

THE AFFECT OF DOMINANCE, EYE CONTACT AND  
PARTICIPANTS' SEX ON ATTITUDE AND  
EXPRESSIVE BEHAVIOR

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## CHAPTER I

### THE PROBLEM

Some form of dominance and submission exists in nearly all species (Young, 1947). Man has been intensely interested in the study of dominance for many years because of its affect on interpersonal behavior (Landis, 1939). Recently, researchers of dominance have turned their attention toward two aspects of behavior, eye contact and personal space, both of which affect and are affected by dominance. Most of the studies, however, have focused on the relationship between dominance and eye contact (Strongman and Champness, 1968) and the relationship between dominance and personal space (Butt and Fiske, 1968). To a lesser degree, there has been recent research on the relationship between eye contact and personal space (Argyle and Dean, 1965; Sommer, 1967). Little attention has been given to the interrelation of all three. The present study investigated the affects of dominance, eye contact and participants' sex on attitude and expressive behavior such as personal space.

The relationship of two of these variables, dominance and eye contact, has been investigated by Exline (1963). He suggested that looking at a person encroaches upon his autonomy and that when two glances meet, a wordless

struggle ensues until one or the other succeeds in establishing dominance. This dominance is signaled by the lowered glance of the loser (Kendon, 1967; Argyle, 1967).

The animal literature also reports communication through eye contact. The most widely shared aspect of threat behavior across primate species is the direct gaze. Animals use this eye contact to indicate dominance and submission. Looking anywhere except toward the opponent is a widespread sign of submission for the monkey (Marler, 1965). Simonds (1965) found that a subordinate monkey consistently gives way to the approach of a dominant monkey and looking away from the dominant monkey is often substituted for actually moving. Jay (1965) reported that aggressive gestures among the langurs include staring behavior while submissive gestures include avoiding visual contact. Schaller (1965) observed that gorillas indicate their submissiveness by simply averting their eyes and turning their heads to one side.

Human eye contact can also be influenced by affective states. Mehrabian (1968) found eye contact to be lowest for intensely disliked examiners and to be moderately high for intensely liked examiners. Fromme and Schmidt (1970) reported that subjects given instructions to act out emotions maintained less eye contact for sorrow than for fear, anger, or a neutral affect.

Thus both the human and animal literature indicate that eye contact can convey several meanings. Eye contact

can be conceived as symbolic aggression, a threat, a means of establishing dominance, or as an influence on attitude and an expression of affect.

Participants' sex is also an important variable in the study of eye contact. Exline (1963) found distinctly different patterns of visual interaction for male and female subjects. Using only same-sex dyads, he found that women are significantly more prone to engage in mutual visual interaction than are men. Also once contact has been made, they tend to hold the other's gaze longer than do men. Exline, Gray and Schuette (1965) used cross-sex dyads and established that women engage in more mutual glances than do men regardless of the sex of the partner. Women are also more willing to tolerate a mutual glance than are men regardless of the sex of the partner.

Personal space is conceived as the area surrounding the individual which he feels to be personal, to belong only to him. Argyle and Dean (1965) found that the amount of eye contact increases as personal space increases. Horowitz, Duff and Stratton (1964) found that stress increases personal space. On the basis of this, Dosey and Meisels (1969) theorized that personal space acts in part as a buffer zone which serves as protection against perceived threats to one's emotional well-being and self-esteem. The animal literature supports this theory to some extent. Jay's (1965) studies with langurs have shown that the more dominant the animal, the larger the personal space



needed by the other animals.

Personal space is also influenced by the participants' sex. Sommer (1967) found that females can tolerate closer physical presence by other females than can males with other males. Dosey and Meisels (1969) reported that females approached closer to other females and stayed further away from males while males used virtually the same distance in approaching both sexes.

Personal space is also related to several other variables. Studies by Mehrabian (1968) and Sommer (1967) indicated that personal space is a decreasing linear function of the positive attitude toward the person approached. Fromme and Schmidt (1970) found that role-enacted fear results in greater personal space than does the enactment of anger, sorrow, or neutral states. They also found a tendency for affective states to influence the approach speed.

It may be concluded that several variables have similar effects on personal space and eye contact. These studies indicate that the subject's eye contact is affected by personal space, dominance, participants' sex, attitude, and affect. The purpose of the present study was to investigate the affect of the confederate's eye contact, the participants' sex, and the subject's own dominance level upon the subject's personal space, eye contact, rate of approach and his attitude toward the confederate.

The following hypotheses were advanced:

- #1 A high dominant subject will have less personal space, but more eye contact with the confederate, and will approach the confederate more rapidly.
- #2 The confederate's high eye contact will cause the subject to have more personal space and less eye contact with him and the subject's approach speed will be slower. The subject will have a negative attitude toward the confederate.
- #3 The confederate's high eye contact toward a high dominant subject will cause the subject to need less personal space, more eye contact with him, and the subject's approach speed will be increased. The confederate's high eye contact toward a low dominant subject will have just the opposite affect. Both the high and the low dominant subjects will have a negative attitude toward the confederate.
- #4 The confederate's low eye contact toward either a high or low dominant subject will cause the subject to have intermediate personal space with the confederate, intermediate eye contact with the confederate, and the subject's approach speed will be moderate. The subject will have the most positive attitude toward the confederate.

## CHAPTER II

### METHOD

#### Subjects

Twenty-four male and twenty-four female Caucasian Oklahoma State University students served as subjects. The males ranged in age from eighteen to thirty-one with a mean of 22.6. The females ranged in age from eighteen to forty-five with a mean of 22.2. None of the subjects had more than six hours of psychology credit.

#### Confederates

The male and female confederates were selected from a graduate psychology class. They were volunteers and were chosen on the basis of their performance in a staring contest.

#### Instruments and Measurements

The Bernreuter Personality Inventory was administered to each subject. On the basis of dominance scores the subjects were divided into thirds and high (upper third) and low (lower third) dominance groups for males and females were formed. Each of these four groups consisted

of eight subjects. The subjects were then randomly assigned to one of four conditions: (1) a female confederate maintaining high eye contact; (2) a female confederate maintaining low eye contact; (3) a male confederate maintaining high eye contact; (4) a male confederate maintaining low eye contact. The four experimental factors then were: subject's sex, subject's dominance ranking, the confederate's sex and the confederate's level of eye contact. Thus the experimental design consisted of sixteen groups with two subjects per group.

TABLE I

THE NUMBER OF SUBJECTS PER CELL IN  
EACH EXPERIMENTAL CONDITION

		High Dominance		Low Dominance	
		Male	Female	Male	Female
		Subject	Subject	Subject	Subject
High Eye Contact	Male Confederate	n=2	n=2	n=2	n=2
	Female Confederate	n=2	n=2	n=2	n=2
Low Eye Contact	Male Confederate	n=2	n=2	n=2	n=2
	Female Confederate	n=2	n=2	n=2	n=2

A blackboard marked in one inch intervals, disguised to represent an experiment in perception, was stationed in

the experimental room. The nose-to-nose distance between the subject and confederate as indicated by the blackboard was used as the measure of the subject's personal space.

The subject was stationed at a standard location one hundred inches from the confederate. The subject's approach toward the confederate was timed by the examiner and this time was divided into the distance the subject moved to produce his speed in inches per second. An Observer stationed behind a one-way mirror used a cumulative stop watch to record the time the subject spent looking at the confederate. This time was divided by the subject's total approach time to produce the percentage of eye contact the subject had with the confederate. After the approach the subject was asked to fill out a Likert-type attitude scale. Twenty-four pairs of attribute poles were established and a seven point rating continuum was designed. The attribute poles covered four types of traits: Personality (anxious, dependent); Sociometric (likable, attractive); Ability (capable, orderly); and Motive (generous, competitive). This scale was adapted from one used by Wilson, Chun and Kayatani (1965).

#### Procedure

The examiner brought both the subject and the confederate into the experimental room. The following instructions were given: "This is a study of what is known as the orienting reflex. I want you (confederate) to stand

with your toes on this line and I want you (subject) to stand with your toes on this line. (To the subject) When I tell you to start, I want you to walk toward him (her) and stop at the point where you feel the most comfortable. Just stay there until I tell you to return to your position. This will allow me to get some idea of certain automatic reflex reactions. These reactions are natural and are present in everyone. So just relax and we will go through this quickly. Are there any questions? Ready, start."

When the approach interaction with the confederate was concluded both subject and confederate were instructed as follows: "Please go to the room across the hall. There you will find a questionnaire and some pencils on the table. Please take one, be seated and fill it out. When you are finished, just leave your paper on your chair. You are then free to go. Thank you very much for your cooperation and help."

Later all the subjects were sent a letter explaining the nature and purpose of the experiment (see Appendix C).

### Statistical Analysis

The independent variables in this study were high and low dominance, high and low conditions of confederate eye contact, the sex of the confederate and the sex of the subject. The dependent variables used to measure the affects of these independent variables were personal space,

the percentage of eye contact the subject had with the confederate, the subject's approach speed toward the confederate and the subject's attitude toward the confederate. A four factor factorial analysis of variance was used to evaluate the effects of dominance, the confederate's eye contact, the confederate's sex and the subject's sex on the four criterion variables. There were two subjects per cell in a 2x2x2x2 analysis of variance (see Table I).

As only one of the predicted interaction effects approached significance the F test for simple effects was made only on this interaction. Other significant interaction effects were examined by testing for differences between all possible pairs of means in a logical grouping of means using the Newman-Keuls procedure (Winer, 1962).

## CHAPTER III

### RESULTS

The results of the analysis of variance are presented in Table II. Means associated with the significant main effects and interaction effects for the four criterion variables are presented in Table III.

As predicted in hypothesis one, high dominance decreases personal space significantly ( $p < .05$ ). Furthermore there was a trend toward a dominance by eye contact (AB) interaction effect on the personal space measure ( $p < .10$ ). An F test for the simple effects of the high eye contact on dominance resulted in greater personal space for low dominance than for high dominance ( $p < .01$ ). This tends to support hypothesis three.

The subject sex by confederate sex (CD) interaction effects on personal space were significant at the .05 level. Since no hypothesis had been made concerning this interaction, a Newman-Keuls test was used. For the male subjects ( $D_1$ ), the difference between personal space totals for the male confederate and female confederate conditions was 101.00, which exceeded the critical difference of 94.83 ( $p < .05$ ). The personal space for a male subject was significantly greater with a male confederate than with a female



TABLE II

## ANALYSIS OF VARIANCE OF CRITERION MEASURES

Source	df	Personal Space		% Eye Contact		Speed		Attitude	
		MS	F	MS	F	MS	F	MS	F
A	1	1023.78	8.20**	844.41	1.37	220.90	9.54***	205.03	<1
B	1	<1	<1	79.87	<1	<1	<1	1313.28	4.30 <sup>a</sup>
C	1	140.28	1.12	135.96	<1	57.87	2.50	488.28	1.60
D	1	63.28	<1	666.34	1.08	12.80	<1	413.28	1.35
AB	1	385.03	3.08 <sup>a</sup>	841.80	1.37	17.73	<1	185.28	<1
AC	1	148.78	1.19	91.98	<1	1.19	<1	148.78	<1
AD	1	69.03	<1	149.02	<1	4.68	<1	16.53	<1
BC	1	195.03	1.56	461.99	<1	<1	<1	84.03	<1
BD	1	282.03	2.26	61.12	<1	154.42	6.67**	935.28	3.06 <sup>a</sup>
CD	1	569.53	4.56*	2301.81	3.37 <sup>a</sup>	10.59	<1	195.03	<1
ABC	1	101.53	<1	78.43	<1	<1	<1	73.78	<1
ABD	1	175.78	1.41	1530.36	2.48	78.58	3.40 <sup>a</sup>	913.78	2.99
ACD	1	30.03	<1	247.07	<1	2.06	<1	34.03	<1
BCD	1	318.78	2.55	1809.81	2.94	17.51	<1	397.78	1.30
ABCD	1	140.28	1.12	15.70	<1	65.09	2.81	76.53	<1
ERROR	16	124.91	--	616.42	--	23.14	--	305.34	--

A=Dominance

B=Level of Eye Contact

C=Confederate

D=Subject

\*\*\*p&lt;.01

\*\*p&lt;.025

\*p&lt;.05

<sup>a</sup>p<.10

TABLE III

MEANS ASSOCIATED WITH THE SIGNIFICANT MAIN AND INTERACTION EFFECTS OF DOMINANCE (A), EYE CONTACT (B), CONFEDERATE SEX (C), AND SUBJECT SEX (D) ON THE FOUR CRITERION VARIABLES

	Personal Space in inches	Percent of Eye Contact	Approach Speed in inches per second	Attitude
$\bar{A}_1$	17.8	-	25.78	-
$\bar{A}_2$	29.1	-	20.47	-
$\bar{B}_1$	-	-	-	28.25
$\bar{B}_2$	-	-	-	15.44
$\bar{AB}_{11}$	14.25	-	-	-
$\bar{AB}_{12}$	21.37	-	-	-
$\bar{AB}_{21}$	32.5	-	-	-
$\bar{AB}_{22}$	25.75	-	-	-
$\bar{BD}_{11}$	-	-	26.001	-
$\bar{BD}_{12}$	-	-	20.21	-
$\bar{BD}_{21}$	-	-	21.6	-
$\bar{BD}_{22}$	-	-	24.73	-
$\bar{CD}_{11}$	28.375	-	-	-
$\bar{CD}_{12}$	15.75	-	-	-
$\bar{CD}_{21}$	22.75	-	-	-
$\bar{CD}_{22}$	27.00	-	-	-

$A_1$  = High dominance

$A_2$  = Low dominance

$B_1$  = Confederate's high eye contact

$B_2$  = Confederate's low eye contact

$C_1$  = Male Confederate

$C_2$  = Female Confederate

$D_1$  = Male Subject

$D_2$  = Female Subject

confederate.

There were no significant main or interaction effects in the overall analysis of variance for eye contact (Table I). Although not statistically significant, the percentage of eye contact exhibited by the subjects was in the order predicted in hypotheses three and four.

The results of the analysis of variance for the speed measure indicated a significant main effect for dominance (A), and a significant interaction effect for eye contact by subject sex (BD). High dominance produces a significant increase in speed ( $p < .01$ ). This is in accord with hypothesis one. Table III shows the subject's approach speed in inches per second toward the confederate. The eye contact by subject sex (BD) interaction effects on the approach speed were significant at the .025 level. No hypotheses had been made previously concerning this interaction, so a Newman-Keuls test was made. For the confederate's high eye contact condition ( $B_1$ ), the difference between male and female subjects was 45.27, which exceeded the critical difference of 40.80 ( $p < .05$ ). The approach speed for a male subject under the effect of high eye contact was significantly slower than for a female subject under the high eye contact condition.

For the attitude criterion measure none of the main or interaction effects was significant in the overall analysis of variance. Nevertheless there was a trend toward the main effect of eye contact on attitude ( $p < .10$ ). However

this trend was in the direction opposite to that predicted in hypotheses two and four.

## CHAPTER IV

### DISCUSSION

The present findings indicate that dominance alone and in combination with eye contact has a pronounced affect on personal space. Personal space is also significantly affected by the subject sex-confederate sex interaction. Dominance alone significantly affects the subject's approach speed toward the confederate as does the interaction between eye contact and subject sex. The failure of several tests to reach the conventional level of significance is probably due to the small number of subjects per cell. The sex factor may also have produced some masking effects on the interactions. This is supported by the two significant interactions with sex and the three trends toward interaction effects with the sex variable for which no hypotheses had been made (see Table II). The taboo on interocular intimacy which Tomkins and Izard (1963) describe may also be considered as having a possible confounding influence. This taboo is a function of being taught to be ashamed of witnessing or expressing certain kinds of affect.

Another factor which must be considered is the subject's dominance level. The findings of this study support Dosey and Meisels' (1969) theory that personal space is used as a

protective barrier, as a buffer zone. The less dominant the subject was, the more he felt the need for protection and thus he increases his personal space. Aggression can also be related to this in that the aggressive; i.e. the more dominant subject felt less need for the protection of personal space and consequently decreases his personal space. High eye contact can also be conceived of as aggression. This is shown in that high eye contact caused an increase in personal space only when directed toward a low dominant subject. This is as would be expected since the low dominant subject would feel the need of the protection which personal space offers against the threat which he perceived in the high eye contact.

One particularly noteworthy finding was that high eye contact did not produce the hypothesized negative attitude. Apparently Mehrabian's (1968) finding that positive attitude increases eye contact and negative attitude decreases eye contact works in reverse with high eye contact causing a positive attitude and low eye contact producing a negative attitude. This result is also consistent with Argyle and Dean's (1965) interpretation of eye contact in terms of intimacy. This is not necessarily a contradiction of eye contact being stressful since stress does not preclude a positive attitude.

These findings have several implications, particularly in the area of therapy. In viewing the results of this study as a whole, the therapy situation may be viewed as

being affected by the dominance level of the client, by the therapist's eye contact, and by the amount of personal space the client is allowed. The confidence in and his attitude toward the therapist may be a function of this amount of eye contact and personal space. If the client feels threatened by this amount of eye contact and personal space this could place a great obstacle in the way of successful therapy.

The important influence of the subject sex by confederate sex interaction on personal space and eye contact also has some implications for therapy. The personal space and the amount of eye contact the therapist maintains with the client will be construed differently by male and female clients. For example a male client with a male therapist may feel threatened by a relatively small amount of personal space while in the same situation with a female therapist he might feel quite secure. The same statement may be made about eye contact.

Obviously then it would be to the therapist's advantage to be aware of the client's dominance level, to be cognizant of the optimum amount of eye contact and personal space for each client, and to realize the implications of the sexual nature of the interaction between the client and himself. The utilization of this knowledge would create a more optimal atmosphere for successful therapy.

Future research in this area is warranted in light of the trends and significant findings for which a priori

predictions were not made. Future studies would benefit by an increased number of subjects per experimental cell. One dimension that seems particularly important for future research is the subject sex by confederate sex interaction. No predictions were made concerning these variables for this study and yet several trends and significant results were obtained.

The confederate sex by subject sex interaction effect on personal space in this study is different from that obtained by Dosey and Meisels (1969). They found males used virtually the same personal space with both sexes while the present study indicates that males do make a significant distinction in the amount of personal space used with each sex. One possible explanation is that the additional variables used in this study are responsible for the difference. This certainly merits further investigation.



## CHAPTER V

### SUMMARY

Thirty-two college students were divided into groups on the basis of their dominance scores on the Bernreuter Personality Inventory, their own sex, and the random selection of a male or female confederate who maintained either a high or a low level of eye contact. During an approach situation a measure of the subject's personal space, percentage of eye contact with the confederate, and his approach speed was taken. The subject's attitude toward the confederate was later ascertained by means of a Likert-type attitude scale. The results indicate that high dominance significantly decreases personal space and significantly increases approach speed. The personal space for a male subject was significantly greater with a male confederate than with a female confederate. The approach speed for a male subject under the condition of high eye contact was significantly slower than for a female subject under the high eye contact condition. There was a trend toward an interaction between dominance and eye contact.

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APPENDIX A

BERNREUTER PERSONALITY INVENTORY

NAME \_\_\_\_\_

SEX \_\_\_\_\_

The questions on this blank are intended to indicate your interests and attitudes. It is not an intelligence test, nor are there any right or wrong answers.

In front of each question you will find: "Yes  
No ?"

If your answer is "Yes," draw a circle around the "Yes." If your answer is "No," draw a circle around the "No." If you are entirely unable to answer either "Yes" or "No" to the question, then draw a circle around the question mark.

- 
1. Yes No ? Does it make you uncomfortable to be "different" or unconventional?
  2. Yes No ? Do you day-dream frequently?
  3. Yes No ? Do you usually work things out for yourself rather than get someone to show you?
  4. Yes No ? Have you ever crossed the street to avoid meeting some person?
  5. Yes No ? Can you stand criticism without feeling hurt?
  6. Yes No ? Do you ever give money to beggars?
  7. Yes No ? Do you prefer to associate with people who are younger than yourself?
  8. Yes No ? Do you often feel just miserable?
  9. Yes No ? Do you dislike finding your way about in strange places?

10. Yes No ? Are you easily discouraged when the opinions of others differ from your own?
11. Yes No ? Do you try to get your own way even if you have to fight for it?
12. Yes No ? Do you blush very often?
13. Yes No ? Do athletics interest you more than intellectual affairs?
14. Yes No ? Do you consider yourself a rather nervous person?
15. Yes No ? Do you usually object when a person steps in front of you in a line of people?
16. Yes No ? Have you ever tried to argue or bluff your way past a guard or doorman?
17. Yes No ? Are you much affected by the praise or blame of many people?
18. Yes No ? Are you touchy on various subjects?
19. Yes No ? Do you frequently argue over prices with tradesmen or junkmen?
20. Yes No ? Do you feel self-conscious in the presence of superiors in the academic or business world?
21. Yes No ? Do ideas often run through your head so that you cannot sleep?
22. Yes No ? Are you slow in making decisions?
23. Yes No ? Do you think you could become so absorbed in creative work that you would not notice a lack of intimate friends?
24. Yes No ? Are you troubled with shyness?
25. Yes No ? Are you inclined to study the motives of other people carefully?
26. Yes No ? Do you frequently feel grouchy?
27. Yes No ? Do your interests change rapidly?
28. Yes No ? Are you very talkative at social gatherings?

29. Yes No ? Do you ever heckle or question a public speaker?
30. Yes No ? Do you very much mind taking back articles you have purchased at stores?
31. Yes No ? Do you see more fun or humor in things when you are in a group than when alone?
32. Yes No ? Do you prefer traveling with someone who will make all the necessary arrangements to the adventure of traveling alone?
33. Yes No ? Would you rather work for yourself than carry out the program of a superior whom you respect?
34. Yes No ? Can you usually express yourself better in speech than in writing?
35. Yes No ? Would you dislike any work which might take you into isolation for a few years, such as forest ranging, etc.?
36. Yes No ? Have you ever solicited funds for a cause in which you were interested?
37. Yes No ? Do you usually try to avoid dictatorial or "bossy" people?
38. Yes No ? Do you find conversation more helpful in formulating your ideas than reading?
39. Yes No ? Do you worry too long over humiliating experiences?
40. Yes No ? Have you ever organized any clubs, teams, or other groups on your own initiative?
41. Yes No ? If you see an accident do you quickly take an active part in giving aid?
42. Yes No ? Do you get stage fright?
43. Yes No ? Do you like to bear responsibilities alone?
44. Yes No ? Have books been more entertaining to you than companions?
45. Yes No ? Have you ever had spells of dizziness?
46. Yes No ? Do jeers humiliate you even when you know you are right?

47. Yes No ? Do you want someone to be with you when you receive bad news?
48. Yes No ? Does it bother you to have people watch you at work even when you do it well?
49. Yes No ? Do you often experience periods of loneliness?
50. Yes No ? Do you usually try to avoid arguments?
51. Yes No ? Are your feelings easily hurt?
52. Yes No ? Do you usually prefer to do your own planning alone rather than with others?
53. Yes No ? Do you find that telling others of your own personal good news is the greatest part of the enjoyment of it?
54. Yes No ? Do you often feel lonesome when you are with other people?
55. Yes No ? Are you thrifty and careful about making loans?
56. Yes No ? Are you careful not to say things to hurt other people's feelings?
57. Yes No ? Are you easily moved to tears?
58. Yes No ? Do you ever complain to the waiter when you are served inferior or poorly prepared food?
59. Yes No ? Do you find it difficult to speak in public?
60. Yes No ? Do you ever rewrite your letters before mailing them?
61. Yes No ? Do you usually enjoy spending an evening alone?
62. Yes No ? Do you make new friends easily?
63. Yes No ? If you are dining out do you prefer to have someone else order dinner for you?
64. Yes No ? Do you usually feel a great deal of hesitancy over borrowing an article from an acquaintance?
65. Yes No ? Are you greatly embarrassed if you

have greeted a stranger whom you have mistaken for an acquaintance?

66. Yes No ? Do you find it difficult to get rid of a salesman?
67. Yes No ? Do people ever come to you for advice?
68. Yes No ? Do you usually ignore the feelings of others when accomplishing some end which is important to you?
69. Yes No ? Do you often find that you cannot make up your mind until the time for action has passed?
70. Yes No ? Do you especially like to have attention from acquaintances when you are ill?
71. Yes No ? Do you experience many pleasant or unpleasant moods?
72. Yes No ? Are you troubled with feelings of inferiority?
73. Yes No ? Does some particularly useless thought keep coming into your mind to bother you?
74. Yes No ? Do you ever upbraid a workman who fails to have your work done on time?
75. Yes No ? Are you able to play your best in a game or contest against an opponent who is greatly superior to you?
76. Yes No ? Have you frequently appeared as a lecturer or entertainer before groups of people?
77. Yes No ? Are people sometimes successful in taking advantage of you?
78. Yes No ? When you are in low spirits do you try to find someone to cheer you up?
79. Yes No ? Can you usually understand a problem better by studying it alone than by discussing it with others?
80. Yes No ? Do you lack self-confidence?
81. Yes No ? Does admiration gratify you more than achievement?
82. Yes No ? Are you willing to take a chance alone



- in a situation of doubtful outcome?
83. Yes No ? Does your ambition need occasional stimulation through contact with successful people?
84. Yes No ? Do you usually avoid asking advice?
85. Yes No ? Do you consider the observance of social customs and manners an essential aspect of life?
86. Yes No ? If you are spending an evening in the company of other people do you usually let someone else decide upon the entertainment?
87. Yes No ? Do you take the responsibility for introducing people at a party?
88. Yes No ? If you came late to a meeting would you rather stand than take a front seat?
89. Yes No ? Do you like to get many views from others before making an important decision?
90. Yes No ? Do you try to treat a domineering person the same as he treats you?
91. Yes No ? Does your mind often wander so badly that you lose track of what you are doing?
92. Yes No ? Do you ever argue a point with an older person whom you respect?
93. Yes No ? Do you have difficulty in making up your mind for yourself?
94. Yes No ? Do you ever take the lead to enliven a dull party?
95. Yes No ? Would you "have it out" with a person who spread untrue rumors about you?
96. Yes No ? At a reception or tea do you feel reluctant to meet the most important person present?
97. Yes No ? Do you find that people are more stimulating to you than anything else?
98. Yes No ? Do you prefer a play to a dance?

99. Yes No ? Do you tend to be radical in your political, religious, or social beliefs?
100. Yes No ? Do you prefer to be alone at times of emotional stress?
101. Yes No ? Do you usually prefer to work with others?
102. Yes No ? Do you usually work better when you are praised?
103. Yes No ? Do you have difficulty in starting a conversation with a stranger?
104. Yes No ? Do your feelings alternate between happiness and sadness without apparent reason?
105. Yes No ? Are you systematic in caring for your personal property?
106. Yes No ? Do you worry over possible misfortunes?
107. Yes No ? Do you usually prefer to keep your feelings to yourself?
108. Yes No ? Can you stick to a tiresome task for a long time without someone prodding or encouraging you?
109. Yes No ? Do you get as many ideas at the time of reading a book as you do from a discussion of it afterward?
110. Yes No ? Do you usually face your troubles alone without seeking help?
111. Yes No ? Have you been the recognized leader (president, captain, chairman) of a group within the last five years?
112. Yes No ? Do you prefer making hurried decisions alone?
113. Yes No ? If you were hiking with a group of people, where none of you knew the way, would you probably let someone else take the full responsibility for guiding the party?
114. Yes No ? Are you troubled with the idea that people on the street are watching you?

115. Yes No ? Are you often in a state of excitement?
116. Yes No ? Are you considered to be critical of other people?
117. Yes No ? Do you usually try to take added responsibilities on yourself?
118. Yes No ? Do you keep in the background at social functions?
119. Yes No ? Do you greatly dislike being told how you should do things?
120. Yes No ? Do you feel that marriage is essential to your present or future happiness?
121. Yes No ? Do you like to be with people a great deal?
122. Yes No ? Can you be optimistic when others about you are greatly depressed?
123. Yes No ? Does discipline make you discontented?
124. Yes No ? Are you usually considered to be indifferent to the opposite sex?
125. Yes No ? Would you feel very self-conscious if you had to volunteer an idea to start a discussion among a group of people?

## APPENDIX B

### ATTITUDE SCALE

Below is a list of pairs of adjectives which are opposite in meaning. Rate the other participant as accurately as possible by circling your response for each adjective pair. The following abbreviations are appropriate:

E - Extremely    M - Moderately    S - Slightly    N - Neutral

Unkind	E	M	S	N	S	M	E	Kind
Friendly	E	M	S	N	S	M	E	Unfriendly
Intelligent	E	M	S	N	S	M	E	Unintelligent
Cooperative	E	M	S	N	S	M	E	Uncooperative
Mean	E	M	S	N	S	M	E	Nice
Independent	E	M	S	N	S	M	E	Dependent
Inefficient	E	M	S	N	S	M	E	Efficient
Hostile	E	M	S	N	S	M	E	Cordial
Anxious	E	M	S	N	S	M	E	Calm
Capable	E	M	S	N	S	M	E	Incapable
Gullible	E	M	S	N	S	M	E	Knowledgeable
Likable	E	M	S	N	S	M	E	Unlikable
Unpleasant	E	M	S	N	S	M	E	Pleasant
Not Competitive	E	M	S	N	S	M	E	Competitive
Unselfish	E	M	S	N	S	M	E	Greedy
Generous	E	M	S	N	S	M	E	Stingy
Ugly	E	M	S	N	S	M	E	Attractive

Desirable as a friend	E M S N S M E	Undesirable as a friend
Boring	E M S N S M E	Charming
Messy	E M S N S M E	Orderly
Ineffective	E M S N S M E	Effective
Stubborn	E M S N S M E	Obliging
Fair	E M S N S M E	Unfair
Submissive	E M S N S M E	Dominant

## APPENDIX C

### LETTER OF EXPLANATION TO THE SUBJECT

Dear

I want to thank you for your participation this summer in my thesis study. It may be that you are unclear as to the purpose of my study and the role you played in it. Let me try to explain just what I was doing.

My thesis concerns the interaction of dominance, eye contact, personal space and how these are influenced by one's sex. As you probably recall you were first asked to answer a questionnaire concerning your feelings on various things. This was the Bernreuter Scale of Dominance. It was simply used to get an idea of how dominant or how submissive a person you are.

Next came the experimental situation itself. The other "subject" who was there at the same time as you was actually a confederate, a helper of mine. This person had been instructed to either stare at you or to refuse to look at you at all during the time you were walking toward him. The purpose of this was to see how this would affect your attitude toward that person, how it would affect your walking speed, and how it would affect your own eye contact with the confederate.

An observer was stationed behind the one-way mirror in the experimental room. He took a measure of the amount of time you looked at the confederate. I timed you as you walked toward the confederate. This was of course your speed. I also took a measure of your personal space, that is the distance that you stopped from the confederate. I then found out how you felt toward the confederate by having you rate him on different personality dimensions. This was an attitude scale. Also I noted how close or how far away you sat from the confederate. This was another indication of your attitude toward him.

Since some of you were paired with a female confederate and some of you with a male confederate, I was able to see how one's sex influences the other variables just named. These were of course personal space, walking speed, eye contact, and attitude toward the confederate.

Hopefully this letter has cleared up any questions you may have had. Once again thank you for your help.

Sincerely,

Donna Beam

VITA

Donna Clegg Beam

Candidate for the Degree of  
Master of Science

Thesis: THE AFFECT OF DOMINANCE, EYE CONTACT AND  
PARTICIPANTS' SEX ON ATTITUDE AND EXPRESSIVE  
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