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LEWIS, JANE BROWN. An Analysis of the Feminine Image and Various Sport Images of Competitive College Women Swimmers. (1974)
Directed by: Dr. Rosemary McGee. Pp. 97.

The purpose of this descriptive study was to assess the images of a sample of competitive college women swimmers. Images of the feminine girl and the competitive female swimmer, tennis player, and basketball player were identified and analyzed as to their similarities and differences.

The subjects were thirty-one competitive women swimmers attending universities in North Carolina during the 1972-73 academic year. The universities eligible for this research were ones which had current membership in the NCAIAW and had varsity teams established for at least two years. The participating universities included Appalachian State University, East Carolina University, the University of North Carolina at Chapel Hill, and the University of North Carolina at Greensboro. Semantic differential scales developed by Ruth E. Brown were administered by the coaches to their swimming teams. The data were analyzed by statistical methods described by Osgood.

The following conclusions were made in reference to the members of the swimming teams who served as subjects:

1. The feminine image was perceived to be quite affectionate, graceful, attractive, and emotional. She was seen to be quite polite and soft, and slightly deep and intelligent. The bipolar terms uncertain-definite, passive-active, weak-strong, and hesitant-aggressive were neutral.

2. The competitive female swimmer image was perceived to be quite affectionate, graceful, and attractive and slightly emotional, deep, and loud. She was seen to be quite polite, definite, intelligent, strong, and aggressive and extremely active.
3. The competitive female tennis player image was perceived to be quite graceful, polite, and definite and slightly affectionate, attractive, and emotional. She was seen to be slightly deep and intelligent, quite strong and aggressive, and extremely active. The bipolar term soft-loud was neutral.
4. The competitive female basketball player image was perceived as slightly graceful, emotional, polite, deep, intelligent, and loud. She was seen to be quite definite, active, strong, and aggressive. The bipolar terms cold-affectionate and unattractive-attractive were neutral.
5. The feminine and competitive female swimmer images ranked number one and two, respectively, on the evaluative factor.
6. The feminine image was closest in meaning to the competitive female tennis player image.
7. The feminine image was farthest in meaning from the competitive female basketball player image.
8. The images of the competitive female swimmer and tennis player followed an almost parallel pattern across the three dimensions and were the closest sport images in meaning. The competitive female basketball player image was closer in meaning to the competitive female tennis player image than to the competitive female swimmer image.

APPROVAL SHEET

This thesis has been approved by the following committee of the Faculty of the Graduate School at The University of North Carolina at Greensboro.

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April 12, 1974
Date of Examination

ACKNOWLEDGMENTS

The writer wishes to express her appreciation to the coaches who administered the semantic differential and to the women swimmers who served as subjects.

Appreciation is extended also to Dr. Pearl Berlin for her assistance in understanding specific statistical procedures and in obtaining certain references.

Deepest appreciation and gratitude are extended to Dr. Rosemary McGee, thesis adviser, for her guidance, patience, and interest in the compilation of this research.

TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION.	1
Statement of the Problem.	2
Definition of Terms	3
Assumptions Underlying the Research.	4
Scope	4
Significance of the Study	5
II. REVIEW OF LITERATURE.	6
The Feminine Image.	6
Women in Sports	11
Comparison of Feminine Image to Women in Sports.	14
Rankings of Acceptable Sports for Women.	16
The Personality of Athletes	18
III. PROCEDURE	22
Selection of Subjects	23
Selection of Measuring Instrument.	24
Organization and Administration of Testing Procedures	29
Data Analysis	30
IV. DATA ANALYSIS	33
Information about Swimmers and Teams	33
Analysis of the Eight Questions	36
V. SUMMARY AND CONCLUSIONS	62
Summary	62
Conclusions	71
BIBLIOGRAPHY.	73
APPENDIX.	79

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LIST OF TABLES

TABLE	PAGE
I. Scale Means for Four Images	37
II. Factor Scores Matrix of Four Images	38
III. Rank Order of Four Images for Three Factors	49
IV. D Matrix.	52
V. Raw Data--"A Girl Who Is Feminine"	94
VI. Raw Data--"A Girl Who Is on the School's Girls' Swimming Team".	95
VII. Raw Data--"A Girl Who Is on the School's Girls' Tennis Team".	96
VIII. Raw Data--"A Girl Who Is on the School's Girls' Basketball Team".	97

LIST OF FIGURES

FIGURE	PAGE
1. Assigned Values for Interpretation of Scale Means	35
2. Profile of Scale Means for "A Girl Who Is Feminine"	40
3. Profile of Scale Means for "A Girl Who Is on the School's Girls' Swimming Team"	42
4. Profile of Scale Means for "A Girl Who Is on the School's Girls' Tennis Team"	44
5. Profile of Scale Means for "A Girl Who Is on the School's Girls' Basketball Team"	46
6. Profile of Scale Means for Four Images	48
7. Comparison of Factor Means of Feminine Girl and Swimmer Images.	51
8. D Model of Four Images	53
9. Comparison of Factor Means of Feminine Girl and Tennis Player Images.	55
10. Comparison of Factor Means of Feminine Girl and Basketball Player Images.	58
11. Comparison of Factor Means of Three Sport Images	60

LIST OF APPENDICES

APPENDIX	PAGE
A	79
Letter to Coach	80
Response Card for Coach	81
B	82
Cover Sheet	83
Semantic Differential	84
Directions to Coach	87
Instructions to the Team.	88
General Information Sheet	89
C	90
Order in Which Concepts Were Administered to Swimmers	91
D	92
Scale Abbreviations	93
Raw Data	94

CHAPTER I

INTRODUCTION

'Femininity.' Does it have to do with the way a woman looks, the way she behaves, her goals and ambitions, the way she walks or talks, a certain style? Does feminine mean pretty? If so, most of the women in the world are not feminine-at least by movie star and fashion magazine standards. Does it mean quiet and unassuming and subservient? If so, most women with any intelligence or ambition are ruled out-and anyone who never opens her mouth qualifies!

Is physical weakness feminine? Does it require that one never engage in active sports-are girls or women who play football or field hockey unfeminine? Or would they be more 'feminine' if they engaged in acceptable sports like tennis and skiing? And what makes them acceptable? What makes a sport 'masculine' or 'feminine'? (34:173)

The image of the feminine girl and its comparison to the images of women competitors in various sports was pursued in this study. With the increased opportunity to participate in different sports which many women are beginning to experience, it is important to understand how the girl and woman sports competitors are perceived. Through this knowledge, the physical educator and coach should be more competent in helping students understand themselves as a feminine girl and a sports competitor.

STATEMENT OF THE PROBLEM

The purpose of this descriptive study was to assess the images of a sample of competitive college women swimmers. Images of the feminine girl and the competitive female swimmer, tennis player, and basketball player were identified and analyzed as to their similarities and differences. The following questions were investigated:

1. How do competitive college women swimmers view the feminine girl?
2. How do competitive college women swimmers view the competitive female swimmer?
3. How do competitive college women swimmers view the competitive female tennis player?
4. How do competitive college women swimmers view the competitive female basketball player?
5. How do competitive college women swimmers compare the feminine image with the competitive swimmer image?
6. How do competitive college women swimmers compare the feminine image with the competitive tennis player image?
7. How do competitive college women swimmers compare the feminine image with the competitive basketball player image?
8. How do the images of the competitive college women swimmer, tennis player, and basketball player compare with each other?

DEFINITION OF TERMS

Terms Relevant to the Images Measured

- A. Attitudes.--". . . implicit processes having reciprocally antagonistic properties and varying in intensity." (45:190)
- B. Competitive Basketball Player.--an individual who has played basketball on a varsity level.
- C. Competitive Sport.--a sport that is played on the varsity level.
- D. Competitive Swimmer.--an individual who has swum on a varsity level.
- E. Competitive Tennis Player.--an individual who has played tennis on a varsity level.

Terms Relevant to the Semantic Differential

- F. Activity Factor.--a factor ". . . concerned with quickness, excitement, warmth, agitation and the like." (45:73)
- G. Evaluative Factor.--a factor based ". . . on the bedrock of rewards and punishments both achieved and anticipated . . ." (45:72)
- H. Factor Analysis.--a method of testing the dimensionality of the items or scales in a semantic differential.
- I. Intensity.--the distance the score lies from the origin (neutrality).
- J. Polar Adjectives.--a pair of adjectives that are opposite in meaning.
- K. Potency Factor.--a factor ". . . concerned with power and the things associated with it, size, weight, toughness, and the like." (45:72, 73)
- L. Profile Image.--a graph of the scale responses for a concept.
- M. Semantic Differential.--". . . a combination of controlled association and scaling procedures." (45:20)

- N. Semantic Differential Scale.--an equally divided distance (7 parts) between two polar adjectives.
- O. Semantic Space.--". . . a region of some unknown dimensionality and Euclidian in character." (45:25)

ASSUMPTIONS UNDERLYING THE RESEARCH

The following assumptions were made for the purpose of this study:

- A. The semantic differential is a reliable, valid, objective, and sensitive instrument for attitude measurement.
- B. Brown's scales (6) compose a reliable, valid, and objective form of the semantic differential.
- C. The images being measured are independent of each other.
- D. Competitive college women swimmers have perceptions of the images being measured.
- E. Subjects can read the directions for the selected instrument and can properly record their responses.
- F. Subjects will respond honestly to the measuring instrument.

SCOPE

The boundaries of this research are established by the following points:

- A. Only universities with current membership in the North Carolina Association of Intercollegiate Athletics for Women which have had competitive women swimming teams for at least two years were included in the study.
- B. Brown's semantic differential scale (6) was used to study the

selected images of the feminine girl and the competitive female swimmer, tennis player, and basketball player.

SIGNIFICANCE OF THE STUDY

The perceptions of female athletes regarding their dual roles as women and sports competitors have received minimal attention in research. Until recently, studies in this area reported on the personalities of athletes involved in different activities. With today's emphasis on the changing feminine role in society and with the increase in leisure time enjoyed by most people, it is recognized that more needs to be known about how female athletes perceive the feminine girl and her role in athletics. This investigation should contribute to a greater understanding of this phenomenon. Additional knowledge of these redefined roles should help the athlete understand herself more fully as a feminine girl and as a competitor.

CHAPTER II

REVIEW OF LITERATURE

To facilitate the review of literature pertinent to the question under investigation, the following outline was established:

1. The Feminine Image
2. Women in Sports
3. Comparison of Feminine Image to Women in Sports
4. Rankings of Acceptable Sports for Women
5. The Personality of Athletes

THE FEMININE IMAGE

The feminine image is a concept produced by biology and the socio-cultural conditions of the times. (16) Traditionally, the female has been identified as her mate's companion, her children's guardian, and the family's homemaker. The theory that biology determined women's destiny has been perpetrated by magazines, commercials, psychologists, and educators. (19)

Studies have shown that sex roles are not as dependent on biology as they are on the culture (15, 16, 19), and conceptions of the sex roles change as the culture changes. (34)

To put it another way, femininity in any era is a whole cluster or set of roles which a woman plays toward the people around her; but some of these are biological roles and hence not changeable, while others are social roles and hence are subject to great variations. (16:262)

Mead (42) illustrated that characteristic female behavior in one society

might be considered male behavior in another. In Iatmul ornaments adorn the bodies of children and women, but in Tchambuli they are worn by the children and men. In Samoa work is based on status and age instead of sex. In America the pioneer woman had to be strong enough to help clear the land and cultivate the garden. (16) As American history has evolved, the views of the feminine image have changed.

Views of the Feminine Image

A study relating the college woman's self-concept, her view of the ideal woman, and her belief about men's perception of the ideal woman was conducted by Steinmann, Levi, and Fox. (60) The subjects' self-image was found to be closely balanced between active and passive characteristics, while the ideal woman was seen as more active. Men's opinion of the ideal woman was to view her as a very passive person who regards family duties as more important than personal success.

Steinmann and Fox's study (59) using subjects of both sexes produced similar results. However, a disparity between men's perception of the ideal woman and what women believed that image to be was recorded. The women believed men's ideal woman to be the traditionally passive, family-first image, but the description by men was a fairly balanced one between self-achieving and other-achieving. A contradiction was indicated in the men's attitudes. Despite their depiction of the ideal woman as being fairly equally balanced between the two factors, men often kept women from pursuing personal desires. Their reasoning was based on their view of family responsibilities. A comparison of women's self-concept and the ideal woman described by men was not significantly different.

These results were reinforced when Steinmann (58) tested a group of parents and their daughters. Daughters and their mothers agreed quite closely that the feminine role is fairly balanced between self- and other-oriented characteristics. Both mothers and daughters thought that men would view the ideal woman as much more traditional than was actually the case. Men viewed the ideal woman as having both family and self-achieving elements but tending towards the family side. Steinmann concluded that communication was lacking between men and women about the feminine role.

In Brown's study (6), of the concepts ranked, the feminine image was first in the evaluative factor, second in the potency factor, and last in the activity factor. The feminine image was perceived as emotional, attractive, intelligent, and graceful but not very strong and aggressive. A study by Griffin (23) produced a similar image of the ideal woman. Clinicians' views were researched about characteristics of a healthy adult, healthy man, and healthy woman. (4) Results indicated the similarity between the image of good health for the adult and the man, whereas there was a significant difference in the comparison between the adult and the woman.

. . . clinicians are more likely to suggest that healthy women differ from healthy men by being more submissive, less independent, less adventurous, more easily influenced, less aggressive, less competitive, more excitable in minor crises, having their feelings more easily hurt, being more emotional, more conceited about their appearance, less objective, and disliking math and science. This constellation seems a most unusual way of describing any mature, healthy individual. (4:4, 5)

If a woman exhibits characteristics of the healthy adult, she is in conflict with her image as a female. With such characteristics

describing a healthy female, the following negative definition of feminine is consistent: ". . . submissive, a nonparticipant, an under-achiever, a person who lacks a strong sense of self-identity, who has weak life goals and ambitions." (21:97)

The feminine image may be changing in regard to strength as evidenced by Reece. (48) Male and female undergraduate students were researched to find the most pertinent dimensions of the masculinity and femininity concepts. The image of typical femininity produced a dominant social behavior dimension and a secondary potency factor. Ideal femininity produced a reverse in the positioning of the two dominant factors for typical femininity. The potency factor became the main dimension followed by social behavior. It appeared that both male and female subjects would like to see females stronger. "Thus, it may be inferred that the ideal female is not regarded here as a powerfully built Amazon. The image that emerges is of a very vigorous, industrious, but delicate and graceful figure." (48:138) It should be noted that both typical and ideal masculinity had potency as the first dimension and social behavior second. Masculine and feminine ideal images were viewed as strong but the male image was stronger.

The concepts of masculinity and femininity were studied by Jenkin and Vroegh (29) to determine if they are opposite in meaning. The results supported the theory that the two concepts are more complimentary than competitive. The most masculine and feminine imagined concepts were shown to be more homogeneous than heterogeneous. Many characteristics common to both concepts were ones of a social nature.

Women's Preference for Men's Role

Rosenberg and Sutton-Smith (50) measured game preferences for both sexes from grade one through six. Girls showed an increased preference for boys' items over girls' items. The authors concluded that this preference demonstrated a growth in the perception of the feminine role. Brown's results (5) were similar in that girls from preschool age through fourth grade showed less preference for the traditional feminine roles than did boys for the masculine role. In grades one through four girls preferred masculine things. At the college level McKee and Sherriffs (41) found that women preferred male characteristics more than men preferred female characteristics when force and strength terms were disregarded.

The trend towards females preferring male activities and characteristics may be due to the concept of male superiority as evidenced in several studies. McKee and Sherriffs (40) concluded that male and female undergraduates rate men more favorably than they rate women. Females are described by women with a greater number of negative adjectives than the number used by males. Another study (51) of college students compared their self-concept with their masculine and feminine images. Both sexes agreed masculine characteristics were more socially valued than feminine characteristics.

Women often tend to consider themselves inferior to men. (22) Wallin (64) revealed a sizable proportion of college women felt that if they demonstrated equal or superior knowledge to men in such areas as academic work or athletic competence they were penalized. As a result, they felt compelled to pretend they were inferior to men.

WOMEN IN SPORTS

Traditional Views

When women play in sport they risk a great deal. They dare to chance fundamentals. Woman's first risk with sport is that it still poses a threat to her femininity. Sport, and especially organized sport which is called athletics, is still primarily male oriented in our culture. In order to excel, the female sportswoman must possess 'male oriented' characteristics. She must be tenacious, brave, aggressive, daring, self assertive, hardy—all adjectives which usually describe masculinity. Female trait associations such as timidity, fastidiousness, aesthetic sensitivity, and compassion have less import for the sports world. Consequently, the young woman who dares to become an athlete must first of all risk her feminine image in a world that puts tremendous values on such an image. (62:3, 4)

Sports were designed for the male anatomy (17), and most are based primarily on endurance and strength, which has resulted in male domination. (63) Female athletic interest was considered incompatible with the feminine image (17), as women were supposed to be weak and fragile. (63) Many people thought sports participation would masculinize girls and give them bulging muscles. (3) Rogers expressed this traditionally negative view adequately:

Natural feminine health and attractiveness, whether physical, emotional or social, certainly are impaired if not destroyed by the belligerent attitudes and competitive spirit the development of which intense athletic activity inevitably fosters. (49:193)

Contemporary Views

A change is occurring in attitudes toward women in sports, but women athletes still are not valued as highly as male athletes. (27)

Women are participating in sports previously ruled by men. The New York Times has published articles on women who participate in the role of jockey, bullfighter, sports car racer, and soccer player. (20) Cheska (9) attributed some of the following reasons for the surge in girls' athletics: (1) acceptance of the body as a means of expression, (2) women's liberation in areas such as politics and economics, (3) increase of women's leisure time, and (4) emphasis on status in sports through mass media. Another reason for the surge is the change in women's fashions that permits freer movements. (53)

The concept of females being the weaker sex is being refuted. (54, 63) Women have longer life spans and are more resistant to illness than men. (54) Women are capable of developing more endurance and strength than once believed, and highly competitive women athletes demonstrate no adverse physiological effect from sport participation. (55) Mounting evidence reports a greater difference of endurance and strength within the sexes than between them. (63)

The large muscle idea has been deflated. No bulky muscles are likely to develop from athletic competition. However, extended participation in an activity such as ballet may develop muscles more than usual. (3)

As the amount of leisure time increases, women will turn to sports. (53) This view corresponds to the changes occurring in the institution of marriage. The husband respects the rights of the wife, and the wife is seeking outlets in clubs, sports, or careers. (46)

Studies show that the image of women in sport in our culture is unstable. Leyhe (37) surveyed women members of the American Association of Health.

Physical Education and Recreation to determine their attitude towards women's athletic competition. Athletic competition in individual sports was favored by most of the respondents; team sports competition received a much more negative reaction. Recreation workers were more favorable regarding intensive women's athletics than were physical educators.

McGee (39) studied the attitudes of school administrators, parents, teachers, and coaches towards high school girls' athletic competition. Results showed parents and coaches were more in favor of girls' athletic competition than the school administrators.

Harres (24) measured the desirability of athletic competition for women. The woman athlete tended to be accepted in society by peers of both sexes. The subjects' participation in sports elicited a more positive attitude than nonparticipation in sports. Although scores were in favor of athletics for women, they also indicated divergent opinions. It is apparent that the concept of girls' competition is being questioned from the following decision made by a judge on the Superior Court of Connecticut. (14) In his ruling against a girl being able to participate on the boys' varsity track team, he said that the kind of character competition molds in boys is not appropriate for girls.

Women's sports must be based on women's needs, values, and interests. Sports must help women maintain their femininity, not destroy it. (54)

What our society needs really is a whole new way of looking at athletics and it's not going to happen like that because there are a lot of problems. For instance, one of the commentators at the King-Riggs match said that Billie Jean strode across the court 'like a man' and yet they seemed surprised that she kissed her husband

at the end of the match. They really made a big deal about this. As if an athlete who was good couldn't be a woman, too. (31:C12)

COMPARISON OF FEMININE IMAGE TO WOMEN IN SPORTS

Feminine Image in Sports

Metheny (43) described three principles from which the socially accepted image for the American collegiate women athlete is derived:

1. It is inappropriate for women to participate in a competitive situation in which: (a) bodily contact is required to defeat the opponent, (b) direct bodily force is required to displace a heavy object, and (c) the body is thrust into space for prolonged time periods or over lengthy distances.

2. Women belonging to the lower socioeconomic class may participate in a competitive situation in which: (a) direct bodily force is required to displace an object of moderate weight and (b) the body is thrust into space for moderately short time periods or over conservative distances.

3. Women belonging to the fashionable socioeconomic class may participate in a competitive situation in which: (a) a light weight implement is required to displace a light object, (b) the body is thrust into space in aesthetic movements, (c) a mechanical device increases the movement and speed of the body, and (d) bodily contact is prevented in "face-to-face" competition by a barrier.

Clark and Lantis (10) supported Metheny's analysis. Sports which require a great deal of physical strength and endurance are contrary to the feminine image. However, sports which require only a moderate

amount of strength and endurance and emphasize aesthetic characteristics are more accepted. These implications of the feminine image may be related to interest in dancing, tennis, swimming, golf, and bowling.

Studies

In Brown's study (6), the feminine image was rated higher on the evaluative and potency factors than the images of sports women. On the activity factor all sports images were ranked above the feminine image. The general athlete held a middle ranking in the evaluative and potency factors and a slightly above average ranking in activity. No relationship was established between rankings in the evaluative and activity factor. The variables of grades, family sports habits, sports participation, age, spectator habits, and region had no affect on the subjects' perceptions.

Of all concepts tested by Griffin (23), the ideal woman was rated the highest on the evaluative scale, and the woman athlete was the lowest ranked. The woman athlete was perceived higher on the potency and activity dimensions than the ideal woman. The higher a concept was evaluated, the less active and potent it was considered to be. Also a concept that appeared potent was viewed as active. The woman athlete was perceived in a provisional manner. Except for two scales, the woman athlete received neutral scale means. Griffin suggested this was an indication of the changing attitude toward women's roles. Of the concepts tested, the ideal woman and the woman athlete were the farthest apart. A significant statistical difference occurred in the male and females' perceptions of women's roles. The woman athlete was perceived more positively by the men than the women. An inconsistency occurred in the attitude toward

women athletes and approval of sports for women. Griffin explained that there might be a connotative difference between a woman who participates in sports and a woman athlete. The woman who participates in sports may have a more relaxed, less involved meaning than the term "woman athlete" has. "Thus, the difference may be based on the degree of involvement. If this is true, perhaps almost any sport is perceived as acceptable for women and it is the degree of involvement which determines its acceptability." (23:160)

Landers (36) studied the masculinity-femininity ratings of women physical education majors and education majors. Physical education majors had a feminine score significantly lower than that of the education majors. However an arrangement of the test items into eleven categories resulted in a significant difference between the groups in only two categories--religious beliefs and discreet vs. boastful.

Timmermans (61) conducted a study of personality traits of women physical education majors and nonmajors. Only one significant difference was found between the groups. The general activity trait was higher for the physical education majors. The groups were closest on the traits of objectivity and friendliness. Results showed no indication that physical education majors are more extroverted or dominant than nonmajors.

RANKINGS OF ACCEPTABLE SPORTS FOR WOMEN

The acceptability of six sports for skilled women was measured by testing a sample of male physical education majors and nonmajors. (12) As a result of the study, the sports were ranked in the following descending order: (1) swimming, (2) tennis, (3) volleyball, (4) fencing,

(5) basketball, and (6) softball. The low ratings of basketball and softball imply that a stigma is still associated with women who engage in these two sports. Similar results were obtained in a study by Harres (24) in which students were asked to rank certain designated sports as to desirability for participation by women. For girls' athletics, swimming and tennis received the most favorable ratings and were followed by volleyball, track and field, softball, and basketball.

Hart (25) studied factors that influenced college women's concepts of acceptable feminine sports. Twenty-two events were judged by a sample of college coed subjects. Tennis and swimming were the only highly selected events for professional or competitive performance. Of the respondents, ninety percent recommended the following activities for recreation: tennis, swimming, badminton, horseback riding, bowling, ice skating, skiing, golf, diving, volleyball, basketball, softball, and archery. Little relationship was shown between a subject's previous experience and enjoyment of an activity and recommendation of the activity for competitive and professional performance.

In the present study, the respondents have indicated that they believe that a girl may develop high levels of skill in tennis, swimming, ice skating, diving, bowling, skiing, and golf without loss of social approval. It is noteworthy that none of these activities involve aggressive body contact and only one, tennis, involves direct interchange of force with an opponent. Four of them—swimming, diving, ice skating and skiing—are commonly associated with concepts of grace and beauty; and it may be noted that golf and tennis are associated with country clubs and social settings. (25:38)

Hart concluded that the subjects' recommendation of sport involvement was influenced by the feminine image. It was indicated also that the attitudes could be influenced by religious beliefs and economic classes.

Brown and Griffin (6, 23) attained similar rankings in their studies. In the evaluative factor of Brown's study, the tennis player and swimmer were the highest ranked sports concepts. These two concepts were followed by the basketball player, general athlete, and track player. In Griffin's study, the sports most appropriate for girls were tennis, swimming, gymnastics, bowling, and skiing. Team sports were conservatively appropriate; however, none of the sports researched was viewed as inappropriate for women.

THE PERSONALITY OF ATHLETES

Athletes in General

Cooper (11) described male athletes as more extroverted, aggressive, competitive and emotionally stable than non-athletes. Johnson, Hutton, and Johnson (32) described male athletes as very aggressive and anxious as well as self-confident, with uncontrollable emotions and intellectual pursuits.

In a study by Ogilvie and Tutko (44), 15,000 athletes were tested on personality factors. Women athletes were found to be more introverted, more creative and more independent than male athletes. The personalities of women competing in different sports were found to be more homogeneous than those of men participating in different sports. The following traits were descriptive of athletes:

1. They have great need for achievement and tend to set high but realistic goals for themselves and others.
2. They are highly organized, orderly, respectful of authority and dominant.
3. They have large capacity for trust, great psychological endurance, self-control, low-resting levels of anxiety and slightly greater ability to express aggression. (44:61)

Personalities of athletes were identified as having either a team sports orientation or an individual sports orientation. Individual sports athletes were found to demonstrate more healthy introversion. They were less friendly, more aggressive, and more creative than team sports athletes. The research indicated that a sports personality exists, but no evidence verified that sports produced that personality. Booth's study (2) of male college students indicated personality differences existed between athletes and non-athletes. Personality differences also existed between athletes who participated in team sports, those who participated in individual sports, and those who participated in both.

Ibrahim (28) compared the temperament traits of male and female intercollegiate athletes and physical education majors. The female subjects were divided into athletes, physical education majors, and dancers. In general activity, the dancers rated first; athletes, second; and majors, third. None of the groups rated high on social leadership or social passiveness. The dancers received the highest rating with respect to femininity, and they were followed by the majors and athletes, respectively. Inferiority feelings were felt most by the majors, followed by the dancers and athletes, respectively. Women athletes were the least nervous of the groups.

The influence of athletics on personality is not positive in all of the studies. Schendel (52) researched personalities of athletes and non-athletes at the junior high, senior high, and college levels. The junior and senior high athletes rated higher on socially desirable characteristics than did the non-athletes; however, the trend reversed itself at the college level.

Werner and Gottheil's study (65) of personality of cadets showed no effects of sports on personalities. After engaging in athletics for four years, students labeled as nonparticipants when they entered school did not change in personality any more than did the athletes. The non-participants also did not become more similar in personality to the athletes.

Athletes in Different Sports

Although few studies have been conducted on the personality of athletes in different sports, Lakie (35) researched personalities of athletes from four colleges. The athletes represented basketball, football, tennis-golf, track and wrestling. When athletes from all schools were combined under the various sports, no difference in personality was noted between groups. However, differences were evident between athletic groups at some of the individual schools.

A similar comparison of personalities of women golfers, bowlers, basketball players and field hockey players was made by Johnson. (30) Findings indicated the basketball players to be quite different than the other groups. "Generally, the image for members of the basketball group is of a self-centered, socially awkward, and intellectually and socially inhibited person." (30:415) In the personalities of male athletes studied by Flanagan (18), the basketball players were the most masculine group. Slusher (56) found high school basketball players to be different from other athletic groups and non-athletes. The basketball players appeared ego-centered and concerned with societal rules. In Brown's study (6) the basketball player was perceived as extremely aggressive and

active, fairly polite and intelligent, but not very attractive, graceful or emotional. In a study about swimmers and nonswimmers, Behrman (1) found swimmers to be more impetuous, hostile, gregarious, and aggressive than nonswimmers.

Personalities of women who compete in individual sports were compared with personalities of women who compete in team sports by Peterson, Weber, and Trousdale. (47) Results showed that individual sports athletes are more independent and introverted than team sports participants. Individual sports participants are self-confident and delight in attention, whereas team sports participants appear firm, reliable, realistic, and dependable. Similar results were reported by Malumphy. (38) The women individual sports athletes appeared less nervous, more extroverted and adventurous than the team sports athletes who appeared more reserved than the nonparticipants. The individual sports athletes saw the feminine image improved by their sport participation. The team sports participants were not positive of the relationship between sport participation and the feminine image. Their insecurity stemmed from the association of the sport with men's sports.

CHAPTER III

PROCEDURE

The purpose of this descriptive study was to assess the images of a sample of competitive college women swimmers. Images of the feminine girl and the competitive female swimmer, tennis player, and basketball player were identified and analyzed as to their similarities and differences. The following questions were investigated:

1. How do competitive college women swimmers view the feminine girl?
2. How do competitive college women swimmers view the competitive female swimmer?
3. How do competitive college women swimmers view the competitive female tennis player?
4. How do competitive college women swimmers view the competitive female basketball player?
5. How do competitive college women swimmers compare the feminine image with the competitive swimmer image?
6. How do competitive college women swimmers compare the feminine image with the competitive tennis player image?
7. How do competitive college women swimmers compare the feminine image with the competitive basketball player image?
8. How do the images of the competitive college women swimmer, tennis player, and basketball player compare with each other?

The following techniques were utilized in exploring the questions posed above:

1. Selection of subjects
2. Selection of measuring instrument

3. Organization and administration of testing procedures
4. Data analysis

SELECTION OF SUBJECTS

The subjects were competitive women swimmers attending universities in North Carolina during the 1972-73 academic year. Based on an interview with Ms. Lynne Gaskin, 1972-74 Swimming Chairman for the North Carolina Association of Intercollegiate Athletics for Women, the universities included in this research were ones which had current membership in the NCAIAW and had varsity teams established for at least two years. These criteria were established to assure a degree of stability to the university's swimming program and a degree of uniformity to the population under study. The schools which met these criteria were Appalachian State University, Duke University, East Carolina University, the University of North Carolina at Chapel Hill, and the University of North Carolina at Greensboro. Letters were sent to the swimming coach at each university asking for his/her team's participation in this study. Positive responses were received from all colleges except Duke University.

A total of thirty-five semantic differentials were returned to the investigator. Four subjects had to be eliminated from the data analysis because of insufficient responses to the scales. Of the thirty-one remaining subjects, five were from Appalachian State University, ten from East Carolina University, seven from the University of North Carolina at Chapel Hill, and nine from the University of North Carolina at Greensboro.

SELECTION OF MEASURING INSTRUMENT

Definition

The instrument selected for this study was the semantic differential devised by Charles E. Osgood, Research Professor and Director of the Institute of Communications Research at the University of Illinois. The semantic differential is a paper-and-pencil test that measures an individual's reactions to concepts by the use of bipolar descriptive adjectives. (45)

The subject is presented with a concept and a set of scales (opposite adjectives). The bipolar adjectives are separated by seven spaces on which the subject marks her response. Numbers are arbitrarily assigned to the seven spaces (1, 2, 3, 4, 5, 6, and 7 or +3, +2, +1, 0 -1, -2, -3) to permit statistical interpretation of the responses. (45)

A word value is also assigned each seven-step scale. For example, if X and Y are the bipolar adjectives, the assigned value meanings would be the following:

- (1) extremely X
- (2) quite X
- (3) slightly X
- (4) neither X nor Y; equally X and Y
- (5) slightly Y
- (6) quite Y
- (7) extremely Y (45:29)

A person places a mark in the space that best represents her feelings and/or attitudes. In this way, the semantic differential measures the connotative meanings of the concept for each individual. Osgood (45) operationally defined concept meaning for an individual as the group of factor scores associated with that concept. His operational definition of concept meaning for a culture is the averaged factor scores associated

with that concept.

Osgood described the semantic differential in the following manner:

Although we often refer to the semantic differential as if it were some kind of 'test,' having some definite set of items and a specific score, this is not the case. To the contrary, it is a very general way of getting at a certain type of information, a highly generalizable technique of measurement which must be adapted to the requirement of each research problem to which it is applied. There are no standard concepts and no standard scales; rather, the concepts and scales used in a particular study depend upon the purposes of the research. Standardization, and hence comparability, lies in the allocation of concepts to a common semantic space defined by a common set of general factors, despite variability in the particular concepts and scales employed. (45:76)

Semantic Space

According to Osgood, semantic space is

. . . a region of some unknown dimensionality and Euclidian in character. Each semantic scale, defined by a pair of polar (opposite-in-meaning) adjectives, is assumed to represent a straight line function that passes through the origin of this space, and a sample of such scales then represents a multidimensional space. (45:25)

The alternate polar terms utilized determine the direction of the point from the origin, and the position of the check mark on the seven-step scale determines the distance of the point from the origin. (45)

Three dimensions of semantic space have been isolated in factor analytic studies which focused on the aspects of connotative meaning. They are the evaluative, potency, and activity factor. The research group analyzed the evaluative factor to be the strongest dimension measured by the semantic differential, with the potency and activity factors following. (45) Osgood (45) reported the evaluative factor

responsible for almost twice the amount of total variance accounted for by the potency and activity factors. Brown's research (6) also indicated that the evaluative factor has a greater effect on total variance. Her findings indicated that twenty-two per cent of the variance was accounted for by the evaluative factor, fifteen per cent accounted for by the activity factor, thirteen per cent accounted for by the potency factor. Carroll gave the following description of the three dominant factors:

To indulge in some bold speculation perhaps carrying forward the analysis offered by the authors themselves, let us propose that the three principal SD dimensions represent fundamental dimensions in the adjustment of the individual to the objects in his environment. The first dimension, evaluation, corresponds to the individual's tendency to make an approach to the stimulus or to avoid it; it measures the extent to which the stimulus has positively or negatively reinforced the individual's responses The second dimension, activity, refers to the necessity or nonnecessity of making movements in adjusting to stimuli. . . . Finally, the third dimension, potency, suggests a measurement of the AMOUNT of adjustment that is made or must be made to a stimulus, or perhaps the amount of effort which is put into the response to a stimulus. (8:73, 74)

Additional factors of stability, tautness, novelty, and receptivity have been identified from factor analysis of semantic differential scales. Even with the identity of these factors, approximately fifty per cent of the total variance is unidentified. (45)

Acceptance As An Attitude Measuring Instrument

The semantic differential has been used in many tests that have established its worth as a measuring instrument of attitudes. Deutschmann (13) noted that to assess public attitudes the semantic differential is an excellent tool. He described the instrument as ". . . a means of increasing the comparability of attitude measurements across different social objects (concepts), across groups, and over time." (13:435)

Heath (26) applied the semantic differential to the area of attitudes towards recreation and found it to be an appropriate research tool. Brown (6) utilized the semantic differential successfully to investigate the concepts of a feminine girl and various sport concepts. Its diversity, reliability, and validity are represented in the work of Kjeldergaard (33), who used the semantic differential as an evaluation technique for casting a new television news program.

Osgood (45) reported on the reliability and validity of the semantic differential as an instrument of attitude measurement. Studies conducted on the reliability criterion have found it to be a reliable measurement. (57) Validity was established by comparing the semantic differential to the Thurstone scales and the Guttman scale. (45)

Selection of Brown's Semantic Differential

The semantic differential developed by Ruth E. Brown (6) was selected for use in this study. It was selected because of its concepts and the developmental procedures and factor analysis results of the scales.

Concepts. Four of the ten concepts used by Brown were of interest to the present investigator:

- "A Girl Who Is Feminine"
- "A Girl Who Is on the School's Girls' Swimming Team"
- "A Girl Who Is on the School's Girls' Tennis Team"
- "A Girl Who Is on the School's Girls' Basketball Team" (6:92)

The first concept was utilized to study how women in sport view the feminine image. The other concepts were selected to appraise the image projected by females participating in several specific sports. Since

the subjects were swimmers, the investigator wanted to analyze their image of female swimmers and how this image compared to other female sport images. In addition, tennis was chosen to represent an individual/dual sport, and basketball was chosen to represent a team sport.

Scales. Brown developed her scales through four pilot studies and a panel of eighteen judges. The judges sorted one hundred and twenty-five adjective pairs selected as suitable for the concepts under study into seventeen categories. This selection met Osgood's criterion (45) for significant clustering.

Eighteen scales were submitted to factor analysis and the results were supportive of Osgood's findings on factors and total factor variance. It was concluded that the concepts and scales utilized in Brown's study had proven themselves reliable enough to apply them to a different population.

The scales used in the study were the following:

polite-rude
uncertain-definite
deep-shallow
cooperative-competitive
cold-affectionate
rounded-angular
tough-fragile
modest-conceited
awkward-graceful
active-passive
weak-strong
aggressive-hesitant
attractive-unattractive
unemotional-emotional
small-large
dumb-intelligent
humorous-serious
loud-soft (6:55)

After Brown's factor analysis, the number of scales for each concept was reduced from eighteen to twelve. Since Osgood suggests working with three to four scales for each factor, the four scales having the heaviest loading for each factor were selected. The bipolar adjectives "tough-fragile" were dropped because of potential inappropriateness to the concepts even though it was heavily loaded for a factor. The scales analyzed in Brown's study follow:

Evaluative

attractive-unattractive
affectionate-cold
graceful-awkward
emotional-unemotional

Potency

intelligent-dumb
deep-shallow
definite-uncertain
polite-rude

Activity

strong-weak
active-passive
aggressive-hesitant
loud-soft (6:54)

The present investigator used only the aforementioned scales in the data analysis.

ORGANIZATION AND ADMINISTRATION OF TESTING PROCEDURES

A letter was sent to the swimming coach of each selected university asking for his/her team's participation in this study. The letter stated that responding to the semantic differential should take a maximum of fifteen minutes. A postcard was enclosed for his/her reply. A copy of the letter to the coach and a response card are included in Appendix A. Positive responses were received from all of the colleges

except Duke University. The semantic differentials and directions to the coach for administering the scales were mailed to the participating universities upon receipt of responses. Cover sheet, semantic differential, directions to the coach, instructions to the team, and a general information sheet for the coach are presented in Appendix B.

The swimming coach of each university was requested to administer the semantic differential to that team. The administration of the semantic differential was directed to be "at practice just prior to the last swim meet." By administering the semantic differential at this time, each team would have completed the majority of its 1972-73 season. The instructions read to each team before they took the semantic differential were identical. Identical scales were administered at all four universities with only a variation in the ordering of concepts. An attempt was made to keep the ordering of concepts from influencing the responses by having random sequences of concepts. The ordering of the concepts for each university was determined by a blind draw with the colleges being alphabetized for the draw. The concept order for each university may be found in Appendix C.

DATA ANALYSIS

Statistical procedures described by Osgood (45) were followed to answer the questions in this study. The answers to the first four questions were analyzed by identical statistical methods. The first questions under investigation were the following:

1. How do competitive college women swimmers view the feminine girl?

2. How do competitive college women swimmers view the competitive female swimmer?
3. How do competitive college women swimmers view the competitive female tennis player?
4. How do competitive college women swimmers view the competitive female basketball player?

To answer the four questions, first, the averaged scale means of all subjects for each image were calculated. The means were then plotted on a profile for each image. From the scale means, the factor scores for each image were calculated.

The second group of questions analyzed were the following:

5. How do competitive college women swimmers compare the feminine image with the competitive swimmer image?
6. How do competitive college women swimmers compare the feminine image with the competitive tennis player image?
7. How do competitive college women swimmers compare the feminine image with the competitive basketball player image?

One profile was plotted with all four images superimposed so a schematic comparison could be made. The factor scores matrix set up for the previous questions provided the information for a chart of the rank order of each image for the evaluative, potency, and activity factors. Using the factor scores, a graph was drawn of the feminine concept in comparison to each sports concept.

Osgood explained that the correlation coefficient was inadequate for calculating semantic space. He suggested the D matrix since it ". . . takes into account both the profile covariation and the discrepancies between the means of the profiles, thereby reflecting more fully the information available in the data." (45:91) "This D is found by taking the difference between the scores of the two concepts on each factor, squaring this difference, summing these squares, and taking the square root of the sum" (45:91) The origin, the area in

semantic space that represents no meaning, was included in the calculations of the D matrix. From the D matrix, the four images were plotted in the D model, a three dimensional model representing semantic space.

The last question to be answered was the following:

8. How do the images of the competitive college women swimmer, tennis player, and basketball player compare with each other?

This question was answered through interpretation of the scale profiles and the rank order of the three images for the factors of evaluative, potency, and activity. A graph of the factor scores was plotted for schematic presentation. The comparison of the three images was enhanced by the data of the D matrix and the D model.

CHAPTER IV
DATA AND ANALYSIS

Information about Swimmers and Teams

To gain some knowledge about the subjects a cover sheet was placed in front of each semantic differential to be completed by each subject. A general information sheet regarding the team was supplied each coach. (Appendix B)

The majority of swimmers researched were freshmen, eighteen and nineteen years of age. Their youthfulness may be an indication of the newness of competitive swimming programs for college women.

Through the ninth grade, eight swimmers had no competitive swimming experience and over half of the swimmers had less than four years. Five responded they had eight and nine years of experience. From the ninth through the twelfth grade, eleven swimmers had no competitive swimming experience, but twelve had three years of experience. As was expected from the youthfulness of the subjects, a majority (twenty-one) reported only one year of competitive swimming experience in college. Nine reported two years and one, three.

The responses from the swimmers about high school sports played on a varsity level were almost evenly balanced between nonparticipation and participation. Of the various sports mentioned team sports were represented nine times, individual sports three times, and a combination of team and individual sports were mentioned by five respondents.

An overwhelming majority of these swimmers did not participate in any other competitive college varsity sport. This lack of sport participation may be the result of a majority of the subjects being freshmen. The sport in which the most frequent participation resulted on the college level was tennis, represented by three respondents. Seventeen swimmers responded they planned to try out for another intercollegiate sport. Of these sports ten were team sports, six were individual, and a combination of team and individual sports was listed by one respondent. Again, tennis was listed most frequently as the sport for which the subjects planned to try out.

The average number of swim meets for the four participating teams was six. Three of the four teams had winning seasons, and one was tied between wins and losses. Two coaches administered the semantic differential prior to the date of their final swim meet and two administered it after the date of their final swim meet. Considering the small number of subjects, the data were treated as though all the semantic differentials had been administered prior to the final swim meet.

The remainder of this chapter contains the results derived from the procedural methods described in the preceding chapter. It should be noted in Table I and in the profiles of the images that the scales have been arranged so that all scales representing the evaluative factor are first, followed by the potency and activity factors, respectively. The scales are also arranged from -3, extremely X, to a +3, extremely Y. (See Figure 1) The means reported in Table I were rounded to the nearest whole number for plotting the profile images.

X -3 : -2 : -1 : 0 : +1 : +2 : +3 Y

-3 = Extremely X

-2 = Quite X

-1 = Slightly X

0 = Neither X nor Y
and/or
Equally X and Y

+1 = Slightly Y

+2 = Quite Y

+3 = Extremely Y

FIGURE 1

Assigned Values for Interpretation of Scale Means

Analysis of the Eight Questions

Question One

"How do competitive college women swimmers view the feminine girl?"

The following statistical procedures were conducted to determine the image of the feminine girl as perceived by competitive college women swimmers:

1. Mean scores for each of the scales of the feminine girl image were calculated. A profile of the mean scores was drawn.
2. Mean factor scores of the feminine girl image were computed.

These same procedures were used to answer questions Two, Three, and Four.

Evaluative Factor

The competitive college women swimmers viewed the feminine girl "quite" high on the evaluative factor. From Table I, it can be seen that the feminine girl was perceived to be quite affectionate, graceful, attractive, and emotional.

Potency Factor

The feminine girl was seen to be quite polite and slightly deep and intelligent. The scales of uncertain-definite had a neutral role for this image. The feminine image was more diverse on the potency factor and not as highly rated as on the evaluative factor. Table II shows the factor scores for the potency factor to be much lower than they were for the evaluative factor.

Activity Factor

The swimmers viewed the feminine girl as being basically neutral

TABLE I
Scale Means for Four Images

Scales	Images			
	FG	ST	TT	BT
Evaluative Factor				
Cold (-3) - Affectionate (+3)	+2.03	+1.52	+ .84	+ .39
Awkward (-3) - Graceful (+3)	+1.94	+1.68	+1.90	+ .71
Unattractive (-3) - Attractive (+3)	+2.06	+1.45	+1.29	+ .03
Unemotional (-3) - Emotional (+3)	+1.90	+1.30	+ .90	+ .55
Potency Factor				
Rude (-3) - Polite (+3)	+2.29	+2.26	+1.84	+1.19
Uncertain (-3) - Definite (+3)	+ .32	+1.55	+1.45	+1.77
Shallow (-3) - Deep (+3)	+ .55	+1.16	+ .87	+ .97
Dumb (-3) - Intelligent (+3)	+ .61	+1.52	+1.35	+ .90
Activity Factor				
Passive (-3) - Active (+3)	+ .13	+2.61	+2.55	+2.32
Weak (-3) - Strong (+3)	- .42	+2.35	+1.97	+2.29
Hesitant (-3) - Aggressive (+3)	- .32	+1.84	+1.71	+2.10
Soft (-3) - Loud (+3)	-1.45	+ .97	+ .23	+1.42

Abbreviations.--FG = "A Girl Who Is Feminine"
 ST = "A Girl Who Is on the School's Girls' Swimming Team"
 TT = "A Girl Who Is on the School's Girls' Tennis Team"
 BT = "A Girl Who Is on the School's Girls' Basketball Team"

TABLE II
Factor Scores Matrix of Four Images

Images	Factors		
	Evaluative	Potency	Activity
FG	+1.984	+ .944	- .516
ST	+1.484	+1.621	+1.960
TT	+1.234	+1.379	+1.613
BT	+ .419	+1.210	+2.032

Abbreviations.--FG = "A Girl Who Is Feminine"

ST = "A Girl Who Is on the School's Girls' Swimming Team"

TT = "A Girl Who Is on the School's Girls' Tennis Team"

BT = "A Girl Who Is on the School's Girls' Basketball Team"

in the activity factor. Three of the four scale means shown in Table I, passive-active, weak-strong, and hesitant-aggressive, were in the neutral area. This neutral position means that none of these three activity bipolar scales affected the image of the feminine girl or they equally affected it. On the fourth activity scale the feminine girl was viewed as quite soft. The neutrality of the scales and the negative mean scale (soft-loud) resulted in a negative activity factor score of $-.516$ for the feminine image. (Table II)

Profile

The profile of scale means for "A Girl Who Is Feminine," shows the "quite" high rating on the evaluative scales. (Figure 2) The neutral positioning of four scales and the lack of any extreme scales are shown. Since three of the four neutral scales are activity factors, the amount of or lack of activity may not be an indicator of femininity.

Question Two

"How do competitive college women swimmers view the competitive female swimmer?"

Evaluative Factor

"A Girl Who Is on the School's Girls' Swimming Team" was perceived as being quite affectionate, graceful, and attractive and slightly emotional as shown in Table I.

Potency Factor

The swimmer image was viewed as being quite polite, definite, and intelligent and slightly deep. Table II shows the swimmer image to have

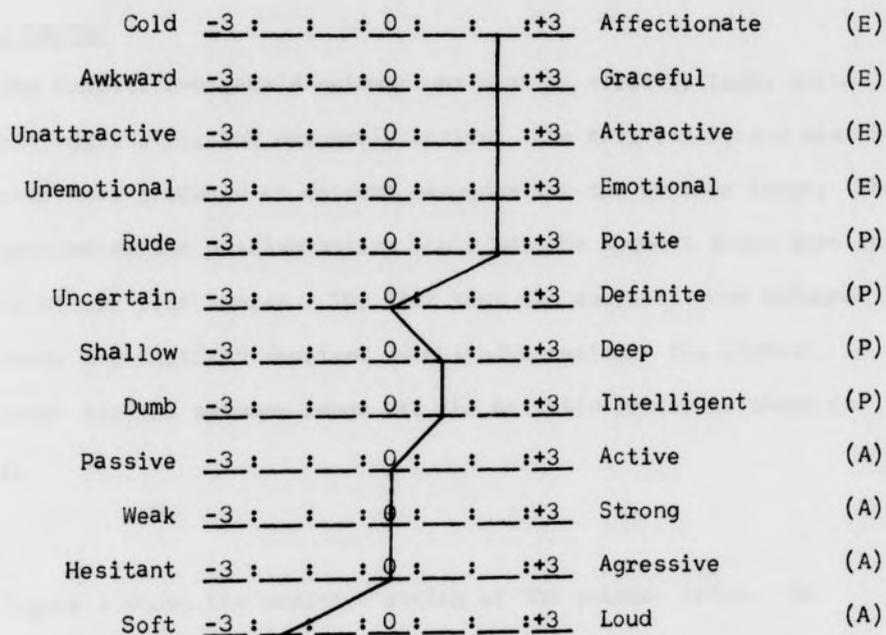


FIGURE 2

Profile of Scale Means for
"A Girl Who Is Feminine"

a higher potency factor score than evaluative score.

Activity Factor

The competitive female swimmer was seen as slightly loud, quite strong and aggressive, and extremely active. The activity factor was the only factor that produced an extreme response for the swimmer image. The +2.61 reported on the passive-active scale was the highest scale mean for any scale of all four images. The fact that the subjects were swimmers may indicate why "active" received such a high rating. The highest factor score for the swimmer image was the activity factor as shown in Table II.

Profile

Figure 3 shows the positive rating of the swimmer image. No scales received a neutral position and one, passive-active, received an extreme position.

Since these are competitive college women swimmers evaluating "A Girl Who Is on the School's Girls' Swimming Team," their responses may be indicative of their self-image. The lack of any neutral scales indicates that this image has meaning to the subjects.

Question Three

"How do competitive college women swimmers view the competitive female tennis player?"

Evaluative Factor

Table I shows that the competitive female tennis player was viewed as quite graceful and slightly affectionate, attractive, and

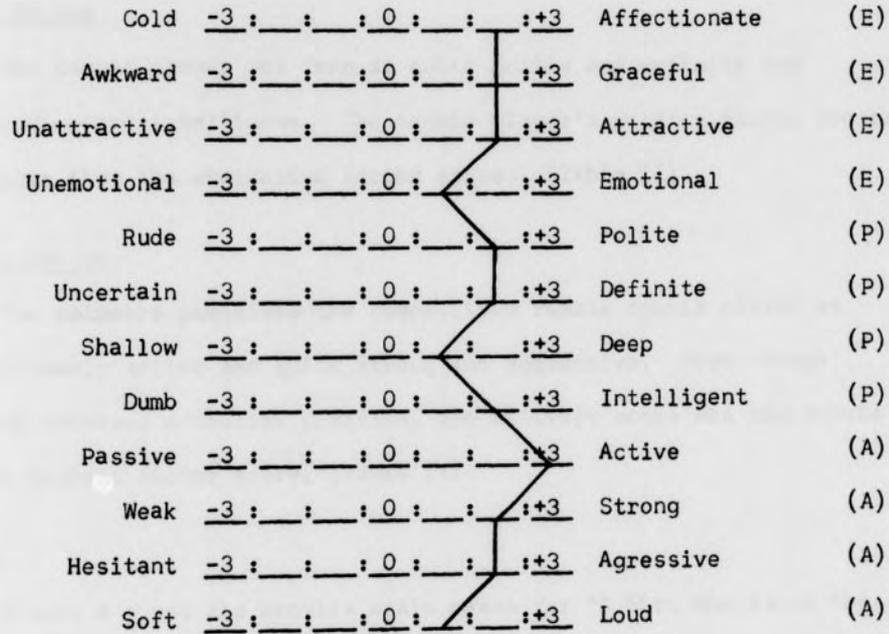


FIGURE 3

Profile of Scale Means for

"A Girl Who Is on the School's Girls' Swimming Team"

emotional. Graceful was her highest evaluative scale.

Potency Factor

The tennis player was seen as quite polite and definite and slightly deep and intelligent. The tennis player's potency factor scores were higher than the evaluative factor scores. (Table II)

Activity Factor

The swimmers perceived the competitive female tennis player as being extremely active and quite strong and aggressive. Even though soft-loud received a neutral position, the activity score was the tennis player's highest factor score. (Table II)

Profile

Figure 4 gives the profile scale means for "A Girl Who Is on the School's Girls' Tennis Team." It illustrates the positive rating of the tennis player image with the exception of the one neutral scale.

Question Four

"How do competitive college women swimmers view the competitive female basketball player?"

Evaluative Factor

The evaluative scales of the competitive female basketball player appeared close to neutral. The basketball player was viewed as slightly graceful and emotional and two of the scales, cold-affectionate and unattractive-attractive, were neutral. This image had a low factor score of +.419 on the evaluative factor. (Table II)

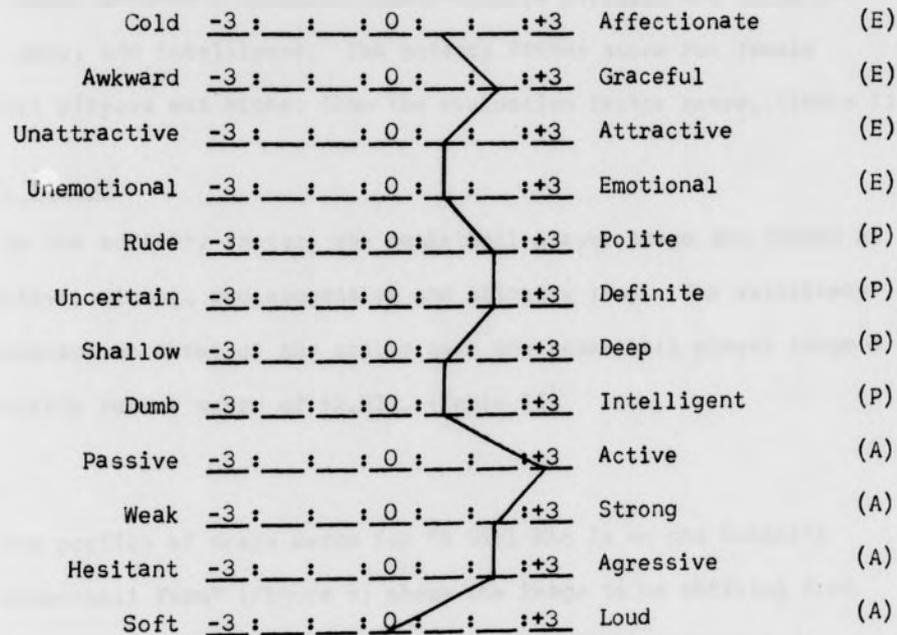


FIGURE 4

Profile of Scale Means for

"A Girl Who Is on the School's Girls' Tennis Team"

Potency Factor

Female basketball players appeared quite definite and slightly polite, deep, and intelligent. The potency factor score for female basketball players was higher than the evaluative factor score. (Table II)

Activity Factor

On the activity factor, the basketball player image was viewed as quite active, strong, and aggressive and slightly loud. The relatively high responses on three of the scales gave the basketball player image a high activity factor score of +2.032. (Table II)

Profile

The profile of scale means for "A Girl Who Is on the School's Girls' Basketball Team" (Figure 5) shows the image to be shifting from an almost neutral evaluative factor to a more positive potency and activity factor. The scale means range from "neutral" to "quite," with the majority of "quite" scales belonging to the activity factor. This image of the female basketball player is similar to the one produced in Brown's study. (6)

Question Five

"How do competitive college women swimmers compare the feminine image with the competitive swimmer image?"

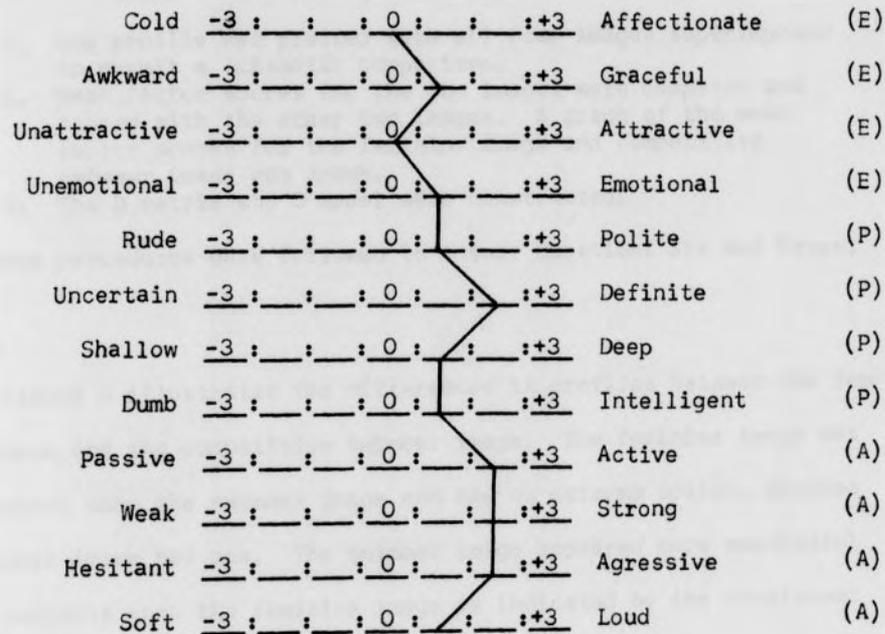


FIGURE 5

Profile of Scale Means for

"A Girl Who Is on the School's Girls' Basketball Team"

The following statistical procedures were conducted to determine how the feminine image compared with the competitive swimmer image:

1. One profile was plotted with all four images superimposed to permit a schematic comparison.
2. Mean factor scores for the two images were computed and ranked with the other two images. A graph of the mean factor scores for the feminine image and competitive swimmer image was drawn.
3. The D matrix and D model were constructed.

These same procedures were followed to answer questions Six and Seven.

Profile

Figure 6 illustrates the differences in profiles between the feminine image and the competitive swimmer image. The feminine image was more neutral than the swimmer image and had no extreme scales, whereas the swimmer image had one. The swimmer image appeared more meaningful to the subjects than the feminine image as indicated by the consistent positive scales for the swimmer image. The two images measured closest on the scales of cold-affectionate, awkward-graceful, unattractive-attractive, rude-polite, and shallow-deep; the first three belong to the evaluative factor. The swimmer and feminine girl images were farthest apart on the scales of uncertain-definite, passive-active, weak-strong, hesitant-aggressive, and soft-loud. The last four of these scales belong to the activity factor.

Factor Scores

The ranking of the factor scores in Table III produced a number one ranking in the evaluative factor for the feminine image. The swimmer image ranked second. On the potency factor, the swimmer had the highest rank and the feminine girl ranked fourth. The activity

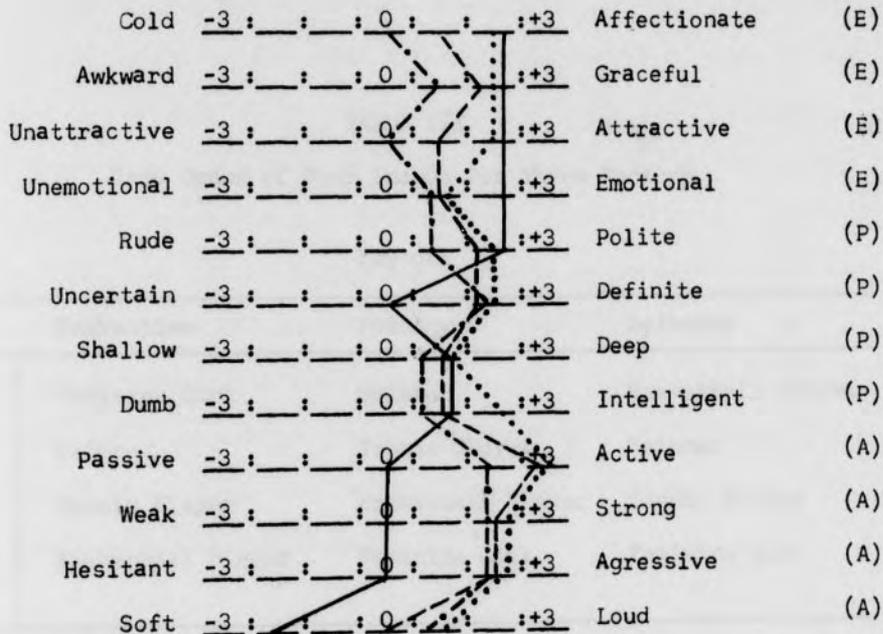


FIGURE 6

Profile of Scale Means for Four Images

Code:

"A Girl Who Is Feminine" _____

"A Girl Who Is on the School's Girls' Swimming Team"

"A Girl Who Is on the School's Girls' Tennis Team" - - - - -

"A Girl Who Is on the School's Girls' Basketball Team" - . - . - . - .

TABLE III

Rank Order of Four Images for Three Factors

		Factors		
		Evaluative	Potency	Activity
Images	Feminine Girl	Swimmer	Basketball Player	
	Swimmer	Tennis Player	Swimmer	
	Tennis Player	Basketball Player	Tennis Player	
	Basketball Player	Feminine Girl	Feminine Girl	

Abbreviations.--Feminine Girl = "A Girl Who Is Feminine"

Swimmer = "A Girl Who Is on the School's Girls'
Swimming Team"

Tennis Player = "A Girl Who Is on the School's Girls'
Tennis Team"

Basketball Player = "A Girl Who Is on the School's
Girls' Basketball Team"

factor also had higher scores for the swimmer, second place, than the feminine girl, fourth place. Figure 7 shows the feminine image placed higher than the swimmer on the evaluative scale. The feminine image, however, dropped in the potency and activity factors while the swimmer image received higher scores on these factors. The number one position of the feminine girl on the evaluative factor is in agreement with the findings of both Brown (6) and Griffin. (23) Griffin's results of the ideal woman receiving a lower position on the potency and activity factors than the woman athlete are compatible with this investigation. However, in Brown's study, the feminine image was rated higher on the potency factor than the sports images.

D Matrix and D Model

The D matrix and the D model (Table IV and Figure 8) show the feminine image closer to the origin than the swimmer image. The feminine girl image is 2.256 from the origin and the swimmer image 2.944 from the origin. (Table IV) Following Osgood's theory that the closer a concept is to the origin the less meaning it has, it appears that the feminine girl had less meaning for the subjects than the swimmer image. The swimmer image is located 2.615 away from the feminine image in the D matrix illustrating its "distance" in meaning from the feminine image. This distance can be seen graphically in Figure 8.

Question Six

"How do competitive college women swimmers compare the feminine image with the competitive tennis player image?"

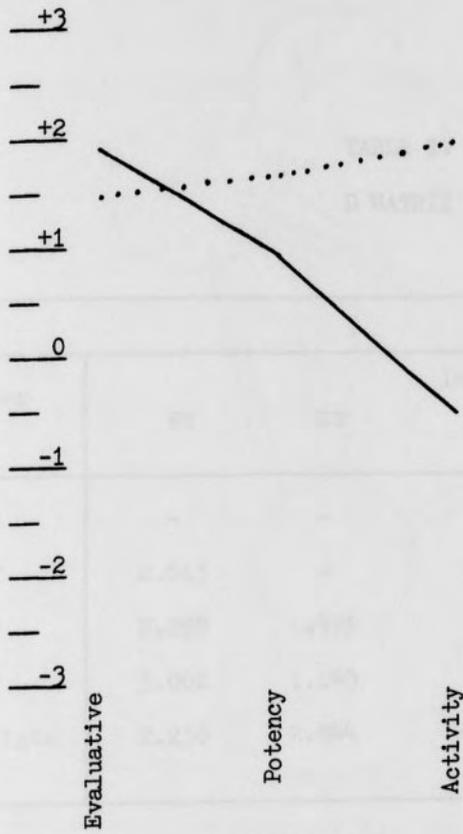


FIGURE 7

Comparison of Factor Means of Feminine
 Girl and Swimmer Images

Feminine Girl Image —————
 Swimmer Image

TABLE IV
D MATRIX

Images	Images				
	FG	ST	TT	BT	Origin
FG	-	-	-	-	-
ST	2.615	-	-	-	-
TT	2.298	.491	-	-	-
BT	3.002	1.143	.931	-	-
Origin	2.256	2.944	2.454	2.401	-

Abbreviations.--FG = "A Girl Who Is Feminine"

ST = "A Girl Who Is on the School's Girls' Swimming Team"

TT = "A Girl Who Is on the School's Girls' Tennis Team"

BT = "A Girl Who Is on the School's Girls' Basketball Team"

Origin = Neutrality

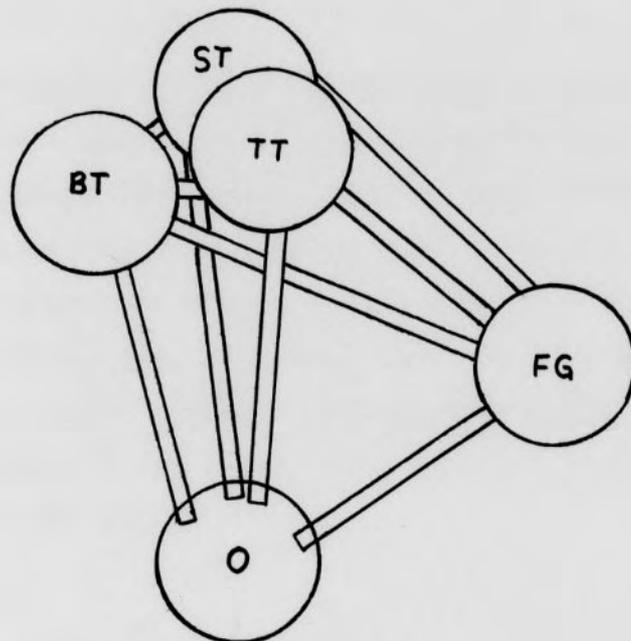


FIGURE 8

D Model of Four Images

Abbreviations.--FG = "A Girl Who Is Feminine"

ST = "A Girl Who Is on the School's Girls' Swimming Team"

TT = "A Girl Who Is on the School's Girls' Tennis Team"

BT = "A Girl Who Is on the School's Girls' Basketball Team"

O = Origin

Profile

From the profiles of the images in Figure 6 on page 48, it can be seen that the feminine girl and competitive tennis player images agreed most closely on the scales of cold-affectionate, awkward-graceful, unattractive-attractive, unemotional-emotional, rude-polite, shallow-deep, and dumb-intelligent. Of these seven scales, four represent the evaluative factor and three represent the potency factor. The images differed most on the scales of uncertain-definite, passive-active, weak-strong, hesitant-aggressive, and soft-loud. The last four of these scales represent the activity factor.

Factor Scores

In the evaluative factor the feminine girl image ranked first, and the tennis player image ranked third. (Table III on page 49) The potency and activity factors show the feminine image with lower factor scores than the tennis image. The feminine image ranked fourth for both factors, but the tennis image ranked second in the potency factor and third in the activity factor. Figure 9 shows the feminine image rated higher in the evaluative factor and then drop below the tennis image in the potency and activity factors.

D Matrix and D Model

The feminine girl image was closer to the origin than the tennis image. (Table IV and Figure 8) The feminine girl was 2.256 from the origin and the tennis player image was 2.454 from the origin. (Table IV) This proximity to the origin implies that the feminine image had less meaning for the subjects than the sports concept of the tennis player.

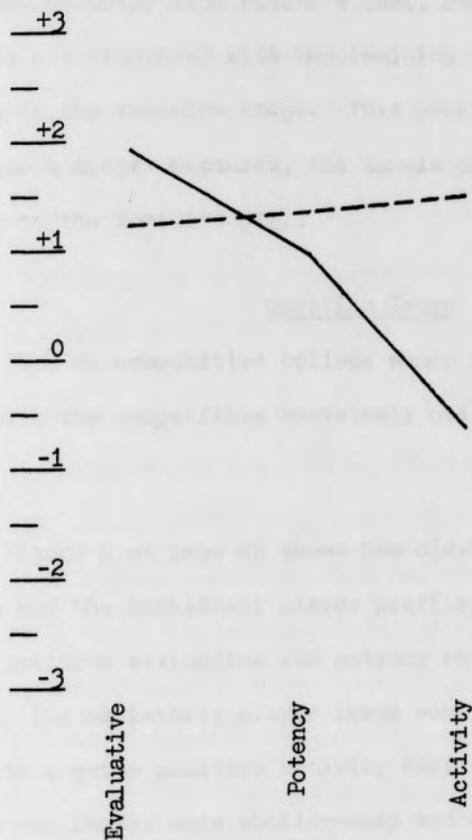


FIGURE 9

Comparison of Factor Means of Feminine
Girl and Tennis Player Images

Feminine Girl Image —————

Tennis Player Image - - - - -

It should be noted from Figure 8 that, even though the tennis player image is not clustered with the feminine image, it is the closest sport concept to the feminine image. This position illustrates that, of the three sport images measured, the tennis player image is the closest in meaning to the feminine girl.

Question Seven

"How do competitive college women swimmers compare the feminine image with the competitive basketball player image?"

Profile

Figure 6 on page 48 shows how dissimilar the feminine image profile and the basketball player profile are. The feminine image went from a positive evaluative and potency rating to a negative activity rating. The basketball player image went from a neutral evaluative factor to a quite positive activity factor. The most compatible scales for the two images were shallow-deep and dumb-intelligent, both potency factors. The images showed the most difference on the scales of cold-affectionate, unattractive-attractive, uncertain-definite, passive-active, weak-strong, hesitant-aggressive, and soft-loud; the last four belong to the activity factor.

Factor Scores

The feminine girl image was ranked higher in the evaluative factor than the basketball player image as shown in Table III on page 49. Of the four concepts, the feminine girl image ranked first on the evaluative factor compared to the basketball player's rank of four. In

the potency and activity factors, the basketball player image ranked higher than the feminine girl image. The basketball player image was third and the feminine girl fourth in the potency factor. The activity factor showed the basketball player image ranked number one and the feminine girl ranked fourth. Figure 10 illustrates how the factor means for the basketball player increased from the evaluative factor to the activity factor, while the feminine image means decreased.

D Matrix and D Model

The D matrix and D model (Table IV and Figure 8) show the feminine girl image closer to the origin than the basketball player image. The feminine girl image was 2.256 from the origin and the basketball player image was 2.401. The basketball player image was the farthest sport image from the feminine image, being 3.002 from the feminine girl image. (Table IV) This distance supports the variance in the profiles of the feminine girl and the basketball player image observed earlier in Figure 6 on page 48.

Question Eight

"How do the images of the competitive college women swimmer, tennis player, and basketball player compare with each other?"

The following statistical procedures were conducted to determine how the swimmer, tennis player, and basketball player images compared with each other:

1. One profile was plotted with the images superimposed to permit a schematic comparison.
2. Mean factor scores for the three images were ranked. A graph of the factor scores for the sport images was drawn.

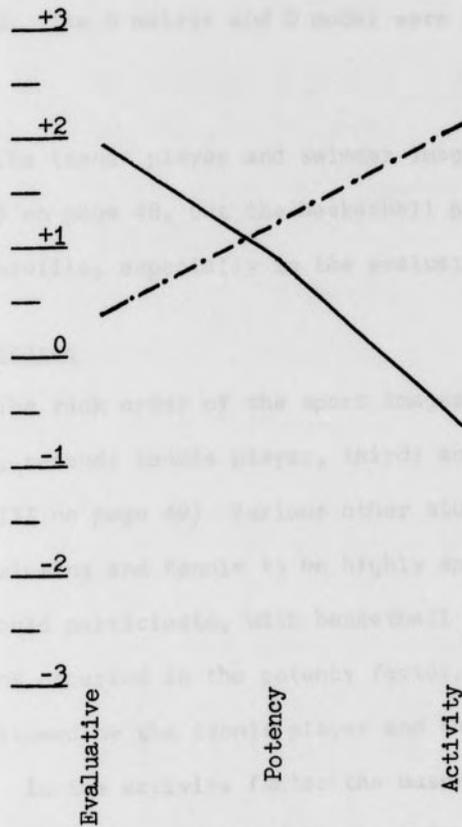


FIGURE 10

Comparison of Factor Means of Feminine

Girl and Basketball Player Images

Feminine Girl Image —————

Basketball Player Image - - - - -

3. The D matrix and D model were constructed.

Profile

The tennis player and swimmer images showed similar profiles in Figure 6 on page 48, but the basketball player image followed a lower scaled profile, especially in the evaluative scales.

Factor Scores

The rank order of the sport images for the evaluative factor was swimmer, second; tennis player, third; and basketball player, fourth. (Table III on page 49) Various other studies (6, 12, 23, 24, 25) found swimming and tennis to be highly appropriate sports in which women could participate, with basketball in a lower rank. A shift of positions occurred in the potency factor. The swimmer ranked number one, followed by the tennis player and basketball player images, respectively. In the activity factor the basketball player was perceived to be the most active, followed by the swimmer and tennis player images, respectively. The sport images held the same relative positions for the evaluative and potency dimensions with a shift only in the basketball player image occurring in the activity factor. It is interesting that in all three factors in Brown's study (6), the tennis player has a higher rank than the swimmer but in the present study the opposite results were obtained. The reason for this inversion of images may be because the subjects were swimmers. Figure 11 points out that on the evaluative factor the swimmer and tennis player image were the closest images. In the potency factor the tennis player and basketball player were closest. The activity factor had the basketball player image

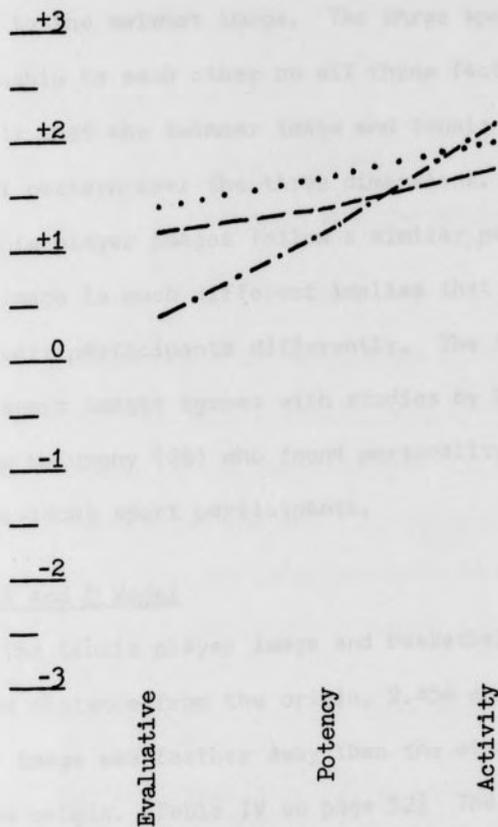


FIGURE 11
 Comparison of Factor Means of
 Three Sport Images

Swimmer Image
 Tennis Player Image -----
 Basketball Player Image -.-.-.-.-

closest to the swimmer image. The three sport images changed in relationship to each other on all three factors. Also, it can be seen from Figure 11 that the swimmer image and tennis player image follow an almost parallel pattern over the three dimensions. The fact that the swimmer and tennis player images follow a similar pattern and the basketball player image is much different implies that these subjects see the three sport participants differently. The similarities and differences of the sport images agrees with studies by Peterson, Weber, and Trousdale (47) and Malumphy (38) who found personality differences between team and individual sport participants.

D Matrix and D Model

The tennis player image and basketball player image were almost the same distance from the origin, 2.454 and 2.401, respectively. The swimmer image was farther away than the other two images, being 2.944 from the origin. (Table IV on page 52) The distances imply that for these subjects, the swimmer image had the most meaning. The three sport images were clustered together showing some similarity of meaning. (Figure 8) The basketball player image was closer to the tennis player image (.931); however, the tennis player image was closer to the swimmer image (.491). (Table IV on page 52) These distances mean the tennis player and swimmer images were closer in meaning to each other than the tennis player and the basketball player images. It also means the basketball player image was closer in meaning to the tennis image than it was to the swimmer image.

CHAPTER V
SUMMARY AND CONCLUSIONS

Summary

The purpose of this descriptive study was to assess the images of a sample of competitive college women swimmers. Images of the feminine girl and the competitive female swimmer, tennis player, and basketball player were identified and analyzed as to their similarities and differences. The following questions were investigated:

1. How do competitive college women swimmers view the feminine girl?
2. How do competitive college women swimmers view the competitive female swimmer?
3. How do competitive college women swimmers view the competitive female tennis player?
4. How do competitive college women swimmers view the competitive female basketball player?
5. How do competitive college women swimmers compare the feminine image with the competitive swimmer image?
6. How do competitive college women swimmers compare the feminine image with the competitive tennis player image?
7. How do competitive college women swimmers compare the feminine image with the competitive basketball player image?
8. How do the images of the competitive college women swimmer, tennis player, and basketball player compare with each other?

The subjects were thirty-one competitive women swimmers attending universities in North Carolina during the 1972-73 academic year. The universities eligible for this research were those which had current

membership in the NCAIAW and had varsity teams established for at least two years. The participating universities included Appalachian State University, East Carolina University, the University of North Carolina at Chapel Hill, and the University of North Carolina at Greensboro. Semantic differential scales developed by Ruth E. Brown were administered by the coaches to their swimming team.

The following statistical procedures were conducted to answer questions One through Four:

1. Mean scores for each of the scales of the feminine girl image were calculated. A profile of the mean scores was drawn.
2. Mean factor scores of the feminine girl image were computed.

The following statistical procedures were conducted to answer questions Five through Seven:

1. One profile was plotted with all four images superimposed to permit a schematic comparison.
2. Mean factor scores for the two images were computed and ranked with the other two images. A graph of the mean factor scores for the feminine image and competitive swimmer image was drawn.
3. The D matrix and D model were constructed.

The following statistical procedures were conducted to answer question Eight:

1. One profile was plotted with the images superimposed to permit a schematic comparison.
2. Mean factor scores for the three images were ranked. A graph of the factor scores for the sport images was drawn.
3. The D matrix and D model were constructed.

The research produced the following results for the questions under investigation.

Question One

"How do competitive college women swimmers view the feminine girl?"

Evaluative Factor

The feminine girl was perceived to be quite affectionate, graceful, attractive, and emotional.

Potency Factor

The feminine girl was seen to be quite polite and slightly deep and intelligent. The scales of uncertain-definite had a neutral role for this image. The potency factor scores for the feminine girl image were much lower than were the evaluative factor scores.

Activity Factor

The swimmers viewed the feminine girl as being basically neutral in the activity factor. Three of the four scale means were in the neutral area. On the fourth activity scale the feminine girl was viewed as quite soft.

Profile

The profile of scale means for this image shows the "quite" high rating on the evaluative scales. The neutral positioning of four scales and the lack of any extreme scales are shown.

Question Two

"How do competitive college women swimmers view the competitive female swimmer?"

Evaluative Factor

The competitive female swimmer was perceived as being quite affectionate, graceful, and attractive and slightly emotional.

Potency Factor

The swimmer image was viewed as being quite polite, definite, and intelligent and slightly deep. The swimmer image had a higher potency factor score than evaluative score.

Activity Factor

The competitive female swimmer was seen as slightly loud, quite strong and aggressive, and extremely active. The highest factor score for the swimmer image was the activity factor.

Profile

The profile shows the positive rating of the swimmer image. No scales received a neutral position and one, passive-active, received an extreme position.

Since these are competitive college women swimmers evaluating the swimmer image, their responses may be indicative of their self-image. The lack of any neutral scales indicates that this image has meaning to the subjects.

Question Three

"How do competitive college women swimmers view the competitive female tennis player?"

Evaluative Factor

The competitive female tennis player was perceived as quite graceful and slightly affectionate, attractive, and emotional.

Potency Factor

The tennis player was seen as quite polite and definite and slightly deep and intelligent. This image's potency factor scores were higher than the evaluative factor scores.

Activity Factor

The swimmers perceived the competitive female tennis player as being extremely active and quite strong and aggressive. Soft-loud received a neutral position. The factor score for the activity factor was the tennis player's highest score.

Profile

The profile for "A Girl Who Is on the School's Girls' Tennis Team" illustrates the positive rating of the tennis player image with the exception of the one neutral scale.

Question Four

"How do competitive college women swimmers view the competitive female basketball player?"

Evaluative Factor

The evaluative scales of the competitive female basketball player appeared close to neutral. Two of the scales, cold-affectionate and unattractive-attractive, appeared neutral for this image. The basketball player was viewed as slightly graceful and emotional.

The basketball player had a low factor score on the evaluative factor.

Potency Factor

Female basketball players appeared quite definite and slightly polite, deep, and intelligent. The potency factor score for female basketball players was higher than the evaluative factor score.

Activity Factor

On the activity factor, the basketball player image was viewed as quite active, strong, and aggressive and slightly loud. The basketball player image had a high activity factor score.

Profile

The profile shows the image to be shifting from an almost neutral evaluative factor to a more positive potency and activity factor.

Question Five

"How do competitive college women swimmers compare the feminine image with the competitive swimmer image?"

Profile

The differences in profiles between the feminine image and the competitive swimmer image are illustrated. The feminine image was more neutral than the swimmer image and had no extreme scales, whereas the swimmer image had one. The swimmer image appeared more meaningful to the subjects than the feminine image as indicated by the consistent positive scales for the swimmer image. The swimmer and feminine girl images were farthest apart mainly on the activity factor.

Factor Scores

The ranking of the factor scores produced a number one ranking in the evaluative factor for the feminine image. The swimmer image ranked second. On the potency factor, the swimmer had the highest rank and the feminine girl ranked fourth. The activity factor also had higher scores for the swimmer, second place, than the feminine girl, fourth place.

D Matrix and D Model

The D matrix and the D model show the feminine image closer to the origin than the swimmer image. The swimmer image is located away from the feminine image in the D matrix illustrating its "distance" in meaning from the feminine image.

Question Six

"How do competitive college women swimmers compare the feminine image with the competitive tennis player image?"

Profile

It can be seen that the feminine girl and competitive tennis player images agreed most closely on the scales of cold-affectionate, awkward-graceful, unattractive-attractive, unemotional-emotional, rude-polite, shallow-deep, and dumb-intelligent. Of these seven scales, four represent the evaluative factor and three represent the potency factor. The images differed mainly on the activity factor scales.

Factor Scores

In the evaluative factor the feminine girl image ranked first, and the tennis player image ranked third. The potency and activity

factors show the feminine image with lower factor scores than the tennis image. The feminine image ranked fourth for both factors, but the tennis image ranked second in the potency factor and third in the activity factor.

D Matrix and D Model

The feminine girl image was closer to the origin than the tennis image. Even though the tennis player image is not clustered with the feminine image, it is the closest sport concept to the feminine image.

Question Seven

"How do competitive college women swimmers compare the feminine image with the competitive basketball player image?"

Profile

The feminine image and the basketball player profiles are dissimilar. The most compatible scales for the two images were shallow-deep and dumb-intelligent, both potency factors. The images showed the most difference on the scales of cold-affectionate, unattractive-attractive, uncertain-definite, passive-active, weak-strong, hesitant-aggressive, and soft-loud; the last four belong to the activity factor.

Factor Scores

The feminine girl image was ranked higher in the evaluative factor than the basketball player image. Of the four concepts, the feminine girl image ranked first on the evaluative factor compared to the basketball player's rank of four. In the potency and activity factors, the basketball player image ranked higher than the feminine

girl image. The basketball player image was third and the feminine girl fourth in the potency factor. The activity factor showed the basketball player image ranked number one and the feminine girl ranked fourth.

D Matrix and D Model

The D matrix and D model show the feminine girl image closer to the origin than the basketball player image. The basketball player image was the farthest sport image from the feminine image.

Question Eight

"How do the images of the competitive college women swimmer, tennis player, and basketball player compare with each other?"

Profile

The tennis player and swimmer images showed similar profiles, but the basketball player image followed a lower scaled profile, especially in the evaluative scales.

Factor Scores

The rank order of the sport images for the evaluative factor were swimmer, second; tennis player, third; and basketball player, fourth. A shift of positions occurred in the potency factor. The swimmer ranked number one, followed by the tennis player and basketball player images, respectively. In the activity factor the basketball player was perceived to be the most active, followed by the swimmer and tennis player images, respectively. The sport images held the same relative positions for the evaluative and potency dimensions with a shift only in the basketball player image occurring in the activity factor. In the evaluative factor

the swimmer and tennis player image were the closest images. In the potency factor the tennis player and basketball player were closest. The activity factor had the basketball player image closest to the swimmer image. The three sport images changed in relationship to each other on all three factors. The swimmer image and tennis player image follow an almost parallel pattern over the three dimensions.

D Matrix and D Model

The tennis player image and basketball player image were almost the same distance from the origin. The swimmer image was farther away from the origin than the other two images. The three sport images were clustered together showing some similarity of meaning. The basketball player image was closer to the tennis player image; however, the tennis player image was closer to the swimmer image. These distances mean the tennis player and swimmer images were closer in meaning to each other than the tennis player and the basketball player images. It also means the basketball player image was closer in meaning to the tennis image than it was to the swimmer image.

Conclusions

The following conclusions were made in reference to the members of the swimming teams who served as subjects:

1. The feminine image was perceived to be quite affectionate, graceful, attractive, and emotional. She was seen to be quite polite and soft, and slightly deep and intelligent. The bipolar terms uncertain-definite, passive-active, weak-strong, and hesitant-aggressive were neutral.

2. The competitive female swimmer image was perceived to be quite affectionate, graceful, and attractive and slightly emotional, deep, and loud. She was seen to be quite polite, definite, intelligent, strong, and aggressive and extremely active.
3. The competitive female tennis player image was perceived to be quite graceful, polite, and definite and slightly affectionate, attractive, and emotional. She was seen to be slightly deep and intelligent, quite strong and aggressive, and extremely active. The bipolar term soft-loud was neutral.
4. The competitive female basketball player image was perceived as slightly graceful, emotional, polite, deep, intelligent, and loud. She was seen to be quite definite, active, strong, and aggressive. The bipolar terms cold-affectionate and unattractive-attractive were neutral.
5. The feminine and competitive female swimmer images ranked number one and two, respectively, on the evaluative factor.
6. The feminine image was closest in meaning to the competitive female tennis player image.
7. The feminine image was farthest in meaning from the competitive female basketball player image.
8. The images of the competitive female swimmer and tennis player followed an almost parallel pattern across the three dimensions and were the closest sport images in meaning. The competitive female basketball player image was closer in meaning to the competitive female tennis player image than to the competitive female swimmer image.

BIBLIOGRAPHY

1. Brown, Robert M. "Personality Differences Between Menstruating and Nonmenstruating," *Research Quarterly*, 38:15-21, May, 1967.
2. Burt, S. G. "Personality Traits of Athletes as Measured by the MMPI," *Research Quarterly*, 39:127-135, May, 1968.
3. Burt, Robert. "A New Look at Girls' Sports," *Journal of Health, Physical Education, and Recreation*, 38:42-48, November-December, 1967.
4. Brewster, Inge, et al. "Ten-Year Stereotypes and Clinical Judgments of Mental Health," *Journal of Abnormal and Clinical Psychology*, 84:1-5, February, 1976.
5. Burt, Robert. "Sex-Role Development in a Changing Culture," *Psychological Bulletin*, 75:233-242, July, 1970.
6. Brown, Ruth Wilson. "A Use of the Semantic Differential to Study the Positive Image of Girls Who Participate in Competitive Sports and Certain Other School Related Activities," Unpublished Doctoral Dissertation, Florida State University, Tallahassee, 1965.
7. Burt, Robert. "Perceptions of 'The Modern Athlete' and 'The Modern Coach,'" Unpublished Master's Thesis, University of North Carolina at Greensboro, 1973.
8. Carroll, John B. "Revision of the Measurement of Sex-Role," *Language*, 35(1):59-77, 1959.
9. Chasin, Alyce. "Current Developments in Competitive Sports for Girls and Women," *Journal of Health, Physical Education, and Recreation*, 41:86-91, March, 1970.
10. Clark, Margaret, and Margaret Lantis. "Sports in a Changing Culture," *Journal of Health, Physical Education, and Recreation*, 39:17-29, May-June, 1968.
11. Cooper, Lowell. "Athletic Activity and Personality: A Review of the Literature," *Research Quarterly*, 40:17-23, March, 1969.
12. Dewey, Helen, Sue Sports, and Suzanne Beach. "What do You Really Think About Athletic Competition for Women?" *Journal of Health, Physical Education, and Recreation*, 41:20, 2-7, November-December, 1970.

BIBLIOGRAPHY

1. Behrman, Robert M. "Personality Differences Between Nonswimmers and Swimmers," Research Quarterly, 38:163-171, May, 1967.
2. Booth, E. G. "Personality Traits of Athletes as Measured by the MMPI," Research Quarterly, 29:127-138, May, 1958.
3. Bowen, Robert. "A Man Looks at Girls Sports," Journal of Health, Physical Education, and Recreation, 38:42-44, November-December, 1967.
4. Broverman, Inge, et al. "Sex-Role Stereotypes and Clinical Judgments of Mental Health," Journal of Consulting and Clinical Psychology, 34:1-7, February, 1970.
5. Brown, Daniel. "Sex-Role Development in a Changing Culture," Psychological Bulletin, 55:232-242, July, 1958.
6. Brown, Ruth Eileen. "A Use of the Semantic Differential to Study the Feminine Image of Girls Who Participate in Competitive Sports and Certain Other School Related Activities." Unpublished Doctoral dissertation, Florida State University, Tallahassee, 1965. (Micro Card)
7. Buhner, Nancy. "Perceptions of 'The Woman Athlete' and 'The Woman Coach.'" Unpublished Master's thesis, University of North Carolina at Greensboro, 1973.
8. Carroll, John B. "Review of the Measurement of Meaning," Language, 35(1):58-77, 1959.
9. Cheska, Alyce. "Current Developments in Competitive Sports for Girls and Women," Journal of Health, Physical Education, and Recreation, 41:86-91, March, 1970.
10. Clark, Margaret, and Margaret Lantis. "Sports in a Changing Culture," Journal of Health, Physical Education, and Recreation, 29:37-39, May-June, 1958.
11. Cooper, Lowell. "Athletics, Activity and Personality: A Review of the Literature," Research Quarterly, 40:17-22, March, 1969.
12. Debacy, Diane, Ree Spaeth, and Roxanne Busch. "What Do Men Really Think About Athletic Competition for Women?," Journal of Health, Physical Education, and Recreation, 41:28,29,72, November-December, 1970.

13. Deutschmann, Paul. "The Semantic Differential: A Critical Appraisal," Public Opinion Quarterly, 23:435-436, Fall, 1959.
14. Edmiston, Susan. "The Gym Suit Blues: Changing the Odds Against Women in Sports," Redbook, 124:69,123,125,126, January, 1974.
15. Edwards, Harry. Sociology of Sport. Homewood, Illinois: The Dorsey Press, 1973.
16. Farber, Seymour, and Roger H. L. Wilson (eds.). The Potential of Woman. New York: McGraw-Hill Book Co., 1963.
17. Fasteau, Brenda Feigen. "Giving Women A Sporting Chance," Ms., 11:56-61,103, July, 1973.
18. Flanagan, Lance. "A Study of Some Personality Traits of Different Physical Activity Groups," Research Quarterly, 22:312-323, October, 1951.
19. Friedan, Betty. The Feminine Mystique. New York: Dell Publishing Company, Inc., 1963.
20. Gerber, Ellen. "The Changing Female Image: A Brief Commentary on Sport Competition for Women," Journal of Health, Physical Education, and Recreation, 42:59-61, October, 1971.
21. Gilbert, Bil, and Nancy Williamson. "Sport Is Unfair to Women," Sports Illustrated, 38:88-98, May 28, 1973.
22. Goldberg, Philip. "Are Women Prejudiced Against Women?," Transaction, 5:28-30, March, 1968.
23. Griffin, Patricia. "Perceptions of Women's Roles and Female Sport Involvement Among a Selected Sample of College Students." Unpublished Master's thesis, University of Massachusetts, 1972.
24. Harres, Bea. "Attitudes of Students Toward Women's Athletic Competition," Research Quarterly, 39:278-284, May, 1968.
25. Hart, Mabel Marie. "Factors Influencing College Women's Attitudes Toward Sports and Dance." Unpublished Master's thesis, University of Southern California, 1963. (Micro Film)
26. Heath, Edward. "A Semantic Differential Study of Attitudes Relating to Recreation as Applied to a BiCultural Setting." Unpublished Doctoral dissertation, University of Illinois, Urbana, 1966. (Micro Card)

27. Higdon, Rose, and Hal Higdon. "What Sports for Girls?," Today's Health, 45:21-23, 74-76, October, 1967.
28. Ibrahim, Hilmi. "Comparison of Temperament Traits Among Intercollegiate Athletes and Physical Education Majors," Research Quarterly, 38:615-622, December, 1967.
29. Jenkins, Noel, and Karen Vroegh. "Contemporary Concepts of Masculinity and Femininity," Psychological Reports, 25:679-697, December, 1969.
30. Johnson, Patricia Ann. "A Comparison of Personality Traits of Superior Skilled Women Athletes in Basketball, Bowling, Field Hockey, and Golf," Research Quarterly, 43:409-415, December, 1972.
31. Johnson, Sherry. "Can Women Match Men In Sports? 'Female Could Equal Man,'" Greensboro Daily News, 203:C1,C12, January 6, 1974. (Interview of Dr. Celeste Ulrich)
32. Johnson, Warren, Daniel C. Hutton, and Granville B. Johnson, Jr. "Personality Traits of Some Champion Athletes as Measured by Two Projective Tests: Rorschach and H-T-P," Research Quarterly, 25:484-485, December 1954.
33. Kjeldergaard, Paul. "Attitudes Towards Newscasters as Measured by the Semantic Differential: A Descriptive Case," Journal of Applied Psychology, 45:35-40, February, 1961.
34. Komisar, Lucy. The New Feminism. New York: Warner Books, Inc., 1972.
35. Lakie, William. "Personality Characteristics of Certain Groups of Intercollegiate Athletes," Research Quarterly, 33:566-573, December, 1962.
36. Landers, Daniel. "Psychological Femininity and the Prospective Female Physical Educator," Research Quarterly, 41:164-170, May, 1970.
37. Leyhe, Naomi. "Attitudes of the Women Members of the American Association for Health, Physical Education, and Recreation toward Competition in Sports for Girls and Women." Unpublished Doctoral dissertation, Indiana University, 1955. (Micro Card)
38. Malumphy, Theresa. "Personality of Women Athletes in Intercollegiate Competition," Research Quarterly, 39:610-620, October, 1968.
39. McGee, Rosemary. "Comparison of Attitudes Toward Intensive Competition for High School Girls," Research Quarterly, 27:60-73, March, 1956.

40. McKee, John, and Alex Sherriffs. "The Differential Evaluation of Males and Females," Journal of Personality, 25:-356-371, 1957.
41. McKee, John, and Alex Sherriffs. "Men's and Women's Beliefs, Ideals, and Self-Concepts," American Journal of Sociology, 64:356-363, January, 1959.
42. Mead, Margaret. Male and Female. New York: Dell Publishing Company, 1949.
43. Metheny, Eleanor. Connotations of Movement in Sport and Dance. Dubuque, Iowa: Wm. C. Brown Company, 1965.
44. Ogilvie, Bruce, and Thomas Tutko. "Sport: If You Want to Build Character, Try Something Else," Psychology Today, 5:60-63, October, 1971.
45. Osgood, Charles, George Suci, and Percy Tannenbaum. The Measurement of Meaning. Urbana, Illinois: University of Illinois Press, 1957.
46. Parsley, H. M. (trans.). The Second Sex, by Simone de Beauvoir. New York: Bantam Books, Inc., 1949.
47. Peterson, Sherri, Jerome Weber, and William Trousdale. "Personality Traits of Women in Team Sports vs. Women in Individual Sports," Research Quarterly, 38:686-690, December, 1967.
48. Reece, Michael. "Masculinity and Femininity: A Factor Analytic Study," Psychological Reports, 14:123-139, February, 1964.
49. Rogers, Frederick. "Olympics for Girls?," School and Society, 30:190-194, August 10, 1929.
50. Rosenberg, B. G., and B. Sutton-Smith. "A Revised Conception of Masculine-Feminine Differences in Play Activities," Journal of Genetic Psychology, 96:165-170, March, 1960.
51. Rosenkrantz, Paul, et al. "Sex-Role Stereotypes and Self-Concepts in College Students," Journal of Consulting and Clinical Psychology, 32:287-295, June, 1968.
52. Schendel, Jack. "Psychological Differences Between Athletes and Nonparticipants in Athletics at Three Educational Levels," Research Quarterly, 36:52-67, March, 1965.
53. Scott, Phebe. "Women's Sports in 1980," Proceedings of the Second National Institute on Girls' Sports, 1966, 143-148.

54. Scott, Phebe. "Reflections on Women in Sports," Proceedings of the Third National Institute on Girls' Sports, 1966, 7-13.
55. Scott, Phebe. "Intercollegiate Sports for Women Present Problems and Future Directions," National Conference on Sports Programs for College Women, June 23, 1969, 25-30.
56. Slusher, Howard. "Personality and Intelligence Characteristics of Selected High School Athletes and Nonathletes," Research Quarterly, 35:539-545, December, 1964.
57. Snider, James, and Charles Osgood (eds.). Semantic Differential Technique. Chicago, Illinois: Aldine Publishing Company, 1969.
58. Steinmann, Anne. "Lack of Communication Between Men and Women," Marriage and Family Living, 20:350-352, November, 1958.
59. Steinmann, Anne, and David J. Fox. "Male-Female Perceptions of the Female Role in the United States," Journal of Psychology, 64:265-276, November, 1966.
60. Steinmann, Anne, Joseph Levi, and David J. Fox. "Self-Concept of College Women Compared with Their Concept of Ideal Woman and Men's Ideal Woman," Journal of Counseling Psychology, 11:370-374, Winter, 1964.
61. Timmermans, Helen. "A Comparison between Physical Education Majors and Nonmajors in Certain Personality Traits," Research Quarterly, 39:1088-1093, December, 1968.
62. Ulrich, Celeste. "The Land O'The Leal," National Conference on Sports Programs for College Women, June 21, 1969, 3-10.
63. Ulrich, Celeste. "She Can Play As Good As Any Boy," Phi Delta Kappan, 55:113-117, October, 1973.
64. Wallin, Paul. "Cultural Contradictions and Sex Roles: A Repeat Study," American Sociological Review, 15:288-293, April, 1950.
65. Werner, Alfred, and Edward Gottheil. "Personality Development and Participation in College Athletics," Research Quarterly, 37:126-131, March, 1966.

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Greensboro, North Carolina

Dear Dr. Caskin:

I plan to write a descriptive study on the college-competitive swimmer as partial fulfillment of the requirements for the Master of Science degree at the University of North Carolina at Greensboro. I will be using the scientific differential technique to distinguish certain concepts about the college swimmer as a competitive swimmer. I would be most appreciative if you would allow your team members to be a part of my study. I would like for the scale to be administered prior to your last swimming meet. Realizing that you may finish your season before Christmas, I will mail the tests to you as soon as I receive your reply. It is not necessary that the tests be returned to me before Christmas.

APPENDIX A

Reading the directions and responding to the scientific differential tests should require no more than fifteen minutes. Could you please send your reply on the enclosed postcard. If you have any questions, please call or collect at 919-375-4223.

Thank you.

Yours truly,

Jane Lewis
Jane Lewis

1109 A West Market Street
Greensboro, North Carolina
November 24, 1972

Ms. Lynne Gaskin
Department of Physical Education
University of North Carolina
Greensboro, North Carolina

Dear Ms. Gaskin:

I plan to write a descriptive study on the college competitive swimmer as partial fulfillment of the requirements for the Master of Science degree at the University of North Carolina at Greensboro. I will be using the semantic differential technique to distinguish certain concepts about the college woman as a competitive swimmer. I would be most appreciative if you would allow your team members to be a part of my study. I would like for the scale to be administered prior to your last swimming meet. Realizing that you may finish your season before Christmas, I will mail the tests to you as soon as I receive your reply. It is not necessary that the scale be returned to me before Christmas.

Reading the directions and responding to the semantic differential scale should require no more than fifteen minutes. Would you please send your reply on the enclosed postcard. If you have any questions, please call me collect at 919-275-4285.

Thank you.

Yours truly,

Jane Lewis

Jane Lewis

RESPONSE CARD FOR COACH

Please check your response

My team will be glad to participate
in the study.

Number on swim team

Date of last swim meet

My team will not be able to participate
in the study.

This study deals with how you feel about exercise programs. Your identity will remain anonymous. No name is to appear on your paper and no attempt will be made to trace your answers back to you. We'll try to respond quickly on the following scales.

Thank you for your cooperation.

Please provide the following information:

Name of University _____

Name of College _____

Age _____

PERSONAL HISTORY OF COMPETITIVE SWIMMING

Years of Competitive Swimming Through High School _____

Years of Competitive Swimming From High School Through Twelfth Grade _____

APPENDIX B

Years of Competitive Swimming in College _____

Please list any other competitive sports in which you have participated at the varsity level.

SPORT

GRADE

Do you not know yet whether you will make the team of another inter-collegiate sport. Please list any sport for which you plan to try out.

This study deals with how you feel about certain concepts. Your identity will remain anonymous. No name is to appear on your paper and no attempt will be made to trace your responses back to you. Feel free to respond frankly on the following scales.

Thank you for your cooperation.

Please provide the following information:

Name of University _____

Year in College _____

Age _____

PERSONAL HISTORY OF COMPETITIVE SWIMMING

Years of Competitive Swimming Through
Ninth Grade _____

Years of Competitive Swimming From
Tenth Grade Through Twelfth Grade _____

Years of Competitive Swimming in
College _____

Please list any other competitive sports in which you have participated at the varsity level.

HIGH SCHOOL

COLLEGE

You may not know yet whether you will make the team of another inter-collegiate sport. Please list any sport for which you plan to try out.

Sometimes you may feel as though you have had the same item before on the test. This will not be the case, so do not look back and forth through the items. Do not try to remember how you checked similar items earlier in the test. Make each item a separate and independent judgment. Work at fairly high speed through the test. Do not worry or puzzle over individual items. It is your first impressions, the immediate feelings about the items, that we want. On the other hand, please do not be careless, because we want your true impressions.

A GIRL WHO IS FEMININE

polite	__ : __ : __ : __ : __ : __	rude
uncertain	__ : __ : __ : __ : __ : __	definite
deep	__ : __ : __ : __ : __ : __	shallow
cooperative	__ : __ : __ : __ : __ : __	competitive
cold	__ : __ : __ : __ : __ : __	affectionate
rounded	__ : __ : __ : __ : __ : __	angular
tough	__ : __ : __ : __ : __ : __	fragile
modest	__ : __ : __ : __ : __ : __	conceited
awkward	__ : __ : __ : __ : __ : __	graceful
active	__ : __ : __ : __ : __ : __	passive
weak	__ : __ : __ : __ : __ : __	strong
aggressive	__ : __ : __ : __ : __ : __	hesitant
attractive	__ : __ : __ : __ : __ : __	unattractive
unemotional	__ : __ : __ : __ : __ : __	emotional
small	__ : __ : __ : __ : __ : __	large
dumb	__ : __ : __ : __ : __ : __	intelligent
humorous	__ : __ : __ : __ : __ : __	serious
loud	__ : __ : __ : __ : __ : __	soft

 ADDITIONAL CONCEPTS MEASURED

- A GIRL WHO IS ON THE SCHOOL'S GIRLS' SWIMMING TEAM
 A GIRL WHO IS ON THE SCHOOL'S GIRLS' TENNIS TEAM
 A GIRL WHO IS ON THE SCHOOL'S GIRLS' BASKETBALL TEAM

December 2, 1972

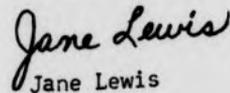
Dear Ms. Gaskin,

I appreciate your team's participation in this study about the college woman as a competitive swimmer. I would like for the semantic differential scale to be administered at practice just prior to the last swim meet. When your team is ready to take the scale, would you please follow the instructions on the attached sheet to insure similarity of administration. Will you please remain with your swimmers as they respond to the scale and collect the papers as soon as they finish. I hope to avoid any comparison of papers. Finally, I would like you to supply the information requested on the last page to help validate the study.

Thank you very much for your assistance with this study. A self-addressed stamped envelope is enclosed for returning the scales. Also included is an extra copy of the semantic differential scale for you.

Thank you again.

Sincerely,



Jane Lewis

Jane Lewis

INSTRUCTIONS TO THE TEAM

Step 1. PLEASE READ TO YOUR TEAM BEFORE DISTRIBUTING THE PAPERS.

As members of this team, you have been asked to participate in a study being conducted by a graduate student at the University of North Carolina at Greensboro. This study deals with how you perceive certain concepts. Therefore, it is important that your responses be frank. It will take approximately fifteen minutes for you to supply the information requested.

Step 2. DISTRIBUTE PAPERS. THEN READ THE FOLLOWING STATEMENTS.

Please fill out the first page and then continue with the following pages. No questions may be asked, but you may refer to the directions at any time. As soon as you finish, return your papers to me.

Step 3. COLLECT PAPERS AS THEY FINISH.

GENERAL INFORMATION SHEET

_____ Name of University

_____ Number of Swimming Meets in the 1972-73
School Year

_____ Present Record (Won-Loss-Tie)

_____ Date Semantic Differential Administered

_____ Date of Final Swim Meet

_____ Place Semantic Differential Scale Was Ad-
ministered (Room, Deck, etc.)

_____ Position of Subjects While Taking the
Semantic Differential Scale (Sitting on
Bleachers, Standing, etc.)

_____ Indicate Whether You Would Like To Receive
Your Team's Results

COMMENTS:

GRADE IN WHICH CONCEPTS WERE
ADMINISTERED TO SUBJECTS*

APPALACHIAN STATE UNIVERSITY

A Female Girl
Basketball Player
Swimmer
Tennis Player

EAST CAROLINA UNIVERSITY

Tennis Player
A Female Girl
Basketball Player
Swimmer

UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

Basketball Player
Swimmer
Tennis Player
A Female Girl

APPENDIX C

UNIVERSITY OF NORTH CAROLINA AT RALEIGH

Swimmer
A Female Girl
Basketball Player
Tennis Player

Abbreviations:

* Female Girl = A Girl Who Is Female

Swimmer = A Girl Who Is on the School's Girls' Swimming Team

Tennis Player = A Girl Who Is on the School's Girls' Tennis Team

Basketball Player = A Girl Who Is on the School's Girls' Basketball Team

ORDER IN WHICH CONCEPTS WERE
ADMINISTERED TO SWIMMERS*

APPALACHIAN STATE UNIVERSITY

A Feminine Girl
Basketball Player
Swimmer
Tennis Player

EAST CAROLINA UNIVERSITY

Tennis Player
A Feminine Girl
Basketball Player
Swimmer

UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

Basketball Player
Swimmer
Tennis Player
A Feminine Girl

UNIVERSITY OF NORTH CAROLINA AT GREENSBORO

Swimmer
A Feminine Girl
Basketball Player
Tennis Player

*Abbreviations:

A Feminine Girl = A Girl Who Is Feminine

Swimmer = A Girl Who Is on the School's Girls' Swimming Team

Tennis Player = A Girl Who Is on the School's Girls' Tennis Team

Basketball Player = A Girl Who Is on the School's Girls' Basketball Team

SCALE ABBREVIATIONS

Scale	Factor
P-1 = polite--rude	(potency)
U-0 = warm--cold	(potency)
D-0 = deep--shallow	(potency)
A-0 = active--passive	(evaluative)
I-0 = intense--diffuse	(evaluative)
A-1 = active--passive	(activity)
S-0 = strong--weak	(activity)
A-2 = assertive--withdrawn	(activity)
A-3 = assertive--withdrawn	(evaluative)
S-1 = assertive--withdrawn	(evaluative)
I-1 = intelligent--unintelligent	(potency)
I-2 = hard--soft	(activity)

APPENDIX D

SCALE ABBREVIATIONS

<u>Scales</u>	<u>Factors</u>
P-R = polite--rude	(potency)
U-D = uncertain--definite	(potency)
D-S = deep--shallow	(potency)
C-A = cold--affectionate	(evaluative)
A-G = awkward--graceful	(evaluative)
A-P = active--passive	(activity)
W-S = weak--strong	(activity)
A-H = aggressive--hesitant	(activity)
A-U = attractive--unattractive	(evaluative)
U-E = unemotional--emotional	(evaluative)
D-I = dumb--intelligent	(potency)
L-S = loud--soft	(activity)

TABLE VI

A GIRL WHO IS ON THE SCHOOL'S GIRLS' SWIMMING TEAM

Subjects	Scales											
	P-R	U-D	D-S	C-A	A-G	A-P	W-S	A-H	A-U	U-E	D-I	L-S
1	+2	+2	+2	+2	+2	+3	+3	+2	0	+2	0	+2
2	+1	+2	+2	+1	+2	+3	+3	+2	0	0	+1	0
3	+3	+1	0	0	+1	+3	+2	+2	0	-1	+1	0
4	+2	+2	0	+1	+2	+1	+2	0	0	0	0	0
5	+1	0	+1	0	+2	+2	+2	+2	-1	+1	+1	+1
6	+3	+1	+2	+2	+3	+3	+3	+2	0	+1	+2	0
7	+2	+1	+1	+1	0	+2	+2	+2	0	+2	+1	+2
8	+3	-2	+2	-3	-3	+2	-3	+2	+3	-3	-3	+2
9	+3	+2	+2	+2	+2	+3	+3	+2	+1	+1	+2	+1
10	+3	+2	+3	+3	+3	+3	+3	+3	+2	+3	+3	+3
11	+3	+3	+3	+3	+2	+2	+2	+2	+1	+3	+3	+2
12	+1	+2	+1	0	+2	+2	+1	+1	+2	+2	+2	0
13	+2	+2	+2	+3	+3	+3	+3	0	+2	+3	+2	+1
14	+2	+2	+3	+3	+2	+2	+2	+2	+3	+2	+2	0
15	+3	+2	+1	+2	0	+3	+3	+2	+2	+1	+2	0
16	+2	+1	0	+2	+3	+3	+2	+1	+1	0	+1	+1
17	+2	+1	+1	+1	+1	+2	+2	+2	+2	+1	+1	0
18	+2	+2	+2	+2	+2	+2	+2	+1	+1	+1	+2	+1
19	+3	+3	0	+3	+3	+3	+3	0	+3	0	0	0
20	0	+1	0	-1	0	+3	+3	+1	+1	+2	+1	+1
21	+3	+1	+1	+1	+1	+3	+3	+2	+3	+2	+2	0
22	+3	+1	+2	+2	+2	+3	+3	+3	+2	0	+2	0
23	+2	+2	-1	+2	+2	+3	+3	+3	+2	+3	+2	+2
24	+3	+3	0	+2	+3	+3	+3	+3	+3	+1	+3	0
25	+2	+2	+1	+1	+2	+3	+3	+3	+1	+2	+3	+2
26	+3	+3	+2	+3	+2	+3	+3	+1	+2	+2	+2	+1
27	+1	+1	-1	0	-1	+2	+1	+1	+2	0	0	+2
28	+3	+2	+2	+3	+3	+3	+3	+3	0	+3	+3	+1
29	+3	+3	+2	+3	+3	+3	+3	+3	+3	+3	+3	+1
30	+2	+1	+2	+1	+2	+2	+2	+2	+2	+2	+2	+1
31	+2	-1	-2	+2	+1	+3	+3	+2	+2	+1	+1	+3

TABLE VII

A GIRL WHO IS ON THE SCHOOL'S GIRLS' TENNIS TEAM

Subjects	Scales											
	P-R	U-D	D-S	C-A	A-G	A-P	W-S	A-H	A-U	U-E	D-I	L-S
1	+2	+2	+2	+1	0	+3	+1	+3	0	+2	+1	0
2	+2	0	+1	0	+1	+2	+3	0	+3	+3	+3	0
3	+3	+1	0	0	+2	+3	+3	+1	0	+1	+1	0
4	+2	+1	+1	+1	+1	+2	+2	+2	0	+1	+1	+1
5	0	+2	0	0	+2	0	+1	0	0	0	+1	0
6	+2	+2	+2	+1	+3	+3	+2	+1	0	+1	+2	-1
7	+3	+1	+2	0	+3	+3	+2	+3	0	0	+1	+1
8	+2	-3	+3	-2	-3	+3	-3	+3	+2	-2	-3	+3
9	+3	+2	+3	+3	+2	+3	+3	+2	+3	+2	+2	+1
10	+2	+3	+2	+2	+3	+3	+3	+3	+2	+3	+3	+3
11	+3	+2	+2	+2	+3	+3	+2	+2	+2	+1	+2	-1
12	+2	+1	+1	+1	+2	+2	+2	+2	+2	+1	+2	-1
13	+1	+2	+1	0	+2	+3	+3	+2	0	+1	+1	+2
14	+2	+2	0	+1	+3	+3	+1	+2	+2	0	+2	0
15	-1	+1	0	-1	-2	+3	+3	+1	0	+1	0	+2
16	+2	+1	0	0	+2	+2	+2	+1	+1	0	+1	0
17	+2	+2	+1	0	+1	+2	+2	+2	+1	+1	0	0
18	-2	+2	-3	+3	+3	+3	+2	+2	+2	-1	+2	+3
19	+3	+3	-3	0	+3	+3	+3	0	0	0	0	0
20	+1	+1	0	0	+1	+3	+3	+1	+1	+2	+1	0
21	+2	+1	+1	+2	+2	+2	+2	0	+2	+2	+2	0
22	+3	+1	+1	+1	+2	+3	+2	+2	+1	0	+1	0
23	+2	+2	-1	+2	+3	+3	+2	+2	+2	+2	+2	-1
24	+3	+3	+1	+1	+3	+3	+3	+3	+2	-1	+2	-1
25	+2	+2	+2	+2	+3	+3	+2	+2	+1	+1	+1	0
26	+3	+3	+2	+3	+3	+3	+3	+1	+2	+2	+2	0
27	0	0	+1	0	+1	+1	0	+1	+1	+1	+1	-1
28	+2	+1	+1	-2	+2	+1	+1	+1	+2	+3	+2	-2
29	+2	+2	+3	+2	+3	+2	+1	+3	+2	+2	+2	+1
30	+1	+2	+1	+1	+3	+3	+2	+2	+2	-1	+2	0
31	+3	0	0	+2	+2	+3	+3	+3	+2	0	+2	-2

TABLE VIII

A GIRL WHO IS ON THE SCHOOL'S GIRLS' BASKETBALL TEAM

Subjects	Scales											
	P-R	U-D	D-S	C-A	A-G	A-P	W-S	A-H	A-U	U-E	D-I	L-S
1	+2	+1	0	+2	0	+3	+3	+3	0	+2	+1	+2
2	0	+2	+2	0	0	+3	+3	+3	0	-1	0	+1
3	+3	+1	0	0	+2	+3	+3	+1	0	+1	+1	0
4	+2	+2	+1	+1	+1	+1	+3	+2	0	0	+1	+1
5	-2	+2	0	+1	+2	0	+2	+2	0	+1	+2	0
6	+2	+2	+1	+1	+2	+3	+3	+2	0	+1	+2	0
7	+3	+2	+2	0	+2	+3	+2	+3	0	+1	+1	+1
8	+2	-3	+3	-2	-3	+3	-3	+3	+1	-2	-3	+3
9	+1	+3	+1	-2	+2	+3	+3	+3	+1	+1	+2	+3
10	+3	+3	+3	+2	+3	+3	+3	+3	+3	+3	+3	+3
11	+3	+3	+3	+3	+2	+3	+3	+3	0	+3	+2	+3
12	0	+2	+1	0	-1	+2	+2	+2	-2	-1	0	+2
13	-2	+2	-3	-2	-2	+3	+3	+3	-3	-3	-2	+3
14	+2	+2	+2	0	+1	+2	+2	+1	-2	-2	+2	+1
15	0	+3	0	-1	-1	+3	+3	+3	-1	0	0	+2
16	+1	+2	0	+1	+2	+3	+3	+3	0	-1	0	+3
17	+2	+2	+1	+1	0	+1	+2	+2	+1	0	0	+1
18	-1	+2	+2	-1	0	+3	+2	+3	0	+1	+1	+2
19	+3	0	0	0	0	0	+3	0	0	0	0	0
20	0	0	0	-1	-1	+2	+2	+1	0	0	0	+1
21	+2	+1	+2	+2	+2	+2	+2	-1	+2	+2	+2	-1
22	+3	+1	+1	+1	+1	+3	+3	+3	+1	0	+1	0
23	-1	+2	+2	-1	-2	+2	+2	+3	-2	+1	+2	+2
24	+3	+3	+2	+2	+3	+3	+2	+2	+2	-1	+2	+1
25	0	+2	+1	-1	+1	+2	+2	+3	-1	+1	0	+1
26	+3	+3	+2	+3	+2	+3	+3	+1	+1	+2	+2	+1
27	0	+2	0	-1	-1	+1	+1	+1	0	0	0	+2
28	-1	+2	+1	+1	0	+1	+1	-1	-2	+2	+1	+1
29	+1	+2	0	0	0	+2	+3	+2	+1	+3	+3	+1
30	+1	+3	+1	+3	+3	+3	+2	+3	+1	+1	+1	+2
31	+2	+1	-1	0	+2	+3	+3	+3	0	+2	+1	+2