physical appearance reflect feelings about the process of aging. The biological changes that occur in mid-life are cues

that signal aging. It is during this part of one's life that this issue becomes most sensitive. Nowak found that women in mid-life perceived higher correlations between the characteristics of attractiveness and youthfulness in photographed men and women than did either younger or older women. Nowak interpreted this finding as indicating that mid-life women show more confusion of the concepts of youthfulness and attractiveness because they are dealing with the issue of their own aging. In a related study, Nowak (1974, Note 2) found that mid-life women showed more concern with physical attractiveness than either younger or older women. When the author interviewed these women, she found that many of them expected dramatic declines in physical attractiveness. They seemed to fear a "hag-like" transformation into old age. It is also of interest to note that Nowak found differences among young, middle-aged and older women in their relative concern about youthfulness and attractiveness. She found that young women were mostly concerned with attractiveness, while older women were mostly concerned with youthfulness. The women in the middle were concerned with both youthfulness and attractiveness.

Nowak's results are interesting to compare with the findings of Berscheid (1973) who investigated body image in three age groups: age 24 and younger, age 25 to 44, and age 45 and over. No age differences were found in overall body image, although there were certain age-specific dissatisfactions such as skin problems in adolescence and concern with over-weight and teeth at a later age. The author suggests that either the subjects were not willing to report dissatisfaction with body image as they got older, or they did not

experience a decline in body image.

At first glance, it appears that the findings of Nowak and Berscheid are contradictory. Nowak reports confusion and negative attitudes toward changes in appearance with age, while Berscheid reports no change in body image. This points to the possibility that women in mid-life anticipate more negative changes than they actually experience. Is it possible that mid-life women fear the loss of physical attractiveness more than they actually experience this loss?

In summary, the studies with middle-aged adults show that the physical attractiveness stereotype influences adults' perception of others. However, the emphasis is on a fear of loss of attractiveness with age. It is still unclear as to whether women actually perceive a change in physical attractiveness with age. There is no evidence, as yet, that physical attractiveness is perceived as declining with age.

With old age, physical attractiveness takes on a different significance than with other age groups. First, there are no studies that deal directly with physical attractiveness in old age. Part of the reason why there are no studies on physical attractiveness in old age is due to the close association of physical attractiveness and sexual attractiveness. Since sexuality in old age is relatively taboo, it is not surprising that there are few studies on physical attractiveness. However, this does not mean that people are not concerned with this topic. Palmore (1971) investigated humor about aging. He found that two-thirds of all negative humor about aging concerns aging in women, and that the theme of the humor centered on their concern for loss of physical and sexual

attractiveness.

In one study on appearance in old age, Kogan (1961) looked at the comparison of people's appearance in general to old people's appearance in a sample of older subjects. Kogan reports that the older women tended to answer defensively about old people's appearance by emphasizing positive qualities. Kogan suggests that these subjects were attempting to deny age-related physical changes in a culture emphasizing female attractiveness. Still, in the entire sentence completion test used in this study, the item which evoked the most negative comments was: "When a woman becomes old. . . "

There is very little research on physical attractiveness in relation to old age. There are many studies, however, concerned with attitudes toward old age, and in general these attitudes are negative. Kahana (1971) looked at the perception of older people by both young and older adults. He reports that old people are thought to be helpless, hopeless, uninvolved, passive, fragile and unattractive. They were even seen as "scary." In another study, Kastenbaum and Durkee (1964) found that young people viewed old age as risky, unpleasant and of little positive value. These studies give a fairly grim picture of attitudes toward aging.

Although the attitudes are consistently negative toward old age, there is actually no empirical evidence that older people are perceived less favorably in a social perception task involving various age groups. The intent of the present investigation is to examine the perceived attractiveness and social desirability of different age groups, so that a comparison can be made.

Feminist Orientation

When looking at attitudes toward women, it is important to note the impact of the feminist movement on how women are perceived. Hacker (1975) refers to women as a minority group and the developing consciousness of this fact in women. One effect of this awareness is a questioning of previously accepted roles and an attempt to redefine roles. Klein (1975) examined the question of role conflict in feminist and non-feminist women. She was interested in determining to what extent feminist and non-feminist women experience conflict between the traditional female role (wife-mother-homemaker) and the "American" values of achievement, independence, and self-realization. The results of this investigation showed that both feminist and non-feminists report the same degree of role conflict; however, the feminists reported an increased awareness of role conflict and a reduction in that role conflict due to the rise of the feminist movement. The results also showed that the feminists rated higher on self-acceptance and on achievement and independence.

Baker (1972) also looked at differences in personal identity of women who expressed either acceptance or rejection of the traditional feminine role. Personality trait scales were used to assess differences between the groups in terms of belief systems (dogmatism, rigidity, and alienation) and the need for autonomy (hostility and locus of control). The results showed no difference between the "Acceptor" and "Rejector" groups on dogmatism; however, the "Acceptor" group did score higher on rigidity of thought process. This was interpreted as consistent with a greater degree of conservatism of this group. A greater degree of alienation was expressed by the "Rejector" group.

The two groups also showed a difference in need for autonomy, in that the "Rejector" group scored higher on expressed hostility and externality on the locus of control factor.

While both of these studies (Klein, 1975; Baker, 1972) report personal differences in women related to feminist orientation, there is very little evidence of difference in behavior of traditional and non-traditional women. It is interesting to note that the studies that have looked at behavioral responses of traditional and non-traditional women have focused on how these two groups perceive other women who are portrayed in either traditional or non-traditional roles. The general hypothesis is that non-traditional women will be more accepting of women in non-traditional roles, while traditional women will be more accepting of women in traditional roles. For example, Wortzel and Frisbie (1974) looked at women's role portrayal preferences in advertisements. It was of interest to determine whether traditional and non-traditional women would show different preferences of women portrayed in either traditional or non-traditional roles in advertisements. They found no significant difference between the two groups. Also Goldberg, Gottesdiener and Abramson (1975) looked at the perceived attractiveness of women as a function of support for the feminist movement. It was hypothesized that feminists would be less biased in their perception of the attractiveness of women portrayed as supporters or non-supporters of the women's movement. Again, these authors found that both feminists and non-feminists showed biased attitudes toward women portrayed as supporting the movement. It was concluded that one's attitude toward the movement is not necessarily consistent with one's behavior.

There is at least one study that found a difference in the subjects' behavioral response as a function of attitude toward the woman's role. Young, Beier, Beier, and Barton (1975) looked at differences in game-aggression in male subjects as a function of their attitudes toward women. The subjects were divided into two groups of "pro" and "anti" liberation of women, based on their agreement or disagreement with the following statement: "True or false___ You would really prefer that women play a more traditional role and take care of the home and children?" The subjects were then placed in a game situation and given Bataca clubs. It was of interest to determine whether there would be a difference in the intensity of blows delivered by the "pro" and "anti" groups toward a female confederate. The results showed that when the female confederate maintained a defensive position in the game, the "pro" group delivered more intense blows than the "anti" group; however, when the female confederate changed her defensive response to an assertive attack position, the intensity of the blows of the "anti" group increased, while the "pro" group showed no change. The authors concluded that the subjects who were anti-liberation were behaving in a chivalrous manner as long as the female confederate was in a defensive position; while the pro-liberation group were behaving in an egalitarian manner regardless of the defensive or assertive position of the female confederate.

The studies reviewed so far have shown mixed results concerning the effect of feminist orientation on behavior responses. It is hypothesized in the present study that the feminist movement has resulted in a change in self-perception for women in a positive

direction. Thus, women who have been influenced by the feminist movement would have more positive attitudes toward other women and toward themselves. It is of interest in the present study to look at the subject variable of feminist orientation to determine whether there is a difference in how traditional and non-traditional women evaluate other women on the variables of physical attractiveness and likeability.

In any discussion of positive attitudes toward women, the variable of age cannot be ignored since it is almost invariably the young woman who is singled out by the media as a positive image of a woman. Since most women do not fall into the category of "young women" it is important to investigate age-bias in attitudes toward women. While the feminist movement has addressed the issue of attitudes toward women in general, there has been an emphasis on the interests of young women and not women from other age groups. Lewis and Butler (1972) make this point in their discussion of why the women's movement is ignoring old women. They state that this is one more case of "agism" in which eleven million women in this country over 65 years of age are ignored.

Thus, it is not clear as to whether the feminist movement has yet had an effect on age-biased attitudes toward women. It is of interest in the present investigation to look at this question. It would certainly be consistent with the feminist movement that non-traditional women would show less age-bias in their evaluation of other women than would traditional women. However, this may well

be yet to come, since the issue of age-bias is only beginning to surface in the feminist movement.

Summary

The present review examined the research on physical attractiveness within a developmental framework from early development in childhood to old age. Essentially, the research shows that children are aware of physical attractiveness and that it may be important in forming their self image. There is also some indication that physical attractiveness is significant in the development of sex-role identity, especially for girls. This begins in early childhood and continues into adolescence, when the adolescent girl makes the transition in self-image to a young woman. In young adulthood, attractiveness becomes important in social interaction with others, particularly romantic interaction. This phase is also important, since it is the last phase of development where one finds a strong association between youth and attractiveness. Thus, it is the image of the young adult woman that is selected by the media as the single most valuable symbol of the youth-oriented culture.

Toward mid-life, attractiveness begins to take on a different significance. Changes in appearance with age become noticeable, and attractiveness then becomes closely associated with the process of aging and concern with aging. As a young woman begins to make the transition into mid-life, she must make the transition in self-image from a youthful symbol of attractiveness to a sometimes less valued image of the mature woman.

After mid-life, there is little indication in the research literature concerning the significance of physical attractiveness in old age. Also, there has been little research which actually compares

the social perception of older adults along with other age groups. While there are generally negative attitudes toward old age, it is still unclear as to whether these attitudes are any more negative than attitudes toward mid-life.

It is interesting to compare the research on young adults with the research done on middle and older adults. With young adults, physical attractiveness is viewed as a positive attribute that is associated with other positive traits of social desirability. With middle-aged and older adults, physical attractiveness takes on an added significance. It appears to be the case that physical attractiveness and physical appearance are viewed as an indication of the process of aging. Hence, there is a focus on loss of attractiveness with age. While the research with young adults looks at differences in attractiveness within an age-group, the research with middle-aged and older adults tends to look at the differences that occur with age.

The present study is concerned with how individuals perceive changes in appearance that occur with age. It is not necessarily the case that physical attractiveness decreases with age. It could be said that beauty is in the eye of the beholder, and that different individuals would perceive the relation between physical attractiveness and perceived age differently. However, many of the studies reviewed on aging showed negative attitudes toward aging, and one of the connotations of the word "aging" is physical decline. Thus it appears that this is a youth-oriented society with somewhat negative attitudes toward aging.

If it is the case that physical attractiveness is seen as decreasing with age, then it is important to look at what happens with the physical attractiveness stereotype in relation to aging. If physically attractive people are seen as more socially desirable, does it follow that as people get older and are seen as less attractive, that they are also seen as less socially desirable? It is of interest in the present study to examine the correlation between physical attractiveness and perceived age to see whether there is a perceived decline with age. It is also of interest to see whether perceived likeability, which is used as a measure of social desirability, will follow a similar decline with age. Finally, it is of interest to look at the effect of the subjects' feminist orientation on the perceived inter-relation of attractiveness, likeability and perceived age.

Hypotheses

The intent of the present study is to examine the perceived inter-relation of physical attractiveness, likeability and perceived age. The inter-relation of these three variables will be examined within two frameworks. The first framework involves an individual analysis, such that the responses of each subject can be examined to determine the perceived inter-relation between the variables. This will involve a correlational analysis of the responses of each subject to determine whether each subject perceives a significant correlation between each pair of variables. It is hypothesized that the subjects will perceive a negative correlation between physical attractiveness and perceived age, a negative correlation between likeability and perceived age, and a positive correlation between physical attractiveness and likeability. This particular inter-relation of the studied variables is based on the following line of reasoning. The physical attractiveness stereotype, which is well documented, postulates a positive relation between physical attractiveness and likeability. Second, this is a youth-oriented culture in which young adults are more positively valued than middle-aged or older adults. If this is the case, then it would follow that there would be a negative correlation between the variable of perceived age and the other two variables of physical attractiveness and likeability. Thus, aging would be associated with both a decline in physical attractiveness as well as other socially desirable characteristics that are associated with physical attractiveness, such as likeability.

Next, the perceived inter-relation between the variables of physical attractiveness, likeability and perceived age will be examined within a second framework. It is of interest here to look at the perceived mean differences of physical attractiveness and likeability when the target groups to be rated are categorized into the groups of young women, middle-aged women and older women. With this type of analysis, it is possible to look at the perception of specific age groups of women and compare the ratings of each age group with the others. It is hypothesized that the young women will be rated as most attractive and likeable, the middle-aged women will be rated as less attractive and likeable than the young women, and the older women will be rated as least attractive and likeable of the three groups. This hypothesis is based on a decremental model of perceived aging, in that the older a person is, the more negative will be the evaluation.

Also, in this second analysis, it is possible to look at two subject variables of interest. The first subject variable is the age of the subject. It is of interest to see whether the subjects' age is a significant variable in looking at the inter-relation of the studied variables. This is simply a control measure, since the research findings on this variable report very little evidence of a significant effect due to the age of the subject.

The second subject variable is feminist orientation. It is hypothesized that the non-traditional subjects will perceive other women as more attractive and likeable than will the traditional subjects.

This is based on the assumption that the non-traditional women, as a result of the consciousness raising attempts of the feminist movement, will have a more positive attitude in general toward other women. It is also of interest to see whether non-traditional women will show less age-bias in their evaluation of other women. Here, age-bias refers to a more negative evaluation of middle-aged and older women in comparison to young women. It is consistent with the feminist movement that a person is equally valued regardless of sex or age. As Tish Somers points out in her speech on the "Old Grey Mare," it is difficult to a woman in this society, but it is even more difficult to be an old woman(Sommers,1974 , Note 3).

CHAPTER II

Methodological IssuesUsing photographs as stimuli

One of the criticisms of the research on physical attractiveness is the use of photographed stimulus persons. When a photograph is presented, the respondent is using this visual information to rate both attractiveness and characteristics of social desirability. It could be argued that attractiveness is all that can be rated from a photograph. If both attractiveness and social desirability, i.e., likeability, are evaluated on the basis of physical appearance in a photograph, then it would be no surprise that the two variables were correlated.

In the present study, subjects are asked to rate the physical attractiveness, likeability and perceived age of various photographs. It is expected that part of the correlation between attractiveness and likeability is due to the fact that both of these attributes are rated from visual appearance in a photograph. The focus of the study is not to show that likeability and attractiveness are highly correlated. This has already been well documented in the research on the physical attractiveness stereotype. However, it is of interest to focus on the perceived relation between perceived age and the two variables of physical attractiveness and likeability. Here, we come to an important limitation of the present study. It cannot be clearly shown that the two variables of attractiveness and likeability are differentiated by the subjects unless the perceived relation between

each of these variables and perceived age is different. On the other hand, if the perceived relation between perceived age and the two variables of attractiveness and likeability are similar, then there are two possible interpretation. First, it may be that the two variables are "tied" and the subjects are actually rating only one characteristic when they are rating both attractiveness and likeability. Or, it may be the case, that the variables are separate, and that the sbujects are making a distinction in their ratings of physical attractiveness and likeability.

Cross-sectional method: Age of the perceiver versus age of the perceived

The present study looks at age-differences from two perspectives, both from the age of the perceiver as well as the age of the perceived. A cross-sectional method is used in the selection of both of these groups. First, there is a cross-section of different age groups of subjects. Second, there is a cross-section of photographed stimulus persons of various ages. The cross-sectional method, which looks at age differences between different age groups at one point in time, can be contrasted with the longitudinal method which looks at age-change in individuals over a span of time. This is an issue that is inherent in life-span research, and which has been analyzed in depth by Schaie (1965).

In the present study, the effect of the age of the perceiver is examined in order to determine whether the different age groups of young, middle-aged and older women have similar or different perceptions of the studied variables. If there are differences due to the age of the perceiver, this could be due to two different factors: generational differences and/or developmental differences. The generational differences have to do with the fact that the different age groups have lived through different historical periods, and this may in some way influence their perceptions. The developmental differences are concerned with the different perspectives

that may come from having lived through certain phases of the lifespan. Unfortunately, in a cross-sectional study, these two factors cannot be separated out, so that if any differences are found due to the age of the perceiver, it may be due to one or both of these factors.

The age of the perceived is also a significant variable in the present investigation. Stimulus persons were selected from a range of various age groups in order to determine whether perceived age is a factor which is related to perceived physical attractiveness and likeability. This is a study of perceived age-differences in that the perception of individuals of various ages is examined. This can be contrasted with the study of age-change, which looks at the change occurring in one individual over an age span. Although the cross-sectional design only gives evidence for age-differences, it can be speculated that perceived age-differences reflect perceived age-change. Wohlwill (1970) makes the point that this is an assumption that is often made in developmental research.

There have been several studies which contrasted the different effects of "age of the perceiver" and "age of the perceived." These studies indicate few, if any, differences due to the age of the perceiver. However, there are substantial and consistent differences due to the "age of the perceived." For example, in a study by Iliffe (1960) twelve pictures of different women were rated by readers of a newspaper. The women were, for the most part, average in attractiveness. Iliffe found that there was overall agreement concerning the attractiveness ratings of the different women. He also found no age-differences among the groups of subjects who rated the photographs. In another study by Cross and Cross (1971)

the effect of age, sex and race on the perception of facial beauty was examined. The ages of the judges were 7 years, 12 years, 17 years and adults. Again, the authors found no difference in the attractiveness ratings of the different age groups of subjects. However, there was an effect due to the perceived age and sex of the target stimuli, with the female faces and the adolescent faces receiving the highest ratings. Finally, a study by Nardi (1971) examined perceived changes in social and personality traits with age. She found that all of the subjects (age 15, 40 and 65) shared similar perceptions of each target age (age 15, 40 and 65). The targets representing adolescence, adulthood and old age were differentially perceived, yet there were no differences due to the age of the perceiver. It appears from these studies, that there is a significant effect due to the age of the perceived, but no effect due to the age of the perceiver.

One study that has found a significant effect due to the age of the perceiver is Nowak (1975). She holds that mid-life women respond differently to the appearance of aging than do younger or older women. The mid-life women perceived a higher correlation between the perceived attributes of youthfulness and attractiveness than did the younger or older women. She states that during mid-life, women tend to differentiate the concepts of attractiveness and youthfulness less.

Due to the similar interests of the present study and Nowak's investigation, it is important to note the differences. Nowak looked at the perceived correlation between attractiveness and youthfulness. However, her target stimuli were carefully structured into categories

of age, sex and level of attractiveness. For example, she looked at the perceived correlation between attractiveness and youthfulness for young women who were pre-judged as unattractive, or for older women who were pre-judged as attractive. Thus, the Nowak study looked at perceived correlations within an age group and within a pre-judged attractiveness level group. This contrasts with the present study which looks at the perceived correlation between attractiveness and perceived age over a range of age and attractiveness levels.

Also the Nowak study looked at the variable of youthfulness, while the present study looked at perceived chronological age. The youthfulness measure used in the Nowak study consisted of respondents rating the stimuli on three factors. The three factors concerned how old the perceived person looked in comparison with other people of the same age, and how old his or her activities and interests compared with other people of the same age. For example, the subjects were asked, "compared with most people his or her age, this person looks . . ." The possible responses ranged from very old to very young. This contrasts with the present study which examines the variable of perceived chronological age.

Thus, the perceived correlation between attractiveness and youthfulness in the Nowak study and the perceived correlation between attractiveness and perceived age turn out to be quite different measures. While the Nowak study looks at the association of youthfulness and attractiveness within a particular age group and within a particular level of attractiveness, the present study looks at the perceived age-differences in attractiveness ratings

in a group of women of various ages and representing a normal distribution of attractiveness.

In summary, most of the studies reviewed found significant differences in the perceived social attributes of stimulus persons of different ages. This reflects a significant effect due to the "age of the perceived." However, there is little evidence that there is any difference due to the "age of the perceiver."

The one study reviewed which found a significant effect was the Nowak study. She found that the mid-life women perceived the association between attractiveness and youthfulness differently from the younger or older women.

Concerning the "age of the perceived" the present study is interested in the attitudes that individuals have about chronological age and the changes that occur with age. It is expected that perceived age is somewhat negatively valued in relation to the studied variables of physical attractiveness and likeability. This is due to the fact that chronological age often becomes symbolic of the process of aging and thus takes on somewhat negative associations. From the research so far on attitudes toward aging, it appears that the age variable tends to be a negative one. Schaie (1973) describes a model which he calls the "irreversible decrement" model. This model depicts a peak in young adulthood, and then a cumulative decrement from that point on. This contrasts with the "stability" model where all age levels have the same relation to the studied variable. The present study will attempt to examine the nature of the relation between perceived age and the two evaluative variables, and will look at individual differences among subjects in terms of manifest patterns of relationship.

Structure of the perceived stimuli

In the research done so far with both physical attractiveness and perceived age-differences, there has been a pre-judged grouping of attractiveness levels and/or a clear separation of age groups. The intent of the present study is not to present a pre-judged attractiveness and age-stratified structure, but instead to investigate the structure imposed on the stimuli by the subjects.

Many of the studies on physical attractiveness reviewed by Berscheid and Walster (1974) used pre-judged categories of attractiveness, such as unattractive, plain and attractive. Berscheid and Walster report the data on consensus among judges of physical attractiveness. They report fairly consistent and reliable evaluations by judges of different ages, sex and even socio-economic status. However, one characteristic of the research which uses pre-judged categories, is that the stimuli do not represent a normal distribution of attractiveness. In this sense, attractiveness is manipulated as an independent variable. This is to be distinguished from looking at attractiveness as a dependent variable in order to see what structure is imposed on this variable. A set of stimuli is provided which represents a normal distribution of attractiveness of women of various ages on a continuous scale of age. Then the structure that the subjects project of the perceived inter-correlation of the three studied variables will be examined.

Also, an attempt is made to examine the age variable as separate from age-related roles. The different aged stimulus persons are not portrayed as coming from a particular generation, or from

a particular social role, or even from a particular age group. It is not always clear whether a particular person is a young or middle-aged adult, or a middle-aged or older adult. Much of the previous research on aging has presented pre-determined categories in the sense of "this age group, this generation, or this role." The present study attempts to isolate the age variable, as separate from age-related roles.

CHAPTER 3

Method

Subjects

Ninety women participated in the study. The subjects were recruited at the New York City airports. The subjects were recruited by simply asking women who were seated in waiting areas if they would like to participate in a study designed to look at how we perceive other people. If the women indicated that they would like to participate, they were then asked for background information on age, socio-economic status and feminist orientation.

In order to obtain information on the subjects' age, each subject was asked for her date of birth. The subjects were selected according to age in order to obtain 30 women in each of three age groups: young (age 20 - 29), middle (40 - 49) and older (60 - 69). The mean ages of the three groups of subjects were 24.4 (s.d. = 3.00) for the young women, 44.4 (s.d. = 3.11) for the middle women, and 64.5 (s.d. = 2.89) for the older women.

To control for social class effects, an effort was made to recruit only middle-class subjects. Hess (1970) suggests, in his review of social class variables in research, that the best single indicator of socioeconomic class is years of education. There has been a historical change in the amount of education, however, such that middle-class older subjects are more likely to have only completed high school, while younger age cohorts of the same social class would have at least completed some college. Using, the criterion

suggested by Hess, all subjects in the present study were required to have at least completed high school. The educational distribution of the sample is presented in Appendix A.

Finally, the subjects were selected according to their views concerning the women's role, or their feminist orientation. There were 15 traditional and 15 non-traditional subjects in each age group. In order to determine the subjects' feminist orientation, an item used by Young, Beier, Beier and Barton(1975) , was also used in the present study. The item was recommended by the authors as a good predictor of attitudes toward traditional and non-traditional roles. The item is worded as follows: "I would really prefer that women play a more traditional role, and take care of the home and children." Subjects were asked if they agreed or disagreed with this item. If the subjects agreed with this statement, they were placed in the traditional group, and if they disagreed with it, they were placed in the non-traditional group.

In order to test the reliability of using this item with the subject pool of this study, a pilot study was done. The complete Worell and Worell (1974) Attitude Toward Women Scale (Note 4) was given to thirty-three women, eleven from each of the three age groups of young, middle and older women. The selected item used in the present study was also administered to the pilot subjects. The subjects were recruited at a New York City Airport. They were placed into the two groups of traditional and non-traditional women, according to how they answered the predictive test item. Then the overall mean scores on the Worell and Worell scale were compared for the traditional and

non-traditional women. The mean score for the traditional subjects was 48.6 ($n = 14$, $s.d. = 9.59$) and the mean score for the non-traditional subjects was 57.0 ($n = 19$, $s.d. = 4.75$). A t-test for the difference between means was used to determine whether the non-traditional subjects scored significantly higher than the traditional subjects. The results confirmed this to be the case ($t = 2.91$, $df = 31$, $p < .01$). It was concluded that the test item selected as a predictor of traditional and non-traditional subjects was suitable to use with the subject pool in the present study.

Materials

The stimulus set of pictures consisted of 35 black and white photographs (4 in. X 5 in.) of women's faces. A sample of 35 white middle class women in Brooklyn Heights of Brooklyn, New York, was obtained by randomly asking women passersby if they would participate in helping set up a study in psychology on how we perceive other people. They were told that this would involve using their photograph in a set of pictures about which other people would be asked questions. They were also asked for their date of birth. If the person indicated that she was interested in participating, she was photographed in standardized form. The photographs were taken with a 100 mm. lens at a distance of two feet, revealing only the person's face. The photographed women ranged in age from 20 to 70, and the sample was chosen so that an even range of chronological ages was represented. A random sampling procedure was used to select the women to be photographed in order to approximate the population distribution of physical attractiveness. The random sampling procedure consisted of simply asking the first woman who passed by if she would like to participate. After this person left, the next woman who passed by was asked if she would like to participate. The important point here is that no selection criterion was used for asking passersby if they would participate. However, it cannot be determined in this study whether those women who agreed to be photographed were any different in physical attractiveness than those who did not want to be photographed. This procedure was continued until an equal spread of ages was represented in the stimulus set.

Procedure

The subjects were presented with each of the 35 photographs, one at a time. Each subject was asked to make three different types of ratings on the set of stimuli. Ratings were made of perceived chronological age, physical attractiveness and likeability. The order of the ratings was randomized for different subjects. For the perceived age rating, the subjects were asked to estimate the chronological age of each photographed person. For the physical attractiveness rating, the subjects were asked to rate each photograph on a seven point Likert-type scale. A similar scale was used for the likeability ratings. Each subject was tested separately. The order of the three evaluation tasks was randomized, with six possible orderings of the three tasks. Each task was completed for all of the photographs before beginning the next task. For example, a subject was asked to estimate the chronological age of all 35 photographed women. When this was completed, the subject was asked to next rate the physical attractiveness of all of the 35 women. Finally, when this was completed, the subject was asked to rate the likeability of all of the 35 women. Each subject was tested separately, and the testing time averaged thirty minutes.

The following instructions were read to the subjects:

This is a study of how people form impressions of others when they see them for the first time. When you meet someone for the first time, you usually have some immediate thoughts about what that person might be like. You will be presented with some photographs of women and asked to rate your immediate reactions. Please give your first reactions and do not worry about accuracy. There are no right or wrong answers.

1. Estimate the age of each of the photographed women.
2. Rate the likeability of each of the photographed women on a scale like the one illustrated below. The scale ranges from not very likeable to very likeable. Place a check mark above one of the numbers to indicate your response.
3. Rate the physical attractiveness of each of the photographed women on a scale like the one illustrated below. The scale ranges from not very physically attractive to very physically attractive. Place a check mark above one of the numbers to indicate your response.

not very likeable			average			very likeable
1	2	3	4	5	6	7

not very physically attractive			average			very physically attractive
1	2	3	4	5	6	7

This completed the testing of each subject. The subjects were then thanked for their participation in the study. If the subjects had any questions about the study, a short explanation of the study was given.

Specific Hypotheses and Proposed Evaluation

The first three hypotheses concern the relationship between each of the three pairs of variables: a.) physical attractiveness and perceived age, b.) physical attractiveness and likeability and c.) likeability and perceived age.

Hypothesis 1. There will be a negative correlation between physical attractiveness and perceived age, in that the physical attractiveness ratings will decrease with increasing perceived age. This is based on the assumption that there is an age-bias in the cultural standard for physical attractiveness, in that attractiveness is associated with youth.

Hypothesis 2. There will be a positive correlation between physical attractiveness and likeability. This is based on the previous research findings on the physical attractiveness stereotype, which has documented the fact that people who are seen as attractive are also seen as having other socially desirable characteristics. It is expected that the physical attractiveness stereotype will be particularly evident in the present study due to the fact that both of the attributes of physical attractiveness and likeability are rated from the physical appearance of a person in a photograph.

Hypothesis 3. There will be a negative correlation between likeability and perceived age, such that with increasing age the likeability ratings will decrease. Again, this is thought to be due to the

physical attractiveness stereotype. If it is the case that people are seen as less attractive the older they are, then it may also be the case that they will be seen as less likeable.

Perceived differences in physical attractiveness

The next three hypotheses are concerned with the perceived differences in physical attractiveness as a function of the age group of the target photographs (young, middle-aged and older) and the feminist orientation of the subjects (traditional and non-traditional).

Hypothesis 4. There will be differences in the physical attractiveness ratings as a function of the age group of the target photographs, such that the perceived young women will be seen as most attractive, the perceived middle-aged women will be seen as less attractive, and the perceived older women will be seen as least attractive.

Hypothesis 5. There will be a mean difference in the physical attractiveness ratings of the photographs as a function of the feminist orientation of the subjects. It is expected that the non-traditional subjects will perceive the photographs as more attractive than the traditional subjects. This hypothesis is based on the assumption that the non-traditional subjects have more positive attitudes toward other women than do traditional women.

Hypothesis 6. There will be less age-bias in the physical attractiveness ratings of the non-traditional subjects than the traditional subjects. It is predicted that the non-traditional subjects will rate the young, middle-aged and older women as equally attractive, while the traditional subjects will rate the middle-aged and older women as increasingly less attractive with age.

Perceived differences in likeability

The next three hypotheses are concerned with the perceived differences in likeability as a function of the age group of the target photographs (young, middle-aged and older) and the feminist orientation of the subjects (traditional and non-traditional).

Hypothesis 7. There will be differences in the likeability ratings as a function of the age group of the target photographs, such that the perceived young women will be seen as most likeable, the perceived middle-aged women will be seen as less likeable, and the perceived older women will be seen as least likeable.

Hypothesis 8. There will be a mean difference in the likeability ratings of the photographs as a function of the feminist orientation of the subjects. It is expected that the non-traditional subjects will perceive the photographs as more likeable than the traditional subjects. This hypothesis is based on the assumption that the non-traditional subjects have more positive attitudes toward other women than do traditional women.

Hypothesis 9. There will be less age-bias in the likeability ratings of the non-traditional subjects than the traditional subjects.

It is predicted that the non-traditional subjects will rate the young, middle-aged and older women as equally likeable, while the traditional subjects will rate the middle-aged and older women as increasingly less likeable with age.

CHAPTER IV

Results

Correlational analysis

The first three hypotheses concern the correlations obtained from the data of individual subjects. It was hypothesized that the subjects would perceive a 1.) negative correlation between physical attractiveness and perceived age, 2.) a positive correlation between physical attractiveness and likeability, and 3.) a negative correlation between likeability and perceived age.

These hypotheses were evaluated in two different ways:

a.) the number of individual subjects who perceived a significant correlation between a pair of variables, and b.) the size of the mean correlation for the sample as a whole. For both of these tests, Pearson product-moment correlations were computed from the responses of each subject to the 35 photographs for each of the variable pairs: physical attractiveness and perceived age, physical attractiveness and likeability, and likeability and perceived age.

For test a.) the correlations were examined to determine whether each individual subject perceived a significant correlation between each of the pairs of variables. An F test of significance was used to determine whether each correlation was significant. A .05 level of significance ($df = 33$) was used for determining significant values. At this level of significance, the size of the significant

correlations was approximately 0.30. The value of the correlation that was significant varied slightly with each subject due to within-subject differences in variation. Next, the number of significant correlations for each variable pair was examined in a test of proportions. Of interest was whether a significant proportion of subjects perceived a significant correlation between each variable pair as compared with the proportion that did not.

For test b.) the distribution of correlations for the sample as a whole was examined to determine whether the mean correlation was significantly different from zero. First, the Fisher r-to-z technique was used to normalize the distribution of correlations. The mean of the transformed correlations was examined in a z test to determine whether the mean was significantly different from zero.

The results of test a.) of the first three hypotheses are presented in Table I. As predicted in hypothesis one, a significant proportion of subjects perceived a significant negative correlation between perceived age and physical attractiveness. Forty-two subjects or 46.7% of the sample perceived a negative correlation ($z = 4.796$, $p < .01$, $df = 88$). As predicted in hypothesis two, a significant proportion of subjects perceived a significant positive correlation between physical attractiveness and likeability. Seventy subjects or 77.8% of the sample perceived a significant positive correlation ($z = 3.97$, $p < .01$, $df = 88$). As predicted in hypothesis three, a significant proportion of subjects perceived a significant negative correlation between perceived age and likeability. Seventeen subjects or 18.9% of the sample perceived a significant negative correlation ($z = 3.718$, $p < .01$, $df = 88$).

For test b.), first the distribution of transformed correlations for each variable pair was examined. The distributions of z scores, obtained from the Fisher r-to-z transformation, are presented in Figures I, II, and III. Since each of these distributions approximates a normal distribution, a z test could be used to examine the significance of the mean of each distribution to determine whether that mean is significantly different from zero.

The results of these tests of significance are presented in Table II. As predicted in hypothesis one, there is a mean negative correlation that is significantly different from zero between the variables of physical attractiveness and perceived age ($X_r = -.287$, s.d. = 0.213, $z = 12.812$, $p < .01$, $df = 88$). As predicted in hypothesis two, there is a mean positive correlation that is significantly different from zero between the variables of physical attractiveness and likeability ($X_r = 0.560$, s.d. = 0.309, $z = 17.231$, $p < .01$, $df = 88$). As predicted in hypothesis three, there is a mean negative correlation that is significantly different from zero between the variables of perceived age and likeability ($X_r = -0.117$, s.d. = 0.225, $z = 4.937$, $p < .01$, $df = 88$).

In summary, it was predicted in the first three hypotheses that there would be 1.) a significant negative correlation between perceived age and physical attractiveness, 2.) a significant positive correlation between physical attractiveness and likeability and 3.) a significant negative correlation between perceived age and likeability. These hypotheses were confirmed both by the proportion of subjects who perceived a significant correlation and by the overall mean value of the distributions of correlations.

Table I. Frequency table of the number of significant positive and negative product-moment correlations for each of the three pairs of variables.

Variable Pair	Number of Significant Positive Correlations	z	Number of Significant Negative Correlations	1., 2. z
Perceived Age and Physical Attractiveness N = 90	0 (0%)		42 (46.7%)	4.796**
Physical Attractiveness and Likeability N = 90	70 (77.8%)	3.97**	0 (0%)	
Likeability and Perceived Age N = 90	1 (1.1%)		17 (19.9%)	3.718**

** $p < .01$

1. A significant z indicates that a significant proportion of the subjects perceived either a significant positive or negative correlation between a given pair of variables.

2. The experimental hypotheses were tested at the .05 level of significance; however, if the results showed a greater level of significance, this is reported.

Figure 1. Distribution of transformed correlations, using the Fisher r-to-z transformation, between perceived age and physical attractiveness. ($\bar{X}_r = -0.287$, s.d. = 0.213, n = 90).

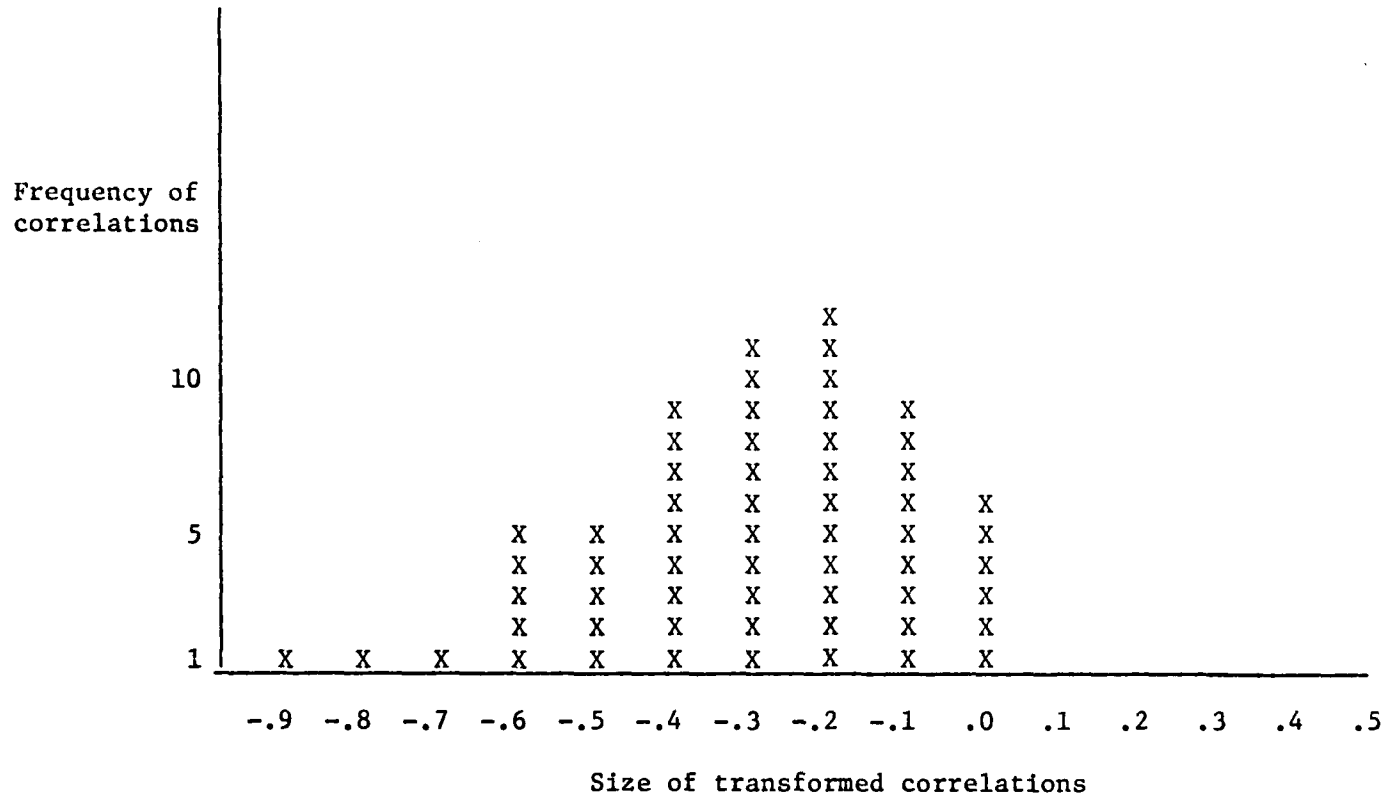


Figure 2. Distribution of transformed correlations, using the Fisher r-to-z transformation, between perceived age and likeability. ($\bar{X}_r = -0.117$, s.d. = 0.225, n = 90).

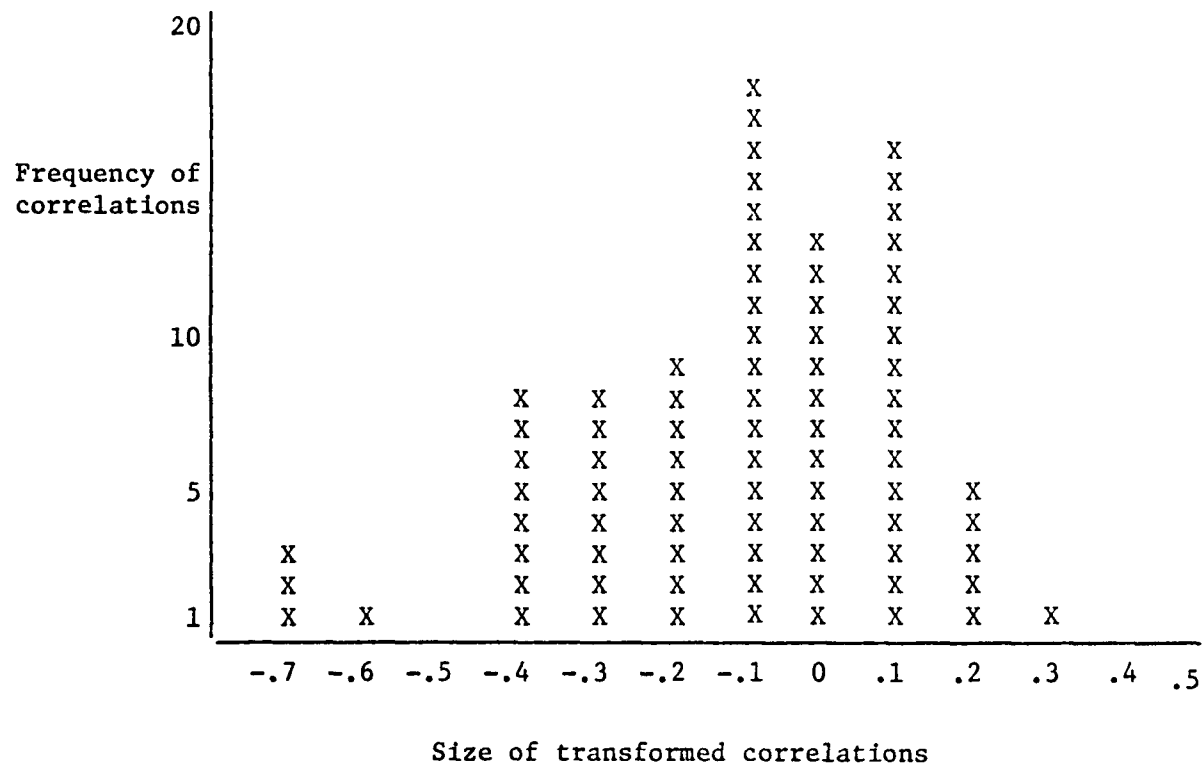


Figure 3. Distribution of transformed correlations, using the Fisher r-to-z transformation, between physical attractiveness and likeability. ($\bar{X}_r = 0.560$, s.d. = 0.309, n = 90).

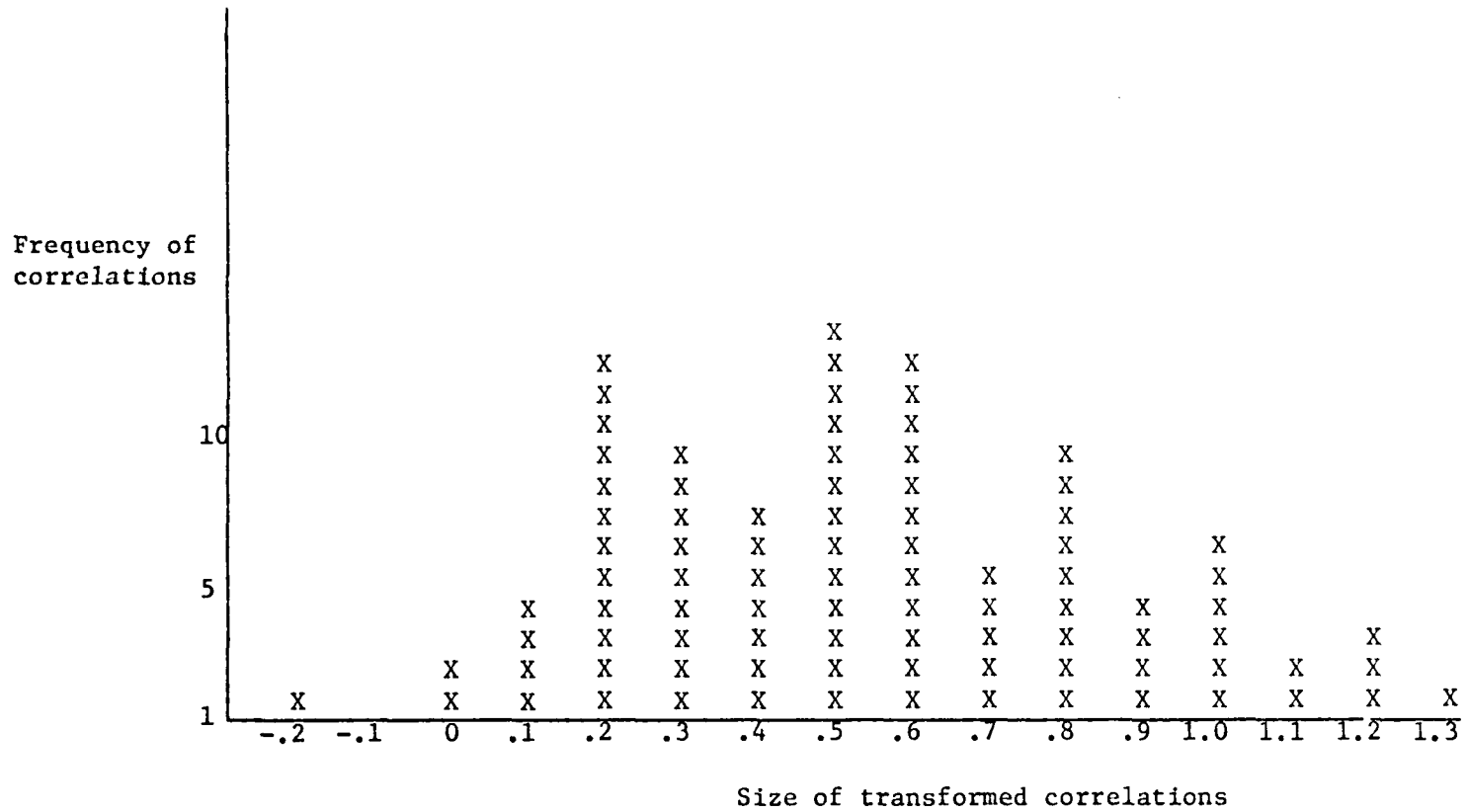


Table II. Mean values of the distribution of product-moment correlations for each pair of variables.

Variable Pair	Mean r	s.d.	N	z^1 .
Perceived Age and Physical Attractiveness	-0.287	0.213	90	12.812**
Physical Attractiveness and Likeability	0.560	0.309	90	17.231**
Perceived Age and Likeability	-0.117	0.225	90	4.937**

** $p < .01$

1. A significant z indicates that the mean correlation for the sample as a whole is significantly different from zero.

Perceived differences in physical attractiveness

The next three hypotheses are concerned with the perceived mean differences in the physical attractiveness ratings of the photographs as a function of the perceived age of the target stimuli and the subjects' feminist orientation. The perceived age of the target stimuli was measured by dividing each subject's responses to the 35 photographs into three parts; the eleven photographs that were the perceived youngest, the eleven photographs that were the perceived middle, and the eleven perceived oldest.

Hypothesis four predicted that there would be a difference in the mean physical attractiveness ratings of the photographs as a function of the perceived age of the target stimuli. It was predicted that the young would be perceived as most attractive, the middle as less attractive, and the older as the least attractive. Hypothesis five predicted that there would be a difference in the mean ratings of physical attractiveness due to the subjects' feminist orientation. It was predicted that the non-traditional subjects would perceive the photographs as more attractive than the traditional subjects. Finally, Hypothesis six predicted that the non-traditional subjects would show less age-bias in their ratings of physical attractiveness than would the traditional subjects.

These three hypotheses were examined within an analysis of variance design with physical attractiveness ratings as the dependent variable. The independent variables were the age of the target stimuli(3) X

age of the subjects(3) X feminist orientation(2). The results of the analysis of variance are presented in Table III. There are two significant main effects and no significant interaction effects. The two main effects are the perceived age of the target stimuli (Factor C, $F = 94.021$, $p < .001$) and the feminist orientation of the subjects (Factor B, $F = 5.706$, $p < .05$). In Table IV are presented the means for the significant effects. There are three mean physical attractiveness ratings for the perceived age of the target stimuli: the perceived young, the perceived middle and the perceived older. Hypothesis four predicted that the perceived young would be rated as the most attractive, the perceived middle-aged as less attractive and the perceived older as the least attractive. Scheffe's S-method (Edwards, 1967) for comparisons between treatment means was used to compare the attractiveness ratings of the perceived young, middle-aged and older target stimuli. The results of the Scheffe test confirmed that the perceived young were seen as more attractive than the perceived middle target stimuli ($t' = 3.069$, $p = .01$, $t = 11.376$, $p < .01$, $df = 2, 267$). The perceived young were also seen as more attractive than the perceived older target stimuli ($t' = 3.069$, $p < .01$, $t = 12.352$, $p < .01$, $df = 2, 267$). However, the perceived middle group was not seen as more attractive than the perceived older group of target stimuli ($t' = 3.069$, $p < .01$, $t = 1.776$, n.s., $df = 2, 267$). Thus hypothesis four was only partially confirmed in that the perceived young were seen as more attractive than the perceived middle target stimuli; however, the perceived middle-aged and older groups were seen as equally less attractive than the perceived young.

Hypothesis five was confirmed in that there was a significant effect due to feminist orientation (Factor B, $F = 5.706$, $p .05$). The mean physical attractiveness ratings which are presented in Table IV show that the non-traditional subjects rated the photographs as more attractive than did the traditional subjects. Finally, hypothesis six was not confirmed in that there was not a significant interaction of feminist orientation(2) X perceived age of the target stimuli(3), (Factor BC, $F = 0.683$, n.s.).

The variable of the age of the subject was included in the analysis of variance design as a control measure. The results of the analysis of variance showed no differences between the age groups of young, middle-aged and older subjects.

Table III. Summary of the age of subject X feminist orientation X perceived age of target stimuli analysis of variance. The dependent variable is physical attractiveness ratings.

Source	DF	SS	MS	F
Between Ss				
Age of Subject (A)	2	0.370	0.185	0.171
Feminist Orientation (B)	1	6.153	6.153	5.706*
AB	2	1.573	1.573	1.459
Error	84	90.585	1.078	
Within Ss				
Perceived Age of Target Stimuli (C)	2	33.133	16.566	94.021***
AC	4	0.417	0.104	0.591
BC	2	0.214	0.120	0.683
ABC	4	0.339	0.085	0.481
Error	168	29.601	0.176	
Total	269	163.984	0.610	

* $p < .05$

** $p < .01$

*** $p < .001$

Table IV Mean values of physical attractiveness for the significant effects in the age of subject X feminist orientation X perceived age of target stimuli analysis of variance. ¹.

<u>Feminist Orientation (B)</u>			
	Traditional Ss		Non-traditional Ss
\bar{X}	3.898		4.200
s.d.	0.517		0.573

<u>Perceived Age of Target Stimuli (C)</u>			
	Perceived Young	Perceived Middle	Perceived Older
\bar{X}	4.544	3.833	3.772
s.d.	0.613	0.624	0.639

1. These means represent averages based on a one to seven rating scale.

Perceived differences in likeability

The next three hypotheses are concerned with the perceived mean differences in the likeability ratings of the photographs as a function of the perceived age of the target stimuli and the subjects' feminist orientation. The perceived age of the target stimuli was measured by dividing each subject's responses to the 35 photographs into three parts: the eleven photographs that were the perceived youngest, the eleven photographs that were the perceived middle, and the eleven photographs of the perceived oldest.

Hypothesis seven predicted that there would be a difference in the mean likeability ratings of the photographs as a function of the perceived age of the target stimuli. It was predicted that the young would be perceived as most likeable, the middle-aged as less likeable and the older as the least likeable. Hypothesis eight predicted that there would be a difference in the mean ratings of likeability due to feminist orientation. It was expected that the non-traditional subjects would perceive the photographs as more likeable than the traditional subjects. Finally, hypothesis nine predicted that the non-traditional subjects would show less age-bias in their ratings of likeability than would the traditional subjects.

These three hypotheses were examined within an analysis of variance design with likeability ratings as the dependent variable. The independent variables were the age of the target stimuli(3) X age of the subjects(3) X feminist orientation (2). The results of this

analysis of variance are presented in Table V . There are two significant main effects and one significant interaction effect. The two main effects are the perceived age of the target stimuli (Factor C, $F = 23.357$, $p < .001$) and the feminist orientation of the subjects (Factor B, $F = 3.976$, $p < .05$). The significant interaction effect is age of subject X feminist orientation (Factor AB, $F = 6.019$, $p < .01$). The means for the significant effects are presented in Table VI. There are three mean likeability ratings for the perceived age of the target stimuli: the perceived young, the perceived middle-aged and the perceived older. Hypothesis seven predicted that the perceived young would be rated as the most likeable, and perceived middle as less likeable and the perceived older as the least likeable. The results of a Scheffe test using the S-method (Edward, 1967) confirm that the perceived young were seen as more likeable than the perceived middle group of target stimuli ($t' = 3.069$, $p < .01$, $t = 6.737$, $p < .01$, $df = 2, 267$). The perceived young were also seen as more likeable than the perceived older ($t' = 3.069$, $p < .01$, $t = 4.401$, $p < .01$, $df = 2, 267$). However, the perceived middle group was not seen as more likeable than the perceived older group. Instead, the middle group was seen as less likeable than the older group, although the difference between the means did not quite reach significance ($t' = 2.466$, $p < .05$, $t = 2.335$, n.s., $df = 2, 267$). Thus hypothesis seven was only partially confirmed. The perceived young were seen as most likeable, and the perceived middle-aged and older target stimuli were seen as less likeable. There was a trend which did not reach significance for the older group to be seen as more likeable than the middle group. This is opposite from what was predicted in hypothesis seven.

Hypothesis eight was confirmed in that there was a significant effect due to feminist orientation (Factor B, $F = 3.976$, $p = .05$, $df = 1,84$); however, there was a significant interaction effect between age of subject and feminist orientation (Factor AB, $F = 6.019$, $p = .01$, $df = 2, 84$). The mean likeability ratings for the interaction effect of age of subjects X feminist orientation are presented in Table VI. Z tests were used to test the difference between traditional and non-traditional subjects from each of the three age groups of young, middle-aged and older subjects. The results of the z tests showed that for the young subjects, the traditional and non-traditional subjects did not differ in their mean ratings of likeability of the target stimuli ($z = 0.94$, n.s., $df = 43$). For the middle group of subjects, the non-traditional subjects perceived the target stimuli as more likeable than did the traditional subjects ($z = 5.616$, $p = .01$, $df = 44$). Likewise, for the older group of subjects, the non-traditional subjects perceived the target stimuli as more likeable than did the traditional subjects ($z = 2.108$, $p = .01$, $df = 44$).

Finally, hypothesis nine was not confirmed in that there was not a significant interaction between feminist orientation X perceived age of the target stimuli (Factor BC, $F = 1.314$, n.s.).

The variable of the age of the subject was included in the analysis of variance design as a control measure. The results of the analysis of variance did show that there was a significant interaction effect (Factor AB) of feminist orientation and the age of the subjects on the likeability ratings.

Table V . Summary of the age of subject X feminist orientation X perceived age of target stimuli analysis of variance. -
The dependent variable is likeability ratings.

Source	DF	SS	MS	F
Between Ss				
Age of Subject (A)	2	0.498	0.249	0.295
Feminist Orientation (B)	1	3.360	3.360	3.976*
AB	2	10.174	5.087	6.019**
Error	84	70.997	0.845	
Within Ss				
Perceived Age of Target Stimuli (C)	2	9.403	4.702	23.357***
AC	4	0.473	0.118	0.587
BC	2	0.529	0.264	1.314
ABC	4	0.997	0.249	1.239
Error	168	33.818	0.201	
Total	269	130.248	0.484	

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

Table VI. Mean values of likeability for the significant effects in the age of subject X feminist orientation X perceived age of target stimuli analysis of variance.

<u>Feminist Orientation (B)</u>			
	Traditional Ss		Non-traditional Ss
\bar{X}	4.345		4.569
s.d.	0.519		0.503

<u>Perceived Age of Target Stimuli (C)</u>			
	Perceived Young	Perceived Middle	Perceived Older
\bar{X}	4.705	4.255	4.411
s.d.	0.477	0.573	0.484

<u>Age of Subject X Feminist Orientation (AB)</u>		
	Traditional Ss	Non-traditional Ss
Young Ss		
\bar{X}	4.379	4.278
s.d.	0.656	0.297
Middle Ss		
\bar{X}	4.156	4.858
s.d.	0.414	0.731
Older Ss		
\bar{X}	4.355	4.570
s.d.	0.487	0.480

Summary of Results

First, simple correlations were used to examine the interrelation of the studied variables for individual subjects. As predicted, a significant proportion of the subjects perceived a significant correlation between each pair of variables: physical attractiveness and perceived age, physical attractiveness and likeability, and likeability and perceived age. Looking at the mean values of the correlations for the sample as a whole, it was found that the sample perceived a low negative correlation between physical attractiveness and perceived age. This confirmed the prediction that perceived age-differences in physical attractiveness would reflect a decline in attractiveness with age.

The mean value for the sample correlations between physical attractiveness and likeability was a moderate positive correlation. This result was expected due to the close association of physical attractiveness and likeability in the physical attractiveness stereotype. Also, both of these traits were rated from a photograph, and this may account for part of the correlation between them.

The mean value for the sample correlation between likeability and perceived age was slightly negative, but still significant. Again, this result was expected as a function of the physical attractiveness stereotype, in that, if women are seen as less attractive with age, they will also be seen as less likeable.

The next section of the results dealt with the perceived mean differences in physical attractiveness and likeability as a function of the subjects' age and feminist orientation and the perceived age of the target stimuli. An analysis of variance design was used to look

at the inter-relation of the variables. This contrasts with the first section which focused on the correlational data of individual subjects. However, there is the assumption made in a correlational analysis that the relation between two variables is linear. This means that there is an assumption that the correlation between perceived age and the other two variables of physical attractiveness and likeability is linear. Because this assumption may not be true, an analysis of variance design was used in which this linear assumption was not made. This made it possible to look more closely at the relation between perceived age and the other two variables.

The results of the analysis of variance showed that indeed the linear assumption did not hold true. With physical attractiveness, the results showed that the young were seen as most attractive; however, there was no significant difference in the perceived physical attractiveness of the middle-aged and older groups. Similarly, with likeability, the results showed that the young were seen as most likeable, while there was no significant difference in the likeability ratings of the middle-aged and older groups. However, there was a trend which approached significance and indicated that the older group was rated more likeable than the middle group. This is a surprising tendency, and is opposite from what was predicted. Thus, it was the middle-aged women who were rated least favorably, and not the older women, as expected.

The results also showed that the non-traditional subjects rated the target stimuli more favorably than did the traditional subjects. With physical attractiveness, the non-traditional subjects perceived the photographs as more attractive than did the traditional subjects.

With likeability, it was mostly the middle-aged non-traditional subjects who rated the photographs more favorably than the middle-aged traditional subjects. It is difficult to interpret this interaction effect. It may indicate that the middle-aged women who are non-traditional, have been more influenced by the women's movement in their attitudes toward the likeability of other women. However, an alternative explanation concerns the test item that was used as a basis for selection of traditional and non-traditional women. The item was worded as follows: "I would really prefer that women play a more traditional role, and take care of the home and children." It may be the case that this item worked better as an indicator of traditional and non-traditional attitudes in the middle group than the other two age groups. The young subjects, for the most part, were not yet involved with home and children; while the older women had mostly retired from this role. As a result, the test item perhaps was geared more toward the middle group of subjects. This reflects a common methodological problem in adult developmental studies, in that it is often difficult to find measures that are salient to different age groups.

CHAPTER V

Discussion

The present study was concerned with whether individual women show age-biased perceptions of other women, specifically in their evaluation of physical attractiveness and likeability. The results of the study indicate that women do hold negative age-biases, in that the middle and older women were seen as less attractive and less likeable than the young women. Also of interest was whether the subjects' own age and feminist orientation influenced their evaluation of other women. It was of interest to look at the effect of the subjects' own age, because if middle and older women hold negative age-biases, then they would be evaluating their own age groups unfavorably. The results indicate that this is what happens. Young, middle and older subjects showed very similar age-biases in their evaluation of physical attractiveness and likeability. Finally, the effect of feminist orientation was examined. The results showed that feminist orientation had no effect on the perception of age-biases, in that traditional and non-traditional subjects showed similar responses. However, the non-traditional subjects did show more favorable attitudes toward other women, in that they perceived the photographs as more attractive and likeable than did the traditional subjects.

These findings will be discussed further in the following three sections concerning age-biased perceptions, the significance of the subjects' own age, and feminist orientation.

Age-biased perceptions

Here, an age-biased perception refers to the evaluation of certain traits on an age-related standard, such that the variable of age is seen as a negative variable. In contrast to this, a non-biased response would be unrelated to age. In the present study, a non-biased response would find the the young, middle and older women to be equally attractive and likeable.

If this definition of age-bias is accepted, then the results indicate that, for the most part, the sample of subjects showed negative age-biases in their evaluation of physical attractiveness and likeability in other women. The bias was directed toward the middle and older women, in that these two groups were seen as equally less likeable and less attractive than the young women.

It is interesting to note that the age-bias in the subjects' responses is not directly related to age in that there was not a linear relationship between physical attractiveness or likeability and perceived age. Instead, the sample as a whole rated the young most favorably and the middle and older groups as equally less attractive and likeable. There was no distinction made between the middle and older groups. This was an unexpected finding, since a direct linear relationship was originally hypothesized.

There are many possible interpretations for this finding, but it seems that a plausible explanation is that in this culture, physical attractiveness and youth go hand in hand. Thus, it was not

surprising to find that the young women were seen as more attractive than the middle and older women. When a woman is no longer young, then she is seen as less attractive. It appears that for women, this drop in perceived attractiveness happens only once. That "once" is when women make the transition from a young woman to a middle-aged woman. It is true that a woman's appearance continues to change in the transition to old age, however, there does not appear to be another drop in perceived physical attractiveness. This is the major finding of the present study and was completely unexpected. It appears to be the case that the middle-aged woman carries a greater burden than the older woman. As far as physical attractiveness is concerned, there is no in-between stage between youth and old age. Once a woman reaches middle-age, she loses all that she is going to lose. It is no wonder that Nowak (1974) found that middle-aged women feared a "haglike" transformation into old age. According to the results in the present study, it is only the middle group of women whose scores on physical attractiveness represent a definite drop in perceived physical attractiveness.

The age-biases in perceived likeability follow a similar pattern, with the young perceived as most likeable and the middle and older perceived as equally less likeable. There are two interpretations offered here for this finding. First, it may be the case that physical attractiveness and likeability are tied variables, and that the subjects are rating only one characteristic. Thus, the subjects

would show no distinction in their evaluation of attractiveness and likeability. This interpretation is based on the fact that both attractiveness and likeability were rated from appearance of women in photographs. Only if there is a distinction in the subjects' response to attractiveness and likeability, could it be shown that these two were not tied. Unfortunately, this cannot be determined within the present design of the study. A weak point in the design of the study is that the assumption was made that photographs could be used to rate both attractiveness and likeability. The design included no proposed method of examining whether the subjects were making a distinction between these two characteristics. In fact, one subject stated, " But you can't rate likeability from a picture." As a result, the findings in the study on the relation between likeability and perceived age are brought under question until the issue of the tied variable is examined further. It seems more plausible that the results concerning the relation between physical attractiveness and perceived age are more accurately measured within the present design of the study.

A second interpretation concerning perceived likeability is that the physical attractiveness stereotype is operating. According to this stereotype, physically attractive people also have other socially desirable traits such as likeability. If this is the case, then perceived likeability would follow a similar pattern as did physical attractiveness. Thus if middle and older women are seen as less attractive, then they are also seen as less likeable. Again, it is the middle-aged group of women who appear to fare worse than the other two groups. Upon close inspection of the results,

it can be seen that there was a tendency, although it was not statistically significant, for the mean perceived likeability score for the perceived older women to be higher than the mean score for the middle-aged women. This indicates that the physical attractiveness stereotype may not have as great an influence on the perception of older women as it does on the perception of middle-aged women. Thus, it is more probable that an older woman would be seen as likeable in spite of a low score on physical attractiveness.

Finally, a third interpretation is that the findings on perceived likeability reflect a reality, that is, that young women are actually more likeable than middle-aged or older women. However, this interpretation violates one of the basic assumptions made in the study, that any perceived age-difference in physical attractiveness or likeability is an age-bias. Thus, it is assumed that there is no reason to believe that one age group would be more or less likeable than any other age group. It is also assumed that there is no reason to believe that one age group would be more or less attractive than any other age group; however this is a more complex assumption involving aesthetics and the problem that beauty and attractiveness may well be in the "eye of the beholder."

What the results do seem to indicate is that the middle-aged women seem to fare worse than the older women. Perhaps this is because a different standard is used for the two groups. It may be case that middle-aged women are expected to look youthful; whereas older women are not expected to look youthful. Thus, the middle-aged women would be more likely to be perceived as falling short of expectations.

The significance of the subjects' own age

It was of interest in the present study to see whether the perception of aging, or more specifically, the perception of age-differences in physical attractiveness and likeability, would be influenced by the subjects' own age. Previous research has found little or no indication of differences in the perception of traits over an age span due to the subjects' own age (Iliffe, 1960; Cross and Cross, 1971; Nardi, 1971). It was of special interest to determine whether this would also hold true in the present study. As stated earlier, if there are negative age-biases, and if young, middle and older women perceive these biases similarly, then it follows that middle and older women would hold negative biases toward their own age group.

The results of the present study confirm the previous research on the perception of age-differences, in that all three groups of subjects had similar perceptions of age-differences. The different age groups responded similarly, perhaps because the different age groups hold similar cultural stereotypes of what physical attractiveness is. This is important, because it appears that the middle-aged and older groups of subjects have essentially bought this cultural stereotype that their own age groups are less attractive and possibly less likeable than young people. Accepting these negative attitudes toward their own age group may well have an effect on their own self-concept.

The results of the present study found no age-differences in the responses of the subjects. Thus there was no indication that there are generational differences or developmental differences in the way that age-related differences in attractiveness and likeability are perceived. This contrasts with the findings of Nowak (1975) who reports that in a comparison of different age groups of subjects, the mid-life women perceived a higher correlation between the perceived attributes of youthfulness and attractiveness than did the younger or older women. Nowak states that during mid-life, women tend to differentiate the concepts of attractiveness and youthfulness less.

While both the present study and Nowak's investigation are concerned with the appearance of aging, the two studies address different questions. In the present study, correlations were computed for the subjects' response to the appearance of aging over a span of ages. In contrast, Nowak examined the perceived correlation between attractiveness and youthfulness for a target group of photographed persons of the same age, or close to the same age. For the measure of youthfulness, subjects were asked to rate the target person on how youthful they were in comparison with other people of the same age. Thus, the measure of youthfulness was independent of the target person's actual or perceived age.

The findings of the two studies are not necessarily inconsistent. In the present study, there were no age-differences among

subjects in the perceived inter-correlation of physical attractiveness, likeability and perceived age. However, when looking at the correlation of attractiveness and youthfulness, Nowak found that mid-life women showed less differentiation of these concepts than did the younger or older women. The crucial difference between the two studies is that the measure of youthfulness used by Nowak was independent of perceived chronological age, which was the measure used in the present investigation.

A possible interpretation of how these two different findings are related is as follows. It appears from the results of the present study, that different age groups of women have similar age-biases in their evaluation of other women. It seems that the age-biases in attractiveness and likeability carry the most negative message for middle-aged women. It is only at mid-life, and not at old age, that there is a perceived drop in attractiveness and likeability. It follows that a woman who has made the transition to mid-life, would think of youthfulness and attractiveness as almost synonymous. She has just experienced losing both at the same time. She is no longer a young woman, and she is seen as less attractive than young women.

The significance of feminist orientation

Before discussing the major findings concerning feminist orientation, the problems involved in using one key item to measure feminist orientation will be discussed. Although it was time-saving to use just one item to measure feminist orientation, it appears now that this advantage was out-weighed by the disadvantages. If a standardized measure of feminist orientation had been used, then it would be possible to examine the results of the present study with greater confidence. However, with this in mind, the following interpretations will be considered as tentative and in need of further research for clarification.

There was no indication in the results that feminist orientation influenced the age-related perceptions of the subjects. Both traditional and non-traditional subjects perceived similar relationships between the variables of physical attractiveness, likeability and perceived age. It appears to be the case that the feminist movement had not had an effect on the age-biases that women hold in their evaluation of other women. However, the results did show that non-traditional women have more favorable attitudes toward other women than do traditional women. While the feminist movement has influenced general perceptions of women, it has not yet influenced age-related perceptions. This is probably due to the fact that until recently, the feminist movement was composed predominantly of younger women, who were interested mainly in the issues of young women.

It is interesting to note that the more favorable attitudes of the non-traditional subjects concerning perceived likeability was due to the response of the middle group of subjects. This refers

to the significant interaction effect of feminist orientation and the subjects' own age. Thus, it was the middle group of subjects who were different from the other two groups, as far as the effect of feminist orientation is concerned. Looking more closely at the item used to assess feminist orientation, it may be the case that the middle group of women were more sensitive to this item than the other two groups. The item referred to the woman's role of taking care of the home and children. Perhaps the middle-aged subjects, more so than the young or older subjects, had to choose between a career and a homemaker role. This is different from the choices that young women have today, since women today are freer to choose both roles. It is also different from the choices of older women, in that there was less conflict over choosing the homemaker role in their youth. Also, many older women are essentially retired from their homemaker role, and may have returned to work.

What may have happened in the present study is that the test item used to assess feminist orientation was more meaningful for the middle subjects. Perhaps a different measure should be used with the young subjects and the older subjects. If this interpretation is accurate, then this is an interesting finding in itself. It indicates that the feminist movement possibly has a different meaning to different age groups. This is not so much a developmental difference as a generational effect. The young subjects have been exposed to the women's movement during their adolescence and youth, before they had to make decisions about choosing a traditional or non-traditional role. On the other hand, the middle subjects had made such decisions

and lived with them for many years, before the current feminist movement began to question the roles of women. Thus the middle-aged women have much at stake when the issue of traditional and non-traditional roles is raised. Finally, the older women are somewhat removed from this issue, since it refers to a past decision that they may be retired from at present.

Appendix A

Educational Distribution of the Sample

<u>Education</u>	Young Subjects	Middle Subjects	Older Subjects
8th grade or less			
High school graduate	50%	32%	62%
High school, plus	42%	24%	31%
College graduate	8%	39%	7%
Graduate or pro- fessional degree		5%	

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