

ABSTRACT

AN EVALUATION OF FEMALE RECRUIT PERFORMANCE  
AND MALE/FEMALE RECRUIT PERCEPTIONS OF THE  
FEMALE TROOPER'S ROLE IN THE 90th MICHIGAN  
STATE POLICE TRAINING ACADEMY

By

Michael T. Charles

The purpose of this research project was to study female recruits in the 90th recruit school of the Michigan State Police Training Academy. More specifically, this study was designed to consider five major aspects of the training process: (1) comparison of male and female academic performance; (2) comparison of male and female physical performance; (3) comparison of male and female technical performance; (4) comparison of male and female perceptions of the female trooper's role to determine if inter-sender conflict existed (inter-sender conflict exists when disagreement among members of the role set occurs, i.e., when the focal person and "significant others" do not agree on desired behavior in specific job situations); (5) determination of the effect the academy had on male and female perceptions of the female trooper's role.

80  
88  
64

Michael T. Charles

Results indicated that there was no significant difference between male and female recruits in academic performance, technical performance, or the average aggressiveness score, which made up one-half of the physical performance measure. A statistically significant difference between the sexes on the average ability score, which made up the second half of the physical performance measure, was found. However, due to the lack of operational definitions for both ability and aggressiveness, as well as the lack of an interrater reliability measure for the judges scoring the physical measure utilized at the academy, the reliability of the physical measure was brought into question. Qualitative data obtained in the study did, however, support the contention that female recruits were, overall, not as physically strong as their male counterparts.

In the Pre-Academy Survey a significant difference between the sexes existed in their perceptions of the female trooper's physical and general roles, while the technical role measure approached a significant level. On the Post-Academy Survey, all three role measures were found to differ significantly between the sexes. While male recruits were more restrictive of the female trooper's role on each of the three role measures, the majority of male recruits supported female officers in the general and technical role of the police officer.

Michael T. Charles

However, it was discovered by the writer that even seemingly small degrees of inter-sender conflict can result in conflict for both the organization and the focal person (the female recruit) herself. Finally, no significant change in role perceptions occurred during the academy process. It was felt that male recruits continued to exclude female officers from the physical function of police work for two major reasons: (1) female recruits, overall, did not perform the physical tasks at the academy as well as did male recruits; and (2) the academy experience was felt to be isolated from the police officer's everyday world of work. Female recruits continuing to report that they felt that female officers could perform the physical role of a police officer were thought to have done so largely because of their success at passing the physical components of the academy. Finally, the successful performance of female recruits in the general and technical role components at the academy was thought to have aided in maintaining general support among both male and female recruits on these role measures. Thus, inter-sender conflict existed for female recruits at the conclusion of the academy.

Results obtained from the Peer Evaluation Form utilized in this project further indicated that male recruits did not accept female troopers as their equals.

AN EVALUATION OF FEMALE RECRUIT PERFORMANCE  
AND MALE/FEMALE RECRUIT PERCEPTIONS OF THE  
FEMALE TROOPER'S ROLE IN THE 90th MICHIGAN  
STATE POLICE TRAINING ACADEMY

By

Michael T. Charles

A DISSERTATION

Submitted to  
Michigan State University  
in partial fulfillment of the requirements  
for the degree of

DOCTOR OF PHILOSOPHY

College of Social Science

1977

To Pat and Andy

## ACKNOWLEDGMENTS

So many individuals have contributed in the preparation of this dissertation that it is practically impossible to give them all credit by name. However, if it were not for the financial support and wholehearted cooperation of the Michigan State Police this dissertation could not have been written. Additional resources in the form of an LEEP fellowship made the final stages of this project far easier than would have otherwise been possible. Conceivably, some of the members of the Michigan State Police may not agree with the findings presented within this text, but the existence of this dissertation is owed as much to them as to myself.

I am particularly grateful to Colonel George Halverson, who retired as director of the Michigan State Police in May, 1977, and to the present director, Colonel Gerald Hough, both of whom supported the Michigan State Police Female Trooper Project fully. Further thanks must be afforded Lieutenant Ritchie Davis and Trooper Robert Kraft for their assistance in expediting this research endeavor. A word of thanks must also be extended to those post commanders and troopers in the

field who provided invaluable input into this project during the pre-testing phase. I would also like to take this opportunity to express my indebtedness to the administration and staff at the Michigan State Police Training Academy for not only their gracious and warm hospitality, but also for sharing their many years of experience in policing with me. Certainly, without the full support of Captain Charles Weirman, Commanding Officer, Training Division, and Lieutenant William Parviainen, Commanding Officer, Basic and Probationary Training Section, this project could have never been completed. Finally, a word of gratitude must be expressed to the 64 recruits of the 90th Michigan State Police Training Academy for their cooperation and frankness throughout the duration of this project.

A special note of thanks must be extended to the members of my dissertation committee: Dr. Terry Moe, Dr. Kenneth Christian, and Dr. Frank Horvath, for their assistance in the development of this study. Also, I would like to thank Dr. John H. McNamara, dissertation committee chairman, for the many hours he spent in aiding me in this work.

Although this research project could not have been completed without the aid of numerous individuals, the author must assume the personal and individual responsibility for the contents of this dissertation.

The material in this project was prepared under a research grant under Grant No. 77-NI-99-0078 from the Office of Education and Manpower Assistance, Law Enforcement Assistance Administration, U.S. Department of Justice. Researchers engaging in such projects under Government sponsorship are encouraged to express freely their professional judgment. Therefore, points of view or opinions stated in this document do not necessarily represent the official position or policy of the U.S. Department of Justice.

## TABLE OF CONTENTS

	Page
<b>LIST OF TABLES . . . . .</b>	viii
<b>LIST OF APPENDICES . . . . .</b>	xi
<b>Chapter</b>	
<b>I. INTRODUCTION . . . . .</b>	1
Need and Importance . . . . .	7
Purpose . . . . .	10
Theory . . . . .	11
Physiological Comparison of Men and Women . . . . .	12
Training . . . . .	15
Intellectual Differences Between Sexes . . . . .	20
Women's Role . . . . .	23
Role Acquisition . . . . .	26
Motivation . . . . .	28
Conclusion . . . . .	31
<b>II. REVIEW OF THE LITERATURE . . . . .</b>	35
Police Academy Training . . . . .	38
Female Police Officer Performance on the Road . . . . .	45
Female Performance in the Academy and on the Road . . . . .	63
Conclusion . . . . .	70
Hypotheses . . . . .	73
<b>III. METHODOLOGY . . . . .</b>	79
Participant Observation . . . . .	81
Questionnaires . . . . .	84
Recruit Profile . . . . .	90
Sample . . . . .	95
Training Staff . . . . .	98
Training Facility . . . . .	100
Atmosphere . . . . .	101

Chapter	Page
Research Team/Academy Staff Relations . . . . .	103
Research Team/Recruit Relations . . . . .	105
Compensating for Methodological Weakness . . . . .	108
Data Analysis . . . . .	111
<b>IV. RESEARCH PROCEDURES AND FINDINGS . . . . .</b>	<b>117</b>
Hypothesis Group I . . . . .	118
Data Collection . . . . .	118
Hypothesis 1 . . . . .	121
Hypothesis 2 . . . . .	126
Hypotheses 3a and 3b: Physical Measures . . . . .	131
Hypothesis Group II . . . . .	137
Data Collection . . . . .	137
Hypothesis 1 . . . . .	141
Hypothesis 2 . . . . .	154
Hypothesis 3 . . . . .	166
Hypothesis 4 . . . . .	175
Summary of Results . . . . .	178
<b>V. DISCUSSION . . . . .</b>	<b>182</b>
Performance Measures . . . . .	182
Role Measures . . . . .	183
Significant Others' Effect on Role Definitions of Recruits . . . . .	187
Role Conflict . . . . .	189
Recommendations . . . . .	191
Additional Avenues for Research . . . . .	191
A Comparison of Findings . . . . .	193
Study Limitations . . . . .	200
Future of Women in Policing . . . . .	201
<b>APPENDICES . . . . .</b>	<b>205</b>
<b>BIBLIOGRAPHY . . . . .</b>	<b>238</b>

## LIST OF TABLES

Table	Page
1.1 Comparison of Physical Measurements of Women With Men . . . . .	13
4.1 Recruits' Sex by Average Academic Score . . . . .	122
4.2 Recruits' Sex by Spelling Score . . . . .	122
4.3 Recruits' Sex by Civil Disorder Score . . . . .	124
4.4 Recruits' Sex by Firearms Score . . . . .	124
4.5 Recruits' Sex by Average Technical Score . . . . .	127
4.6 Recruits' Sex by Controlled Weaving Score . . . . .	128
4.7 Recruits' Sex by Precision Driving Score . . . . .	128
4.8 Police Experience of Male Recruits by Average Score for Precision Driving . . . . .	129
4.9 Police Experience of Female Recruits by Average Score for Precision Driving . . . . .	129
4.10 Recruits' Sex by Average Ability Score . . . . .	132
4.11 Recruits' Sex by Defensive Tactics Ability Score . . . . .	133
4.12 Recruits' Sex by Average Aggressiveness Score . . . . .	134
4.13 Recruits' Sex by Defensive Tactics Aggressiveness Score . . . . .	135
4.14 Alpha Coefficients for Study Questionnaires . . . . .	140
4.15 Difference Between Male and Female Recruits' Perceptions on the Physical Role Measure at the Beginning of the Academy . . . . .	142

Table		Page
4.16	Male and Female Recruits' Perceptions of the Female Trooper's Ability to Lift Heavy Objects, in the Pre-Academy Survey . . . . .	143
4.17	Differences Between Male and Female Recruits' Perceptions on the General Role Measure, at the Beginning of the Academy . . . . .	144
4.18	Male and Female Recruits' Perceptions of the Female Trooper's Ability to Maintain Personal Control Under Stressful Conditions, in the Pre-Academy Survey . . . . .	148
4.19	Difference Between Male and Female Recruits' Perceptions on the Technical Role Measure, at the Beginning of the Academy . . . . .	151
4.20	Male and Female Perceptions of the Female Trooper's Ability to Operate a Patrol Vehicle Safely, in the Pre-Academy Survey . . . . .	152
4.21	Male and Female Perceptions of the Female Trooper's Ability in Verbally Expressing Thoughts, in the Pre-Academy Survey . . . . .	153
4.22	Male and Female Perceptions of the Female Trooper's Ability in Testifying in Court, in the Pre-Academy Survey . . . . .	153
4.23	Difference Between Male and Female Recruits' Perceptions on the Physical Role Measure, at the Conclusion of the Academy . . . . .	156
4.24	Male and Female Recruits' Perceptions of the Female Trooper's Ability to Lift Heavy Objects, in the Post-Academy Survey . . . . .	157
4.25	Difference Between Male and Female Recruits' Perceptions on the General Role Measure, at the Conclusion of the Academy . . . . .	159
4.26	Male and Female Recruits' Perceptions of the Female Trooper's Ability to Deal Effectively With Traffic Violators and to Issue Citations, on the Post-Academy Survey . . . . .	160

Table	Page
4.27 Difference Between Male and Female Recruits' Perceptions on the Technical Role Measure, at the Conclusion of the Academy . . . . .	162
4.28 Male and Female Recruits' Perceptions of the Female Trooper's Ability to Testify in Court, on the Post-Academy Survey . . . . .	163
4.29 Male Recruits' Perceptions in the Pre- and Post-Academy Surveys on the General Role Measure . . . . .	168
4.30 Male Recruits' Perceptions in the Pre- and Post-Academy Surveys on the Technical Role Measure . . . . .	168
4.31 Female Recruits' Perceptions in the Pre- and Post-Academy Surveys on the Physical Role Measure . . . . .	169
4.32 Female Recruits' Perceptions in the Pre- and Post-Academy Surveys on the General Role Measure . . . . .	169
4.33 Female Recruits' Perceptions in the Pre- and Post-Academy Surveys on the Technical Role Measure . . . . .	170
4.34 Male Recruits' Acceptance of Female Recruits as Equals . . . . .	173

## LIST OF APPENDICES

Appendix	Page
A. Michigan Department of State Police, Training Division, Recruit School Curriculum . . . . .	206
B. Recruit Background and Performance Form . .	211
C. Pre-Academy Survey . . . . .	215
D. Post-Academy Survey . . . . .	221
E. Academy Recruit Survey . . . . .	227
F. Questionnaire Items Included in Role Measures . . . . .	234
G. Peer Evaluation Form, Michigan State Police, Training Division . . . . .	236

## CHAPTER I

### INTRODUCTION

The introduction of females into the police function in the United States occurred in 1845, when the first six prison matrons were hired by the City of New York. Since that time females have been advancing and expanding their role within the police milieu. For example, throughout the 1870's and 1880's the concept of the female prison matron spread to such an extent that in 1888 New York and Massachusetts passed laws that made it mandatory for all cities within their boundaries with a population over 20,000 to hire police matrons to care for female prisoners.

In 1893 the mayor of Chicago appointed Marie Owens, the widow of a police officer, to the detective bureau of the police department. She was carried on the police payroll for 30 years as a "patrolman." Mrs. Owens' duties as a patrolman were to visit courts and assist fellow detectives in cases involving women and children.

In 1905, in Portland, Oregon, Lola Baldwin was given police powers to deal more effectively and authoritatively with the problems of girls and young women.

Mrs. Baldwin's efforts proved so effective that the city of Portland immediately organized a Department of Public Safety, which was later incorporated by charter into the police department, for the protection of young girls and women.<sup>1</sup>

The Los Angeles Police Department is credited with hiring the first regularly rated policewoman in the United States in 1910. Alice Stebbins Wells, a graduate theological student and social worker, obtained her position by addressing a petition, containing the signatures of 100 influential citizens and civic organizations, to the city council asking for an ordinance creating the position of policewoman. The major responsibilities ascribed to Mrs. Wells included the supervision and enforcement of laws concerning juveniles and women in dance halls, skating rinks, movie theaters, and other recreational establishments.<sup>2</sup>

Another important step in the advancement of women within policing occurred on May 17, 1915; on this day

---

<sup>1</sup> Lois Higgins, "Historical Background of Police-women's Service," Journal of Criminal Law, Criminology and Police Science 41 (1951): 823. There are numerous publications reporting the history of policewomen in the United States; see Chloe Owings, Women Police (Montclair, New Jersey: Patterson, Smith, 1968); Lois Higgins, Policewoman's Manual (Springfield, Illinois: Charles C Thomas, 1961); Eleanore Hutzel, The Policewoman's Handbook (Worchester, Mass.: Columbia University Press, 1933).

<sup>2</sup> Peter P. Horne, "The Role of Women in Law Enforcement," The Police Chief (July 1973): 61.

the International Association of Policewomen was organized. This Association contributed greatly to the advancement of women in policing through its constant search for improved standards and its concern for the betterment of policewomen.<sup>3</sup> Unfortunately, because of the lack of funding during the Depression, the organization was unable to continue its existence.

Problems arising during World War I catapulted females into the police function. Women were employed by the Law Enforcement Division of the Commission on Training Camp Activities to keep prostitutes away from military camps, return runaway women and girls to their homes, and supervise commercial amusements near military bases. The outstanding work done by these female officers convinced officials in more than 200 towns and cities to employ women in their police departments to work with women and children offenders.

At its 1922 convention, the International Association of Chiefs of Police passed a resolution stating that policewomen are essential to modern police departments and offered standards for qualification, selection, and training of policewomen. In 1967, the President's Commission on Law Enforcement and Administration of Justice suggested that not only are policewomen

---

<sup>3</sup> Lois L. Higgins, "The Feminine Force in Crime Prevention," The Police Yearbook (1958): 104.

an invaluable asset to modern law enforcement, but also that their role should be broadened in the police function.<sup>4</sup>

Although advances have been made in the use of female officers in the United States,<sup>5</sup> the role of policewomen is still largely based upon traditional modes of thought. Today, as in years past, females are largely restricted to such areas as juvenile work, matron duty, crimes involving females, and clerical tasks. But society has entered a new era, an era in which the women's liberation movement has

---

<sup>4</sup> The President's Commission on Law Enforcement and Administration of Justice, Task Force Report: The Police (Washington, D.C.: Government Printing Office, 1967), p. 125.

<sup>5</sup> Numerous police agencies have extended the role of female officers to include road patrol; see International City Management Association, "Women in Law Enforcement," Management Information Service Report 5 (September 1973): 2-3; International Association of Chiefs of Police and the Police Foundation, Deployment of Female Police Officers in the United States (Washington, D.C.: International Association of Chiefs of Police, 1974), *passim*. Although the number of women used in police departments has grown, an IACP survey conducted in 1967 of 161 police departments reported that there were only 1,792 female police officers with full police powers employed in these departments. The proportion of females on the force ranged from 1/20 of one percent to a high of 2-1/4 percent. For further discussion of the use of females in police departments throughout the country see Theresa M. Melchionne, "The Current Status and Problems of Women Police," The Police Yearbook (1967): 115; Peter Horne, "Policewomen and International Women's Year," Law and Order (October 1975): 66; John O. Smykla, "Preliminary Analysis of Employment and Deployment of Women in Michigan Law Enforcement" (East Lansing, Michigan, 1975), pp. 5-6. (Mimeo graphed.)

gained momentum, Title VII of the Civil Rights Act of 1964 came into existence, and the Supreme Court specifically applied the Equal Protection Clause of the Fourteenth Amendment to prohibit discrimination on the basis of sex.<sup>6</sup> These movements have all aided in the promulgation and implementation of female police officers into the primary function of the police--patrol.

Although a few females have made inroads into the police patrol function, it is an accomplishment that has met with serious opposition. Resistance to placing females in the patrol function is common from many segments of society; the most vocal opposition, however, comes from male patrol officers. A major reason for this reaction is based on the unanswered question, "Can a woman perform as well as a man when placed in a patrol situation?"<sup>7</sup>

To date relatively few attempts have been made to determine the role female police officers should play in today's modern police organization, and equally few studies concentrating on the performance of females in

---

<sup>6</sup> For a summary of the rights afforded females see Catherine Milton et al., Women in Policing: A Manual (Washington, D.C.: Police Foundation, 1974), pp. 49-60; International Association of Chiefs of Police and the Police Foundation, "Deployment of Female Police Officers in the United States," pp. 39-54.

<sup>7</sup> Theresa Melchionne, "The Changing Role of Police-women," The Police Journal (October 1974): 340.

any aspect of the police function. The importance of continued research on females in all aspects of the police organization cannot be denied. The National Advisory Commission on Criminal Justice Standards and Goals pointed out that "Police administrators must determine whether expansion of the woman's role will further the cause of efficient police service."<sup>8</sup> In a similar vein, Perlstein suggested that "Only research can provide the necessary information regarding what role the policewoman should be allowed to perform in law enforcement."<sup>9</sup> Finally, Melchionne stated that realistically ". . . any appraisal of policewomen street patrol must be studied in a variety of urban settings."<sup>10</sup> Taken to their logical conclusion, these statements would suggest that researching all areas related to the performance of female police officers is essential for the development of an efficient police organization.

Even though a strong argument can be made for studying females in any segment of the police function, this study was designed to focus on the physical, academic,

---

<sup>8</sup> National Advisory Commission on Criminal Justice Standards and Goals, Police (Washington, D.C.: Government Printing Office, 1973), p. 342.

<sup>9</sup> Gary R. Perlstein, "Policewomen and Policemen: A Comparative Look," The Police Chief (March 1972): 73.

<sup>10</sup> Melchionne, "The Changing Role of Policewomen," p. 341.

and technical performance of female recruits in the 90th Michigan State Police recruit school. In addition, this research project concentrated on the role perceptions of both male and female recruits within this academy.

#### Need and Importance

In late 1975 the Michigan State Police found themselves in a legal battle over reverse discrimination charges that had been filed against them. Until the discrimination charges were resolved, a Michigan district court ordered that the Michigan State Police discontinue academy training for newly hired police personnel.

Resolution of this conflict came in the form of a consent decree that was entered into by the State of Michigan, the Director of State Police, and the Director of the Michigan Civil Service Commission with the United States District Court, Western District of Michigan, Southern Division. This consent decree stated, among other things, that the Michigan State Police ". . . will adopt and seek to achieve a goal of graduating at least fifty (50) women into the position of Trooper 07 over the next four academy classes."<sup>11</sup>

Because of the Department of State Police's concern for maintaining its traditionally highly rated

---

<sup>11</sup>United States of America v. State of Michigan et al., Consent Decree, Civil Action No. G75-472-CA5, pp. 5-6. (1976).

service to the public, officer safety, and public protection, departmental administrators believe that the introduction of females into the state police trooper road patrol function requires an analysis of females' performance in this new position. State police administrators contend that this analysis should begin during the early stages of the female officer's career, at the academy. Studying the performance of females in the academy and role perceptions of both male and female recruits during their three-month training period may provide useful information to the Department's decision makers.

A second reason for providing such a study was alluded to earlier. As a result of the lack of research on females in the police function, it is imperative that all aspects of the females' professional police career be researched. The performance of females in the police academy and the role perceptions of male and female police recruits are perhaps the least researched topics on females in the police function. An analysis of female police recruits should demonstrate, at least to some extent, the female recruit's acceptableness as a trainable apprentice in the occupation of policing. Specifically, there is general agreement among police personnel that academy training is isolated from the

police officer's everyday world of work.<sup>12</sup> However, the academy does perform at least two major functions:

- (1) it attempts to identify those participants who are emotionally, academically, or physically incapable of performing job tasks required of police officers; and
- (2) the academy serves as a rite de passage in the policing milieu. In fact, the latter function, which serves as a means of strengthening group cohesiveness and solidarity, appears to be the overriding purpose of training in police academies.

The symbolic importance of the academy experience for the state police became apparent early in the development of this research project. For example, through interviews with state police personnel it was discovered that any changes in academy training, with particular reference to the demanding physical aspects of the training process, have, in the past, consistently met with resistance from state police troopers. However, the only suggestions given the researchers by state police administrators were that the research team should be cautious when they considered the boxing segment of

---

<sup>12</sup>See, for example, Arthur Niederhoffer, Behind the Shield: The Police in Urban Society (Garden City, N.Y.: Doubleday and Company, Inc., 1967), pp. 44, 47; William A. Westley, Violence and the Police (Cambridge, Mass.: The MIT Press, 1970), p. 156; Richard N. Harris, The Police Academy: An Inside View (New York: John Wiley and Sons, Inc., 1973), p. 168.

training program. The importance linked with boxing by the state police was not related to its actual merit to the officer on patrol, but to its symbolic nature in the masculine environment of the state police.

Studying female recruits should therefore provide information on women's ability to successfully complete certain pre-defined aspects of the training process, and provide an indication of male recruit acceptance of female recruits in the police environment, as defined by research constraints.

#### Purpose

The purpose of this research project was to study female recruits in the 90th recruit school of the Michigan State Police Training Academy. More specifically, this study was designed to consider five major aspects of the training process: (1) comparison of male and female physical performance; (2) comparison of male and female academic performance; (3) comparison of male and female technical performance; (4) comparison of male and female perceptions of the female trooper's role to determine if inter-sender conflict exists. Inter-sender conflict exists when members of the role set (the role set is limited in this study to male and female recruits in the 90th Michigan State Police Training Academy) fail to agree on a consistent role definition. Inter-sender

conflict is therefore said to exist among recruits in this study when either (a) male recruits disagree with female recruits on the proper role of female troopers, (b) when female recruits disagree among themselves as to what the proper role of the female trooper should be, or (c) when both male and female recruits disagree among one another as to what the proper role of female troopers should be; (5) determination of the effect the academy experience has on male and female perceptions of the female trooper's role.

#### Theory

Evidence presented in this section demonstrates that sex-roles are closely related to the culture in which the individual is raised, and that opposing cultures ascribe differing sex-role behavior to their members. Therefore, a study of this kind is culturally linked in the sense that the cultural beliefs influence study design. For example, in certain cultures it would be unthinkable to compare the performance of females as compared to males in physical labor, because cultural beliefs are such that women are considered more fit for heavy labor than are men. In fact, in the cultures just discussed, the appropriate research question would be to ask, "Could males perform physical tasks as well as women?" In other cultures the research question would

not be concerned with the issues of either physical or academic performance because the sexes are considered equal on these measures.

The cultural beliefs of American society suggest that a relevant study of females in the police academy concentrate on (1) a comparison of female recruit performance as compared to male recruit performance in the police academy, and (2) the acceptance of female officers in the traditionally masculine police function by male officers. It is for this reason that the research project was designed to compare male and female performance and to determine if role disparity existed among recruits in the 90th Michigan State Police Training Academy.

#### Physiological Comparison of Men and Women

The work of Anna Baetjer provides a scientific analysis of the physical differences between the sexes. For example, Baetjer pointed out that although the average weight of women is slightly less than that of men of similar height, women on the whole are approximately 85% as heavy as men because men's average height is greater.<sup>13</sup> The difference in strength between the sexes, however, is quite marked:

---

<sup>13</sup> Anna M. Baetjer, Women in Industry: Their Health and Efficiency (Philadelphia: W. B. Saunders Company, 1946), p. 7.

When measured by their ability to lift a weight or to grip or pull against a resistance, women show only between fifty-five and sixty-five per cent as much strength as men [Table 1.1]. . . . The ratio of their strength to their weight is less than that of men. . . . In running also and to a greater extent in walking upgrade on a treadmill women have been shown to be inferior to men.<sup>14</sup>

Thus Baetjer concluded that females are not able to perform the same degree of physical labor as men.

Table 1.1.--Comparison of physical measurements of women with men.

	Male	Female
Stature (inches)	67.9	63.3
Height, sitting (inches)	36.0	33.9
Span (inches)	69.9	63.0
Breathing capacity (cubic inches)	219.0	138.0
Strength of pull (pounds)	74.0	40.0
Squeeze (strongest hand) (pounds)	85.0	52.0
Swiftness of blow (feet per second)	18.1	13.4

SOURCE: Anna M. Baetjer, Women in Industry: Their Health and Efficiency (Philadelphia: W. B. Saunders Company, 1946), p. 7.

Studies performed on athletes have provided further data on the physical characteristics and/or capabilities of men and women. In Plowman's study of male and female athletes and nonathletes she found that the female athlete was superior to her nonathlete counterpart in strength, aerobic capacity (prolonged work),

<sup>14</sup>Ibid.

normal tolerance for lactic acid (a physiological measure of work load) and  $O_2$  depth (a physiological measure of an individual's ability to sustain heavy, prolonged work), and lower fat-free body mass (amount of adipose tissue present in the body).<sup>15</sup> In these respects the female athlete was also well above the average of many untrained males; however, when compared to her male athlete counterpart the female athlete, at the onset of puberty, tended to possess less strength and muscle and lower values for cardiovascular-respiratory variables, both aerobic and anaerobic (short bursts of activity).<sup>16</sup> Cardiovascular-respiratory variables are used as measures of fitness. Whether a high or a low cardiovascular-respiratory value is an indication of a high or low degree of fitness is dependent on the particular measure incorporated.

In Astrand's report comparing numerous physiological characteristics on the basis of sex, he discovered that the aerobic capacity of females was lower

<sup>15</sup> Sharon Plowman, "Physiological Characteristics of Female Athletes," The Research Quarterly (December 1963): 349-62. See also Henrietta H. Avent et al., "Cardiovascular Characteristics of Selected Track Participants in the First Annual DGWS Track and Field Meet," The Research Quarterly (December 1971): 440-43; Lars Hermansen and K. Langer Andersen, "Aerobic Work Capacity in Young Norwegian Men and Women," Journal of Applied Physiology (May 1965): 425-31; Patricia R. Conger and Ross B. J. Macnab, "Strength, Body Composition, and Work Capacity of Participants and Nonparticipants in Women's Inter-collegiate Sports," The Research Quarterly (May 1967): 184-92.

<sup>16</sup> Plowman, "Physiological Characteristics of Female Athletes," p. 356.

than that of males (17 to 29% lower).<sup>17</sup> Further analysis revealed that under similar work conditions males exhibited a lower heart rate than females, suggesting that males are more fit. Astrand also noted that:

(1) as a rule females have a higher blood lactic acid value than men, which indicates that women must work harder to perform similar tasks; (2) females develop between 60 and 80% of the degree of strength that men do, depending on the muscle group studied; (3) the average hemoglobin content of the blood is higher in males, an indication that more oxygen can be carried in the blood stream of males; and (4) females have a lower fat-free body mass, the total weight of adipose tissue in males being 12.3 kilograms whereas for females it is 19.8 kilograms. Astrand and others have suggested that body fat hinders fitness.<sup>18</sup> Astrand thus concluded that "men are, nevertheless, better working machines than women."<sup>19</sup>

### Training

The previous section suggested that females are not capable of either the aerobic or anaerobic capacity of

---

<sup>17</sup> P. O. Astrand, "Human Physical Fitness With Special Reference to Sex and Age," Physiological Reviews (July 1956): 307-35.

<sup>18</sup> Ibid., p. 313; Plowman, "Physiological Characteristics of Female Athletes," p. 350.

<sup>19</sup> Astrand, "Human Physical Fitness With Special Reference to Sex and Age," p. 314.

males. This, however, cannot be taken prima facie as an indication of the inability of women to perform in the police patrol function. In order to make some determination of the ability or expected performance of females in this position, it is first necessary to determine the degree of physical fitness needed to perform effectively the work of a patrol officer. Determining this is no easy task, for as Johnson stated:

Quantitative assessment of physical fitness is one of the most complex and controversial problems in applied physiology. The situation arises in part from lack of general agreement on what constitutes fitness for withstanding various types of stress, and in part from lack of agreement on what measurements allow valid comparison to be made among different individuals exposed to the same stress.<sup>20</sup>

Although it is extremely difficult to define in physiological terms the degree of physical fitness needed to be a patrol officer, there are numerous indications that the police patrol function is largely not of an aerobic nature, and only partly of an anaerobic nature.<sup>21</sup>

<sup>20</sup> Robert E. Johnson, "Applied Physiology," Annual Review of Physiology 8 (1946): 535-36.

<sup>21</sup> For a discussion of the type of work performed by police patrol officers see Ronald G. Talney, "Women in Law Enforcement: An Expanded Role," Police (November-December 1969): 50; International City Management Association, "Women in Law Enforcement," p. 3; Richard A. Myren and Lynn D. Swanson, "Police Contacts With Juveniles: Perspectives, Guidelines," 2nd Review Draft, June 1961 (Washington, D.C.: Children's Bureau, U.S. Department of Health, Education, and Welfare, 1961), pp. 1-4, cited by Niederhoffer, Behind the Blue Shield: The Police in

In fact, in a study Hettinger conducted on 96 Philadelphia policemen, he found that the oxygen uptake of these

Urban Society, p. 75; Elaine Cumming, Ian Cumming, and Laura Edell, "Policemen as Philosopher, Guide and Friend," Social Problems (Winter 1965): 276-86. In their empirical study of the Syracuse Police Department, Cumming, Cumming, and Edell found that only 20 percent of the telephone calls received by the department in an eight-hour period were related to crime or violence. Harris, The Police Academy: An Inside View, p. 159. James Q. Wilson, Varieties of Police Behavior (Cambridge, Mass.: Harvard University Press, 1968), p. 19; Egon Bittner, "The Police on Skid-Row: A Study of Peace-Keeping," American Sociological Review (October 1967): 699-715; James F. Ahern, Police in Trouble (New York: Hawthorn Books, Inc., 1972), p. 168; Howard H. Earle, Police Recruit Training Stress vs. Nonstress: A Revolution in Law Enforcement Career Programs (Springfield, Illinois: Charles C. Thomas, 1973), p. 6; Thomas E. Bercal, "Calls for Police Assistance: Consumer Demands for Governmental Service," American Behavioral Scientist (May, June, July, August 1970): 681-91; Marvin Cummins, "Police and Service Work," in Police in Urban Society, ed. Harlan Hahn (Beverly Hills, Calif.: Sage Publications, 1971), pp. 279-90; Harlan Hahn, "The Public and the Police," in Police in Urban Society, ed. Harlan Hahn, pp. 9-33; John Webster, "Police Task and Time Study," Journal of Criminal Law, Criminology and Police Science (March 1970): 94-100; A. C. Germann, "Community Policing: An Assessment," Journal of Criminal Law, Criminology and Police Science (March 1969): 89-86; Morton Bard, "Iatrogenic Violence," The Police Chief (January 1971): 16-17; Albert Reiss, The Police and the Public (New Haven: Yale University Press, 1971), p. 71; The President's Commission on Law Enforcement and Administration of Justice, The Challenge of Crime in a Free Society (Washington, D.C.: Government Printing Office, 1967), p. 91. Research conducted in the Netherlands found that only about 5.5% of the work done by Dutch police officers is crime related; see J. Junger-Tas, A. A. v.d. Zee-Nefkens, and L. Smits, "Basic Police Training and Police Performance in the Netherlands," paper presented at the American Sociological Convention, Tucson, Arizona, 1976. It might also be noted that "Physical strength, for example, has never been shown to be job-related to police functioning"; see Lewis J. Sherman, "A Psychological View of Women in Policing," Journal of Police Science and Administration (December 1973): 390.

subjects was quite low and that they had poor physical fitness.<sup>22</sup> Hermansen compared Hettinger's findings with his conclusions and Astrand's:

For American men, considerably lower values are reported. Ninety-six policemen in Philadelphia, studied by Hettinger. . . , averaged only 2.2 liter/min O<sub>2</sub>. The average figure for our women students is 2.2 liter/min, which is essentially the same as reported for Swedish housewives.<sup>23</sup>

Hence, even though females may not be capable of attaining the maximal fitness of their male counterparts there is certainly some indication that the fitness needed to be a patrol officer is not beyond the capacity of many females. Earlier research reported here demonstrated that trained females were superior to their untrained female counterparts in most physiological measures. Evidence also indicated that trained females were well above the average fitness of most men. Thus, through proper training it is conceivable that females could be brought up to the fitness required for the job of patrol officer.

Training procedures should not be thought of exclusively as a measure to increase aerobic capacity or

---

<sup>22</sup>Theodor Hettinger et al., "Assessment of Physical Work Capacity," Journal of Applied Physiology (January-November 1961): 155.

<sup>23</sup>Hermansen and Andersen, "Aerobic Work Capacity in Young Norwegian Men and Women," p. 429.

endurance. Technical training is a form of training designed to improve dexterity; thus, through proper technical training task efficiency may be increased, which according to Astrand means that ". . . low aerobic [and anaerobic] capacity can be compensated for to some extent if the individual works economically. . . ."<sup>24</sup> In fact, Astrand further stated, "If a given task is of a technical nature, the person with low fitness may possibly, by training, fulfill it more easily than the person with high fitness who is a beginner."<sup>25</sup> Considering the fact that differences based on sex are less in anaerobic measures,<sup>26</sup> that trained women are more physically fit than untrained women and above the average fitness of most untrained men, and that technical training can compensate somewhat for a lack of aerobic and anaerobic capacity, it is quite possible that women could effectively perform the work required of patrol officers.

Finally, it must not go unnoticed that fitness, anatomical factors, and technical training are not the only variables that affect work capacity. Motivation to

---

<sup>24</sup> Astrand, "Human Physical Fitness With Special Reference to Sex and Age," p. 316.

<sup>25</sup> Ibid., p. 307.

<sup>26</sup> Plowman, "Physiological Characteristics of Female Athletes," p. 356.

perform well is an additional factor that influences work capacity. The topic of motivation is discussed at some length later in this chapter.

#### Intellectual Differences Between Sexes

There is some consensus among research findings that "generally females score higher than males on measures of some types of verbal abilities, perceptual speed, rote memory, and manual dexterity. Males typically score higher than females on measures of spatial ability, numerical reasoning, and scientific knowledge."<sup>27</sup> However, it has been suggested by some authors that scores obtained on cognitive abilities of men and women are affected by variant conditions and items included in the tests.<sup>28</sup> It should also be noted that, given our present methods of measurement, it is impossible to measure pure native intelligence. An individual's performance always reflects native capacity and the experiences he/she has undergone;<sup>29</sup> hence differences reported on aptitude tests

<sup>27</sup> Elaine Donelson and Jeanne E. Gullahorn, "Part Two: Psychobiological Foundations of Sex-Typed Behavior, in Women: A Psychological Perspective, ed. Elaine Donelson and Jeanne E. Gullahorn (New York: John Wiley and Sons, 1977), p. 35.

<sup>28</sup> Mirra Konarovsky, "Where Angels Fear to Tread," in Womankind: Beyond the Stereotypes, ed. Nancy Reeve (Chicago: Aldine and Atherton, 1971), p. 304; Mildred E. Katzell and William C. Byham, Women in the Work Force (New York: Behavioral Publications, Inc., 1972), p. 30.

<sup>29</sup> Katzell and Byham, Women in the Work Force, p. 29.

cannot be attributed wholly to inborn characteristics, but certainly must be accounted for in part by the different upbringing of the sexes.<sup>30</sup> Thus, although the present data provide no conclusive results concerning innate cogitative ability, they do indicate that

One prediction may be safely made. If ever confirmed, these inborn differences will be small. . . . Today, despite great divergencies in the social influences impinging upon them, men and women show, with one or two exceptions, such great similarities in tests of mental aptitudes.<sup>31</sup>

It is important to consider that research findings have demonstrated that differences in cognitive ability are more marked among members of the same sex than between the sexes.<sup>32</sup> It is therefore advisable, when considering cognitive skills, to make decisions of employment, admissions to institutions of higher learning, and training programs on an individual basis rather than on the basis of sex.

In Judith Galloway's analysis of women's academic ability or potential in the U.S. Air Force Academy, she concluded:

---

<sup>30</sup> Konarovsky, "Where Angels Fear to Tread," p. 307.

<sup>31</sup> Ibid., p. 309; Helen Bee, The Developing Child (New York: Harper and Row, Publishers, Inc., 1975), p. 356.

<sup>32</sup> Konarovsky, "Where Angels Fear to Tread," p. 304; L. E. Tyler, "Individual Differences: Sex Differences," International Encyclopedia of the Social Sciences (New York: Macmillan Company and The Free Press, 1968), p. 209.

CEEB [College Entrance Examination Board] scores are generally valid indicators of academic success. It must, therefore, be concluded that women academy cadets will successfully compete with the men.

A look at the actual academic achievement by women at Yale seems to support this premise. Women earned 5% more As in the beginning of coeducation, decreasing to 3% after four years. They earned an equal number of Bs and 5% fewer Cs. The women earned one-half as many Fs in the beginning, but this equalized over four years.<sup>33</sup>

In sum, evidence indicates that females do score lower than males in areas such as mathematics and that they tend to score above their male counterparts on tests of verbal aptitude. This phenomenon can, to a large extent, be attributed to environmental influences, self-image, and the level of aspiration present, all directly related to motivation to perform.<sup>34</sup> The differences between the sexes on intelligence measures are for the most part quite small; in fact, variations in intelligence are more marked within each sex than between the sexes. Therefore, when considering cognitive skills, the selection of candidates should stress differences based on the individual, not differences based on sex. The logical conclusion to be reached is that there is little overall difference between the cognitive abilities of men and women.

---

<sup>33</sup> Judith M. Galloway, "The Impact of the Admission of Women to the Service Academies on the Role of the Woman Line Officer," American Behavioral Scientist (May-June 1976): 651-52.

<sup>34</sup> Konarovsky, "Where Angels Fear to Tread," p. 309.

Women's Role

The traits dominant in the roles prescribed for women in the United States are related primarily to such things as interpersonal warmth and social concerns.

Males, on the other hand, are generally concerned with or oriented toward achievement and personal competence.

Women are therefore expected to be sensitive, emotional, and gentle; men are expected to be independent, self-

confident, and ambitious.<sup>35</sup> This does not mean, however, that females have been restricted to these role traits throughout American history, that these role traits are common between cultures, nor that they will remain consistent in the years ahead; in fact, the role of women in America today is in a state of flux. The dramatic increase of females in the American labor force graphically illustrates that both the social and economic roles of women have been changing in this country.<sup>36</sup>

The efforts of women over the ages often have been left unsaid and forgotten. However, throughout history accounts have been recorded of women as warriors, hunters, priestesses, and queens. In African history, for example:

---

<sup>35</sup> Jeanne E. Gullahorn, "Understanding the Psychology of Women," in Women: A Psychological Perspective, ed. Donelson and Gullahorn, p. 6.

<sup>36</sup> Population Reference Bureau, "Status of Women in the United States, 1950 and 1975," Social Education (April 1977): 319-20.

. . . The Niger and Chad regions and in Hausa territory, women founded cities, led migrations, conquered kingdoms. . . . In the myths concerning the establishment of the So in North Cameroon it was also often a woman who chose the site of a city, held the insignia of power, or governed a district.

The Lango, a Nilotc tribe, recount tales about the feats of arms performed by women; and long before we heard of the exploits of the "Amazons" of the kings of Dahomey, Gezo, Glele and Behanzin, there were written accounts celebrating the courage of the female legions who fought in the armies of Monomotapa and reporting the privileges they enjoyed.<sup>37</sup>

The celebrated work of Margaret Mead on three New Guinea tribes demonstrated the diverse personality traits that have been related to femaleness and maleness.<sup>38</sup>

Mead reported that both men and women in the Arapesh tribe were cooperative, unaggressive, and responsive to the needs of others. In marked contrast to this type of behavior, men and women in the Mundugumor tribe were ruthless, suspicious, aggressive, jealous, and minimally involved with the care of their children. The behavior displayed by both men and women in the Mundugumor tribe was that type of behavior we in our Western culture would expect from a violent male.

The third tribe studied, the Tchambuli tribe, was quite different from the two other tribes previously

<sup>37</sup> Annie M. D. Lebeuf, "The Role of Women in the Political Organization of African Societies," in Woman-kind: Beyond the Stereotypes, ed. Reeves, p. 321.

<sup>38</sup> Margaret Mead, Sex and Temperament in Three Primitive Societies (New York: William Morrow and Company, Inc., 1963), pp. 279-309.

discussed. Men and women in this tribe displayed the reversal of the sex attitudes of our own culture. Women displayed behavior that was impersonal, dominant, managing, and sexually aggressive. Males of the Tchambuli tribe were socially responsive and less responsible.

Mead thus concluded:

If those temperamental attitudes which we have traditionally regarded as feminine--such as passivity, responsiveness, and a willingness to cherish children--can so easily be set up as the masculine pattern in one tribe, and in another be outlawed for the majority of women as well as for the majority of men, we no longer have any basis for regarding such aspects of behaviour as sex-linked. And this conclusion becomes even stronger when we consider the actual reversal in Tchambuli of the position of dominance of the two sexes, in spite of the existence of formal patrilineal institutions.

The material suggests that we may say that many, if not all, of the personality traits which we have called masculine or feminine are as lightly linked to sex as are the clothing, the manners, and the form of head-dress that a society at a given period assigns to either sex. When we consider the behaviour of the typical Arapesh man or woman as contrasted with the behaviour of the typical Mundugumor man or woman, the evidence is overwhelmingly in favour of the strength of social conditioning.<sup>39</sup>

Further evidence points to the importance of socialization with respect to male and female roles. Perhaps the most dramatic evidence supporting the socialization hypothesis is research on hermaphrodites or pseudohermaphrodites, individuals born with genital abnormalities that make their "true" sex ambiguous.

---

<sup>39</sup> Ibid., pp. 279-80.

Parents of hermaphrodites generally treat the child as either male or female, and the child usually assumes the characteristics of the assigned role. Later development of the child may prove to be biologically different from the sex role assigned at birth. However, the child generally maintains sex-typed characteristics, and it is not uncommon for the individual later to seek hormonal and/or surgical treatment so that his/her biological make-up will correspond to the initial sex-role assignment. In fact, efforts to change the sex-role assignment later in life may result in severe psychological trauma.<sup>40</sup>

Thus, "It is fairly well established that there are no marked genetic personality traits predisposing members of either sex to specific behavior patterns."<sup>41</sup>

#### Role Acquisition

Acquisition is defined at times in a manner that emphasizes the acquisition of behaviors that are relevant to social interaction; other definitions place emphasis on the influence others have on the individual. One common element found in all definitions of

<sup>40</sup> Paul H. Mussen, "Early Sex-Role Development," in Womankind: Beyond the Stereotypes, ed. Reeves, p. 396; Glenn I. Hatton, "Biology and Gender: Structure, Sex, and Cycles," in Women: A Psychological Perspective, ed. Donelson and Gullahorn, p. 53.

<sup>41</sup> J. Roger Penn and Mary E. Gabriel, "Role Constraints Influencing the Lives of Women," The School Counselor (March 1976): 253.

socialization is the assumption that one organism influences the behavior of another in a social context.<sup>42</sup>

"Socialization consists of the individual's learning to take the perspective of the other (or group of others) in formulating and evaluating his or her behavior."<sup>43</sup>

Thus, developing a common definition for the role he/she is to assume is an important aspect of role acquisition.

Katz and Kahn provided a definition of role, used in this study, which incorporates most of the elements stressed by others: ". . . the recurring actions of an individual appropriately interrelated with the repetitive actions of others, so as to yield a predictable outcome."<sup>44</sup>

The key element of role acquisition, therefore, is for the individual to define accurately the message sent by "significant others" and to translate these messages into predictable behavior patterns acceptable to group and the focal person's expectations. Complications emerge when "significant others" transmit insufficient or

---

<sup>42</sup> Hiram E. Fitzgerald, "Infants and Caregivers: Sex Differences as Determinants of Socialization," in Women: A Psychological Perspective, ed. Donelson and Gullahorn, p. 103.

<sup>43</sup> Harriet A. Connolly, "Policewomen as Patrol Officers: A Study in Role Adaptation" (Ph.D. dissertation, City University of New York, 1975), p. 3.

<sup>44</sup> Ibid., p. 4.

conflicting information about the proper role definition.

Connolly noted that this situation results in role ambiguity and role strain, which can cause an individual to have:

. . . increased tension levels, deteriorating health, decreased job satisfaction, reduced efficiency, lessened social participation and cognitive changes which reduce the strain. Similarly, effects on groups include changed cognitions of group members which act to reduce the strain, deteriorated interpersonal relations, decreased coordination and reduced efficiency of group performance.<sup>45</sup>

It is obvious, therefore, that role strain will hinder the performance of the individual, the group, and ultimately the organization.<sup>46</sup>

### Motivation

Clearly linked to female performance and role acquisition is the concept of motivation. Earlier it was stated that motivation to perform is related to task performance and that socialization is influenced by "significant others." That is, neither males nor females are likely to perform well on a task for which they have received no encouragement or opportunity.<sup>47</sup>

---

<sup>45</sup> Ibid., p. 20.

<sup>46</sup> A discussion of Connolly's results is provided in the following chapter.

<sup>47</sup> Katzell, Women in the Work Force, p. 31.

The relationship of motivation to task performance has been a subject of psychology and other disciplines for a number of years, and the relationship is well documented.<sup>48</sup> Therefore, suffice it to say that for an individual to perform any given task, some type of motivating force must exist. That force may be of an economic or noneconomic nature and may well vary between individuals and among tasks.

Role traits play an important part in the motivation concept. If a particular type of role behavior or trait is not within the scope of the individual's role definition, which has been found to be a result of the socialization process, there will be either no incentive to attempt the task or decreased motivation to perform the task well. For example, if female police officers

<sup>48</sup> See, for example, such works as Chris Argyris, Personality and Organization (New York: Harper, 1957), *passim*; Frederick Herzberg, Bernard Mausner, and Barbara Snyderman, The Motivation to Work (New York: John Wiley and Sons, Inc., 1959), *passim*; Daniel Katz and Robert Kahn, The Social Psychology of Organizations (New York: John Wiley and Sons, 1966), *passim*; Edward Lawler, Motivation in Work Organizations (Monterey, California: Brooks/Cole Publishing, 1973), *passim*; Rensis Likert, The Human Organization (New York: McGraw-Hill Book Company, 1967), *passim*; Elton Mayo, The Social Problems of an Industrial Civilization (Cambridge, Mass.: Harvard University Press, 1945), *passim*; Douglas McGregor, The Human Side of Enterprise (New York: McGraw-Hill Book Company, 1960), *passim*; Charles Perrow, Complex Organizations: A Critical Essay (Glenview, Illinois: Scott, Foresman and Company, 1972), *passim*; Edgar Schein, Organizational Psychology, 2nd ed. (Englewood Cliffs, New Jersey: Prentice-Hall, 1970), *passim*; Victor Vroom, Work and Motivation (New York: John Wiley and Sons, 1964), *passim*.

receive from "significant others" role definitions that exclude the physical aspects of the patrol function, it is logical to assume either that they will not perform the function, or that they must develop protective devices that will allow them to ignore to a great extent the messages sent by "significant others" (their peers in the case of this study) that contradict previously developed sex-role definitions. Either situation will result in increased organizational, group, and individual conflict and decreased performance. Ultimately, however, if inter-sender conflict is severe, females' performance may be superior if they use defensive tactics as opposed to being subjected to continual conflict. This, however, does not mean that females would perform better under this condition than if no conflict existed whatsoever.

The socialization process is greatly influenced by an individual's parents; but other "significant others," i.e., other members of the role set such as peers, education, formal institutions, and the nuclear family, also influence role definitions.<sup>49</sup> Considerable evidence indicates that females are greatly influenced by "significant males" in defining their roles. Numerous research findings have indicated that females make career decisions on the basis of what they believe men

---

<sup>49</sup> Penn and Gabriel, "Role Constraints Influencing the Lives of Women," pp. 253-54.

will tolerate.<sup>50</sup> Thus, if their male patrol officer peers produce role stress in female officers either by being incongruent with already established female officer sex-role definitions or by providing inconsistent role definitions, increased conflict may ensue and organizational efficiency may therefore suffer.

#### Conclusion

Females have had a rather long and progressively more involved relationship with policing over the years, but there has been resistance to extending the role of females into the patrol function. This opposition is based largely on the belief that females cannot adequately perform the duties of a patrol officer.

In an effort to make preliminary predictions of the performance of newly hired Michigan State Police female recruits in the patrol function, an analysis of female recruits' performance in the 90th Michigan State Police Training Academy was undertaken. In addition, an analysis of male and female recruits' expectations concerning the female officer's role was completed in an

---

<sup>50</sup> Peggy Hawley, "What Women Think Men Think: Does It Affect Their Career Choice?" Journal of Counseling Psychology (May 1971): 198. See also Bruno Bettelheim, "Growing Up Female," Harpers Magazine (October 1962): 120-28; Ralph F. Surette, "Career Versus Homemaking: Perspective and Proposals," Vocational Guidance Quarterly (December 1967): 82-86.

effort to determine if inter-sender conflict might be present among the recruits. Such conflict comes about when disagreement among members of the role set occurs, i.e., when the focal person and "significant others" do not agree on the desired behavior in specific job situations. This measure was attempted in order to determine if efforts need be extended by the Department of State Police to lessen inter-sender conflict so that individual, group, and organizational complications do not ensue.

Previous research has indicated that females are smaller and possess less physical strength than men. Research also has indicated that females are unable to attain the maximal aerobic or anaerobic capacity of males. However, these findings do not automatically exclude women from the patrol function. Analysis of the patrol officer's job suggests that it is not largely a physical occupation; there is reason to believe, therefore, that the majority of women can attain a level of fitness appropriate to perform the job of patrol officer adequately. However, the dangerous and physically demanding components of the police officer's job cannot be underemphasized. Although the frequency of these physically demanding job tasks may be quite low, the successful handling of such incidents may well be of critical importance. Male officer perceptions of the physical aspect of policing will also greatly influence

their perception of the female officer's role in the police function; therefore, further emphasizing the overall impact of the physical aspect of policing on the police environment.

Research on cognitive abilities of men and women suggested that little actual difference exists. In addition, it was discovered that the socialization process is the most influential aspect of role acquisition and that "significant others" greatly influence the role traits acquired by the focal person. Finally, the importance of motivation and its relationship to female performance and role acquisition was discussed.

Cultural beliefs in American society suggest that women are to be sensitive, emotional, and gentle, while men are expected to be independent, self-confident, and ambitious. Sex-roles in American society, therefore, mirror these cultural assumptions for the most part. Thus, it is generally assumed by the American public that females cannot successfully cope with a stereotyped masculine job such as policing, because of their physically weaker body structure and because of their emotional instability. The information previously presented in this chapter has brought these cultural beliefs, of the female's role in American society, into question.

Various studies have been conducted on academies and the performance of female police officers. The following chapter reviews these studies, and, as will be seen, brings America's cultural beliefs concerning the proper role of women into further question. At the conclusion of Chapter II the study hypotheses are presented and the logic underlying the development of each hypothesis is discussed.

## CHAPTER II

### REVIEW OF THE LITERATURE

The previous chapter indicated that additional research on the performance of females in the police environment is necessary. The writer found only two studies designed to evaluate female performance in a police academy; one of them provided no information about what dependent variables had been used or what statistical or methodological techniques had been incorporated. Neither of the two studies attempted to determine if there had been inter-sender conflict among the recruits under study. Further investigation into academy-related research revealed that surprisingly little effort had gone into researching police academies in general; even penetrating studies of the police included only a few pages on the subject.

Because of the lack of academy-related research concerning females, the design and content of this chapter revolve around the following structure: (1) The first segment of the literature review concentrates on several classic studies of police training that have been included not only to demonstrate the effect of the academy

experience on participants, but also to accentuate the importance of studying females in the police academy.

(2) The second segment of the literature review actually combines two sections in one. The first studies concentrate on the characteristics of female police officers and their performance after graduation from the police academy. One study reported in this section concerns role adaptation of female officers. These studies provide insight into what sort of performance might be expected of females in a training academy and the implications of role adaptation, as well as some of the advantages of placing properly trained females into the patrol function. These studies further indicate a number of problems or difficulties encountered with the use of females in the patrol function.

The second set of studies reviewed provides analysis of female performance in both the academy and patrol function, giving additional insight into the development of testable hypotheses and demonstrating the need for further research in this area. The need for more rigorous statistical techniques also becomes apparent in this section.

Before beginning this section two essential points must be made: (1) The studies reviewed here, with particular reference to those projects evaluating the performance of female officers, are, as is this study,

influenced by the culture in which they were designed. Therefore, cultural and occupational assumptions popular in American society are evident throughout each of these studies. For example, the major emphasis of each project is to determine if females are as capable as males in the police function. Consequently, questionnaires incorporated in each of the studies reviewed were culturally biased in that they impart the impression that women are not necessarily equal with men in performing job tasks required of police officers. (2) Each study reviewed, again referring specifically to those studies evaluating female officers, was influenced by political pressures. Political constraints affected these studies to varying degrees in the following manner: (a) studies were rushed and thus the conceptualizing phase and data collection phase of the research projects were hindered and thus research precision was lost; (b) both research and organizational atmospheres were created which might well have had a predetermining effect on study outcomes; (c) public pressure on duly elected representatives was favorable toward positive outcomes; and (d) the combination of these pressures may have tended to cause researchers to overstate their findings in an effort to demonstrate the effectiveness of women.

Police Academy Training

In his classic study of cynicism among 220 New York policemen, Arthur Niederhoffer attempted to determine the effect of cynicism over a period of time and among different police duties and ranks.<sup>1</sup> A small portion of this study concentrated on cynicism in the New York Police Academy. Niederhoffer discovered that although the typical police recruit started his career without a trace of cynicism, as time in the academy progressed his cynicism increased. This suggests that the academy process affects the perceptions and/or attitudes of male police recruits. Whether Niederhoffer's sample of policemen is representative might well be questioned, but the indication that the academy process produces changes in the individual cannot go unheeded.

If male recruits' attitudes are changed in the academy, might not the academy experience change male recruit perceptions regarding the use of females in the patrol function? And might not a change also be expected in female recruit perceptions regarding the female trooper's role? If this supposition is valid--and research evidence suggests that it may be--a determination of how male and female recruits' perceptions of the female trooper's role are affected by the academy experience is necessary, not

---

<sup>1</sup>Arthur Niederhoffer, Behind the Shield: The Police in Urban Society (Garden City, N.Y.: Doubleday and Company, Inc., 1967), pp. 35-54.

only to determine whether role perceptions are affected, but also to determine why role perception changes occurred.

In his study of the recruit training program in the New York City Police Department from 1960 through 1963, John McNamara used a variety of methods to obtain the data. The major sources of data used in the study were self-administered questionnaires given to approximately 700 police recruits in the police academy one and two years after their graduation. These questionnaires were designed to measure attitudinal, experiential, and personality variables. Additional data were derived from departmental records, participant observation, the critical incident technique, and observation of role-playing exercises.<sup>2</sup>

The purpose of McNamara's study was to identify and clarify social, psychological, and organizational problems that occur in preparing recruits for the uncertainties of police work. McNamara pointed out that his study was a preliminary analysis because of the rather formidable amount of data gathered in the study. The use of frequencies and percentage distributions was his primary method for presentation of data, and

---

<sup>2</sup>John H. McNamara, "Role-Learning for Police Recruits" (Ph.D. dissertation, University of California, 1967), pp. 49-58, 60-63.

social-psychological and sociological principles accounted for reported changes in subjects.<sup>3</sup>

McNamara reached the following conclusions:

- (1) Numerous gains attained in the academy tended either to disappear or to reverse in the field, where conditions were often quite dissimilar to those in the academy;
- (2) The semi-military model is an inappropriate method for instructing patrolmen to be autonomous and self-directing; and (3) Role learning by police officers is problematic because of the coexistence of the formal and informal organizations.<sup>4</sup>

Since McNamara's study indicated that the traditional academy training process did provide a source of role conflict in male police officers, it is reasonable to conclude that the introduction of women might further exacerbate this dilemma. In fact, male role perception could be affected in one of two ways: (1) With the introduction of females into the academy, males might find it necessary to redefine their role as police officers; or (2) Males may define the role of female recruits who are to be placed in the patrol function differently from

---

<sup>3</sup> Ibid., pp. 72-75.

<sup>4</sup> See also John H. McNamara, "Uncertainties in Police Work: The Relevance of Police Recruits' Backgrounds and Training," in The Police: Six Sociological Essays, ed. David J. Bordua (New York: John Wiley and Sons, Inc., 1967), pp. 163-252.

their own. Both of these role-perception changes could create individual, group, and organizational conflict.

Another interesting facet of role definition concerns female perceptions of their rôle as patrol officers and what effect the academy experience has on the role perception of female recruits. Little information exists concerning female role perceptions of the police function.

In Richard Harris's words, the purpose of his qualitative research of the Ruban County Police Department was ". . . to impartially describe and analyze some of the salient processes and structures of police academy training.<sup>5</sup> In an attempt to realize this goal, Harris, along with 53 recruits, participated in the 12-week-long 32nd recruit class of the Ruban County Police Department. Harris's use of participant observation was based on his concern for developing an understanding of social behavior rather than for making precise predictions.<sup>6</sup>

Since the majority of time at the police training academy was spent in a classroom listening to lectures, Harris's data were based largely upon information obtained in these sessions. Harris conducted a content analysis of lectures and discussions, which led to his

---

<sup>5</sup>Richard N. Harris, The Police Academy: An Inside View (New York: John Wiley and Sons, Inc., 1973), p. 171.

<sup>6</sup>Ibid., p. 20.

discovery that the academy staff and instructors were pre-occupied with certain attitudes--defensiveness, professionalization, and mutual depersonalization--that were to be adopted and mirrored by the recruits.

In reviewing and analyzing the method, impact, and concern for those three attitudes, Harris found that one of the consequences of police training was the cultivation of solidarity.<sup>7</sup> Harris further discovered that "role distance" was a result of academy training. He defined role distance as ". . . actions which effectively convey some disdainful detachment of the performer from the role he is performing."<sup>8</sup> According to Harris, role distance ". . . occurs when an individual consciously plays a role tongue-in-cheek; he does what is expected of him, but simultaneously he maintains an inner distance with respect to his role."<sup>9</sup> Role distance resulted from the academy staff's unawareness of the underlying processes of training (defensiveness, professionalization, depersonalization, etc.); the academy also appeared to institutionalize role distance by reinforcing the recruit's belief that training in the academy was irrelevant to police work.

In Harris's study it became apparent that the academy experience can be expected to affect police

---

<sup>7</sup> Ibid., pp. 163-65.

<sup>8</sup> Ibid., p. 166.

<sup>9</sup> Ibid.

solidarity and role perceptions; therefore it is possible that the academy experience may influence both male and female perceptions of female troopers' role.

In his highly publicized and controversial three-year field study of stress vs. nonstress in a police training academy, Howard Earle compared the performance of Los Angeles County Sheriff's deputies in the field after their completion of stress and nonstress training.

The study used two control groups and two test groups. Both control groups were subjected to the department's existing stress-oriented training academy. The two test classes were placed in a training atmosphere that was developed to resemble, as closely as possible--with one exception--the control group training process. This was accomplished by controlling for class instructors, curricula, evaluators, and assignments to the field. The major difference was that the test group's training experience was conducted in a nonstressful climate.<sup>10</sup>

The sample comprised 174 newly appointed male deputy sheriffs. The first academy class comprised 74 subjects or 37 matched pairs; the second class comprised 100 recruits or 50 matched pairs. The subjects in each class were carefully matched according to six personal

---

<sup>10</sup> Howard H. Earle, Police Recruit Training Stress vs. Non-stress: A Revolution in Law Enforcement Career Programs (Springfield, Illinois: Charles C. Thomas, 1973), p. 83.

characteristics and randomly assigned to the test and control groups.<sup>11</sup>

In the research endeavor extensive efforts were made to control for extraneous variables. Numerous measurement instruments and statistical techniques were used, all contributing to the methodological soundness of this research project. Results of the study indicated that:

The evidence supports the alternative hypotheses: Non-stress trained subjects displayed a higher level of performance proficiency in the field, a higher level of job satisfaction, and a higher level of performance acceptability by persons served.<sup>12</sup>

Earle's study was of importance to this project for two major reasons: (1) His findings demonstrated that the academy did influence male patrol officers; and (2) Results indicated that a nonstress orientation at the academy produced a better patrol officer than did stressful training.

The major problem in analyzing the Earle study arose from the great difficulty in determining exactly what is meant by "nonstressful." Therefore, although the Michigan State Police training process is often referred to as stressful, it does not necessarily mean that it has the same type or degree of stress orientation studied in the Earle project. Actually, the amount or degree of

---

<sup>11</sup>Ibid., pp. 84-85.

<sup>12</sup>Ibid., p. 143.

stress placed upon recruits at the 90th recruit school of the Michigan State Police is not a variable under consideration in this research endeavor. Female recruits were subjected to the same training process as their male counterparts; and it was on this pre-established criterion that, at least initially, their performance was evaluated and discerned. The issue at hand, therefore, was to determine if females could perform equally as well as males under similar academy conditions, and what effect this type of training has on male and female perceptions of the female trooper's role.

Female Police Officer Performance  
on the Road

The first actual attempt at an extensive investigation of female officers was conducted by Gary Perlstein in 1971. Data for his analysis were collected by mailed questionnaires to police departments that were known to use female police officers. Of the original 150 female police officers in the sample, 138 responded to the mailing.<sup>13</sup>

---

<sup>13</sup>Gary R. Perlstein, "An Exploratory Analysis of Certain Characteristics of Policewomen" (Ph.D. dissertation, Florida State University, 1971), p. 32. See also idem, "Certain Characteristics of Policewomen," Police (January 1972): 45-46; idem, "Policewomen and Policemen: A Comparative Look," The Police Chief (March 1972): 72-74, 83. The cities that responded to Perlstein's questionnaires were: Baltimore, Honolulu, Philadelphia, Seattle, Minneapolis, Fort Worth, Oakland, New Orleans, Cincinnati, Kansas City, St. Louis, Montgomery, Atlanta, and Miami.

Although Perlstein sampled only female police officers, he selected the variables measured in the study because of previous research findings on male police officers; thus, Perlstein related his findings to those studies, measuring like variables used with male police officers.

Findings of the study indicated that--unlike those of male officers and with the exception of age--background characteristics did not influence women's reasons for becoming law enforcement officers, and that women, like men, entered police work for security reasons. Perlstein found, too, that with the exception of marital status and unlike male police officers, background characteristics did not influence a female officer's job satisfaction or morale.

Male police officers did not score highly on anomia measures; however, in analyzing the influence of background characteristics of the female officers' degree of anomia no relationship was found, with the exception of the influence of marital status. Perlstein deduced that the type of work female officers performed did not relate to their degree of anomia, in contrast to findings for male police officers.

Finally, Perlstein discovered that white police-women scored lower than black policewomen on the authoritarian-aggression part of the F scale; policewomen

with at least a bachelor's degree scored lower on the authoritarian-aggression and conventionalism scales than did female officers with less education; and the type of work done by policewomen was not related to their scores on the F scale (conventionalism, authoritarian-aggression, and exaggerated concern with sexual "goings-on").<sup>14</sup>

Perlstein concluded by stating, "The results of this research on policewomen have shown that they do not appear to show many of the same characteristics indicated by other research to typify male officers."<sup>15</sup> Perlstein's research efforts probed to the very heart of the issue at hand; that is, differences based on sex can be expected among police recruits and patrol officers.

Between January 1, 1973, and December 31, 1973, the Pennsylvania State Police conducted a research project on their female troopers in an effort to ascertain how female troopers compared with male troopers in the patrol function. Two comparison groups of 14 male and 14 female cadets were matched, using four criteria (state police academy scholastic averages, prior education, intelligence quotient, and Army General Classification Test scores), and were compared throughout the duration of the study. It was originally intended

---

<sup>14</sup> Perlstein, "An Exploratory Analysis of Certain Characteristics of Policewomen," pp. 127-28.

<sup>15</sup> Ibid., p. 123.

that these troopers would be evaluated at the same station, doing like tasks and having the same supervisors; but it became apparent early in the study that this would be impossible. Assignment of both male and female troopers to different stations and different types of assignments changed the original design of the study.<sup>16</sup>

Study findings were presented in terms of means and percentage distributions. Therefore, it is difficult to determine if differences between male and female troopers were statistically significant. The findings indicated that supervisors were reluctant to assign female troopers to dangerous situations and midnight patrol with male troopers. This condition produced considerable resentment on the part of male officers toward their female counterparts, and it affected the type of work performed by female troopers; however, the work performed by females in the area of criminal activity rated almost equally with that of males. Evidence indicated that female troopers were less effective in the traffic-enforcement function of the department. Additional data demonstrated that supervisors rated female troopers higher than males in efficiency, and that the

---

<sup>16</sup> Pennsylvania State Police, Pennsylvania State Police Female Trooper Study (Harrisburg, Pennsylvania: Pennsylvania State Police, 1974), pp. 1, 6.

public and magistrates felt female troopers could perform their duties as well as male officers.<sup>17</sup>

Possibly the single most important finding by the research staff was:

At this junction, the females and comparison males have been involved in few incidents involving violence or potential violence and there appears to be no difference in the performance of the females and males in these few situations.<sup>18</sup>

The authors concluded their analysis of the research findings by stating, "As a result of the partiality shown toward the females there is not sufficient information available to determine whether a female can or cannot function in the role of a trooper."<sup>19</sup> But the authors continued, "Evidence so far has disclosed that some of the females are able to perform most troopers' duties as well as a male."<sup>20</sup>

The preceding study presented three important points: (1) Different treatment of female officers creates a poor image of them in the eyes of their fellow male officers; (2) If different treatment is afforded females, it is impossible to fairly evaluate their performance with that of their male counterparts; and (3) Although the research subjects had encountered few situations involving violence or potential violence, no

---

<sup>17</sup> Ibid., p. 12.

<sup>18</sup> Ibid.

<sup>19</sup> Ibid., p. 20.

<sup>20</sup> Ibid.

differences in the performance of the females and males were found in these few situations.

Undoubtedly, the most complete, methodologically sound, and authoritative study on women in policing is the Washington, D.C., study conducted by Bloch and Anderson. This one-year study began in early 1972 and included 86 female and 86 male municipal police recruits.<sup>21</sup> The study used numerous research instruments to measure four aspects of the police function: (1) officer assignment, (2) officer performance, (3) citizen attitudes, and (4) police officer attitudes.<sup>22</sup>

---

<sup>21</sup> Peter B. Bloch and Deborah Anderson, Policewomen on Patrol: Final Report (Washington, D.C.: Police Foundation, 1974), p. 1. The methodology used in the study and statistical findings are to be found in *idem*, Policewomen on Patrol: Final Report Methodology, Tables and Measurement Instruments (Washington, D.C.: Police Foundation, 1974), *passim*. It should be noted that although the N for the project was 86 males and 86 females, different N's were used in each segment of the study. For information on the number of subjects used in each segment of the study see Bloch and Anderson, Policewomen on Patrol: Final Report Methodology, Tables and Measurement Instruments, p. 5.

It is of further interest to note that an earlier preliminary study was conducted in Washington, D.C., concerning the performance of females on patrol. This study is not reported because of the superior nature of the second research effort reported here. For information on this study see Peter Bloch, Deborah Anderson, and Pamela Gervais, Policewomen on Patrol (Major Findings: First Report, Volume 1) (Washington, D.C.: Police Foundation, 1973), *passim*.

<sup>22</sup> Bloch and Anderson, Policewomen on Patrol: Final Report, pp. 8-10.

At the start it was discovered that female officers were not treated in the same manner as their male comparison group; for example, women were assigned to regular uniformed duty less frequently, were assigned more frequently to desk duty and two-officer patrol, and were given more inside assignments than were comparison males.<sup>23</sup>

Performance measures indicated that female officers saw as many citizens who were dangerous, angry, upset, or violent as did their male counterparts, and they obtained similar results in handling violent or angry citizens when they were on patrol. Female and male subjects received similar performance ratings.

Additional research findings indicated that males made more misdemeanor and felony arrests, but that arrests made by males or females were equally likely to result in convictions. Although men received higher ratings on their ability to handle various violent situations, to perform street patrol, and to handle domestic fights, males and females were rated equally on handling upset or injured persons and on general competence.

Finally, although male subjects were more likely to be charged with seriously unbecoming conduct than were their female counterparts, citizens demonstrated

---

<sup>23</sup>The major findings of the Washington, D.C., study are reported in Bloch and Anderson, Policewomen on Patrol: Final Report, pp. 5-6.

similar levels of respect for both sexes. District of Columbia citizens felt that female officers were capable of handling most police situations, although they did report skepticism concerning the ability of women to handle violent situations; such skepticism, however, did not affect the overall departmental rating by citizens.

Analysis of police attitudes concerning female officers revealed that male officers doubted if female officers were equal to men in most skills and that females, although they preferred to patrol with male partners (as did males), had a higher opinion of their own capabilities than did either male patrol or command officers. In addition, it was found that black officers were more favorable toward women than were white officers; that male officers who worked with females had a lower opinion of them than did other officers assigned to comparison districts; and finally, there was little change in the attitudes of male officers toward female officers between the start and conclusion of the study.

The authors concluded their study by suggesting that, from a performance standpoint, it is appropriate to hire women for patrol assignment on the same basis as men.

The Washington, D.C., study brought a number of issues to the surface: (1) Females were not treated the same as their male counterparts; (2) Females performed

satisfactorily on the road; (3) Male officers were more likely to be charged with unbecoming conduct; (4) Although citizens were skeptical about female officers' ability to handle violent situations, they felt they were capable of handling most police situations; (5) Male officers not only tended to doubt the ability of females, but those who had worked with females had a lower opinion of them than did male officers who had not worked with them; and (6) There was little change in the attitudes of male officers toward female officers between the start and conclusion of the project.

In May, 1972, the New York Police Department, in contract with the Police Foundation and the Urban Institute, undertook a project designed to determine if women would enhance the effectiveness of neighborhood police teams. More specifically, Greenwald designed an analysis of this study to present a multi-faceted descriptive account of the aggressive components of police-citizen interaction.

Originally, the sample for the project was to be composed of newly hired policewomen; but because of the job freeze that struck New York City, the sample comprised 14 volunteer women who already had police experience. Their previous assignments had been predominantly clerical and matronly duties, although occasionally they had served as specialists, i.e., as youth workers and

plainclothes officers. The control group of male officers was twice the size of the experimental group. The male officers had a mean age that was lower than the females, and their previous police experience had been in the patrol function.<sup>24</sup>

The incomparability of the comparison group, coupled with a restricted sample size, limits the general applicability of this research project. However, the author presented her findings with the use of both quantitative and qualitative analysis and multiple research methods.

Greenwald's results suggested that both male and female officers for the most part conducted themselves in a businesslike manner; but whereas males tended to be businesslike throughout an interaction, women at times did not continue to display this type of routine or impersonal style. In fact, when deviations from a businesslike style occurred for males, they usually became engaged in aggressive actions or power displays, whereas females tended to become more friendly toward citizens. Female officers consistently exceeded male

---

<sup>24</sup> Judith E. Greenwald, "Aggression as a Component of Police-Citizen Transactions: Differences Between Male and Female Police Officers" (Ph.D. dissertation, City University of New York, 1976), pp. 54-58.

officers in the extent to which they displayed less hostile behavior toward citizens.<sup>25</sup>

Further analysis indicated that male officers displayed certain constellations of behaviors, i.e., physical aggression and authoritarianism, more frequently than did females. Sex differences were also found in hostile behavior; although females virtually never engaged in hostile behavior, males did so 3% of the time they were observed. Finally, males tended to engage in displays of active aggression, whereas no sex difference existed insofar as passive or indirect aggression was concerned.<sup>26</sup>

Contrary to the original hypothesis, male officers were not more likely than females to be aggressive in defense of their personal safety. Neither did any evidence suggest differences between male and female officers in aggression undertaken as a protection against existing or potential danger. In addition, the study found no sex differences in aggression for the purpose of defending or supporting others. One surprising finding did emerge: Male officers were more likely than female officers to engage in aggression to control a situation. "Specifically, male officers engaged in proportionately more aggression to subdue a citizen, to separate citizens, or to be acknowledged, recognized,

---

<sup>25</sup> Ibid., pp. 109-12.

<sup>26</sup> Ibid., pp. 126-28.

or heard."<sup>27</sup> Also, male officers were more likely than females to be aggressive because of some quality in the citizen, such as race or socioeconomic class.<sup>28</sup>

The final segment of the study reported on the effect social context had on behavioral differences. For example, situations that were potentially the most volatile seemed to elicit greater demonstrations of power and aggression on the part of male officers. Similarly, ambiguous situations, such as order-maintenance calls, elicited more aggressive actions from male officers than female officers. Males also were more likely to exhibit aggressive tendencies in situations in which they had the most discretion and where task requirements were incompatible with a male officer's definition of his role.<sup>29</sup>

Greenwald found that females were less aggressive, even though research findings indicated that females were at least as effective in the patrol function as were male officers, and perhaps more so.<sup>30</sup> However, male patrol officers felt women did not belong in the patrol function. Women were to be restricted to special assignments (juveniles, sex offenses, and questioning females) so that men could spend more time performing real police work.<sup>31</sup>

---

<sup>27</sup> Ibid., p. 143.

<sup>28</sup> Ibid.

<sup>29</sup> Ibid., p. 157.

<sup>30</sup> Ibid., p. 189.

<sup>31</sup> Ibid., p. 117.

Greenwald concluded by saying that the addition of women police officers in sufficient numbers may help to make policing a more human endeavor, although she stated that it would be naive to assume major changes would ensue.<sup>32</sup>

Important issues brought out by Greenwald indicated that: (1) Male patrol officers used physical aggression more frequently than did female officers; (2) Female officers displayed friendly behavior more frequently than did male officers; (3) Male officers were more likely to engage in aggression to control a situation or because of some quality in a citizen, although no evidence indicated that males were more likely to display aggression in defense of their personal autonomy, in situations of existing or potential danger, or to defend or protect others; (4) Although females were at least as effective as males, males defined the role of policewomen differently from their own; and (5) Males were more aggressive than females in situations that were potentially volatile or ambiguous, as well as those in which they had the most discretion and that were incompatible with their role definition.

---

<sup>32</sup> Ibid., pp. 194-95.

Data accumulated in the New York City Police Department experiment were further manipulated and analyzed by Harriet Connolly. The emphasis or design of Connolly's analysis of the data comprised three parts:

The first part [was] an examination of role ambiguity within an organization during a period of social change. . . . The second part [was] a study of the perceptions of those persons occupying newly-created (ambiguous) roles concerning specific conflict-producing situations. . . . Finally, some of the expected indicators of ambiguity and conflict (stress) in social groups and in individuals [were] examined.<sup>33</sup>

Connolly defined the term "role" as ". . . the set of perceptions held by members of a social unit for the overt behavior and style of performance expected of the occupant of a particular position."<sup>34</sup> "Role ambiguity" was defined operationally, as in this study, ". . . as lack of consensus among the members of a role set on the proper definition of a given role."<sup>35</sup>

Connolly indicated early in her study that not all members of the group or unit that defines roles have equal impact on an individual's social behavior. In fact, Connolly insisted that such phenomena as group structure, personal individual qualities, and the "role sender's" importance to the group affect the amount of

---

<sup>33</sup> Harriet A. Connolly, "Policewomen as Patrol Officers: A Study in Role Adaptation" (Ph.D. dissertation, City University of New York, 1975), pp. 20-21.

<sup>34</sup> Ibid., p. 5.

<sup>35</sup> Ibid., p. 8.

impact the role sender will have on "role behavior."

This idea or concept is not new to the study of roles.

In fact, such renowned authors as Katz and Kahn used "role sets" in their study of inter-sender conflict.

Role sets were composed ". . . structurally (immediate supervisors, direct subordinates other superiors, persons adjacent in the work structure were always included) and through interviews (the focal person might mention someone significant, but without any formal connection).<sup>36</sup>

Preiss and Ehrlich studied the role acquisition of State Police recruits by examining the expectations of significant others and relating these expectations to the socialization process.<sup>37</sup> Connolly noted that these significant others were not individually determined:

In one part of the study, self-administered questionnaires covering both formal role requirements and "expressive" or "effective" components of role behavior were distributed to members of the police department. Data were analyzed not by role set but by structural (formal) position within the organization (e.g., sergeant, captain).<sup>38</sup>

Although Connolly, Katz and Kahn, and Preiss and Enrlich agreed that role senders influence role perceptions of group members, they disagreed on the operational

---

<sup>36</sup> *Ibid.*, p. 15.

<sup>37</sup> Jack J. Preiss and Howard Ehrlich, An Examination of Role Theory (Lincoln, Nebraska: University of Nebraska Press, 1966), p. 2.

<sup>38</sup> Connolly, Policewomen as Patrol Officers: A Study in Role Adaptation, p. 16.

definition of the role sender group. For example, Katz and Kahn neglected to consider the focal person's expectations of himself and the expectation of others outside the work environment. Preiss and Ehrlich measured conflict about the role of policemen by comparing all policemen within the organization with all sergeants. "The logic of their concepts, however, dictates that they compare Policeman X's role definition with that of his sergeant, ignoring those supervisors with whom he has no contact."<sup>39</sup> Connolly maintained that those individuals who influence the maintenance and acquisition of roles should be included in the role set (family, friends, etc.). Connolly stated, "It is within interacting groups that conflicts arise and have meaning. Certainly, any clear test of the relationship between conflict or ambiguity and any hypothesized effect must be one which examines the relevant unit. . . ."<sup>40</sup>

In examining her data, Connolly found that there was substantial variation in role definitions for female officers among team commanders, male co-workers, and policewomen themselves. More specifically, male police officers were of the opinion that women in general were unfit for patrol duty. Female officers, on the other hand, felt they would be good at some jobs, average in

---

<sup>39</sup> *Ibid.*, p. 18.

<sup>40</sup> *Ibid.*

others, and were uncertain about still other work situations. In other words, male officers were of the opinion that women would be unable to perform any aspect of patrol work, but women officers predicted differential success, depending on the nature of the task.<sup>41</sup>

Although Connolly hypothesized that role ambiguity would decline over time, results of her study indicated differently. Role definitions of policewomen, patrolmen, and team commanders were essentially the same in the pre- and posttests. In addition, consensus within role sets was not significantly increased over a period of time.

In Connolly's examination of the relationships between focal persons' perceptions of inter-sender conflict, situational characteristics, and the qualities of other role set members, she arrived at the following conclusions. She found that the larger the number of people or positions the policewoman perceived as agreeing with her behavior when it conflicted with the role expectations of others, the less psychologically troublesome this conflict was for her. However, certain modifiers to this finding were discovered. For example if the individual in disagreement with the behavior of the policewoman was thought to be familiar with patrol work

---

<sup>41</sup>Ibid., pp. 51-71.

or control sanctions, role conflict presented a more serious problem than if this were not the case. It was further discovered that female officers who worked primarily with female partners exhibited significantly more male-type behavior than did patrolwomen who worked most frequently with male officers. Connolly noted that this type of behavior may well be explained by the fact that the male officers were more experienced in patrol work than the female officers; thus women may have deferred to men on the grounds of experience and not sex roles.

The final group of hypotheses was developed to examine the relationship between indicators of stress, inter-sender conflict, and assessments of role ambiguity. The findings indicated that there was no significant relationship between role ambiguity and indicator variables such as transfers; number of sick days, leaves, or excusals taken by policewomen; amount of change in policewomen's role definition, perception of the role definitions of patrolmen, or relationship between their own and perceived patrolmen's role definitions; reports of interpersonal conflict by supervisors or by police-women; supervisors' satisfaction with policewomen's performance; arrest and summons rate; or rate of response to calls for services by policewomen. Finally, no significant relationships were found between the summary measure of inter-sender conflict and any indicator

variables previously listed. However, Connolly later suggested that the inability to achieve a level of significance may have been attributed to the sample size ( $N = 13$  females) and not the actual circumstances--an interpretation that found support through further analysis of the data.

In summary, Connolly's study indicated that:

- (1) Role sets should include all those individuals who influence the maintenance and acquisition of roles;
- (2) Role definitions differed based on sex; (3) Role ambiguity did not decline during the study period;
- (4) In general, role conflict decreased as the number of individuals agreeing with the female officer's behavior increased; and (5) There was no significant statistical relationship between role ambiguity or inter-sender conflict and the indicator variables used in the study. Further analysis indicated that this phenomenon was most likely a result of a small sample size and not the actual circumstances.

Female Performance in the Academy  
and on the Road

The Sherman study was somewhat different from either the New York or Washington, D.C., studies. Whereas the New York and Washington, D.C., studies were concerned with urban policing and, in general, two-officer patrol, Sherman's St. Louis County study

focused on a suburban department with a one-officer motor patrol and, to some extent, upon the police academy.

The study was concerned with the first 16 women recruited for the St. Louis County Police Department and placed on one-officer patrol; these females were matched with 16 male officers training with them in the same academy class and therefore controlled for police experience. In addition, both experimental women and comparison men had comparable personal and demographic characteristics.<sup>42</sup>

Unfortunately, Sherman's results were presented solely in narrative form, and the lack of statistical data made it difficult to ascertain the accuracy of interpretations presented by the author. No information contained within the article described the method of analysis Sherman incorporated.

Although Sherman collected data on all probationary officers at the completion of their academy experience, it is unclear what performance measures he used; it is equally unclear how he collected and analyzed the data. Nevertheless, Sherman concluded that there were

---

<sup>42</sup> Lewis J. Sherman, "An Evaluation of Policewomen on Patrol in a Suburban Police Department," Journal of Police Science and Administration (December 1975): 434.

no significant differences in the performance of females as compared to males throughout the duration of the project.

Using a number of research instruments, Sherman drew the following conclusions regarding the performance of female officers on patrol. He found that female officers generally had similar calls and were equally effective in managing angry and distraught citizens.

Although female officers made fewer arrests, there were no critical incidents in which women were reported unable to perform the patrol function adequately. It was found, however, that the women's policing style differed from that of their male counterparts; the women performed their duties less aggressively than did the males.<sup>43</sup>

Citizens indicated their opinion that female officers were more sympathetic, empathic, compassionate, and handled service calls and domestic quarrels better than men. Citizens further noted their satisfaction with the services received from women in both service and nonservice calls, and disclosed that they felt no less safe when female rather than male officers responded.

With reference to the female officers' ability to handle violent situations, the author noted that the

---

<sup>43</sup>Ibid., pp. 435-38.

research subjects had encountered few violent or potentially violent situations. Evidence did tend to show, however, that women may have been more effective in avoiding violence by defusing potentially violent situations.

Finally, Sherman discovered some increasing--though not statistically significant--acceptance of female officers on patrol, six months after they had been hired. However, the overall evaluation of female officers was still negative. Sherman further suggested that the police system may be changing women, rather than women changing the police system; i.e., women officers stated they were forced to sacrifice some of their femininity to gain acceptance from their male colleagues.

Sherman concluded by noting:

In general, the results from the St. Louis County paralleled those of Washington and New York. Women were able to perform the duties of one-person motor patrol in a suburban police department equally as well as men. There are some variations on this theme, but the basic conclusion is clear: women can do the job.<sup>44</sup>

Review of the St. Louis study indicated that:

- (1) Research methodology and statistical analysis were not presented in the study; (2) Little emphasis was placed on female performance in the academy, or on male and female recruits' perceptions of the female officer's

---

<sup>44</sup> Ibid., p. 435.

role; (3) Females were treated the same as their male counterparts; (4) There were no critical incidents in which women were reported to have performed unsatisfactorily; (5) Females appeared to be more effective in avoiding violence by defusing potentially violent situations; (6) At the end of the study, male officers were beginning to have a more positive attitude toward female officers; and (7) The police system appears to be changing women rather than women changing the system.

The California Highway Patrol project attempted to compare the performance of 40 female and 40 male recruits who began training in September, 1974. The study was further designed to determine female performance in the field, to assess citizen and male police officer attitudes toward female officers, and to determine if additional costs would be incurred if female traffic officers were added to the California Highway Patrol.<sup>45</sup>

Assignment to field commands was made in essentially the same manner as with previous academy classes--to available vacancies, but two modifications were employed: (1) At least one woman and one man were assigned to each of the areas with vacancies; and

---

<sup>45</sup> California Highway Patrol, Women Traffic Officer Project: Final Report (Sacramento: Department of California Highway Patrol, 1976), p. 6.

(2) Cadets were paired so that men and women of approximately equal potential would be assigned to the same area.<sup>46</sup>

Although the researchers tried to control for extraneous variables, they presented study findings as means and percentage distributions only; therefore it is not known if statistically significant differences were found between male and female officers.

By the end of the academy training, males and females performed at about the same level, except for physical training, in which males excelled. Males and females performed equally well in emergency vehicle operations, but males performed slightly better on defensive-weapon firing. The number and seriousness of injuries sustained at the academy were different; women had a greater number of injuries and of a more serious nature. Female officers in the field had about the same number of automobile accidents as did males.<sup>47</sup>

Female officers received twice as many citizen complaints as did male officers, and their attrition rate in the field was twice that of male officers in general and three times as high as comparison males. However, no discussion was included in the analysis concerning the reasons officers left the department.

---

<sup>46</sup> Ibid., p. 41.

<sup>47</sup> Ibid., pp. 36-40.

Finally, resignations from the academy were approximately equal for both males and females.<sup>48</sup>

Both the general public and male officers felt women had a lower over-all ability than men to perform as traffic officers, although members of the public who had had contact with female officers had a much higher opinion of the ability of women. Furthermore, the over-all opinion of uniformed personnel toward female troopers was higher in January, 1971, after 22 female officers had been in the field for almost 12 months; but officers who had had personal professional contact with female officers held a less favorable opinion of them than did other California Highway Patrol personnel.<sup>49</sup>

Finally, the California project found that the cost of academy injuries for females was higher than it was for males, and that it was somewhat more expensive to train female officers. However, it was concluded that the addition of women to the candidate group would have little effect on the over-all cost of the recruitment and selection process.<sup>50</sup> The researchers concluded that women can perform acceptably as State Traffic Officers.

The California study may be summarized as follows: (1) The study lacked statistical and methodological

---

<sup>48</sup> Ibid., pp. 55-69.

<sup>49</sup> Ibid., pp. 45-54.

<sup>50</sup> Ibid., pp. 85-91.

sophistication, making it extremely difficult to generalize the findings; (2) Despite the aforementioned restriction, the authors concluded that females can perform in the academy at about the same level as males, with the exception of the physical training portion of the academy; (3) Females received more complaints than did male officers; (4) Both the public and male officers felt females had a lower level of ability than males, although male officers' opinions of female officers were higher, overall, after 12 months; (5) Officers who worked with females had a lower opinion of them than did other California Highway Patrol personnel; and (6) It is somewhat more expensive to train female than male officers.

#### Conclusion

This chapter exhausted neither the literature dealing with studies conducted in police academies, nor those studies reporting the performance of females in the police function. The literature review did, however, provide an over-all view of classical studies of the police academy and of those studies evaluating female performance in the field and in the academy. Finally, the subject of role adaptation of female police officers was discussed.

Each of these studies may be criticized for one or more of the following reasons:

1. Academy studies that measured the variables of cynicism, solidarity, and role disparity were limited to male samples.

2. Most studies concerning the performance of females in the law-enforcement function were limited largely to the patrol duty, thus excluding the academy process.

3. Those studies that attempted to demonstrate, to some degree, the performance of females in the academy were vague, extremely limited, and lacked methodological and/or statistical rigor.

4. All studies regarding the performance of females in road patrol and academy training, with the possible exception of the Washington, D.C., study, had extremely limited generalizability. This criticism is valid because of small sample size, methodological shortcomings, and lack of statistical sophistication.

5. Both political and cultural restraints shaped and affected study designs and study outcomes.

Although these limitations do exist, the preponderance of the findings in these studies, as well as those presented in the previous chapter, allow certain tentative conclusions to be drawn. First, the chance of role ambiguity occurring in the academy is likely, at least initially. However, depending upon the conditions at the academy, previous socialization of the recruits,

etc., these initial role perceptions may or may not be altered during the academy experience. Next, there should be no significant statistical differences between male and female performance in the academic and technical segments of the academy. Finally, differences in physical performance may or may not be found. The factor contributing to whether differences are found is how measures of physical fitness are obtained. More specifically, if the physical fitness program of an academy were designed to reach the maximal performance of the average male recruit, then one would expect that female recruits could not reach the necessary degree of fitness; thus they would score lower than their male counterparts. On the other hand, since the academy uses a progressive physical training program that does not reach the maximal limits of the average male recruit, it is possible for females to compete with male recruits on this measure. In the final analysis, the degree of motivation of the female cadets affects their performance, not only on the physical measures but on other measures as well.

It is appropriate at this point to begin reviewing the hypotheses utilized in the study of the Michigan State Police 90th Recruit school and the logic utilized in incorporating these hypotheses.

Hypotheses

The hypotheses for this study are divided into two distinct areas. The first group of hypotheses concentrates on the performance of females in the academy.

The second group deals with male and female recruits' definitions of the female trooper's role.

Hypothesis Group I: Examination of the relationship between male and female performance measures in the academy.

Hypothesis 1: There will be no difference between male and female scores on academic measures.

Hypothesis 2: There will be no difference between male and female scores on technical measures.

#### Physical Measures

Hypothesis 3a: There will be no difference between male and female scores on ability measures.

Hypothesis 3b: There will be no difference between male and female scores on aggressiveness measures.

The preceding hypotheses were chosen for the following reasons:

1. There was no reason to believe that the motivation of either males or females to succeed in the academy was not high. The lengthy selection process that all recruits went through, coupled with the fact that approximately one-half of the male and female recruits were willing to wait one and one-half years

for the 90th Michigan State Police Academy to begin, can be taken as an indication of recruits' motivation to succeed at the academy and become state troopers.

2. Previous research findings reported that there was little difference in the cognitive abilities of men and women. In addition, it was found that females generally scored higher than males on tests of dexterity. Therefore, there was no reason to believe that males would exceed females on either academic or technical measures used at the academy. Because females generally perform better than men on tasks involving dexterity, it might be suggested that women would perform better than men on the technical measures; however, the components that make up the technical measure (driving, water safety, firearms, first aid, and report writing) do not depend entirely on a dexterity measure. These activities require the ability to learn and/or a relatively low degree of physical fitness, attributes considered well within the range of both sexes. Thus differences based on sex were not expected to emerge on these two measures.

3. Both sexes were expected to perform equally on the physical measures used at the academy, because of the types of measures incorporated. There are only two quantitative measures, officially used and accurately recorded at the academy, that could be included as mea-

measures of physical ability. These measures are ability and aggressiveness in boxing and defensive tactics.

Neither maximal aerobic nor anaerobic capacity of male recruits is reached in these physical tasks, which would indicate that females might possibly compete. In addition, the ability measure of each of these functions is largely a cognitive process, and aggressiveness, although not operationally defined by the academy staff, is an indication of willingness to partake vigorously in these activities. Given a high degree of motivation in both male and female recruits to perform well, it was believed that females would compare equally with males.

Hypothesis Group II: Examination of male and female recruits' definitions of the female trooper's function.

Hypothesis 1: There will be no difference in male and female recruits' definitions of the female trooper's role at the beginning of the academy.

Hypothesis 2: There will be no difference in male and female recruits' definitions of the female trooper's role at the conclusion of the academy.

Hypothesis 3: Neither male nor female recruits' perceptions of the female trooper's role will be altered as a result of the academy experience.

Hypothesis 4: There will be no difference between male and female rankings on the peer evaluation forms.

The Michigan State Police have generally attracted males who ascribe to the male's protective role

in society. However, considering the average age of male recruits; their educational background; and the present societal trends toward equality, with particular reference to the late 1960's, it was difficult to determine the role definitions they might have. Even so, the researcher believed the male recruit's perception of the female trooper's role would be more restrictive than the female recruit's definition of the female trooper's role.

Similar circumstances, as previously described, made it difficult to determine female role perceptions. Their early socialization process undoubtedly affected their perceptions of the female trooper's role, but to what extent is unknown. However, females should, initially at least, be less restrictive regarding the role of female troopers; otherwise one would not expect them to enroll in the academy. Female recruits were informed by the Department of State Police before academy training that they would be required to perform every function of a state trooper; therefore it is logical to assume that they had a broad role definition for female troopers.

Results presented in this chapter conflicted somewhat and thus reflected the complexity of the study of human behavior. In various studies the academy experience affected individual perceptions and thinking; however, research on male perceptions of female police

officers over a period of time indicated that some perceptions changed for the better--more acceptance--and others became more negative--less acceptance. Considering that changes generally occurred in one direction or another, i.e., either more or less acceptance by males, it was felt that the 90th academy would affect male and female role perceptions, and that at the conclusion of academy training, role perceptions would differ from those recorded at the beginning of the academy.

One final issue should be discussed before closing. The reader should keep in mind that the null hypotheses format has been incorporated throughout the research project, and that the alpha level chosen was  $\alpha = .05$ . Therefore, retaining the null hypotheses on the basis of a significance level is statistically relatively easy. In fact, in this study a researcher would expect to find no significant difference between the male and female recruits, by mere chance, 95 out of 100 trials. However, through the use of a measure of association, experiences encountered by the author during the participant observation segment of the study, and logical analysis, the author attempted to bring the findings into perspective.

In Chapter III the methodology, both strengths and weaknesses, utilized in this project is presented. In addition, efforts are extended in this chapter to familiarize the reader with the research setting and sample.

## CHAPTER III

### METHODOLOGY

The study reported below was based on 12 weeks of data gathering in the 90th Michigan State Police Training Academy. This was the first academy held by the Department of State Police since the reverse discrimination suit was filed against the Department in late 1975.

The writer first became involved with the study of female police officers in August, 1976. The Criminal Justice Systems Center at Michigan State University had only recently been contracted by the Michigan State Police to develop and test for the Department an evaluation design that might later be incorporated by the agency to evaluate the performance of females hired under stipulations set forth in the consent decree. The evaluation was to be designed so that the performance of females could be evaluated from their first days as employees of the State Police, through their probationary period, and for one to two years after completing their probation as state troopers.

Not until early 1977 was the development and testing of the evaluation design completed and submitted

to the Department of State Police, which reviewed the design and accepted it. The Criminal Justice Systems Center was subsequently contracted by the Department of State Police to implement the evaluation design--beginning with the 90th academy, which began in late February, 1977.

Even though the project, evaluating the performance of female troopers in numerous aspects of the trooper function, is intended to continue for a number of years, this particular research represents only a small portion of the over-all project. The present study was limited to analyzing the performance of females in the 90th school, as well as male and female recruits' perceptions of the female trooper's role.

The importance of studying the 90th academy with reference to female performance and male and female perceptions of the female trooper's role was discussed earlier. But, because of the many implications of a study of this kind, it is essential that the design of the field project and the statistical techniques used be explored fully.

In an effort to explore the research issues in depth, a variety of research techniques was used throughout the duration of the study. These data-gathering devices included participant observation, questionnaires, and departmental records.

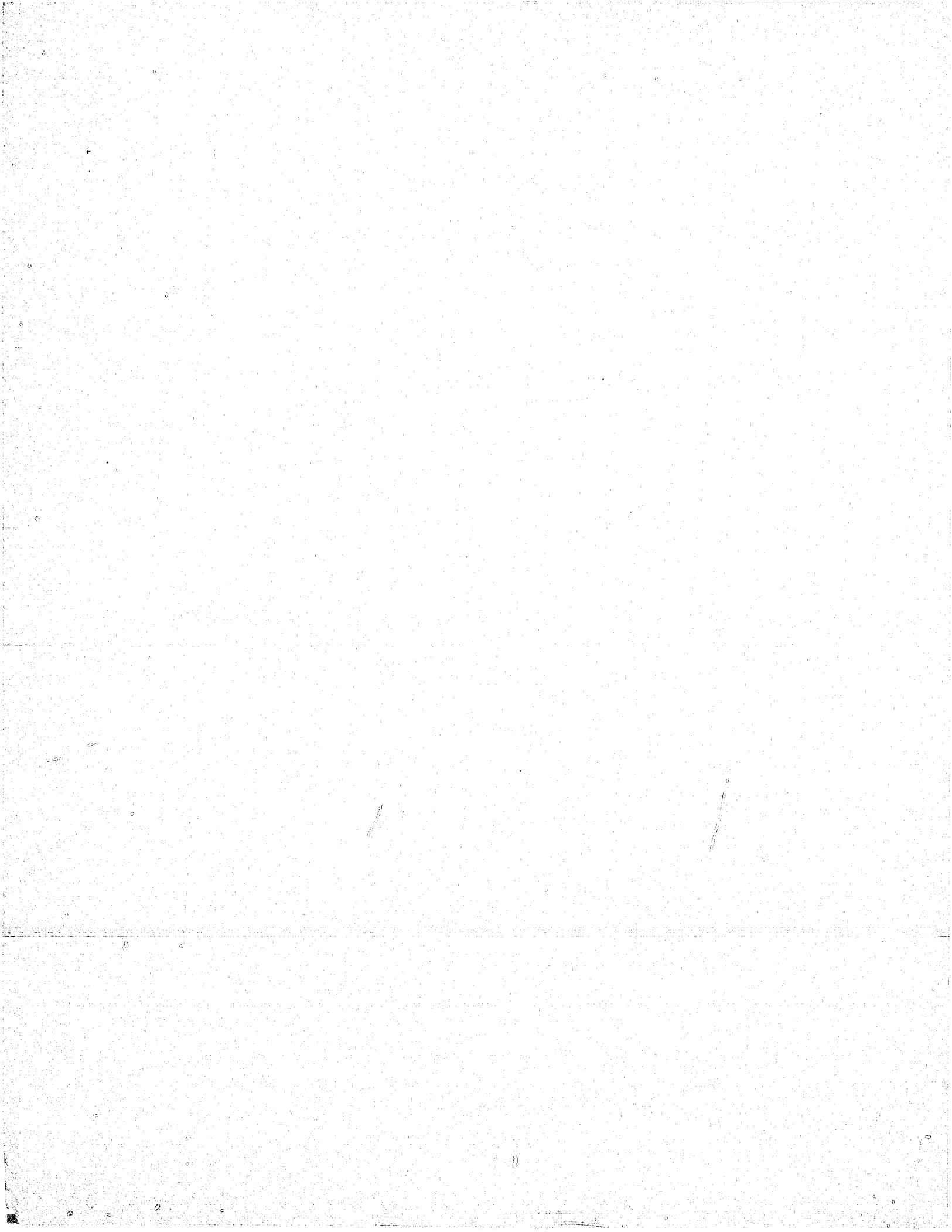
### Participant Observation

There are a variety of ways in which to study behavior in a social context, and each of these data-collection techniques is imperfect and limited in one way or another. Participant observation, a qualitative research method, is criticized because it is conducted in a natural setting, for reasons of sample selection, observer effect, observer bias, and reliability.<sup>1</sup> Yet proponents of this research technique emphasize that:

The methods by which we study people of necessity affects how we view them. When we reduce people to statistical aggregates, we lose sight of the subjective nature of human behavior. Qualitative methods allow us to know people personally and to see them as they are developing their own definitions of the world. We experience what they experience in their daily struggles with their

---

<sup>1</sup> The advantages, disadvantages, and technical problems inherent in the participant observation technique have been well documented in a number of publications. William F. Whyte, Street Corner Society (Chicago: University of Chicago Press, 1943), pp. v-x; Frank R. Kluckhohn, "The Participant Observer Technique in Small Communities," American Journal of Sociology (November 1940): 331-43; William F. Whyte, "Observational Field-Work Methods," in Research Methods in Social Relations, ed Marie Jahoda, Morton Deutsch, and Stuart W. Cook (New York: Dryden Press, 1951), Part 2, pp. 493-513; Morris Zelditch, "Some Methodological Problems of Field Studies," in Issues in Participant Observation: A Text and Reader, ed. George J. McCall and J. L. Simmons (Reading, Mass.: Addison-Wesley Publishing Company, 1969), pp. 5-19; John P. Dean, Robert L. Eichhorn, and Lois R. Dean, "Limitations and Advantages of Unstructured Methods," in An Introduction to Social Research, ed. John T. Doby (New York: Appleton-Century-Crofts, 1967), pp. 274-79.



**CONTINUED**

**1 OF 3**

society. . . . Qualitative methods enable us to explore concepts whose essence is lost in other research approaches.<sup>2</sup>

The reasoning behind the use of participant observation within the context of this study was similar to its employment by sociologists, who ". . . usually use this method when they are especially interested in understanding a particular organization or substantive problem. . . ."<sup>3</sup> The use of participant observation thus provided the researcher with a subjective understanding of the academy process, male and female recruits' role perceptions, and academy staff's role perceptions. Participant observation also gave the researcher an opportunity to observe the performance of recruits throughout their training, thus enabling him to become fully familiar with the research setting.

A participant observer might assume a number of roles in the research setting. These roles vary from complete observer to complete participant.<sup>4</sup> The

---

<sup>2</sup> Robert Bogdan and Steven J. Taylor, Introduction to Qualitative Research Methods: A Phenomenological Approach to the Social Sciences (New York: John Wiley and Sons, 1975), pp. 4-5.

<sup>3</sup> Howard S. Becker, "Problems of Inference and Proof in Participant Observation," in Stages of Social Research: Contemporary Perspectives, ed. Dennis P. Forcese and Stephen Richer (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1970), p. 205.

<sup>4</sup> Norman K. Denzin, Sociological Methods: A Sourcebook (Chicago: Aldine Publishing Company, 1970), p. 366; Raymond L. Gordon, Interviewing Strategy, Techniques, and

researcher employed, to a great extent, the complete observer role. He did not personally partake in the experiences encountered by the recruits themselves, but he did use the unstructured interview technique and questionnaires in an effort to understand better the role and perceptions of the recruits and to observe recruit behavior.

The participant observation role was selected for a variety of reasons: (1) Any attempt to introduce another level of observation in the 90th recruit school would have met with intense resistance and possibly hindered the study; (2) Recruits at the 90th recruit school were extremely anxious and concerned about their status at the academy, and it was felt that added concern about a researcher constantly in their midst would affect their performance, thus hindering the natural process of role acquisition by police recruits; and (3) Considering the purpose of the study, time constraints on the researcher, and the fact that quantitative data were to be collected, it was thought that the complete observer role would give the researcher the necessary

---

Tactics, rev. ed. (Homewood, Illinois: The Dorsey Press, 1975), pp. 36-38; Thomas J. Bouchard, "Field Research Methods: Interviewing, Questionnaires, Participant Observation, Systematic Observation, Unobtrusive Measures," in Handbook of Industrial and Organizational Psychology, ed. Marvin D. Dunnette (Chicago: Rand McNally College Publishing Company, 1976), pp. 385-88.

subjective and intuitive knowledge needed to understand the academy environment.

#### Questionnaires

At the outset of the project, questionnaires designed to determine recruit role perceptions were developed.<sup>5</sup> These questionnaires provided quantitative data that could best be interpreted through the complementary technique of participant observation.<sup>6</sup>

Three questionnaires were used in the study. Two survey forms were pre-test and post-test questionnaires--Pre-Academy Survey and Post-Academy Survey--which measured male/female perceptions of the female trooper's role. The third form--the Academy Recruit Survey--was a post-academy questionnaire only. A number of questions on the Academy Recruit Survey were originally incorporated to further investigate perceptions of male and female recruits toward the female

---

<sup>5</sup> The following questionnaires were adopted in part or fully from questionnaires developed by the California Highway Patrol for their study of female officers: (1) Pre-Academy Survey, (2) Post-Academy Survey, and (3) Academy Recruit Survey.

<sup>6</sup> Arthur J. Vidich and Gilbert Shapiro, "A Comparison of Participant Observation and Survey Data," American Sociological Review (February 1955): 33, stated, "This point indicates that the techniques of participant observation and the sample survey are not competitive, but, in the well conducted community study, will be complementary." Hubert M. Blalock, Jr., Social Statistics, 2nd ed. (New York: McGraw-Hill Book Company, 1972), p. 4.

trooper's role. This questionnaire was subsequently found to be an inadequate measure of role perceptions, because of a lack of variance on the questions, and the measure was therefore excluded from analysis. Further discussion on the Academy Recuit Survey is provided in the following chapter.

Although the instruments had been tested before their use in the 90th recruit school, immediate difficulties with the Pre-Academy Survey were encountered. Upon completion of the survey, numerous recruits voiced their concern about providing demographic data requested on the survey form. This objection by the recruits, coupled with the fact that a large number of questionnaires were returned without demographic data, made it necessary to restructure the demographic-data segment of the questionnaire. Therefore, the first set of questionnaires completed in the first week of academy training was destroyed; the second set of questionnaires, differing only in the type of demographic data requested, was distributed the second week of academy training and used for analysis in this study. The demographic sections of the remaining two questionnaires were restructured before they were distributed to the recruits.

There were a number of reasons why recruits were unwilling to provide the demographic information requested on the original questionnaire. Although

recruits were assured anonymity before, during, and after distribution of the questionnaire, their major concern was that the Department of State Police would discover their identity and use their responses against them in some way at a later date, and that the research team would use their responses in some unethical manner--unethical in the respect that answers might be utilized to harm the recruits in some manner.

It should be understood that recruits of the 90th recruit school felt a great deal of pressure on them in the early weeks of the academy. Part of the underlying reason for this pressure was that a number of the recruits had been required to wait over one and one-half years to enter this school. As discussed earlier, the delay had resulted from the reverse discrimination suit filed against the Department of State Police, which discontinued academy training until the issue had been resolved. Furthermore, most recruits were aware of and concerned that the academy could be closed by the courts if there were violations of the consent decree; thus the recruits were extremely cautious in everything they said and did during the early weeks of the academy.

Although these intervening circumstances may be viewed as making this academy unique and thus unlike a "normal" state police academy, it must be kept in mind that any one of the subsequent three academies might

also have been required to close at any time if a violation of the consent decree were found. Recruits of subsequent academies were also, therefore, faced with the possibility of being forced to leave the academy, with no assurance when it might resume. Even though recruits of the 91st academy did not appear to be as anxious as those of the 90th academy in the early days of training, there was little indication that any substantial differences between the 90th and ensuing academies under study would occur because of these circumstances.

The situation described above is, in fact, not uncommon today among police training academies. Because of the increasing emphasis of society on equality of the sexes, every academy that does not comply with present court rulings concerning equal employment and opportunity could, in fact, be closed and subsequently forced to comply with these laws. Therefore every police academy, to one degree or another--including additional recruit schools held by the Michigan State Police--is actually under the watchful eye of the courts.

Although a strong argument can be made for the similar nature of the 90th Michigan State Police Academy and future Michigan State Police academy settings, various differences do exist between previous academy settings and the 90th recruit school. These differences

appear to be related, at least from my experiences with the academy, more with academy emphasis than with class content. For example, previous academies relied heavily on staff members intuitive interpretations as to a recruit's potential as a state trooper. In fact, although recruits failed the academy frequently for academic reasons, the informal structure of the academy played a far more important role, than did academics, in the recruit's decision to remain or leave the academy. More specifically, recruits felt not to have the necessary attributes to be a state trooper by academy staff members were subjected to various techniques, both physical and psychological, to influence their resignation from the academy.<sup>7</sup> Although efforts were extended by myself to define those attributes necessary to become a state trooper, little success was made in this direction. These techniques have since been eliminated from the academy structure, at least as far as the researcher could determine. This was accomplished through reorganizing the administrative structure at the academy by the state police and the redirectionalization of the academy process by the new administrative head.

---

<sup>7</sup> Fred Carmichael, "State Police Recruit School Investigation," paper prepared for the Michigan State Department of Civil Service, June 23, 1975.

This set of circumstances, however, proves interesting in several important respects: (1) the 90th recruit school may be unique, at least with reference to those academies throughout the country that rely heavily on various physical and/or psychological techniques to encourage resignations; (2) the point must be made that the academy process had to be altered through legal intervention before women could gain admittance and graduate in large numbers; and (3) these circumstances, coupled with extreme political pressures from various quarters, may well have had a predetermining effect on the performance and success of women in the 90th Michigan State Police Training Academy.

In the final days of the 90th recruit school, the last two questionnaires were distributed to the 64 recruits. This time the recruits voiced no concerns or misgivings; however, two recruits who filled out the questionnaires were still unwilling to supply any type of demographic data.<sup>8</sup>

---

<sup>8</sup> An interesting discussion of the problems involved in gaining and maintaining access in police departments for the purpose of research is found in Peter Manning, "The Researcher: An Alien in the Police World," in The Ambivalent Force: Perspectives on the Police, 2nd ed., ed. Arthur N. Niederhoffer and Abraham S.

Departmental Records

Throughout the entire academy process, recruits were evaluated and graded on their performance in all areas in which they were trained (see Appendix A). The training process was divided into three major areas: (1) academic, (2) physical, and (3) technical. These records were made completely available to the researcher; a comparison of the scores made by male and female recruits is provided in the following section.

The final departmental record used in this study was the peer evaluation form, which provided recruit ratings of fellow recruits. This particular form was incorporated as a measure of an overall male and female recruit role definition for female troopers.

Recruit Profile

A total of 64 recruits of black (18.8%), white (70.3%), and other (10.9%) ethnic origin completed the 12-week 90th Michigan State Police Training Academy. Of these 64 individuals, 14 (21.9%) were females, with

---

Blumberg (Hinsdale, Illinois: The Dryden Press, 1976), pp. 103-21. See also James C. Fox and Richard J. Lundman, "Problems and Strategies in Gaining Research Access in Police Organizations," Criminology (May 1974): 52-69.

an average age of 26 years; the remaining 50 (78.1%) males also had a mean age of 26. The academy class was divided almost equally among married (50.0%)--5 females and 27 males--and single recruits (45.3%), with only 3 females (4.7%) divorced. Of the married recruits, 19 males (38%) had children; 6 females (42.9%), both married and divorced, were parents; 4 females and 11 males had more than 1 child.

Educational background of the recruits indicated that only 9.4%--5 males and 1 female--had only a high school diploma. The remaining recruits (82.8%)--12 females and 41 males--had attended college or held a college degree, or had done some graduate work (7.8%)--1 female and 4 males. It is interesting that of those recruits who had attended college, 65.5%, or a total of 8 females and 28 males, had majored in Criminal Justice. The remaining recruits with college backgrounds declared majors in other areas of Social Science (9.1%)--no females and 5 males; or majors in other disciplines (25.5%)--4 females and 10 males.

Although the vast majority (95.3%) of recruits had never been prosecuted for a misdemeanor, the Department was not rigid about excluding candidates who had minor police records; one male and one female had been convicted of a single misdemeanor each, and one male had been prosecuted and convicted twice on misdemeanor

charges. Applicants for the Michigan State Police are automatically rejected from the selection process if they have been convicted of a felony.

Traffic violations were common among both male and female recruits. Of the male recruits, 30 reported having received a total of 80 traffic violations before the 90th academy. Six of the 14 female recruits reported having received a total of 12 traffic violations among them. This means that the average number of tickets received per male recruit was 1.63, and the average number of traffic violations per female recruit was 1.17. Therefore, little over-all difference between the sexes' driving records existed at the beginning of the academy.

Further analysis of recruit background characteristics indicated that a rather large number of recruits had been selected for the Michigan Police Academy that was halted by the Michigan District Court in 1975 because of the previously mentioned reverse-discrimination suit. More specifically, 21 males and 7 females reported having waited over one and one-half years, after the initial selection process, to attend the 90th academy.

A large number of male recruits (24) reported having had previous police experience, and 4 female recruits reported having been law enforcement officers before their appointment to the 90th academy. The span of time those male recruits had spent in law enforcement

was from 3 to 81 months, 26.4 months the average time spent in law enforcement by experienced male recruits. Time spent in law enforcement by females ranged from 11 to 48 months; the average time of police work for experienced females was 24.3 months.

Previous work experience for male recruits included professional (1), white-collar (10), and blue-collar (39) positions; however, it should be kept in mind that 24 of the 39 male recruits reported as blue-collar workers had been police officers before their appointment to the 90th academy. Females had had no previous professional employment, but had been employed in both white-collar (4) and blue-collar (10) jobs. Four of the 10 females reporting blue-collar jobs before the 90th academy had been police officers.

Male recruits reported, for the most part, that their fathers' occupations were either professional (12) or blue-collar (22), with the remaining males indicating their fathers were either white-collar employees, farmers, retired, or deceased. Female responses were similar, with professional (4) and blue-collar (6) being the most frequently reported occupations of their fathers. The remaining females indicated that their fathers were either white-collar workers, retired, or deceased.

When asked to list responses to the question, "Why did you choose to become a police officer?" 45

male and 12 female recruits responded. One of the most interesting findings was that male and female recruits responded similarly to the question. Both male and female recruits most frequently cited the "type of work performed by police officers" as the major reason for joining their ranks. Closely following this response, they indicated the desire to help people. Next in importance was the prestige associated with being a police officer, followed by fulfillment of a life-long ambition. Males infrequently cited: to improve the world in which we live (3), family influence (2), to protect society (1), and job security (1) as reasons for wanting to become a police officer.

Not included on the questionnaires but subsequently discovered by the writer was the fact that a number of recruits, largely male, had left better-paying jobs to become state troopers, and that recruits over 31 years of age--three males and one female--had been required to sign a waiver slightly decreasing their retirement benefits. The upper age limit for acceptance into the State Police is 31; but because of the reverse-discrimination suit that delayed the 90th academy for one and one-half years, four individuals went above the 31-year age limit. These individuals were admitted into the recruit school but were required to sign the retirement waiver before admission.

These circumstances are of interest because various researchers have found a preoccupation on the part of police recruits with job security.<sup>9</sup> Apparently, intrinsic considerations weighed more heavily in the recruits' decision to join the Michigan State Police, although extrinsic factors also influenced their decision to join the ranks. Both male and female recruits reported that the Department's high degree of prestige, good working conditions, excellent training, and professional stature were their major reasons for joining the Michigan State Police. Only three recruits mentioned job security or monetary rewards as motivating forces in their decision to become state troopers.

#### Sample

Two criteria affected sample selection. First, the Michigan Department of State Police was required by consent decree to graduate 50 females from its academy

<sup>9</sup> For a discussion on the importance of the motivating force of security on an individual's decision to join the ranks of the police, see Arthur Niederhoffer, Behind the Shield: The Police in Urban Society (Garden City, New York: Doubleday and Company, Inc., 1967), p. 38; John H. McNamara, "Uncertainties in Police Work: The Relevance of Police Recruits' Backgrounds and Training," in The Police: Six Sociological Essays, ed. David J. Bordua (New York: John Wiley and Sons, Inc., 1967), p. 174; Richard N. Harris, The Police Academy: An Inside View (New York: John Wiley and Sons, Inc., 1973), p. 16; Marianne Hopper, "Becoming a Policeman: Socialization of Cadets in a Police Academy," Urban Life (July 1977): 154-55.

and place them in the patrol function of the Department.

Second, this minimum number of females must be graduated within four academies, unless evidence should indicate that females can not perform satisfactorily in the trooper function of the State Police.

Selection of male and female recruits could not in any way be controlled by the investigators. Both male and female applicants were required to meet pre-established criteria for admittance into the Michigan State Police Training Academy. The criteria or admittance procedure comprised five steps, each of which had to be successfully completed or the applicant would be dropped from the testing procedure. The five steps included: (1) a Civil Service written examination, (2) background investigation and a Civil Service screening board, (3) an oral appraisal examination, (4) a medical examination, and (5) physical performance testing.

Before applicants take the physical examination and the physical performance testing, the combined scores of their written and oral examinations are placed on an eligibility register, according to their standing. Recruits are then selected from this register as State Police vacancies occur and recruit schools are scheduled. After recruits are selected from the eligibility list, they are required to pass the final two phases of the

selection process before they are allowed to begin training.

Scheduling of recruit schools and the number of recruits admitted into each school depend on financial constraints and personnel needs; therefore, the number of males and females selected is unknown until shortly before the beginning of each recruit school.

The original number of recruits beginning the 12-week 90th recruit school was 85. The school included 21 females, both black and white, and 64 males of black, white, Hispanic, and Indian origin. The total number of resignations was 21, with 7 females and 14 males resigning from the 90th recruit school. This left a total of 64 recruits, 14 females and 50 males.

This study concentrated only on those individuals who successfully completed the academy experience; therefore, individuals who completed the Pre-Academy Survey and later left the academy were excluded from the analysis. More specifically, the 14 females and 50 males who were graduated from the academy were the only recruits considered throughout all phases of the research project.

Two major reasons influenced the decision to exclude from the study those who resigned from the academy. First, the scope of the project included only those male and female recruits who completed the

training process and ultimately became sworn officers of the Michigan State Police. Although interesting and perceptive findings on various issues could have been extrapolated from data received from resignees, the ultimate purpose of the project was to study the performance of those recruits who became State Police officers, and to determine the role perceptions of these same recruits. At this time it is imperative to determine how recruits who became State Police officers perform in and are affected by the academy process.

Second, although a questionnaire was sent to those recruits who chose to resign from the Michigan State Police 90th recruit school ( $N = 21$ ), only nine individuals provided responses to the questionnaire after two mailings, one of which was a female. To use results from so few respondents would prove of little overall value.

#### Training Staff

The commanding officer of the Michigan State Police Academy holds the rank of captain, and his assistant is a first lieutenant. The academy is divided into two major sections, the recruit-training division and the in-service training division, each of which is the responsibility of a department lieutenant. Since only the recruit-training division was of concern to this

project, only that division of the academy will be reviewed.

The 90th recruit training staff comprised 17 State Police instructors, including the lieutenant responsible for this division and one female trooper. These instructors were both permanent and temporary Academy staff members. A small number of the staff are permanently assigned to the training division; however, a number of state troopers are brought in from various State Police posts throughout Michigan to provide the additional manpower needed to have a training staff large enough to cope satisfactorily with the demands of a recruit school. These temporary staff members are selected from a pool of trooper volunteers who had requested the opportunity to instruct at the academy. Even though a number of troopers are requested by various permanent academy staff personnel to apply for temporary staff positions, they are in no way assured a place at the academy. Troopers who are asked to apply must compete on an equal basis with all troopers requesting assignment to the academy. The basic criteria for selecting a temporary staff member revolve around: (1) a minimum of four years' experience on patrol, although exceptions to this criterion are made if the trooper has other necessary qualities or proficiency; (2) a good

service record; and (3) an expertise needed at the academy.

Additional instructors for the academy are brought into the academy from various sections of the State Police organization. These guest lecturers instruct certain classes in which they are knowledgeable, such as legal courses or traffic law. In some instances police personnel from other departments are requested to instruct academy recruits if they can provide input that otherwise would be unavailable.

The training staff is subject to change between each academy held by the State Police. Naturally, the permanent staff generally remains relatively stable, but the temporary staff members must reapply if they wish to continue instructing at the academy. Reappointment depends largely upon a trooper's performance while at the academy, but if there is an overriding need for the trooper's presence at his or her post, he/she may be required to return to their regular assignment.

#### Training Facility

The Michigan State Police Training Academy is located on the outskirts of Lansing, Michigan. The facility was constructed only recently, and is considered one of the finest police-training academies in the country. Offices of the academy training staff and the

Michigan Law Enforcement Officers Training Council are in the academy. In addition, the academy is equipped with numerous classrooms, a sophisticated firing range, swimming pool, gymnasium, library, cafeteria, and dormitory-style living accommodations for recruits and temporary staff.

These facilities are used constantly, not only by the Michigan State Police but also by other governmental agencies. On almost a continuous basis, other state and local agencies use the academy to hold training sessions and meetings for their personnel. Although other agencies make use of the facility between and during recruit schools, extensive efforts are made to ensure that these activities in no way conflict with or interrupt the recruit training program.

#### Atmosphere

The class climate, like that of all Michigan State Police Academies, was permeated by strict discipline, procedures, and protocol. Recruits were housed at the academy on a 24-hour basis, except on weekends. Each day began at 5:45 A.M. with physical training, then breakfast, morning inspection, and classes starting promptly at 8:00 A.M. Classes generally lasted until 5:00 P.M.; however, other activities were occasionally scheduled after this time. After dinner, recruits

studied, cleaned weapons, socialized with fellow recruits, and, when necessary, ran off the demerits they had accumulated during the day.

Throughout the day recruits were required to march in single file from one location to another; not speak unless spoken to by a training staff member; answer "yes, sir/ma'am" or "no, sir/ma'am" when addressed; and stand when speaking or being spoken to.

Frequently throughout the day, recruits were given breaks during their classes. During these breaks the recruits were allowed to leave the classroom and to organize in groups, either in the hallways or in the classroom proper, and to socialize. It was a not-infrequent practice for recruits to group around the instructor during this period in order to have points of contention clarified or to delve more deeply into particular areas of concern. It should also be noted that not all instructors insisted on strict adherence to the rules and regulations, and even the strictest training officers were quick to realize the need to relax the austere atmosphere of the academy from time to time.

In an effort to enable the recruits to become acquainted with one another, room assignments were altered weekly, and a mandatory nightly half-hour get-together was required. Recruits could polish shoes, clean their weapons, study, or simply indulge in idle

conversation while at the group session. Occasionally, during these sessions members would bring up issues of concern, or encourage others to do better the next day in some particular aspect of the academy.

Demerits were an every-day occurrence at the academy, and every recruit, at one time or another, could expect to receive one. Staff members gave recruits demerits for infractions of established rules or for some type of behavior that the staff member felt was improper. Each demerit was recorded by a staff member, and recruits with demerits were required to run approximately one-quarter mile at the end of the day for each demerit received.

#### Research Team/Academy Staff Relations

In addition to the project director, the research team consisted of one male doctoral student with some police experience, the writer, and one female undergraduate who had had two years of experience as a patrol officer in a medium-sized city in Iowa. This combination proved very beneficial throughout the project. Both the graduate and undergraduate researchers were immediately stereotyped by troopers as having pre-conceived notions about the outcome of the study. The male researcher was thought to be anti-female, and the female member of the team was considered somewhat of a

feminist. Although this stereotype tended to fade somewhat after relationships between academy personnel and researchers developed, the stereotype was used to the advantage of the researchers. Upon being accused or questioned about the feelings or position of the research-team members concerning the project outcome, the researchers explained that they had been selected and matched in an effort to minimize any biases they might have had, knowingly or unknowingly. This explanation satisfied most staff members, and it followed that the troopers were more confident in the fairness of the research endeavor.

Because of the method of selecting temporary staff members, as well as the research team's pre-occupation with developing and testing the evaluation project, it was impossible to become acquainted with all academy staff members before the 90th recruit school started. The academy staff members did become familiar with the project and the research team members shortly after arriving at the academy. They had been instructed by their superiors to co-operate fully with the research team; however, although the staff did provide information to the research team upon request, it was obvious in the first days of the academy that they were leery of the project, its intent, and the researchers' purpose at the academy. The research team subsequently requested

that a meeting be held to fully explain the project to the staff and give them an opportunity to ask questions of the research team. At the close of this meeting, a marked decrease in apprehension was noticeable; shortly thereafter, the research team was accepted more fully at the academy.

#### Research Team/Recruit Relations

Before the 90th training academy, an agreement had been reached between the State Police and the research team. The agreement consisted of two parts: (1) The research staff would make arrangements, one day in advance, to visit the academy while the school was in session; and (2) The research team would not interview recruits until the eighth week of the academy. These arrangements were made for two reasons: (1) Academy personnel were uncertain about what effect the research team's presence would have on the academy process; and (2) Recruits would need time to adjust to the academy process, and outside interference might hinder their performance, and subsequently negatively affect the academy socialization process. In fact, the major concern expressed by the state police dealt with the negative consequences that the research team might have on the socialization process at the academy. Frequently, it was expressed to me throughout my involvement with

the project that, although they, the state police, were uncertain as to what aspect or aspects of the academy process was responsible for developing the quality of trooper that was desired, the academy did produce the type of police officer wanted. It is for these reasons:

(1) a lack of knowledge as to what aspects of the academy socialization process developed a quality trooper; and (2) their, the state police, confidence in the quality of trooper that had traditionally graduated from the academy, that largely influenced the reluctance of various state police personnel to accept "outsiders" into the academy process, and subsequently limited the involvement of the research team in the academy.

These restrictions affected study design in various ways, but one important influence must be recounted at this time. Originally, researcher involvement was to include interviews with recruits throughout the academy process. However, as a result of the 8-week limitation, this aspect of the design was limited. Therefore, although we were aware of the socialization process of recruits at an inter-personal level, we were unable to study these experiences at length. However, there is no reason to believe that different results would have been obtained if this segment of research had been conducted. There certainly would have been additional dimensions to

the study that could have been considered and analyzed if this segment of research had been conducted.

Although the restriction on visiting was lifted unofficially shortly after the academy began, recruits were not formally interviewed until the final weeks of the academy. It was of interest to the researchers that even though they had almost no interpersonal contact with the recruits before the eighth week of the academy, a relationship of trust toward the research team had developed among a number of recruits. Apparently, the presence of the research team on an almost daily basis, the researcher/academy staff relationship, and the demeanor of the research team members all aided in the development of this trust and proved helpful in the closing weeks. Recruits, with few exceptions, were willing to frankly answer questions posed to them by the researchers and to relate their feelings and attitudes toward issues discussed.

Four major criteria emerged as having aided in the research team's positive relationship with the academy staff and recruits: (1) openness and honesty with the staff and recruits; (2) the graduate's and undergraduate's previous police experience--there was a feeling among the staff and the recruits that the research team would have a more accurate understanding of

the police function than "nonpolice" types; (3) having been hired by the Department and thus having passed the scrutiny of department heads; and (4) a general feeling among staff and recruits that the project was needed and worthwhile.

#### Compensating for Methodological Weakness

Research designs are limited in their precision as a result of two general conditions: (1) the research setting's adaptability to researcher control and manipulation; and (2) the researcher's ability to conceptualize, perform, and analyze the research. Certainly the latter limitation exists to one degree or another irrespective of the research setting. The first limitation, however, is largely associated with the type of research setting selected. For example, it is generally true that field research, which is utilized to study naturally occurring events in their natural settings, creates an extremely complex, involved, and difficult atmosphere for the researcher to control and manipulate for methodological precision. On the other hand, research conducted in the laboratory context generally lends itself to more precise research designs. This, however, does not necessarily indicate that field research is devoid of experimental characteristics, for as Campbell and Stanley stated:

There are many natural social settings in which the research person can introduce something like experimental design into his scheduling of data collection procedures (e.g., the when and to whom of measurement), even though he lacks the full control over the scheduling of experimental stimuli . . . which makes a true experiment possible.<sup>10</sup>

There are a number of ways in which methodological weakness might be overcome. The most important, perhaps, is the use of multiple research methods. For as Greenwald stated:

This helps to validate findings from other methods (Denzin, 1970; Weick, 1968), cancel out the weaknesses or errors of individual measurements (Webb et al., 1966; Weick, 1968), and contributes to acquiring data on a variety of aspects of an individual's reality (Denzin, 1972; Gump and Kounin, 1960; Gurman and Bass, 1961; MacLeod, 1947; Sjoberg and Nett, 1968; Stebbins, 1967, 1972).<sup>11</sup>

---

<sup>10</sup> Donald T. Campbell and Julian C. Stanley, Experimental and Quasi-Experimental Designs for Research (Chicago: Rand McNally College Publishing Company, 1963), p. 34.

<sup>11</sup> Judith E. Greenwald, "Aggression as a Component of Police-Citizen Transactions: Differences Between Male and Female Police Officers" (Ph.D. dissertation, City University of New York, 1976), p. 68. For references cited by Greenwald see E. Webb, D. Campbell, R. Schwartz, and L. Sechrist, Unobtrusive Measures: Nonreactive Research in the Social Sciences (Chicago: Rand McNally and Company, 1966); K. Weick, "Systematic Observational Methods," in The Handbook of Social Psychology, vol. II, ed. G. Lindzey and E. Aronson (Reading, Mass.: Addison-Wesley Publishing Company, 1968); N. Denzin, "The Research Act," in Symbolic Interaction: A Reader in Social Psychology, ed. J. Manis and B. Meltzer (Boston: Allyn and Bacon, Inc., 1972); P. Gump and J. Kounin, "Issues Raised by Ecological and 'Classical' Research Efforts," Merrill-Palmer Quarterly 6 (1960): 145-52; E. Gurman and B. Bass, "Objective Compared With Subjective Measures of the Same

This research inquiry was accompanied by many of the methodological problems that exist in the study of behavior in a natural setting. However, because of the use of multiple research methods (participant observation, questionnaires, and departmental records), these shortcomings were not considered to be as serious as the distortions that would have occurred if a study of this type were removed from the natural setting and placed in a sterile laboratory context. In effect, this study, like so many other studies conducted on female police officers, is what Campbell and Stanely referred to as a "patched-up" design. This type of design is one in which multiple measures are used, and some are incorporated for the explicit purpose of compensating for the inadequacies of the research design.

Overall, this research project represented a multi-faceted causal-comparative method,<sup>12</sup> designed to

---

Behavior in Groups," Journal of Abnormal and Social Psychology 63 (1961): 368-74; R. MacLeod, "The Phenomenological Approach to Social Psychology," Psychological Review 54 (1947): 193-210; G. Sjoberg and R. Nett, A Methodology for Social Research (New York: Harper and Row, Publishers, 1968); R. Stebbins, "A Theory of the Definition of the Situation," The Canadian Review of Sociology and Anthropology 4 (1967): 148-64; idem, "Studying the Definition of the Situation: Theory and Field Research Strategies," in Symbolic Interaction: A Reader in Social Psychology, ed. J. Manis and B. Meltzer (Boston: Allyn and Bacon, Inc., 1972).

<sup>12</sup>This term was used by Walter R. Borg and Meredith D. Gall, Educational Research, An Introduction, 2nd ed. (New York: David McKay Company, Inc., 1971),

compare female to male performance and male/female perceptions of the female trooper's role in the 90th Michigan State Police recruit school. Moreover, this research project was an attempt to integrate a number of research strategies in order to preserve the richness of the data without sacrificing some degree of control and precision.

#### Data Analysis

As a result of the violation, within the context of this study, of normality and homogeneity of variance, both of which are assumptions that are important when using parametric statistics,<sup>13</sup> various nonparametric statistical techniques were incorporated in analyzing the findings. In fact:

Nonparametric tests make fewer assumptions about the population parameters than do parametric tests such as the t-test, F-test, or one-way analysis of variance. Also, nonparametric tests are applicable to ordinal data and/or nominal data, whereas

---

pp. 297-305. The reason a researcher uses the causal-comparative method ". . . is that many of the relationships that we wish to study in education and the other behavioral sciences do not permit experimental manipulation" (p. 297).

<sup>13</sup> Certain assumptions may be violated by parametric tests with little overall effect on results. The term robustness of a test is used to refer to the sensitivity of a test to distortions of various kinds. However, the researcher should weigh the advantages and particularly the disadvantages involved in violating certain assumptions of parametric tests, especially if reasonably satisfactory nonparametric alternatives seem advisable. See Blalock, Social Statistics, pp. 270-71.

the standard parametric tests require at least an interval scale. The latter fact is actually the more relevant since social science data is very often on an ordinal or nominal scale.<sup>14</sup>

Perhaps Siegel summarized best the practical importance of employing nonparametric statistics, in the preface to his text:

The tests are often called "distribution-free," one of their primary merits being that they do not assume that the scores under analysis were drawn from a normally distributed population. Alternatively, many of these tests are identified as "ranking tests," and this title suggests their other principal merit: nonparametric techniques may be used with scores which are not exact in any numerical sense, but which in effect are simple ranks. A third advantage of these techniques, of course, is their computational simplicity. . . . A final advantage of the nonparametric tests is their usefulness with small samples, a feature which should be helpful to the researcher collecting pilot study data and to the researcher whose samples must be small because of their very nature (e.g., samples of persons with a rare form of mental illness, or samples of cultures).<sup>15</sup>

Hypothesis Group I, which was concerned with performance scores obtained by male and female recruits in the academic, physical, and technical segments of academy training, were analyzed through the use of the chi-square test. The chi-square test is a statistical technique

---

<sup>14</sup> Computer Laboratory, User's Guide Supplement SPSS Revisions With Local Modifications (East Lansing: Michigan State University, 1976), p. 8.3.

<sup>15</sup> Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences (New York: McGraw-Hill Book Company, 1956), p. vii.

that helps determine whether a systematic relationship exists between two variables. In conjunction with the chi-square test, the eta measure was used. Eta was incorporated in concurrence with the chi-square test for significant difference because the chi-square, although it tests for independence of variables, does not tell how strongly variables are related. Incorporating the eta measure provided an estimate of the magnitude of the relationship between the variables in the chi-square table, and thus aided in determining if the relationship was strong. Eta was chosen as the measure of association because eta is specifically applicable to contingency tables with unordered and ordered variables. Eta squared was also used to analyze the data further. When eta is squared, it provides an intuitive interpretation of the variance in the dependent variable accounted for or explained by the independent variable.

At this time it is appropriate to discuss an overriding limitation to the chi-square test, the limitation being the fact that the significance level attained when using the chi-square technique is dependent upon the sample size. That is, when the chi-square is utilized in conjunction with large samples, it is difficult to determine the value of a significant relationship.

However:

We can see that when a sample is small, it requires a much more striking relationship in order to obtain significance. Therefore, with small samples significance tests are far more important. In such cases we may be saying quite a bit when we can establish significance. The significance level depends on two factors: the strength or degree of relationship and the size of the samples. Significance can be obtained with a very strong relationship and very small samples, or with a very weak relationship and large samples.<sup>16</sup>

Since the chi-square may quite easily find a significant difference between variables when a large sample is used, the more important question to be answered under this condition is, given this relationship, how strong is the relationship? With small samples the level of significance takes on additional meaning. However, although the level of significance reported by the chi-square, with small samples, is more important, the eta and eta-squared measures were incorporated, as discussed above, as a means of determining the strength of the relationship found. In addition, considerable attention was given frequency distributions throughout the analysis process. This was done in an effort to aid the researcher in determining the practical importance of the findings.

Hypothesis Group II, which concentrated on male and female recruits' perceptions of the female trooper's role in the pre- and post-tests,--the Pre-Academy and

---

<sup>16</sup> Blalock, Social Statistics, pp. 293-94.

Post-Academy Surveys given in this study--was also subjected to the chi-square test and eta statistic in an effort to find if there were differences between male and female perceptions of the female trooper's role. In addition, the pre- and post-tests were analyzed with the aid of the Cochran Q test, a statistical technique used to determine if a treatment, in this case the academy experience, significantly altered either male or female perceptions of the female trooper's role.<sup>17</sup>

The two peer-evaluation forms were averaged and recruits were ranked on each form separately, according to the composite score they received on each survey instrument. With these rankings it was possible to use Kendall's tau to determine if sex was related to the evaluations received by the recruits. In addition, a test of significance was incorporated with Kendall's tau in an effort to determine if the relationship found with Kendall's tau was different from zero.

---

<sup>17</sup> The reader should be aware of the fact that the McNemar test for significance of change could also have been used to analyze the data in this study. The Cochran Q test was employed as a result of computational errors found in the computer-programmed McNemar test. However, since the Cochran Q and the McNemar tests are identical with c equals two, the choice of statistic used was of no practical importance. For a further discussion see W. J. Conover, Practical Nonparametric Statistics (New York: John Wiley and Sons, Inc., 1971), p. 200.

Data collected in the research project were coded and punched on IBM cards. All data manipulation was performed by the Michigan State University 6500 computer. The level of significance chosen for all statistical analysis was  $\alpha = .05$ .

## CHAPTER IV

### RESEARCH PROCEDURES AND FINDINGS

In Chapter I the history of women in policing was reviewed, discussion of the theoretical basis for the study of women in the policing function was presented, and cultural influences on a study of this type were noted. In Chapter II discussion centered on the academy process and the performance of females in the police function. Chapter III was concerned with the research methodology, study limitations, and the research setting. In Chapter IV the results obtained throughout the field research phase of the project are presented and efforts to explain these findings, in an attempt to make them meaningful to the reader, are made.

For expositional clarity, the chapter has been divided into two sections corresponding to the two major groups of hypotheses. Following the presentation of the results, the author closes this chapter by reviewing the findings and relating these findings to the central question: Do the research results support or fail to support the null hypotheses?

Hypothesis Group I

This hypothesis group tested the performance of female recruits compared to male recruits on three basic measures of recruit performance. The measures consisted of academic, technical, and physical performance categories.

Hypothesis 1: There will be no difference between male and female scores on academic measures.

Hypothesis 2: There will be no difference between male and female scores on technical measures.

Physical Measures

Hypothesis 3a: There will be no difference between male and female scores on ability measures.

Hypothesis 3b: There will be no difference between male and female scores on aggressiveness measures.

Data Collection

The three measures used in this section--academic, technical, and physical--represent the grand mean of grades received by every recruit in each of the three groups of measurements. (Appendix B contains a summary of the different courses incorporated in each of the three measures.) Recruit performance in every class at the academy was evaluated by the instructors and assigned a numerical score that ranged from 0 to 100.

In instances in which another scale system for grading

was used, the scores were transformed by the researcher into the 0 to 100 scoring system.

Three particular situations presented themselves in which it was necessary to transform scores into the 0 to 100 scoring system. First, recruit notebook scores were changed as follows: (1) excellent = 100; (2) good = 90; (3) fair = 80; (4) poor = 75; and (5) unacceptable = 74. Second, firearms scores were revised in the following manner: (1) distinguished expert = 100; (2) expert = 95; (3) sharpshooter = 85; (4) marksman = 75; and (5) did not pass = 74. Finally, staff members would occasionally record a negative score for some recruits in various driving courses. This appeared to occur only when staff personnel wanted to express their discontent with certain driving skills, or perhaps it is more appropriate to say lack of proper driving techniques, demonstrated by recruits. When this occurred the recruit was assigned the score of zero.

Traditional testing--paper and pencil tests--was used by the academy staff to evaluate the recruits' progress. However, even though the majority of courses evaluated recruit performance with nonsubjective scoring procedures, some courses partially or wholly employed subjective scoring measures; this situation is not uncommon to most training and educational facilities.

Scores received by the recruits were recorded by the instructors and compiled in a common file. Infrequently, a recruit was not graded on a particular activity incorporated as part of one of the three measures. When this occurred, his/her mean score was computed, excluding the missing score. A missing score generally occurred for one of two reasons: (1) the recruit was ill or injured and therefore could not be tested; or (2) sickness in the recruit's family required him/her to be absent during the testing period.

Since the frequency distributions of grand means were used for comparison in the contingency tables, it is quite possible that significant relationships found in specific courses could have been overlooked. Thus, the writer constructed chi-square tables for all academy courses.<sup>1</sup> Since reporting each value would be an unproductive and cumbersome task, only courses found to be statistically significant and/or of practical or theoretical importance are presented in this section.

It should be noted that three columns were used in the frequency tables in this segment of the study.

---

<sup>1</sup> Since a chi-square test was computed for each course composing the academic, technical, and physical performance measures utilized in this study, it is possible that significant differences could have resulted by mere chance. However, the writer, through analysis of frequency distributions and qualitative data recorded throughout the study, attempted to place the practical importance of these findings into perspective.

The columns represented scores ranging as follows:

(1) 0-74; (2) 75-87; and (3) 88-100. This system was incorporated for the following two reasons: recruits scoring a 74 or below automatically failed, and the remaining two columns were selected largely for the purpose of having equal intervals. Finally, various contingency tables have only two columns; this occurred solely as a result of the fact that recruit scores were concentrated in only two of the three predetermined value ranges.

#### Hypothesis 1

There will be no difference between male and female scores on academic measures.

As demonstrated in Table 4.1,<sup>2</sup> Hypothesis 1 was upheld. No significant difference was found between

---

<sup>2</sup>In specific cases the chi-square values were automatically adjusted when the SPSS computer program for chi-square was used. In 2x2 tables with fewer than 21 cases the Fishers exact test was applied, whereas the Yates' corrected chi-square was applied for all other 2x2 contingency tables. It should, however, be noted that tables exceeding a 2x2 distribution, when the chi-square statistic was used, were not automatically adjusted by the program. Thus, chi-squares reported by the program on contingency tables exceeding a 2x2 matrix are raw chi-square values. The chi-square values reported in this paper are therefore subject to these restrictions, and the reader should keep this in mind when reading chi-square values on tables exceeding a 2x2 matrix. For further discussion see Hubert M. Blalock, Social Statistics (New York: McGraw-Hill Book Company, 1960), p. 221; and Earl R. Babble, Survey Research Methods (Belmont, California: Wadsworth Publishing Company, Inc., 1973), p. 313.

Table 4.1.--Recruits' sex by average academic score.

Sex	Average Academic Score		Total
	75-87	88-100	
Male	27	23	50
Female	9	5	14

$$\chi^2 = .145 \quad df = 1 \quad p < .71$$

$$\eta^2 = .09$$

$$\eta^2 = .008$$

male and female academic performance. The eta and eta-squared measures indicated that an extremely low level of association between the two variables existed, and that a small degree of variance in the dependent variable was explained by the independent variable.

Only one academic course reached a significant level; this measure was spelling, with females scoring much higher than their male counterparts (Table 4.2). However, two additional measures, while not statistically significant, approached the significance level in favor

Table 4.2.--Recruits' sex by spelling score.

Sex	Spelling Score			Total
	0-74	75-87	88-100	
Male	12	12	25	49
Female	0	0	14	14

$$\chi^2 = 11.08 \quad df = 2 \quad p < .004$$

$$\eta^2 = .39$$

$$\eta^2 = .15$$

of male recruits; these courses were firearms and civil disorders.

Evidence presented in Chapter I suggested that, overall, women tend to perform better than men in tasks requiring rote memory, which may account for the female recruits' superior performance in the spelling course.

In addition, sex-roles taught males in their early childhood generally includes a familiarity with firearms and military structure, both of which may partially explain the males' slight advantage in the firearms and civil disorders courses. The two important issues, however, to be considered in reference to these specific courses are as follows: First, the frequency distributions reported in Tables 4.2 and 4.3 indicate that 24% of the male recruits failed spelling and that 56% of the male recruit population and 86% of the female recruit population were unable to score a passing mark in civil disorders. The practical importance of proper spelling by police officers is obvious. A considerable degree of the police officer's time is spent writing reports, which are used by the police department and frequently by the courts in the form of evidence.

The practical implications of the large failure rate in the civil disorders class is difficult to assess. There is no doubt that highly trained and proficient

Table 4.3.--Recruits' sex by civil disorder score.

Sex	Civil Disorder Score		Total
	0-74	88-100	
Male	28	22	50
Female	12	2	14

$$\begin{aligned} \chi^2 &= 2.95 & df &= 1 & p &< .09 \\ \eta^2 &= .25 \\ \eta^2 &= .06 \end{aligned}$$

Table 4.4.--Recruits' sex by firearms score.

Sex	Firearms Score		Total
	75-87	88-100	
Male	28	27	50
Female	11	3	14

$$\begin{aligned} \chi^2 &= 3.44 & df &= 1 & p &< .07 \\ \eta^2 &= .27 \\ \eta^2 &= .07 \end{aligned}$$

police officers are essential in the control of civil disorders. However, since little in-service training is afforded most troopers in maintaining these skills, and since these skills are infrequently used, the overall importance of the civil disorders class comes into question. It is important to note, however, that the state police perceive a need for a class of this type. And,

since this course is a part of the academic curriculum, the department may want to determine the cause of the high failure rate in this course and implement changes to correct this problem. It might also be noted that several courses taught at the academy had a high number of male and female recruits fail. Depending on the practical importance linked to each of these courses, the state police may want to determine the causes of these high failure rates, also.

Second, although firearms are infrequently used by police officers for the purpose of taking life, they do handle weapons frequently in the course of their job and are therefore responsible for the safe handling of these weapons.<sup>3</sup> It is therefore essential that officers be familiar with the proper safety and maintenance procedures of their firearms. It may be noted from the frequency distribution in Table 4.4 that while a higher percentage of male recruits scored above females in firearms, no female failed to pass the firearms course.

---

<sup>3</sup> As shown in Appendix B, the firearms course was divided into academic and technical segments. The academic portion was devised to impart safety and maintenance procedures on recruits, while the technical firearms segment was related to the actual use of various firearms. It is of interest to note that no male or female recruits failed the technical segment of firearms, nor was there a significant difference between male and female recruit performance on the technical firearms measure ( $p < .09$ ).

The reader should be aware of the fact that a number of female recruits, and a few male recruits, had had no previous experience with firearms prior to the state police academy, while other recruits had considerable experience with firearms through military and/or police experience. The important issue, however, is the fact that firearms training at the academy was successful in bringing male and female recruits, totally unfamiliar with weapons prior to the academy, to an acceptable degree of expertise prior to their graduation. As to whether these recruits continue to safely operate and maintain their firearms, or whether male or female officers will differ in safety or maintenance procedures in the field, is a question yet to be researched.

In sum, it appears that recruits, both male and female, selected under present state police guidelines, entering the academy and choosing to remain, can successfully complete the academic segment of the training process. The high failure rate of some courses does, however, suggest that the state police may want to determine the cause of these high failure rates.

#### Hypothesis 2

There will be no difference between male and female scores on technical measures.

Again, the null hypothesis was retained. No significant difference was found between the recruit's

sex and his/her average score on the technical training measure.

Table 4.5.--Recruits' sex by average technical score.

Sex	Average Technical Score			Total
	0-74	75-87	88-100	
Male	2	33	15	50
Female	2	9	3	14

$$\begin{aligned} \chi^2 &= 2.14 & df &= 2 & p < .35 \\ \eta^2 &= .14 \\ \eta^2 &= .01 \end{aligned}$$

Although male and female recruits compared closely on the average technical score, two driving courses did reveal significant differences between the sexes, even though the relationship was small. Both courses were concerned with driving skills. Females scored significantly lower than male recruits in the controlled weaving (Table 4.6) and precision driving (Table 4.7) courses. Apparently, female recruits had not developed the perceptual ability and/or coordination needed in driving that a number of their male counterparts had. However, when viewing the frequency distributions, it became apparent, with particular reference to controlled weaving, that numerous male recruits also lacked the skill and/or perceptual qualities needed to complete these courses successfully.

Table 4.6.--Recruits' sex by controlled weaving score.

Sex	Controlled Weaving Score			Total
	0-74	75-87	88-100	
Male	29	15	6	50
Female	13	0	1	14

$$\chi^2 = 6.46 \quad df = 2 \quad p < .04$$

$$\eta^2 = .24$$

$$\eta^2 = .05$$

Table 4.7.--Recruits' sex by precision driving score.

Sex	Precision Driving Score			Total
	0-74	75-87	88-100	
Male	8	29	13	50
Female	8	5	1	14

$$\chi^2 = 10.20 \quad df = 2 \quad p < .01$$

$$\eta^2 = .36$$

$$\eta^2 = .13$$

It was initially thought that in driving classes males with patrol experience would have an advantage over males without patrol experience; however, this assumption proved false (Table 4.8). The data also indicated that female recruits with police experience did not perform significantly better in driving skills than did females without police experience (Table 4.9).<sup>4</sup> These unexpected

<sup>4</sup>With the exception of report writing, in which females with police experience scored significantly higher than females without police experience ( $p < .05$ ), further analysis revealed that recruits with previous

Table 4.8.--Police experience of male recruits by average score for precision driving.

Police Experience	Average Score for Precision Driving			Total
	0-74	75-87	88-100	
Yes	3	18	3	24
No	6	14	6	26

$$\begin{aligned} \chi^2 &= 2.42 & df &= 2 & p < .30 \\ \eta\alpha &= .00 \\ \eta\alpha^2 &= .00 \end{aligned}$$

Table 4.9.--Police experience of female recruits by average score for precision driving.

Police Experience	Average Score for Precision Driving			Total
	0-74	75-87	88-100	
Yes	2	2	0	4
No	3	6	1	10

$$\begin{aligned} \chi^2 &= .77 & df &= 2 & p < .69 \\ \eta\alpha &= .23 \\ \eta\alpha^2 &= .05 \end{aligned}$$

police experience, whether male or female, did not score significantly higher in any course at the academy than recruits of the same sex without police experience. The explanation for this finding may lie in the fact that recruits were held responsible only for the material presented in classes, that many of these skills are not frequently practiced on the job, or that there is no motivation for police officers to improve in these areas. Whichever reason or reasons explain this phenomenon, it is rather obvious that having had police experience before recruit training is not an indication of superior performance at the academy. Whether recruits with previous police experience perform better in the field than inexperienced recruits is a question yet to be answered.

findings may have been a result of improper, inadequate, or nonexistent driver's training in other police departments. Apparently, at least with respect to police experience, merely spending time driving does not improve certain driving skills. This would suggest that continued in-service training in these driving skills may be in order, but additional research is needed before conclusive results can be obtained.

In conclusion, the most significant finding was that female recruits, overall, compared favorably with the male recruits on the technical measure. Evidence indicated two areas in which males exceeded females in driving skills, and it was found also that a number of male and female recruits did not pass certain driving courses. It does not necessarily follow that recruits not passing specific driving techniques will not pass the driving course. Numerous driving measures are averaged together and because of the averaging process it is possible for a recruit to fail certain specific driving classes and still pass the driving segment of the academy.

The fact that it is possible for a recruit to fail certain specific segments of his/her driver training and still successfully complete this aspect of the training process brings the issue of practical importance to

the forefront. The practical importance of good driving skills, without doubt, makes the driving curriculum one of the more important aspects of training. Troopers are frequently required to drive at excessive speeds under varying conditions for the purpose of catching speeders and various other types of lawbreakers, to save lives, and so forth. Therefore, a trooper not completely competent in his or her driving ability is a danger not only to him or herself, but the public in general. It is thus suggested that efforts be extended to determine if failure in certain segments of the driving curriculum is an indication of increased accident rates, increased expense for the state police, and so forth. If an association is found, then the necessary changes should be undertaken.

Hypotheses 3a and 3b:

Physical Measures

The physical measure incorporated two overall measures. The first measure reflected the ability of men and women to execute defensive tactics techniques and boxing skills. The second measure attempted to reflect the aggressiveness displayed by the recruit while executing these same skills. The final scores obtained by the recruits in both the ability and aggressiveness segments of the boxing and defensive tactics measures of

physical ability represent the average scores given them by four independent judges. Two judges were the instructors responsible for teaching both defensive tactics and boxing, whereas the remaining two were selected largely on their availability to provide this service and their knowledge of the subject.

In Tables 4.10 and 4.12, two male recruits were excluded from the analysis because neither recruit received scores on ability or aggressiveness in boxing.

3a. There will be no difference between male and female scores on ability measures.

Contrary to Hypothesis 3a, a significant difference was found between male and female scores on the ability measure (Table 4.10), with males scoring considerably higher than their female counterparts.<sup>5</sup>

Table 4.10.--Recruits' sex by average ability score.

Sex	Average Ability Score			Total
	0-74	75-87	88-100	
Male	3	41	4	48
Female	9	5	0	14

$$\begin{aligned} \chi^2 &= 23.63 & df &= 2 & p < .0000 \\ \eta^2 &= .56 \\ \eta^2 &= .31 \end{aligned}$$

<sup>5</sup> Probabilities reported on computer outputs were carried to four decimal places; thus, when probabilities were reported as zero through computer tabulation, they were similarly reported throughout the context of this work.

It is interesting that only the defensive tactics ability score showed a significant difference between male and female recruits (Table 4.11) although the ability measure for boxing did approach a significant level ( $p < .08$ ).

Table 4.11.--Recruits' sex by defensive tactics ability score.

Sex	Defensive Tactics Ability Score			Total
	0-74	75-87	88-100	
Male	1	35	14	50
Female	7	6	1	14

$$\chi^2 = 23.45 \quad df = 2 \quad p < .0000$$

$$\eta^2 = .48$$

$$\eta^2 = .23$$

It was difficult to develop a concrete explanation for the disparity between these two ability scores, but two highly probable explanations did surface. The difference could be explained in part by the fact that there was no pre-established operational definition of ability. And second, some of the disparity may have resulted from lack of an attempt to determine inter-rater reliability among the scorers. With these restrictions in mind, the actual significant difference reported on the average ability score by the chi-square

statistic becomes questionable. Only with a standardized rating system could conclusions concerning women's ability on both defensive tactics and boxing be made with these measures.

- 3b. There will be no difference between male and female scores on aggressiveness measures.

Hypothesis 3b was not rejected when subjected to the chi-square test. As indicated in Table 4.12, no significant difference between male and female recruits' scores on the aggressiveness measure was found. The low level of association between the variables on the average aggressiveness measure was revealed in the eta measure.

Circumstances similar to those found in the ability measures appeared in the aggressiveness measures as well. Only the defensive tactics aggressiveness score showed a significant difference between the sexes

Table 4.12.--Recruits' sex by average aggressiveness score.

Sex	Average Aggressiveness Score			Total
	0-74	75-87	88-100	
Male	6	38	4	48
Female	4	8	2	14

$$\begin{aligned} \chi^2 &= 2.84 & df &= 2 & p < .25 \\ \text{eta} &= .08 \\ \text{eta}^2 &= .006 \end{aligned}$$

(Table 4.13); the difference between the sexes on the boxing aggressiveness score was insignificant ( $p < .83$ ).

The circumstances surrounding the scoring procedures of the ability measure were inherent in the aggressiveness measure also, which brought the aggressiveness measure into question. That is, the lack of a pre-established operational definition of aggressiveness and the lack of an interrater reliability test to determine the reliability of judges in scoring the aggressiveness of recruits brings the aggressiveness measure into question.

It is of importance to note that female recruits were required to compete against male recruits in both defensive tactics and boxing. Also, while little difference between male or female aggressiveness in defensive tactics was viewed by myself, it was apparent in boxing that some males would "hold back" on their female

Table 4.13.--Recruits' sex by defensive tactics aggressiveness score.

Sex	Defensive Tactics Aggressiveness Score			Total
	0-74	75-87	88-100	
Male	2	42	6	50
Female	7	5	2	14

$$\begin{aligned} \chi^2 &= 19.98 & df &= 2 & p < .0000 \\ \eta^2 &= .35 \\ \eta^2 &= .12 \end{aligned}$$

counterpart more so than would other males. The degree to which a male recruit would "hold back" appeared to be related to: (1) the female's ability and (2) the male's personal feelings regarding females' acceptability as police officers. Those males having negative feelings appeared to be less restrictive in their boxing style. However, the male recruit's perception that he needed to "hold back" is felt not only to have influenced his perception of the female recruit's physical powers, but other recruits' perceptions as well.

In using the chi-square technique to determine if the null hypotheses presented in Hypothesis Group I could be rejected, it was found that only the ability segment of the physical measure showed a significant difference between male and female recruits' performance. In short, academic and technical measures and the aggressiveness segment of the physical measure were found not to be significantly different between the sexes. However, subsequent analysis of the ability and aggressiveness measures led to the conclusion that, because of scoring procedures, it was difficult to provide a concrete determination of whether or not differences (qualitative differences) actually existed between the sexes on these measures.

Hypothesis Group II

This hypothesis group tested both male and female recruits' definitions of the female trooper's role. This segment of the research project was completed in an effort to determine if inter-sender conflict existed among the recruits.

Hypothesis 1: There will be no difference in male and female recruits' definitions of the female trooper's role at the beginning of the academy.

Hypothesis 2: There will be no difference in male and female recruits' definitions of the female trooper's role at the conclusion of the academy.

Hypothesis 3: Neither male nor female recruits' perceptions of the female trooper's role will be altered as a result of the academy experience.

Hypothesis 4: There will be no difference between male and female rankings on the peer evaluation forms.

Data Collection

In Chapter III considerable attention was devoted to explaining the method whereby the Pre- and Post-Academy surveys and the Academy Recruit survey were distributed; thus this information is not reiterated here. However, a number of points must be brought to the reader's attention for the sake of clarity.

Both male and female recruits were requested to complete the pre- and post-test surveys, which required the respondents to evaluate their expectations of women's

ability to perform in a series of specific job situations (see Appendices C and D). The Pre-Academy Survey was completed during the second full week of the academy and the Post-Academy Survey was distributed to the recruits in the final days of the recruit school. The subjects' responses to the questionnaires were restricted to a five-point scale, ranging from "women perform much better than men" to "men perform much better than women." The particular job situations incorporated in the surveys were subsequently combined as measures of three components of the police function. These measurements included: (1) physical, which incorporated job situations that required the use or possible use of physical force; (2) general, which included job situations centering around such skills as judgment, issuing citations, and effectiveness in dealing with the public; and (3) technical, which combined such tasks as safely operating a patrol car, preparing reports, and giving first aid.

The Academy Recruit Survey (Appendix E), which was distributed at the same time as the Post-Academy Survey, was intended to contain items that would tap the recruits' perceptions of the female trooper's role. Unfortunately, this equality scale, which was composed of questions designed to determine if male and female recruits thought the sexes were equal, proved

to be useless for female recruits because the variance on each component of the equality scale for females was either zero or quite small. Therefore, although this scale was excluded from analysis, its specific components did provide evidence supporting later conclusions reached by the researcher. An individual component of the equality scale is presented later in this chapter.

To verify the internal consistency of the indices, alpha coefficients were computed.<sup>6</sup> Results of the analysis (Table 4.14) indicated that comparisons could be made on the physical, general, and technical measures. As can be seen from the table, the scale developed from the Academy Recruit Survey was of no value for female recruits.

Before presenting the results, three additional topics need to be discussed. First, the "role set" in this study was limited to female and male recruits, thus excluding other role senders that may have had an impact on the recruits' role definition. Budgetary constraints made it impossible to contact significant others such as friends and relatives of the recruits to determine what effect they might have had on the recruits' perception of the female trooper's role.

<sup>6</sup> Alpha is a reliability coefficient designed to determine if the measuring instrument is accurately measuring what it is designed to measure. For a description of the computational properties of Chronbach's Alpha consult Computer Laboratory, User's Guide Supplement SPSS Revisions With Local Modifications (East Lansing: Michigan State University 1976), pp. 12.22-12.23.

Table 4.14.--Alpha coefficients for study questionnaires.

Group	Index			
	Physical	General	Technical	Equality
Male recruits survey (a)	.64	.66	.61	NA
Male recruits survey (b)	.57	.79	.67	NA
Female recruits survey (a)	.85	.93	.95	NA
Female recruits survey (b)	.75	.61	.81	NA
Male recruits survey (c)	NA	NA	NA	.61
Female recruits survey (c)	NA	NA	NA	.21

Survey (a) = Pre-Academy Survey  
 Survey (b) = Post-Academy Survey  
 Survey (c) = Academy Recruit Survey  
 NA = Not Applicable

Second, it should be noted that although 100% of the recruits completed the Pre- and Post-Academy surveys, two recruits chose not to complete the biographical data section of the forms. This rendered their responses useless for analytical purposes. It is also important to note that out of the 62 usable sets of questionnaires, four respondents chose not to indicate their sex on the survey forms; thus only 58 cases (90%) are represented in the following analysis.

Finally, where additional information is necessary to understand specific questionnaires, it is provided throughout the text of this chapter. Where individual components on one of the three role measures present findings that provide additional understanding of role definitions of recruits, this information is provided for the reader's consideration.

#### Hypothesis 1

There will be no difference in male and female recruits' definitions of the female trooper's role at the beginning of the academy.

Two of the three role measures, physical and general, were found to be significantly different between the sexes. Both measures indicated that males were far more restrictive of the female trooper's role than were female recruits. The most obvious inter-sender conflict occurred on the physical measure (Table 4.15). Male recruits consistently reported that male troopers performed better than female troopers in tasks that required or could require physical strength.

Interestingly enough, although a number of female recruits felt that female troopers would be capable of handling situations involving physical measures with lawbreakers, they did not feel female troopers would be as capable as male troopers in situations

Table 4.15.--Difference between male and female recruits' perceptions on the physical role measure at the beginning of the academy.

Sex	Physical Role Measure <sup>a</sup>		Total
	Men and Women Are Equal	Men Are Better Than Women	
Male	0	46	46
Female	7	5	12

$$\begin{aligned} \chi^2 &= 25.27 & df &= 1 & p &< .0000 \\ \eta^2 &= .72 \\ \eta^2 &= .51 \end{aligned}$$

<sup>a</sup>See Appendix F, which presents the survey questions utilized in each of the three role measures.

that required lifting dead weight (Table 4.16). Males, on the other hand, did not make this distinction. To male recruits any situation requiring physical measures would be accomplished better by the male trooper. Therefore, as Table 4.16 indicates, there was no significant difference between the sexes on this particular component of the physical measure. Apparently some female recruits were originally of the opinion that controlling lawbreakers was not as physically demanding as lifting a heavy weight. This may have been because few of the female recruits had actually experienced a physical confrontation with a law violator.

In summation, the evidence suggested that not only was there a wide gap between the perceptions of male and female recruits concerning the physical role

Table 4.16.--Male and female recruits' perceptions of the female trooper's ability to lift heavy objects, in the Pre-Academy Survey.

Sex	Lifting and Carrying Prisoners or Accident Victims		Total
	Men and Women Are Equal	Men Are Better Than Women	
Male	2	44	46
Female	2	10	12

$$\begin{aligned} \chi^2 &= .74 & df &= 1 & p &< .40 \\ \eta\alpha &= .20 \\ \eta\alpha^2 &= .04 \end{aligned}$$

of female troopers, but subsequent analysis also suggested that inter-sender conflict on the physical measure existed among the female recruits in the early days of the academy.

Similar results were obtained on the general measure of the female trooper role, but certain dissimilarities did exist. Male recruits were not as certain on this measure as they were on the physical measure that female troopers would be totally unable to perform acceptably. In fact, when viewing the frequency distribution in Table 4.17 it can be seen that the majority of male and female recruits felt that male and female troopers could perform these job tasks equally well. The significant difference between the role definitions of the sexes can be attributed to the fact that a small number of men felt male troopers would perform

better than female troopers, whereas an equally small number of female recruits felt female troopers would be better than men in the activities making up this measure.

Table 4.17.--Differences between male and female recruits' perceptions on the general role measure, at the beginning of the academy.

Sex	General Role Measure			Total
	Women Are Better Than Men	Men and Women Are Equal	Men Are Better Than Women	
Male	0	39	7	46
Female	2	9	1	12

$$\begin{aligned} \chi^2 &= 8.10 & df &= 2 & p < .02 \\ \eta^2 &= .23 \\ \eta^2 &= .05 \end{aligned}$$

The significant difference between the sexes on the general role measure is due to a small number of recruits having differing perceptions regarding the general role. However, my personal experiences at the academy have led me to the conclusion that even this small number of conflicting views can present serious problems for female officers and the organization as a whole.

During the academy recruits left the training facility and spent their tenth week of training at Fort Custer. Fort Custer is used as an adjunct training site

because of its suitableness as a driver training facility. The importance of Fort Custer, however, is that during the Fort Custer experience serious conflict surfaced between a small number of male recruits and the female recruits. The disagreement occurred when a few male recruits began expressing their negative feelings toward the idea of female police officers to some of the female recruits. The resulting exchange between these male and female recruits reached such proportions that the academy staff felt it necessary to call a general meeting of recruits, so that a resolution to the problem could be found. Unfortunately, as was discovered in recruit interviews sometime later by myself, the staff's effort to dispel these hostile feelings did not help in resolving the issue. The hostility between these few male recruits and the female recruits remained; only the surface or highly visible conflict was reduced.

The important consequence of the situation just described was not fully appreciated by the writer until later in the study. A number of male recruits revealed to the writer the fact that while they had originally had few misgivings about the concept of female police officers, the Fort Custer incident influenced their perceptions. Specifically, a number of male recruits who were generally favorable toward female police officers

reported that they began to side with those male recruits who had ardently voiced their discontent with female police officers. Hence, while the majority of male recruits supported females on most issues, it appears that a few vocal discontents have an impact on the group that far outweighs their numerical representation. However, while these few male discontents did have a strong immediate impact on the total group of males, their long-range effect is difficult to determine at this time. The actions taken by the academy staff, however, while not resolving the issue or necessarily improving relations among the male and female recruits, is felt to have had, as determined through interviews with recruits, calmed the situation to some degree.

It must not go without saying that the impact of the Fort Custer incident had its effect on female recruits. Various female recruits related their frustration and resentment toward those male recruits making attacks on them. Two factors emerged as a result of conversations with the females: (1) the female recruits always noted that they were aware of the fact that only a few males were violently opposed to their presence; and (2) the situation created a certain degree of stress among the women. The degree to which this stress subsequently affected the females' performance or

socialization process is unknown. However, interviews with the female recruits did lead the author to the conclusion that inter-sender conflict did hinder female recruit role acquisition and performance to one degree or another.

Through further analysis of the data it was discovered that two of the four measures making up the general role measure had no significant differences between the sexes on specific job tasks. Male and female recruits were in general agreement that female troopers could deal effectively with traffic violators ( $p < .13$ ) and recognize traffic violations ( $p < .60$ ) equally as well as male troopers. On the other hand, male recruits were not certain of the female trooper's judgment in issuing citations; however, the variance in the dependent variable explained by the independent variable was small ( $\eta^2 = .05$ ). Table 4.18 does show that the male recruits questioned the female trooper's ability to perform well under stressful conditions.

The variance in role perceptions between male and female recruits, as well as differences found among each sex on the general role measure, and other two role measures utilized in this study, can be explained, to some extent, through the recruits' socialization process. Evidence reported in Chapter I indicated that

Table 4.18.--Male and female recruits' perceptions of the female trooper's ability to maintain personal control under stressful conditions, in the Pre-Academy Survey.

Sex	Maintaining Personal Control and Dealing Effectively With the Public Under Stressful Conditions			Total
	Women Are Better Than Men	Men and Women Are Equal	Men Are Better Than Women	
Male	1	27	18	46
Female	4	7	1	12

$$\chi^2 = 13.47 \quad df = 2 \quad p < .002$$

$$\eta^2 = .42$$

$$\eta^2 = .18$$

sex-roles were culturally based and that differing sex-roles are found between cultures. This discussion can be expanded by reviewing aspects of our American culture. For example, our culture's present state of flux, with particular reference to the changing sex-roles of women, coupled with normally occurring inconsistencies among individuals in sex-role development, and the females' typical role flexibility<sup>7</sup> combine and thus allow for widely differing sex-role development among women in our culture. More specifically, while the writer would agree that the female recruits in the 90th state police

<sup>7</sup> Elaine Donelson, "Development of Sex-Typed Behavior and Self-Concept," in Women: A Psychological Perspective, eds. Elaine Donelson and Jeanne E. Gullahorn (New York: John Wiley and Sons, 1977), pp. 131-34.

academy, and perhaps other female police officers as well, were influenced in many ways during their childhood toward the typical female sex-role of the American culture; the writer would not agree that these female recruits were tied closely to traditional female sex-roles. The female recruits' role flexibility was demonstrated in many ways throughout the academy; in fact, the mere fact that they would enter this traditionally male occupation supports the fact that female recruits were not closely linked to traditional female sex-roles. Perhaps the one question posed by myself to a female recruit expresses this idea best. When asked the question, "Don't you feel you have to give up some of your femininity in order to be a state trooper?" the female recruit replied simply "NO." To many of the female recruits in the academy their definition of the female sex-role was quite different from the tightly structured female sex-role generally attributed to women in our culture.

The female recruits' perception of their sex-role is important for two reasons: (1) many of the female recruits were, overall, quite confident that they could perform any of the typically male activities at an acceptable level; and (2) some of the females lent the impression that not only could they perform typically

male activities at an acceptable level, but that they could perform those activities in which women are thought to excell, i.e., verbal abilities, rote memory, and so forth, better than men. Both situations suggest that the female recruits were confident of their abilities and their potential as police officers.

The male recruits were also affected by cultural change (less restrictive sex-roles) in their sex-role development much in the same manner as were the females. However, male recruits were still inclined to report more conservative female sex-role perceptions than were the female recruits. An interesting phenomenon was observed by the writer concerning male role perceptions. (1) The older and more experienced the male recruit, the more likely he was to make fewer distinctions concerning the proper role of female police officers. That is, these male recruits were not as disposed as younger, less experienced male recruits to perceive the female officers as being as competent as male officers in any aspect of police work. (2) Younger male recruits were more inclined than were female recruits to make distinctions between specific job tasks. Specifically, the younger and less experienced male was more inclined to report that females did not compare equally in certain job tasks with males, than were female recruits.

In sum, it was found that on the general role measure, male recruits restricted the female trooper's role more than did female recruits. It was further indicated that while males did not feel that female officers were as capable as male officers in various job tasks of the general role measure, the majority of males did support the female police officer on the general role measure. However, it was pointed out that a few male recruits, under the impression that females should not be allowed to become police officers, can have a negative impact on the organization and female recruits.

As hypothesized, there was no significant difference between male and female recruits' perceptions on the technical role measure (Table 4.19), although the probability level was significant at  $p < .08$ . Overall,

Table 4.19.--Difference between male and female recruits' perceptions on the technical role measure, at the beginning of the academy.

Sex	Technical Role Measure			Total
	Women Are Better Than Men	Men and Women Are Equal	Men Are Better Than Women	
Male	6	35	5	46
Female	5	6	1	12

$$\begin{aligned} \chi^2 &= 5.09 & df &= 2 & p &< .08 \\ \text{eta} &= .23 \\ \text{eta}^2 &= .05 \end{aligned}$$

male and female recruits felt female troopers could perform these tasks equally as well as or better than male troopers.

As Tables 4.20 through 4.22 show, males defined three components of the technical role measure more restrictively than did female recruits. These measures included operating a patrol vehicle safely in routine and emergency conditions, verbally expressing thoughts, and testifying in court. In these situations, female recruits were generally more confident than male recruits that female troopers could perform as well as or better than male troopers. (Apparently the female recruits' confidence was somewhat justified, for there was no significant difference [ $p < .29$ ] between male and female average scores in the driving curriculum at the academy.)

Table 4.20.--Male and female perceptions of the female trooper's ability to operate a patrol vehicle safely, in the Pre-Academy Survey.

Sex	<u>Safely Operating a Patrol Car in Routine and Emergency Situations</u>			Total
	Women Are Better Than Men	Men and Women Are Equal	Men Are Better Than Women	
Male	0	25	21	46
Female	1	10	1	12

$$\begin{aligned} \chi^2 &= 8.65 & df &= 2 & p < .02 \\ \eta^2 &= .36 \\ \eta^2 &= .13 \end{aligned}$$

Table 4.21.--Male and female perceptions of the female trooper's ability in verbally expressing thoughts, in the Pre-Academy Survey.

Sex	Verbally Expressing Thoughts			Total
	Women Are Better Than Men	Men and Women Are Equal	Men Are Better Than Women	
Male	8	35	3	46
Female	7	4	1	12

$$\begin{aligned} \chi^2 &= 8.80 & df &= 2 & p < .02 \\ \eta^2 &= .29 \\ \eta^2 &= .08 \end{aligned}$$

Table 4.22.--Male and female perceptions of the female trooper's ability in testifying in court, in the Pre-Academy Survey.

Sex	Testifying in Court			Total
	Women Are Better Than Men	Men and Women Are Equal	Men Are Better Than Women	
Male	4	41	1	46
Female	4	7	1	12

$$\begin{aligned} \chi^2 &= 6.33 & df &= 2 & p < .05 \\ \eta^2 &= .19 \\ \eta^2 &= .04 \end{aligned}$$

The recruits, both male and female, had a tendency to see the ability of females differently in components of the technical role measure. Although there was overall agreement about the ability of females to perform technical job tasks of the police function, some individual tasks were considered by female recruits to be accomplished better by female troopers. On the other hand, male recruits felt the sexes would perform equally well or that male troopers would perform better than female troopers. The interesting discrepancy occurred because female recruits tended to feel that female troopers were better than male troopers in verbal communication.

#### Hypothesis 2

There will be no difference in male and female recruits' definitions of the female trooper's role at the conclusion of the academy.

In an effort not to replicate previous discussion, in this section I will review the findings of the three role measures, relate them to the Pre-Academy Survey, and attempt to explain the findings. In addition, only differences between recruits' responses on the Pre- and Post-Academy Surveys, which arose on individual items of each scale, are brought to the reader's attention. More specifically, if the direction of

significance changed on a particular item of one of the three role measures, it is brought to the reader's attention and an attempt is made to explain this change. It must be kept in mind, because of the small sample size, that differences could have arisen simply because of a few changes in responses. Therefore, although in fact there may be a reported difference between the Pre- and Post-Academy Surveys, this is not necessarily an indication that a statistically significant or practical difference exists, but merely that frequency distributions changed from the Pre- to the Post-Academy Surveys.

However, Hypothesis 3 helps to bring the overall effect of the academy experience on recruits' perceptions of the female trooper's role into perspective.

Both the physical and general role measures remained relatively consistent from the Pre- to the Post-Academy Survey. Therefore, contrary to the hypothesis, a significant difference between male and female recruits' physical and general role perceptions was found at the conclusion of the academy experience. The most interesting similarity between the Pre- and Post-Academy Surveys was found in the physical role measure. As seen in Table 4.23, male recruits held firm in their perception of the female trooper's overall inability to perform tasks involving the use or potential use of

Table 4.23.--Difference between male and female recruits' perceptions on the physical role measure, at the conclusion of the academy.

Sex	Physical Role Measure		Total
	Men and Women Are Equal	Men Are Better Than Women	
Male	0	46	46
Female	6	6	12

$$\chi^2 = 20.55 \quad df = 1 \quad p < .0000$$

$$\eta^2 = .67$$

$$\eta^2 = .45$$

physical strength. Females also answered the Post-academy Survey similarly to the Pre-Academy Survey. In fact, only one female changed her role perception on this measure, although this female more narrowly defined the physical role of a female trooper.

Only one component of the post-academy physical role measure differed from the Pre-Academy Survey. Interestingly enough, this particular measure was concerned with lifting dead weight. At the conclusion of the academy experience, three female recruits were generally more certain that female troopers could perform equally as well as male troopers in this job task than they were at the onset of the study (Table 4.24).

Females were therefore slightly more certain of the female trooper's ability in physical tasks than they were in the Pre-Academy Survey.

Table 4.24.--Male and female recruits' perceptions of the female trooper's ability to lift heavy objects, in the Post-Academy Survey.

Sex	Lifting and Carrying Prisoners or Accident Victims		Total
	Men and Women Are Equal	Men Are Better Than Women	
Male	2	43	45
Female	5	6	11

$$\begin{aligned} \chi^2 &= 10.10 & df &= 1 & p &< .002 \\ \eta^2 &= .49 \\ \eta^2 &= .24 \end{aligned}$$

Two major incidents that occurred at the academy were seen as accounting for the male recruits' reluctance to define the female trooper's physical role more broadly: (1) Although female troopers ran the many one- to seven-mile runs required of recruits, they were generally slower than the majority of males. Many male recruits felt some female recruits were not trying to maintain an equal pace with the majority of recruits during the running exercises. In the milieu of the State Police academy, it is a serious breach of social norms not to "try" in any exercise that requires physical labor. Not producing under strain is seen as an indication of future behavior on the road and is referred to as "letting your partner down when he needs you." This phenomenon further compounded or solidified the male

recruits' perception of the female trooper's inability in the physical role of a state trooper. (2) The boxing exercises were in some cases, using a subjective measure, an obvious indication of the males' superior physical strength. Although many female recruits were aggressive, their smaller frames, smaller body and muscle mass made them unequal opponents for their fellow male recruits. It was interesting that although the females frequently could not compete physically with the male recruits, the females' willingness to box won them the admiration and respect of many male recruits. Female recruits were not, however, thought of by male recruits as being equal to male recruits in this physical function.

Female recruits also only slightly changed their perception of the female trooper's physical role. Female recruits were still somewhat confident of their overall ability in the physical role of a state trooper. The fact that they had completed every physical requirement at the academy is felt to be the major reason for their continued role perception. Thus, although on the whole they did not perform as well as the male recruits in most physical exercises, they were able to accomplish these exercises well enough to pass the academy. It appeared that some female recruits felt that if they could pass the requirements of the academy, they had the necessary

physical strength to be a good trooper, regardless of whether males were generally better. However, approximately half of the female recruits did not think merely passing the academy was proof of the female's equality of this measure. At the conclusion of the academy, inter-sender conflict on this measure was still high.

Role perceptions were discovered on the post-academy general role measure that were similar to those found on the Pre-Academy Survey. Thus there was, in contradiction to the hypothesis, a significant difference between male and female recruits on the general role measure of the Post-Academy Survey (Table 4.25). In addition, there was a trend on the Post-Academy Survey for male recruits to be more restrictive of the female trooper's role on this measure, and for female recruits to report a more liberal role perception on the general role measure.

Table 4.25.--Difference between male and female recruits' perceptions on the general role measure, at the conclusion of the academy.

Sex	General Role Measure			Total
	Women Are Better Than Men	Men and Women Are Equal	Men Are Better Than Women	
Male	2	32	12	46
Female	6	6	0	12

$$\begin{aligned} \chi^2 &= 18.07 & df &= 2 & p < .001 \\ \eta^2 &= .49 \\ \eta^2 &= .24 \end{aligned}$$

Only one component of the general role measure differed from the responses given in the Pre-Academy Survey. That difference occurred in the female trooper's ability to deal effectively with traffic violators and to issue citations. While there was no significant difference between male and female recruits' role perceptions on this component of the pre-test, a significant difference was found in the Post-Academy Survey (Table 4.26). A number of male recruits did not feel that women police officers could perform as many job tasks as male officers, while a number of female recruits felt that female police officers could perform the job tasks reported in the general role measure.

Even though a small trend was found on the general measure, it is important to note that the majority

Table 4.26.--Male and female recruits' perceptions of the female trooper's ability to deal effectively with traffic violators and to issue citations, on the Post-Academy Survey.

Sex	Dealing Effectively With Traffic Violators and Issuing Citations			Total
	Women Are Better Than Men	Men and Women Are Equal	Men Are Better Than Women	
Male	1	35	10	46
Female	4	8	0	12

$$\begin{aligned} \chi^2 &= 13.44 & df &= 2 & p &< .002 \\ \eta^2 &= .42 \\ \eta^2 &= .18 \end{aligned}$$

of males were still of the opinion that female troopers, overall, could perform the job tasks making up this measure.

The slight trend toward a more restrictive general role on the part of the male recruits appeared to be related to two things: First, there appeared to be a need, on the part of some of these male recruits, to deprecate female success. It has been found in other research projects that men become hostile about women's success, especially if those women are single.<sup>8</sup> Second, a further explanation for these small changes in frequency distribution appeared to have been related to the inability of female recruits to measure up to what some male recruits considered the necessary physical attributes of a state trooper. This perception seemed to carry over into other aspects of the trooper's role that were not actually related to physical powers. Although no hard statistical data indicate the correctness of these conclusions, interviews with male recruits indicated the plausibility of the contentions.

Again, the female recruits' slight trend toward a more liberal role definition was attributed to their

---

<sup>8</sup> Elaine Donelson and Jeanne E. Gullahorn, "Individual and Interpersonal Achievement," in Women: A Psychological Perspective, ed. Elaine Donelson and Jeanne E. Gullahorn (New York: John Wiley and Sons, 1977), p. 173.

success in completing the academy. Furthermore, the overall support of male recruits on the general role measure was also believed to be a supporting factor in the females' continued liberal role definition on this measure.

The final role measure to be discussed, the technical role measure, was found to be significantly different from the null hypothesis. In fact, not only was a significant difference found between male and female recruits' role perceptions on the Post-Academy Survey, but there was also a change from a nonsignificant difference on the Pre-Academy Survey to a significant difference on the technical role measure on the Post-Academy Survey (Table 4.27). It should be noted that this change is entirely the result of seven male recruits becoming

Table 4.27.--Difference between male and female recruits' perceptions on the technical role measure, at the conclusion of the academy.

Sex	Technical Role Measure			Total
	Women Are Better Than Men	Men and Women Are Equal	Men Are Better Than Women	
Male	5	29	12	46
Female	5	6	1	12

$$\begin{aligned} \chi^2 &= 6.84 & df &= 2 & p < .04 \\ \eta^2 &= .31 \\ \eta^2 &= .09 \end{aligned}$$

more restrictive of the female trooper's role on this measure. The female recruits, on the other hand, responded exactly the same on the Post-Academy Survey as they did on the Pre-Academy Survey, which was to define liberally the role of female troopers on this measure.

One component of the technical role measure did change direction with regard to significance. This item --the female trooper's ability to testify in court-- although found to be statistically different in the Pre-Academy Survey, was found not to be significantly different in the post-academy test (Table 4.28). However, changes in frequency distributions proved to be quite small. In fact, only one female and three male recruits responded differently, on this job task, from the Pre- to the Post-Academy Survey.

Table 4.28.--Male and female recruits' perceptions of the female trooper's ability to testify in court, on the Post-Academy Survey.

Sex	Testifying in Court			Total
	Women Are Better Than Men	Men and Women Are Equal	Men Are Better Than Women	
Male	6	38	2	46
Female	5	7	0	12

$$\begin{aligned} \chi^2 &= 5.36 & df &= 2 & p < .07 \\ \eta^2 &= .29 \\ \eta^2 &= .08 \end{aligned}$$

The significant difference in the technical role measure must be attributed largely to the same conclusions formed in the general role measure, i.e., some male recruits' displeasure with the female recruits' success at the academy, and the fact that physical role perceptions appeared to color recruits' role perceptions on the remaining role measures. The frequency distribution of male recruits on this role measure did indicate an overall acceptance of female troopers' ability to perform the technical function of police work at the conclusion of the academy.

Similarly, it was also believed that the female recruits' continued liberal role definition on this measure may have been attributed to their successful performance at the academy, as well as the male recruits' overall acceptance of the female troopers' ability to perform this function.

In sum, results of the Post-Academy Survey indicated that male recruits were of the opinion that female troopers could not successfully complete with male troopers in the physical aspects of police work, whereas female recruits were almost equally split on this measure. The physical measure, both at the start and conclusion of the academy, can be seen as a source of inter-sender conflict for female recruits.

Male recruits tended toward a more restrictive role for female troopers on the general role measure,

and female recruits tended toward a more liberal role definition, although the changes were slight. Despite the small changes in frequency distributions, male recruits were generally more supportive of the ability of female troopers on the general role measure. The occurrence of a change in frequency distributions was attributed to the need of some male recruits to deprecate female success, as well as to the contaminating effect of the physical role measure. Female recruit support for themselves in the technical role measure is attributed to their success at the academy and the general support provided by male recruits.

The significant difference found on the technical measure, which was composed of such items as first-aid, firearms, driving, and so forth, was also contrary to the null hypothesis. Female recruits maintained their original overall nonrestrictive role definition on this measure, but male recruits became more restrictive of this role; however, it was found that the majority of male recruits did support the female trooper's ability on tasks making up this measure. Again, the same criteria or logic incorporated to explain the findings of the general role measure seem relevant in explaining the findings on the technical measure. That is, through personal observation it appeared that male recruits became more

restrictive because of the displeasure of some males at seeing females succeed, and the influence of the physical role on other role perceptions. It was felt that female recruits continued their nonrestrictive role definition because of their successful performance and also because of the overall support of the male recruits.

The findings therefore suggested that: (1) the academy experience had little effect on role perceptions; (2) males were more restrictive of the female trooper's role than were female recruits; (3) except for the physical role measure, the "majority" of male recruits defined the female trooper's role rather broadly; and (4) inter-sender conflict existed on all three role measures.

### Hypothesis 3

Neither male nor female recruits' perceptions of the female trooper's role will be altered as a result of the academy experience.

In an effort to determine statistically if the academy experience significantly affected role perceptions of male and female recruits, the three role measures were analyzed by using the Cochran Q-test.<sup>9</sup> Results indicated

<sup>9</sup> No Cochran Q-test was tabulated for the male physical role measure because all male subjects, on both the Pre- and Post-Academy Surveys, reported that males were better than females on this measure.

The reader should also be alerted to the fact that the researcher found it necessary to collapse the data into 2 x 2 contingency tables. This was necessary

that the null hypothesis was retained on each role measure. As Tables 4.29 through 4.33 show, no significant difference was found between the role definitions of male and female recruits on the Pre- and Post-Academy Surveys.

It was felt that the academy experience did not change the role perceptions of the recruits for the following reasons: Male recruits originally perceived female troopers as being physically less capable than male troopers on the physical role measure. Their continued perception of the male trooper's advantage in the situations or job tasks used as components of this measure was not surprising. Earlier discussion indicated that although female recruits could successfully complete the physical requirements of the academy, for the most part they did not perform as well as the majority

---

for the following reason. While the Cochran Q-test is applicable to r by k tables, the Michigan State University computer program for this nonparametric test was developed to do computations in the 2 x 2 matrix format only. Therefore, the collapsing of the data was mandatory in most cases. When data was collapsed those recruits reporting that "men and women were equal" were equally divided and placed into the categories "men are better than women" and "women are better than men."

The Cochran Q-test is an extension of the McNemar test for significance of changes, and is appropriate for "before and after" designs in which each person is used as his or her own control. For additional discussion of the properties of both the McNemar test for the significance of changes and the Cochran Q-test consult Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences (New York: McGraw-Hill Book Company, 1956), pp. 63-67, 161-66.

Table 4.29.--Male recruits' perceptions in the Pre- and Post-Academy Surveys on the general role measure.

Role Perception	Pre-Academy Survey	Post-Academy Survey
Men are better than women	20	22
Women are better than men	26	24

Cochran Q = .29      df = 1      p < .60  
 Total cases = 46

Table 4.30.--Male recruits' perceptions in the Pre- and Post-Academy Surveys on the technical role measure.

Role Perception	Pre-Academy Survey	Post-Academy Survey
Men are better than women	19	20
Women are better than men	27	26

Cochran Q = .14      df = 1      p < .71  
 Total cases = 46

Table 4.31.--Female recruits' perceptions in the Pre- and Post-Academy Surveys on the physical role measure.

Role Perception	Pre-Academy Survey	Post-Academy Survey
Men are better than women	10	8
Women are better than men	2	4

Cochran Q = 2.00      df = 1      p < .16  
 Total cases = 12

Table 4.32.--Female recruits' perceptions in the Pre- and Post-Academy Surveys on the general role measure.

Role Perception	Pre-Academy Survey	Post-Academy Survey
Men are better than women	11	12
Women are better than men	1	0

Cochran Q = 1.00      df = 1      p < .32  
 Total cases = 12

Table 4.33.--Female recruits' perceptions in the Pre- and Post-Academy Surveys on the technical role measure.

Role Perception	Pre-Academy Survey	Post-Academy Survey
Men are better than women	11	11
Women are better than men	1	1

Cochran Q = 0      df = 1      p = 1.00  
 Total cases = 12

of men in the class. Females were seen as physically weaker by male recruits, and evidence provided in Chapter I would substantiate this role perception presented by male recruits. However, whether their weaker physical nature was in truth an indication of the female trooper's inability to perform equally as well as males in the patrol function is a question yet to be answered.

It is important to consider that recruits were given situations in the physical measure implying either that force was to be used or that the potential for its use was present. Therefore, it is believed that respondents did not consider the female trooper's ability to calm a situation to such an extent that force would not be needed. The job tasks given in the questionnaire to recruits set the stage for violent confrontation in which

a great deal of strength might be needed, and it is logical to contend that the recruits analyzed the situation in the light in which it was presented to them.

With this in mind, two complementing features help to explain male role perceptions at the conclusion of the academy: (1) the previously mentioned over-all weaker physical performance by females at the academy, at least as subjectively perceived by male recruits; and (2) the male recruits' contention that merely being able to pass the physical tests at the academy was not enough. To male recruits, the important aspect of physical strength revolved around those few critical situations occurring while on patrol. These contentions not only explain the male recruits' conservative position at the conclusion of the academy, but also suggest that even if females had excelled in the physical measure--i.e., compared equally or performed better than males--male recruits' role perceptions would have changed little if at all on this measure, because performance at the academy is not closely linked to expected performance on the road. Furthermore, with reference to these contentions, it is possible that male recruits' perceptions might not change in the near future. Personal observation while at the academy and

at various State Police posts during the pre-testing phase of this project suggests that a change in male role perceptions on this measure will depend on female troopers' performance on patrol, as well as upon general societal trends. That is, if females perform adequately in physical tasks on patrol, and the socialization process is altered throughout society to accept females in these types of work, then acceptance of females in the physical role may ensue.

The crux of the problem revolves around the perception of the physical role of the police officer. Evidence reported in Chapter I demonstrated that the police function is, by and large, nonphysical. Even though male recruits were in general agreement with this contention, they still reported that if a physical situation occurred, despite the low probability of its occurrence, they preferred having the physically stronger male partner. The general assertion among male recruits was that in perilous situations physical stamina might make the difference between surviving and not surviving.

Analysis of a specific component of the equality measure in the Academy Recruit Survey substantiated this conclusion (Table 4.34). The vast majority of males and females believed that male recruits did not accept females as equals.

Table 4.34.--Male recruits' acceptance of female recruits as equals.

Sex	The Male Recruits Accept the Females as Equals		Total
	Disagree	Agree	
Male	40	6	46
Female	9	3	12

$$\begin{aligned} \chi^2 &= .33 & df &= 1 & p &< .57 \\ \eta^2 &= .13 \\ \eta^2 &= .02 \end{aligned}$$

Through the techniques of both participant observation and quantitative analysis, the evidence suggested that this inequality was based largely in the physical role of the trooper function.

Possibly, the more difficult condition to analyze was that presented by the female recruits. On both the pre- and post-academy tests, female recruits were split in their perceptions of the female trooper's physical role. From the results gathered in interviewing female recruits, it was felt that their early socialization process greatly affected their responses. Although the female recruits were not too restrictive in their role concepts concerning female troopers, it was obvious that some females were far more certain of the equality of the sexes on all measures than were others. Apparently some female recruits (and some male recruits as well)

did not distinguish between specific job tasks, but considered their sex competent in all aspects of performance. Perhaps the females' perception, whatever its origin, was accurate with regard to the female trooper's ability to perform physical tasks. It should be remembered that previous research on female officer performance in physical job tasks revealed that, thus far, females have performed successfully the physical tasks required of them on patrol.

The frequency distributions reported on the general and technical role measures showed that on the Pre-Academy Survey the vast majority of male and female recruits were confident of the female trooper's ability to perform these functions adequately. Thus, provided that circumstances did not emerge during the academy period to suggest that the female could not perform these tasks, there was no reason for either male or female perceptions to change significantly.

It was interesting that male recruits did distinguish, overall, among roles and between job tasks. Although they were quite convinced on both surveys that women could not handle as well as men those situations requiring physical strength, male recruits did agree, on the whole, that women could perform most other police functions. Finally, a combination of the relative youth

of the recruits, their above-average education, their childhood socialization process, and the female recruits' performance were believed to have been the major reasons for the relatively consistent role perceptions of the male and female recruits.

#### Hypothesis 4

There will be no difference between male and female rankings on the peer evaluation forms.

Twice during each trooper school, recruits are required to complete a one-page evaluation sheet on each person in their particular group. Groups are formed early in the academy, largely according to weight classification, so that competition in physical exercises such as defensive tactics and boxing is on a relatively equal basis. These group structures are also used in assigning work details, which are rotated regularly from one group to another throughout the training process. Thus, individuals in each group become well acquainted early in the academy.

At the halfway point and at the end of the academy, each recruit completed an evaluation form on each member of his/her group. These forms were analyzed and scored by the academy staff, and each recruit was ranked according to the overall evaluation by his/her peers. The form was used to help in determining how

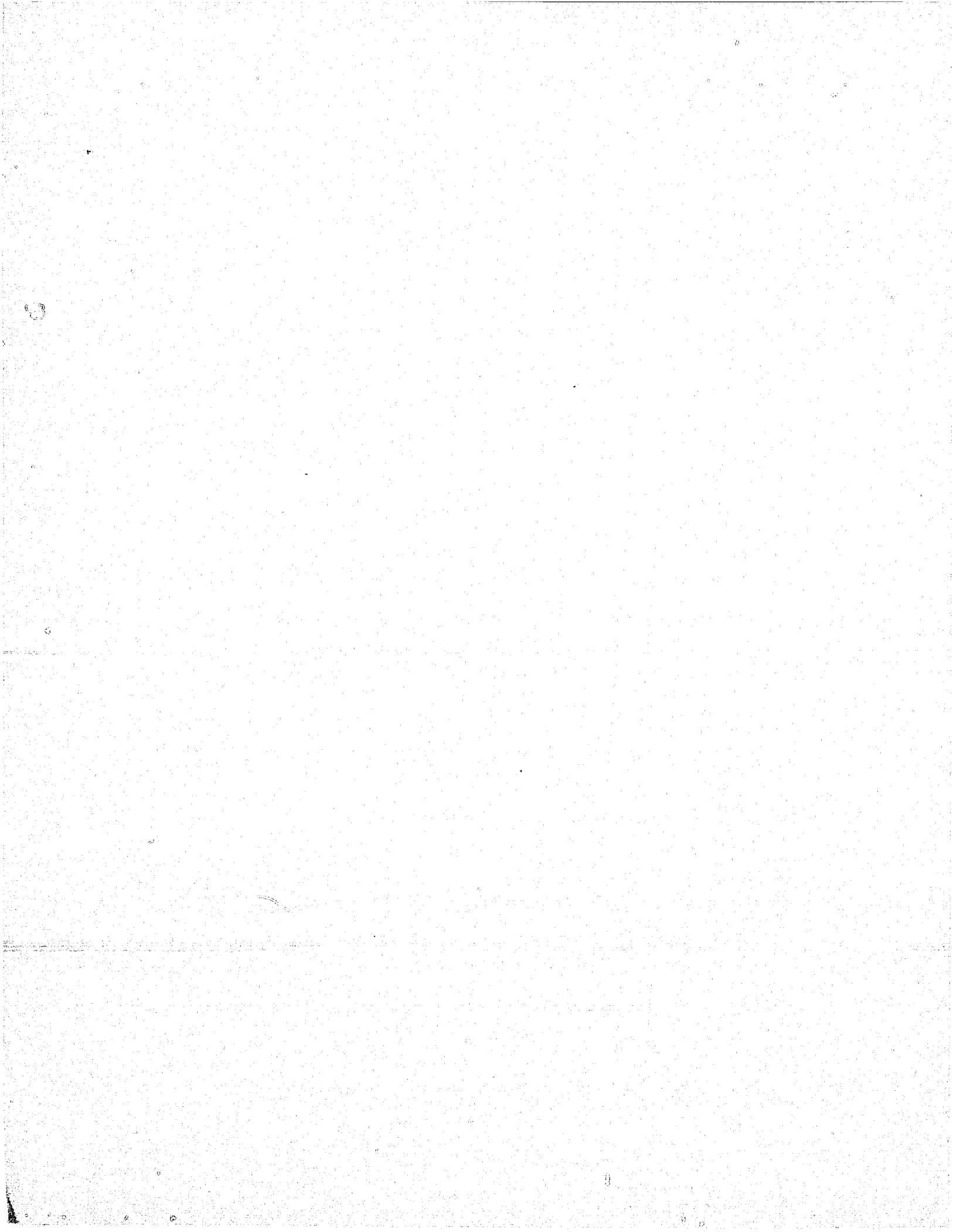
peers perceived each recruit's overall potential to become a successful trooper. The results of these evaluations were shared privately with each recruit so he/she could be aware of the overall peer evaluation.

This form was used as an overall role definition measure for recruits; i.e., the questions on the form concentrated on areas the State Police feel are important attributes for a trooper to have if he/she is to reflect the image of a state trooper (Appendix G). It was felt that if female recruits' rankings on these forms differed significantly from those of male recruits, females would not be accepted equally in the role of state trooper, and thus inter-sender conflict would exist.

Hypothesis 4 was rejected with the Kendall correlation coefficient on both the first ( $\tau = .25$ ,  $p = .003$ ) and final ( $\tau = .29$ ,  $p = .001$ ) peer evaluation. Thus, this measure suggested that female recruits were not thought of as equal with their male counterparts in the trooper function; however, it was felt that the perception of the physical role of the trooper was a major influence on the overall role definition of female troopers. This was evidenced consistently throughout earlier discussion on the three role measures, so it was obvious that inter-sender conflict among recruits did exist concerning the female trooper's role.

It was interesting to discover that on the final peer evaluation form two female recruits ranked first and third, respectively, whereas the remaining female recruits ranked in the lower 50th percentile. Although this may, to some extent, have been representative of the fact that female recruits were concentrated in the lower-weight groups, and that a number of males in higher-weight groups did not evaluate females specifically, it was obvious that male recruits did not stereotype the police function solely as a male occupation. Apparently the recruits were willing to evaluate each person, male or female, separately on performance issues, rather than restricting themselves solely to making broad generalizations on the basis of sex.

A similar finding was discovered during the pre-testing phase, discussed in Chapter III, of the Michigan State Police Female Trooper Project. In the State Police, the academy is the rite de passage of troopers, and each academy is evaluated separately by the troopers stationed throughout the state. Although there were no concrete means of evaluating each recruit class, it became apparent that, in general, classes succeeding that of the particular trooper being interviewed were thought to have been easier (physically) and that these newer troopers were therefore not as capable



**CONTINUED**

**2 OF 3**

as those troopers graduating with the interviewee's class or graduates from academies preceding that of the interviewee. However, even though a trooper responded that troopers from a particular academy were not capable, later in the conversation it was not unusual for the interviewee to praise the performance and intuitive capabilities of a specific individual who had been graduated from the class previously scorned.

Thus, like most of society, troopers and recruits categorize a particular group of people if general questions are asked or under general conditions; but when specific instances (different role measures) or specific individuals (male or female) are under discussion, they will discriminate on an individual basis. Therefore, it is possible that these female troopers could be accepted by their male counterparts at the State Police post to which they are assigned and in the organization. Evidence suggests that female troopers, like male troopers, will be evaluated largely on an individual basis by most State Police personnel.

#### Summary of Results

An overview of the findings indicates that the null hypotheses in Hypothesis Group I were generally retained. No significant difference was found between the male and female recruits' frequency distribution of

their average academic or average technical scores. In like fashion, no difference was found between the sexes on the frequency distribution of their average aggressiveness component of the physical measure. However, certain limitations were reported concerning these results: (1) A significant difference between the sexes in certain courses was discovered, and, equally important, frequency distributions reported in contingency tables indicated that a number of male and female recruits failed to pass certain courses given at the academy. While various factors could cause these circumstances, the findings do suggest that additional research be conducted to determine the cause of these situations. The implementation of such research is important because (a) failure in certain courses may be related to job performance, i.e., failure in certain driving courses may be associated with increased traffic accidents; (b) it may be found that teaching procedures and/or evaluation techniques need improvement; and (c) considerable expense is incurred in training recruits, and if recruits fail to pass certain courses in large numbers, then courses should be evaluated. If either course instruction or testing procedures are faulty then the necessary changes should be made. (2) Not only was the ability component of the physical measure found to

differ significantly between the sexes, but also, as a result of evaluation techniques used at the academy, the entire physical measure was brought into question from a research perspective. The physical measure was questioned due to (a) the lack of operational definitions for ability and aggressiveness; and (b) the fact that interrater reliability of the judges scoring these measures was not determined. (3) Subjective evaluation of physical ability used by male recruits and by approximately one-half of the female recruits indicated that females are not as strong physically as their male peers.

In Hypothesis Group II the majority of null hypotheses were rejected. A significant difference between male and female perceptions of the female trooper's physical and general role measures was found on the Pre-Academy Survey, and the technical role measure was significant at  $p < .08$ . On the Post-Academy Survey, all three role measures were found to differ significantly between the sexes. Consistently, male recruits were more restrictive of the female trooper's role than were female recruits; however, additional analysis uncovered the fact that, although female troopers were not considered as capable as male recruits on physical measures, the majority of male recruits thought female troopers were competent in the general and technical role

measures. Thus, most males were more likely to distinguish between female trooper roles and specific job tasks than were female recruits.

Finally, not only did the academy not significantly change role perceptions of either male or female recruits, but also, overall, females were not thought of as equals by the male recruits. It was concluded that this perception was largely a result of a contaminating effect of the physical role on other aspects of the trooper function. Further analysis did reveal, however, that recruits were willing and capable of judging one another on an individual basis, rather than categorizing performance solely by sex.

Through the use of quantitative and qualitative research techniques, the results did indicate that inter-sender conflict did exist on each role measure, as defined by the researcher, utilized in this study. In addition, it was found that although only a small number of male recruits at the academy felt that women did not belong in the road patrol function, their impact on the organization and female recruits was great.

## CHAPTER V

### DISCUSSION

#### Performance Measures

Little else need be said at this time with reference to the performance measures employed in this study. Data supported the contention that there was no significant difference between male and female recruits on the academic or technical performance measures incorporated in this study. The physical performance measure was deemed unreliable because of the fact that the ability and aggressiveness components of the physical measure were not operationally defined and because interrater reliability was not determined for the judges scoring these courses. However, with the results obtained, both quantitative and qualitative, on the physical performance measure, there is every indication that the female recruits were physically weaker than male recruits at the 90th Michigan State Police Training Academy. Finally, it was suggested that additional research be conducted to determine why a large number of recruits fail to successfully complete certain academy courses.

It must be pointed out that few academies, and possibly few institutions of higher learning, extend as

conscientious an effort to validate course content as does the Michigan State Police Academy. Frequently, recruits were requested to provide written comments on course content and presentations. In addition, in-service training of staff members and updating of course content is done on a continuous basis, so that courses may be improved. However, considering the technical nature of some courses, the inherent difficulties present in training certain skills, and the lack of scientific literature on training, especially with reference to the training of women,<sup>1</sup> it could prove beneficial for any law enforcement agency to utilize professional services for curriculum evaluation and development.

#### Role Measures

The most controversial segment of this paper revolves around the role perceptions of male and female recruits; consequently, a number of issues are in need of further examination.

---

<sup>1</sup>Three texts especially useful in developing training and instructional techniques were Irwin I. Goldstein, Training: Program Development and Evaluation (Monterey, California: Brooks/Cole Publishing Company, 1974), *passim*; Robert H. Davis, Lawrence T. Alexander, and Stephen L. Yelon, Learning System Design: An Approach to the Improvement of Instruction (New York: McGraw-Hill Book Company, 1974), *passim*; Robert F. Mager, Preparing Instructional Objectives (Belmont, California: Fearon Publishers, Inc., 1962), *passim*.

Although each role measure indicated the existence of inter-sender conflict, the physical role measure produced the greatest degree of role disparity. In fact, the evidence suggested that the physical role was not only the most controversial, but also influenced or contaminated the perception of other role measures, especially with regard to male recruits.

The logical question to ask is, Why does the physical role, the role least used by police officers, influence the role perceptions of recruits to such an extent? This phenomenon can be linked closely to the police function in American society. Even though the occupational routine of police officers generally does not include the use of force or the need for strength, the police officer is still required, on occasion, to exercise the physical role,<sup>2</sup> a role that may vary from pulling a victim from a burning car to controlling a desperate felon. However, it has been found that the ever-present threat of physical harm to a police officer greatly shapes the working personality. As Skolnick pointed out, ". . . the element of danger is so integral to policemen's work that explicit recognition might induce emotional barriers

---

<sup>2</sup>William A. Westley, "Violence and the Police," in Crime and Justice in Society, ed. Richard Quinney (Boston: Little, Brown and Company, 1969), p. 207.

to work performance."<sup>3</sup> In fact, Bayley and Mendelsohn found,

The behavior of police officers is partially affected by their perception of danger to themselves. The greater their anxiety, the less likely they will be to take chances, the more likely they will be to demand that events run as they think they should, and the quicker they will be to act to forestall injury to themselves.<sup>4</sup>

Early in the academy experience, and consistently throughout it, recruits were cautioned by staff personnel about the physical aspects of police work, the danger inherent in patrol duties, and the need to be consistently alert for signals, "symbolic assailants," indicating danger. Additional stimuli came from fellow recruits who previously had been patrol officers, and from recounting incidents in which policemen had lost their lives. Such situations encouraged the development of concern for personal safety and aided in the occurrence of a psychological state that emphasized the "danger" in police work. In fact, the preoccupation with danger and personal safety is common among most police officers.

---

<sup>3</sup> Jerome H. Skolnick, Justice Without Trial: Law Enforcement in Democratic Society, 2nd ed. (New York: John Wiley and Sons, Inc., 1975), p. 47.

<sup>4</sup> David H. Bayley and Harold Mendelsohn, Minorities and the Police: Confrontation in America (New York: The Free Press, 1968), p. 94.

With this particular set of circumstances, it is not difficult to understand the recruits' conservative definition on the physical role measure. Females usually are physically weaker than men, and although recruits were aware of the low probability of actually encountering a life-and-death situation in which physical strength was an overriding issue, they were more certain that they would be required physically to subdue drunks and other belligerent citizens.<sup>5</sup> Therefore they felt that the physically stronger male would be more capable in such situations, and felt justified in restricting the female trooper's role in these job tasks--a limitation that was reflected in the recruits' overall opinion that the trooper function is accomplished better by male troopers.

Why some females were of the opinion that female troopers were equal to male troopers on the physical measure is difficult to surmise, although three explanations seem credible: (1) These females felt they could incorporate various verbal or physical techniques to successfully overcome violent, potentially violent, or emergency situations; (2) they were confident of their ability to deal with these types of job tasks because of their success in passing physical entrance and academy requirements; and (3) some females may not have

---

<sup>5</sup> For discussion of this see Jonathan Rubinstein, City Police (New York: Ballantine Books, 1973), pp. 272-73.

been socialized by the academy to accept the "danger syndrome"; i.e., although some females were aware of the dangerous aspects of policing, they did not allow it to be an overriding influence on their thinking about police work. This is an important factor, for as Bayley and Mendelsohn indicated, "The emphasis upon danger in police work, while it cannot be neglected entirely, can perhaps be reduced so as to conform more accurately with the operational requirements of the job."<sup>6</sup> A more realistic vision by police officers of the police function could have resounding effects on the performance of officers, the agencies' image, and the acceptance of females into the police environment.

Significant Others' Effect on Role Definitions of Recruits

Early in Chapter IV, it was indicated that the role set under study was limited to recruits only. At this time it is appropriate to discuss quantitative findings related to the staff's effect on role definitions. Naturally, male staff members were somewhat skeptical of the ability of female recruits to perform the physical job tasks of the police officer, although they were aware of the performance of the few female troopers already working on the road, on vice

---

<sup>6</sup> Bayley and Mendelsohn, Minorities and the Police: Confrontation in America, p. 98.

assignments, and on other trooper duties. However, the administration made clear to the staff that female recruits were to be treated equally with males and that no special privileges were to be afforded them.

Consistently throughout the academy, female recruits were subjected to the same physical, academic, and technical requirements as male recruits. Females were given leadership tasks and work details and were subjected to stressful situations on an equal basis with the men; the staff, later in the academy and on a personal basis, accepted the females equally with the males. Perhaps the most surprising component of the entire academy process was the staff members' overall acceptance of females into the State Police milieu.<sup>7</sup> Not only were females accepted; they were given the respect afforded male recruits who completed the academy rite de passage. However, even after female recruits had completed the academy, male staff members were still uncertain about their physical abilities. In summation, with the exception of the physical role of policing, the staff at the academy was supportive of the female trooper's role in the State Police. The actual effect

---

<sup>7</sup> Similar findings were reported by Judith M. Galloway, "The Impact of the Admission of Women to the Service Academies on the Role of the Woman Line Officer," American Behavioral Scientist (May/June 1976): 654.

of the staff on recruit role perceptions is unknown, but their actions at the academy were predominantly supportive of the female trooper's ability.

The academy experience is an important segment of the trooper's professional career. It is there in the academy that the recruit develops the camaraderie for which the department is well known, and it is there in the academy that the department begins to develop the trooper's role definition of the trooper function. However, other role senders must also be considered as time elapses. For example, a number of troopers have reported to me that their field training officer influenced their perception of the police function in many ways. The new trooper's work group, peers, and post commander will also affect his/her role definition. Family, friends, and societal influences also shape the role perceptions of troopers. It is, therefore, imperative that research on the definitions by male and female troopers of the female trooper's role be continued in the years ahead in conjunction with research on performance measures, so that a better understanding of the implications of female police officers in the police organization can be achieved.

#### Role Conflict

If inter-sender conflict is compounded in the field, increased staff dissension, transfers, increased

absences, lower performance, and a number of other negative side effects could result; therefore it is important that conflict be controlled to as great an extent as possible by the State Police.

Evidence did demonstrate that inter-sender conflict existed at the academy, with particular reference to the physical role measure; however, the majority of recruits were willing to accept females in the remaining roles of the state trooper. Similar results were obtained in the pilot study of the project. For the most part, troopers in the field were willing to accept females in all but the physical role, but a small number of troopers felt the State Police trooper function was no place for a woman. It was interesting that numerous male troopers who had worked with female troopers or had heard of their performance indicated they would be just as willing to go into a dangerous situation with a female partner as they would with any male partner. Thus, it is possible, if steps are taken to control inter-sender conflict, if qualified females become troopers, and if the societal trend toward equality continues, that females may some day be accepted fully into the trooper function.

Recommendations

Although each of the following recommendations have been suggested previously, either implicitly or specifically, they are presented once again for the reader's consideration:

1. Continued research on the socialization process of female troopers.
2. Continued maintenance of sexual equality, i.e., having each sex perform equal duties and accept equal responsibilities, both in the academy and in the field.
3. The review of certain courses and evaluation procedures, with particular efforts extended toward developing appropriate defensive-tactics techniques and training methods for females.
4. Further research efforts on the effect of female officers on the organization, policing style, and public opinion.

Additional Avenues for Research

Studies reported in Chapter II indicated that female officers had a more calming effect than males on potentially violent situations, and that women were less likely to challenge or be challenging to a citizen being questioned. Further research in this direction is needed. If females do have this calming effect, it should be

utilized to the advantage of police departments. Research questions to be asked could include: (1) Why do women have this calming effect, i.e., is it a result of cultural norms? More specifically, as a result of the socialization process of the American culture, do women actually present themselves in a less challenging manner, or do citizens initially react differently when approached by a female officer and thus set the stage for a calm encounter? (2) If socialization is a factor, what effect can be expected over time? (3) Is the calming effect of female police officers a result of their weaker physical stature? (4) Is this calming effect the result of a combination of each of the above factors? (5) Under what type of police situations do female officers encourage this calming effect most? (6) Does this calming effect present itself more when a female officer is working alone, with another female officer, or with a male officer?

Considering the findings in this study and the previous research conducted on female officers, the questions of importance at this time are concerned not necessarily with the issue of whether women can perform the police patrol function, but should be slanted more in the direction of: (1) How best can the female officer

be utilized?<sup>8</sup> (2) What methods of transition and what organizational policies create the least inter-sender conflict? (3) What training techniques best prepare the female officer for police work? and (4) What effect do females have on the police function and organizational milieu?

#### A Comparison of Findings

An important question yet to be asked is, what did this research endeavor add to the already existing literature on female police officers? Naturally, as in most social science research, the answer to this query is no simple response.

Similar to the Sherman and California Highway Patrol studies,<sup>9</sup> little difference was found to exist

<sup>8</sup> For example, a study conducted by Johns with the Michigan State Police found, among other things, that "Not only did troopers with female partners make significantly fewer non-reactive errors, they made significantly more correct shooting responses to the shooting sequences. In other words, with female partners, troopers were able to respond correctly more often when the situation required them to shoot. It is possible that the female presence precipitates a level of arousal which makes the trooper more reactive to cues of danger present in the situation." Thus Johns concluded, "... Since having a female partner increases appropriate motor responses in males, it is possible that using female partners particularly in high stress, dangerous assignments would result in fewer police deaths." Christina J. Johns, "Effects of Female Presence on Male Police Officers' Shooting Behavior" (Master's thesis, Michigan State University, 1976), pp. 35-36, 45.

<sup>9</sup> Lewis J. Sherman, "An Evaluation of Policewomen on Patrol in a Suburban Police Department; Journal of Police Science and Administration (December 1975): 336; California Highway Patrol, Women Traffic Officer Project: Final Report (Sacramento: Department of California Highway Patrol, 1976), p. 36.

between the sexes in performance measures at the Michigan State Police Academy. However, although the California Highway Patrol project reported that males exceeded females in the physical aspects of the academy, quantitative analysis utilized in this project did not allow for conclusions, regarding the physical performance of females, to be drawn. Qualitatively, however, the evidence does support the contention that female recruits were physically weaker than their male counterparts in the physical measures, as defined, in this study. Physiological studies conducted on women as well as studies of female police officers reported in Chapter II also support the contention that females, overall, do not have the aerobic or anaerobic capacity of the average male. In addition, various research projects have attempted to evaluate the female officer's physical ability, but the scarcity of such incidents makes the physical aspect of the police officer's job difficult to measure. However, as reported in the Sherman and Pennsylvania State Police studies, female officers did perform acceptably in those few critical incidents recorded by these researchers.<sup>10</sup> A word of caution must be injected at this point.

---

<sup>10</sup> Sherman, "An Evaluation of Policewomen on Patrol in a Suburban Police Department," p. 435; Pennsylvania State Police, Pennsylvania State Police Female Trooper Study (Harrisburg, Pennsylvania: Pennsylvania State Police, 1974), p. 20.

Although present evidence suggests that women can perform the physical aspects of policing, certain restrictions to this statement must be evidenced: (1) neither the Sherman nor the Pennsylvania State Police studies discussed or fully defined what they meant by physical aspects; (2) few "physical" incidents were observed and recorded; and (3) no data were presented to indicate whether female officers handled these situations with or without male officer assistance. Certainly more scientifically rigorous research projects of female performance in the physical aspects of the academy and the road are needed. Not only will this type of research aid in analyzing the female officer's ability in the physical role, but it will possibly lead to new patrol tactics, methods of interpersonal communication, and defensive-tactics techniques. Findings which may not only aid male and female police officers in the performance of their duties, but increase public support of police agencies as well.

Role perceptions found among the Michigan State Police recruits were also quite interesting in the light of past research. Greenwald reported that male officers felt that women did not belong in the patrol function,<sup>11</sup>

---

<sup>11</sup> Judith E. Greenwald, "Aggression As a Component of Police-Citizen Transactions: Difference Between Male and Female Police Officers" (Ph.D. dissertation, City University of New York, 1976), p. 117.

while male recruits at the Michigan State Police Academy were more open-minded. To male recruits at the Michigan State Police Academy the female trooper role was restricted largely only from the physical role of the state trooper. Although inter-sender conflict did exist on each role measure, the vast majority of males were supportive of the technical and general abilities of the female trooper. Certainly the male recruits' socialization process affected their role perceptions concerning the acceptableness of females in the road patrol function. But the fact that male recruits continued, overall, their support of females in the general and technical roles was felt, by the writer, to have been partially the result of the performance of females in the academy.

While some previous research shows that males become more supportive of female officers on patrol over time, other studies have found that the opposite occurs. In fact, it was reported in the Washington, D.C., project that male officers working with female officers had a lower opinion of their ability in the patrol function than did male officers not working with the female officers.<sup>12</sup> Through personal observation and analysis of

---

<sup>12</sup> Peter B. Block and Deborah Anderson, Police-Women on Patrol: Final Report (Washington, D.C.: Police Foundation, 1974), p. 7.

frequency distributions it was apparent that male recruits at the 90th Michigan State Police Academy were somewhat more restrictive of the female trooper's role after the 12-week academy. Female recruits tended to expand the role of the female trooper. While it is difficult to determine specifically why differences, between studies, in male officer acceptance of females in the road patrol function exists, personal observations indicate three possible reasons: (1) Age differences among male officers, i.e., results suggest that younger male officers will be more open-minded concerning the use of females in the police patrol function. (2) The organizational milieu is thought to have a large impact on the officers' attitude toward female officers. For example, if administrative heads do not develop a supportive atmosphere for female officers, support for them among the ranks will certainly suffer. (3) Female officer performance on the road and female officer personableness is thought to affect male officer role perceptions. Experience with the State Police, as well as various other police agencies, indicated that, like fellow male officers, females are evaluated by their male peers on their job performance and their ability to "fit in" the social setting of the work group. As a result of political pressures, and various other circumstances, females

have been hired in some departments who were unable to perform the job and/or who were incapable, for whatever reason, to "fit in" the social milieu of the work group. Certainly negative feelings would be reported by fellow male officers under these conditions. In fact, perceptions of other female officers could be expected to reflect negatively toward the type of female officer just discussed. An important issue to keep in mind is that because of the small number of females in policing, few male officers have personal experience with female officers. Therefore, if a male officer has worked with a poor female officer, then his perceptions of female officers in general may be tainted; of course, the reverse may well hold true, also, but experience indicates that negative perceptions influence male officers more than do positive ones. In addition, reports of poor performance on the part of a female officer is quickly transmitted through the informal and formal organization and thus further taints the impression of other male officers toward female patrol officers. Finally, if male members of the role set are quite vocal about the use of women in the patrol function, their impact on other male officers may negatively affect fellow male officer role perceptions.

Essentially, the final conclusion regarding female recruits is that they can perform acceptably in the police academy. However, the actual relationship between academy performance and behavior on the road is unknown. Successfully completing the academy process is merely an indication that the recruit has the potential of a trainable apprentice. Given the limitations of previous studies concerning the physical performance of female police officers, in conjunction with the quantitative data utilized within this study, the question of the female's physical ability is still, unfortunately, left largely unanswered. Evidence presented in Chapter I does suggest, however, that the average male is physically stronger than the average female. Therefore, it is reasonable to conclude that male officers could perform acceptably at a level of physical exertion above that of a female officer. Hence, three important questions must be carefully considered by police departments, politicians, and researchers alike: (1) How frequently do situations occur in which the average female could not physically cope with a situation in which an average male officer could? (2) of what critical importance are these situations? and (3) are there reasonable alternatives that may be implemented so that women can perform these critical incidents?

Study Limitations

The issue of women in policing is still a relatively new and controversial subject. The accumulation of data on the performance of women in the police function is still quite small and for the most part of questionable worth. Political pressures, biasness, and various other factors have a tendency to combine and affect over-zealous opponents and proponents of women in the patrol function. Often both opponents and proponents, including both researchers and the general public, of women patrol officers have drawn incorrect conclusions, ignored statistical shortcomings, and/or weighted questionable findings more so than the data warrants.

Certainly this study has or will fall prey to these shortcomings despite the author's attempts to restrict them. However, four important points must be kept in mind concerning the generalizability of this study: (1) this study is merely an evaluation of male and female recruits in the 90th Michigan State Police Training Academy, and it is unknown to what extent findings can be generalized across different police departments; (2) the circumstances under which this small sample of men and women were selected differed greatly from previous Michigan State Police Academies; (3) training techniques were altered greatly prior to

the 90th academy; and finally (4) the political atmosphere surrounding the academy training process may have been such that the success of female recruits was at least partially predetermined.

#### Future of Women in Policing

Evidence accumulated thus far suggests that women can perform all aspects of the academy process and the police patrol function, with the exception of the physical aspect of the police officer's job. In fact, research has been conducted which indicates that females have the ability to deal effectively in administrative positions in police departments.<sup>13</sup> However, the future of women in the police environment is contingent upon two major influences: (1) political pressure--if continued pressure by various segments of society is strong enough, despite the physical ability of women, women will, in all likelihood, remain in the road patrol function; (2) future research suggesting that women have the physical ability to be police officers and/or the development and implementation of various training methods which allow women to improve their performance on critical tasks. That is, if it is found that women can

---

<sup>13</sup> Barbara R. Price, "A Study of Leadership Strength of Female Police Executives," Journal of Police Science and Administration (June 1974): 219-26.

perform the physically critical tasks required of police officers, or if alternative training methods can be devised and implemented, which allow women to perform critical tasks at an acceptable level, then women will remain in the patrol function.

Data thus far accumulated indicates that various forms of inter-sender conflict will surface as a result of the introduction and use of female officers. It is important that the organization control this conflict for two reasons: (1) Only with inter-sender conflict controlled will it be possible to fairly evaluate the performance of females in the police officer's job. For example, if inter-sender conflict is not controlled, line staff may not allow females to patrol alone, give them assignments which may require the use of physical force, or they may provide additional backup when a female is sent on an assignment. (2) Organizational effectiveness may be hindered if conflict is allowed to grow and continue. For example, increases in absenteeism, a decrease in work performance, and so forth, may be some of the negative consequences resulting from inter-sender conflict.

If women continue in the road patrol function, and it is the personal belief of the writer that they will, their effect on the police organization will be

dependent on two important factors: (1) the type of female personality that is attracted to work in policing; and (2) the effect the predominantly male organization will have on female behavior. Specifically, over time will a more aggressive, less people-oriented female be attracted to policing? Or will most women joining the ranks of the police officer begin to take on more male-related traits such as aggressiveness? Or, finally, will female officers gradually aid in changing the police environment to a less aggressive, more people-oriented and responsive organization? Evidence presently available provides inconclusive results.

After spending a considerable amount of time researching, interviewing, and studying females in the police environment, my personal impression is that females can provide a useful service to policing. In fact, the introduction of women into policing could benefit the organization greatly if females are given the opportunity to demonstrate their talents at all levels of the organization. Perhaps research will indicate that female officers cannot perform all the essential physical critical tasks of policing. But alternatives such as two-officer patrol, changes in operating procedures, and so on, may allow women to perform successfully in the police patrol function. Certainly,

whether women are found to be capable or not in the physical aspect of policing, the research performed in evaluating female officers' performance may be utilized by police departments to improve various segments of the department, such as the training procedures, patrol tactics, and police/community relations.

**APPENDICES**

**APPENDIX A**

**MICHIGAN DEPARTMENT OF STATE POLICE  
TRAINING DIVISION  
RECRUIT SCHOOL CURRICULUM**

## APPENDIX A

### MICHIGAN DEPARTMENT OF STATE POLICE TRAINING DIVISION RECRUIT SCHOOL CURRICULUM

#### I. ADMINISTRATIVE SECTION

	<u>HOURS</u>
Administrative Matters . . . . .	2
Continuing Education Program . . . . .	1
Classroom Notetaking . . . . .	1
Final Briefing . . . . .	1
Final Inspection and Preparation for Graduation . . . . .	1
Graduation . . . . .	2
Individual Photographs . . . . .	3
Inspection Procedure . . . . .	1
Issue Equipment . . . . .	1
Loyalty Oath and Personnel Matters . . . . .	4
MLEOTC Pre-Test and Post Test . . . . .	2
Program Orientation and Staff Introduction . . . . .	1
Recruit School Rules and Regulations . . . . .	2
<b>TOTAL</b>	<b>22</b>

#### II. LEGAL SECTION

Admissions and Confessions . . . . .	3
Court Functions . . . . .	12
Criminal Law . . . . .	13
Detention and Custody . . . . .	2
Introduction to Constitutional Law . . . . .	2
Juvenile Law . . . . .	3
Law of Arrest . . . . .	4
Law of Evidence . . . . .	10
Mock Trial . . . . .	8
Search and Seizure . . . . .	8
<b>TOTAL</b>	<b>65</b>

III. CRIMINAL IDENTIFICATION AND INVESTIGATION	<u>HOURS</u>
Criminal Investigation . . . . .	20
(Collection and Preservation of Evidence-2)	
(Crime Scene Search-2)	
(Criminal Investigation Techniques-11)	
(Fingerprinting and Latent Print Search Techniques-3)	
(Mock Crime Scene-2)	
Interview and Interrogation . . . . .	3
Narcotics and Dangerous Drugs . . . . .	4
Stolen Motor Vehicles . . . . .	2
Vice Investigation . . . . .	2
TOTAL	<u>31</u>

## IV. GENERAL POLICE SECTION

Barricaded Gunman and Hostage Negotiations . . . . .	3
Blockade and Roadblock Procedure . . . . .	2
Civil Disorders . . . . .	9
Concealed Weapons Law . . . . .	2
Emergency Preparedness - Disaster Control . . . . .	3
Field Notetaking . . . . .	2
Firearms Training . . . . .	44
(Apprehension of an Armed Felon-2)	
(Firearms-35)	
(Heavy Weapons Familiarization-2)	
(Introduction to Firearms-4)	
(Legal Aspects of Firearms-1)	
History and Government of Michigan . . . . .	2
History and Organization of Michigan State Police . . . . .	2
History and Philosophy of Law Enforcement . . . . .	2
Juvenile Offenders . . . . .	4
Patrols . . . . .	28
(Crisis Intervention-2)	
(Domestic Complaints-3)	
(Mechanics of Arrest and Detention-3)	
(Patrol Techniques-17)	
(Stopping Vehicles and Occupant Control-3)	
Police Communications . . . . .	2
Police First Aid . . . . .	43
Report Writing . . . . .	28
TOTAL	<u>176</u>

V. TRAFFIC SECTION	HOURS
Motor Vehicle Accident Investigation . . . . .	30
(Accident Investigation-28)	
(Prosecution in Accident Cases-2)	
Motor Vehicle Law . . . . .	50
(Driver Licensing-2)	
(DUIL Enforcement-2)	
(Motor Vehicle Code-22)	
(Police Alcohol Training-24)	
Techniques and Methods of Traffic Law Enforcement . . .	2
Traffic Direction and Control . . . . .	2
	TOTAL 84

## VI. DRIVER TRAINING SECTION

Driver Training Exercises . . . . .	40
MR-7 Orientation . . . . .	2
Patrol Unit Maintenance . . . . .	1
Precision Driving Techniques Classroom Orientation . .	3
	TOTAL 46

## VII. MILITARY AND PHYSICAL TRAINING SECTION

Defensive Tactics . . . . .	25
(Holds and Releases-20)	
(Boxing-5)	
Military Courtesy . . . . .	1
Military Drill . . . . .	10
Physical Training Orientation . . . . .	1
Physiology of the Human Body . . . . .	2
Water Safety . . . . .	22
	TOTAL 61

## VIII. SPECIAL SUBJECTS SECTION

Character . . . . .	1
Crime Prevention . . . . .	8
Handling Abnormal Persons . . . . .	4
Human Relations . . . . .	8
K-9 Operations . . . . .	1
Police Courtesy and Ethics . . . . .	4
Public Speaking . . . . .	7
Social Services . . . . .	2
	TOTAL 35

IX. EXTERNAL RELATIONS	<u>HOURS</u>
Jurisdiction of Federal Law Enforcement Agencies . . . . .	2
Michigan Corrections, Parole and Probation System . . . . .	3
State Liquor Law Enforcement . . . . .	3
TOTAL	<u>8</u>
X. DEPARTMENTAL POLICY, PROCEDURES, AND ORDERS	
Departmental Orders . . . . .	1
Departmental Rules and Regulations . . . . .	4
Operations Procedures . . . . .	1
Post Operations, Policies and Report Procedures . . . . .	1
Uniform Division Policies and Procedures . . . . .	1
TOTAL	<u>8</u>
XI. EXTRACURRICULAR HOURS	
Examinations and Examination Review . . . . .	20
Lansing Community College Credit Program . . . . .	1
Night Driving Activities . . . . .	4
Night Patrol Activity . . . . .	4
Night P.A.T. Expense . . . . .	4
Personal and Quarters Inspection . . . . .	31
Physical Training . . . . .	31
Practice Graduation . . . . .	2
Spelling and Vocabulary Words . . . . .	6
Travel - Fort Custer . . . . .	4
Typing . . . . .	5
TOTAL	<u>112</u>
ADMINISTRATIVE SECTION . . . . .	22
LEGAL SECTION . . . . .	65
CRIMINAL IDENTIFICATION AND INVESTIGATION . . . . .	31
GENERAL POLICE SECTION . . . . .	176
TRAFFIC SECTION . . . . .	84
DRIVER TRAINING SECTION . . . . .	46
MILITARY AND PHYSICAL TRAINING SECTION . . . . .	61
SPECIAL SUBJECTS SECTION . . . . .	35
EXTERNAL RELATIONS . . . . .	8
DEPARTMENTAL POLICY, PROCEDURES AND ORDERS . . . . .	<u>8</u>
INSTRUCTIONAL SCHEDULE SUB-TOTAL . . . . .	536
EXTRACURRICULAR HOURS . . . . .	<u>112</u>
GRAND TOTAL . . . . .	648

**APPENDIX B**

**RECRUIT BACKGROUND AND  
PERFORMANCE FORM**

APPENDIX B

RECRUIT BACKGROUND AND PERFORMANCE FORM

Form 1  
Page 1

Do Not Mark  
in This  
Space

1. Name: \_\_\_\_\_  
Last \_\_\_\_\_ First \_\_\_\_\_ Int. \_\_\_\_\_
2. Soc. Sec. # \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ (6-9) \_\_\_\_\_
3. Sex: 1. Male \_\_\_\_\_ 2. Female \_\_\_\_\_ (10) \_\_\_\_\_
4. Age: \_\_\_\_\_ (11-12) \_\_\_\_\_
5. Race: 1. Black \_\_\_\_\_ 2. White \_\_\_\_\_ 3. Other \_\_\_\_\_ (Specify) \_\_\_\_\_ (13) \_\_\_\_\_
6. Height: \_\_\_\_\_ 7. Weight: \_\_\_\_\_ (14-15) \_\_\_\_\_  
(16-18) \_\_\_\_\_
8. Marital Status:  
1. Married \_\_\_\_\_ 2. Widowed \_\_\_\_\_ 3. Divorced \_\_\_\_\_ (19) \_\_\_\_\_  
4. Single \_\_\_\_\_ 5. Other \_\_\_\_\_ (Specify) \_\_\_\_\_
9. Have you had military experience?  
1. Yes \_\_\_\_\_ 2. No \_\_\_\_\_ (20) \_\_\_\_\_
10. Number of Children: \_\_\_\_\_ (21) \_\_\_\_\_
11. Father's Occupation (be specific): \_\_\_\_\_ (22) \_\_\_\_\_
12. Father's Income (last year before taxes): \_\_\_\_\_ (23) \_\_\_\_\_
  1. Under \$6,000 \_\_\_\_\_
  2. \$6,000 to \$11,999 \_\_\_\_\_
  3. \$12,000 to \$14,999 \_\_\_\_\_
  4. \$15,000 to \$19,999 \_\_\_\_\_
  5. Over \$20,000 \_\_\_\_\_
13. Highest Education Completed: \_\_\_\_\_ (24) \_\_\_\_\_  
(25) \_\_\_\_\_
  1. High School \_\_\_\_\_
  2. Some College \_\_\_\_\_ Major \_\_\_\_\_
  3. College Degree \_\_\_\_\_ Major \_\_\_\_\_
  4. Some Graduate Work \_\_\_\_\_ Major \_\_\_\_\_
  5. Graduate Degree \_\_\_\_\_ Major \_\_\_\_\_

Form 1  
Page 2

Do Not Mark  
in This  
Space

14. Number of Convictions prior to appointment:

1. Misdemeanor \_\_\_\_\_  
2. Traffic Violations \_\_\_\_\_

(26-27) \_\_\_\_\_  
(28-29) \_\_\_\_\_

15. How many years have you been a resident of Michigan? \_\_\_\_\_

(30-31) \_\_\_\_\_

16. Were you scheduled to begin the Academy September 22, 1975?

1. Yes \_\_\_\_\_ 2. No \_\_\_\_\_

(32) \_\_\_\_\_

17. Have you had previous law enforcement experience?

1. Yes \_\_\_\_\_ 2. No \_\_\_\_\_

(33) \_\_\_\_\_

If yes, how many months of experience do you have? \_\_\_\_\_

(34-35) \_\_\_\_\_

18. What was your last job before entering the Academy? (Be specific) \_\_\_\_\_

(36) \_\_\_\_\_

Form 1  
Page 3

1. Name: \_\_\_\_\_  
Last \_\_\_\_\_ First \_\_\_\_\_ Int. \_\_\_\_\_
3. N/D Test Score \_\_\_\_\_ (37-39)
4. 1074 B Test Score \_\_\_\_\_ (40-42)
5. ACADEMIC TEST SCORES
  - Criminal Law \_\_\_\_\_ (43-45)
  - Motor Vehicle Code \_\_\_\_\_ (46-48)
  - Hist. of Law Enforcement \_\_\_\_\_ (49-51)
  - History of MSP \_\_\_\_\_ (52-54)
  - Criminal Sexual Conduct \_\_\_\_\_ (55-57)
  - Law of Evidence \_\_\_\_\_ (58-60)
  - Administration \_\_\_\_\_ (61-63)
  - Accident Investigation \_\_\_\_\_ (64-66)
  - Firearms (written) \_\_\_\_\_ (67-69)
  - Communications \_\_\_\_\_ (70-72)
  - Arrest, Search, Seizure \_\_\_\_\_ (73-75)
  - Criminal Investigation \_\_\_\_\_ (76-78)  
(Second Card)
  - Court Functions \_\_\_\_\_ (16-12)
  - Traffic Control \_\_\_\_\_ (13-15)
  - Civil Disorder \_\_\_\_\_ (16-18)
  - Spelling Test \_\_\_\_\_ (19-21)
  - Notebook \_\_\_\_\_ (22-24)
  - AVERAGE ACADEMIC SCORE \_\_\_\_\_ (25-27)
6. TECHNICAL TEST SCORES
  - First Aid \_\_\_\_\_ (28-39)
  - Water Safety \_\_\_\_\_ (31-33)
  - Report Writing \_\_\_\_\_ (34-36)
  - Firearms \_\_\_\_\_ (37-39)
2. Recruit School 90 91 92 93
6. (Continued)
  - Precision Driving:
    - Controlled Weaving \_\_\_\_\_ (40-42)
    - Precision Driving \_\_\_\_\_ (43-45)
    - Practical Driving \_\_\_\_\_ (46-48)
    - Evasive Maneuvering/  
Controlled Braking \_\_\_\_\_ (49-51)
    - Average Score for  
Precision Driving \_\_\_\_\_ (52-54)
  - AVERAGE TECHNICAL SCORE \_\_\_\_\_ (55-57)
7. PHYSICAL TEST SCORES
  - Defensive Tactics:
    - Ability \_\_\_\_\_ (58-60)
    - Aggressiveness \_\_\_\_\_ (61-63)
  - Boxing:
    - Ability \_\_\_\_\_ (64-66)
    - Aggressiveness \_\_\_\_\_ (67-69)
    - Average Ability Score \_\_\_\_\_ (70-72)
    - Average Aggressive-  
ness Score \_\_\_\_\_ (73-75)
8. FIRST PEER EVALUATION  
RANKING \_\_\_\_\_ (76-77)  
(Third Card)
9. FINAL PEER EVALUATION  
RANKING \_\_\_\_\_ (10-11)
10. FINAL ACADEMY STANDING \_\_\_\_\_ (12-13)

**APPENDIX C**

**PRE-ACADEMY SURVEY**

MICHIGAN STATE UNIVERSITY

College of Social Science  
School of Criminal Justice  
Criminal Justice Systems Center  
Baker Hall (517) 355-2199

East Lansing Michigan 48824

Dear Recruit:

The Michigan State University Criminal Justice Systems Center and School of Criminal Justice are conducting research for the Michigan State Police to examine the performance of female troopers and to aid in development of new programs to improve this agency. Your cooperation will be of assistance throughout the duration of this project.

The following questionnaire will be the first of a series of questionnaires that you will receive throughout this project. Please answer all questions carefully and honestly. If you are unsure of your answer, give your best estimate.

This questionnaire will be treated as confidential and only you will be aware of your individual responses. Your help in completing this survey is greatly appreciated.

Sincerely,

John H. McNamara, Ph.D.  
Coordinator  
Criminal Justice Systems Center

JHM:mj

Attachment

## PRE-ACADEMY SURVEY

Form 2

Page 1

## Michigan State Police Female Trooper Project

Instructions

How do you expect the female troopers to perform the following tasks compared to male officers with the same training and experience? For each of the following statements, circle the symbol which most closely indicates your feeling:

- W++ I expect that the female troopers will probably perform much better than male troopers with the same training and experience.
- W+ I expect that the female troopers will probably perform somewhat better than male troopers with the same training and experience.
- W=M I expect that the female troopers will probably perform equally as well as male troopers with the same training and experience.
- M+ I expect that the male troopers will probably perform somewhat better than female troopers with the same training and experience.
- M++ I expect that the male troopers will probably perform much better than female troopers with the same training and experience.

Female Trooper Performance Expectations

Coding (Do not  
Mark in This  
Space)

1. Stopping and making arrests of persons wanted for serious (felony) crimes. (20) \_\_\_\_\_  
W++ W+ W=M M+ M++
2. Making physical arrests of persons wanted for routine offenses. (21) \_\_\_\_\_  
W++ W+ W=M M+ M++
3. Using sufficient force to subdue combative persons. (22) \_\_\_\_\_  
W++ W+ W=M M+ M++
4. Using good judgment in issuing citations. (23) \_\_\_\_\_  
W++ W+ W=M M+ M++

Form 2  
Page 2

Coding (Do not  
Mark in This  
Space)

5. Handling and use of heavy weapons such as rifles, shotguns, and tear gas gun. (24) \_\_\_\_\_  
W++ W+ W=M M+ M++
6. Dealing effectively with traffic violators and issuing citations. (25) \_\_\_\_\_  
W++ W+ W=M M+ M++
7. Recognizing traffic violations while operating the Patrol Vehicle. (26) \_\_\_\_\_  
W++ W+ W=M M+ M++
8. Taking command of accident scenes and other emergencies. (27) \_\_\_\_\_  
W++ W+ W=M M+ M++
9. Safely operating a Patrol car in routine and emergency situations. (28) \_\_\_\_\_  
W++ W+ W=M M+ M++
10. Maintaining personal control and dealing effectively with the public under stressful conditions. (29) \_\_\_\_\_  
W++ W+ W=M M+ M++
11. Lifting and carrying prisoners or accident victims. (30) \_\_\_\_\_  
W++ W+ W=M M+ M++
12. Investigating accidents and preparing written accident reports. (31) \_\_\_\_\_  
W++ W+ W=M M+ M++
13. Giving first aid to victims of accidents or other emergencies. (32) \_\_\_\_\_  
W++ W+ W=M M+ M++
14. Verbally expressing thoughts. (33) \_\_\_\_\_  
W++ W+ W=M M+ M++
15. Recognizing, testing, and arresting drivers under the influence of alcohol or drugs. (34) \_\_\_\_\_  
W++ W+ W=M M+ M++
16. Handling and using the revolver. (35) \_\_\_\_\_  
W++ W+ W=M M+ M++

Form 2  
Page 3

Coding (Do not  
Mark in This  
Space)

17. Testifying in court.

W++ W+ W=M M+ M++

(36) \_\_\_\_\_

18. Acting as the second officer in a two-officer team on Patrol.

W++ W+ W=M M+ M++

(37) \_\_\_\_\_

19. What is your overall opinion of the ability of men vs women as Michigan State Troopers?

W++ W+ W=M M+ M++

(38) \_\_\_\_\_

20. Why did you choose to become a state police trooper? 1.

2.

3.

(39) \_\_\_\_\_

(40) \_\_\_\_\_

(41) \_\_\_\_\_

21. Which phase most accurately describes the role of a Michigan State Police Trooper? (circle one)

1. Order Maintenance (Peace Keeping)
2. Service (Public Assistance)
3. Law Enforcement (Strict Adherence to the Legal Code)

(42) \_\_\_\_\_

22. I plan to make my professional career in the Michigan State Police. (circle one)

(43) \_\_\_\_\_

STRONGLY AGREE

STRONGLY DISAGREE

5

4

3

2

1

(6-9) \_\_\_\_\_

BIOGRAPHICAL DATA

Identification Number

\_\_\_\_\_

\_\_\_\_\_

1. Sex: 1. Male \_\_\_\_\_ 2. Female \_\_\_\_\_ (10) \_\_\_\_\_

2. Race: 1. Black \_\_\_\_\_ 2. White \_\_\_\_\_ (11) \_\_\_\_\_  
3. Other (specify) \_\_\_\_\_

3. Marital Status: 1. Married \_\_\_\_\_ 2. Widowed \_\_\_\_\_  
3. Divorced \_\_\_\_\_ 4. Single \_\_\_\_\_ (12) \_\_\_\_\_  
5. Other \_\_\_\_\_

4. Height: \_\_\_\_\_ (13-14) \_\_\_\_\_

5. Weight: \_\_\_\_\_ (15-17) \_\_\_\_\_

Form 2  
Page 4

Coding (Do not  
Mark in This  
Space)

6. Education (check one)

1. High School \_\_\_\_\_
2. Some College (A.A. included) \_\_\_\_\_
3. College Degree \_\_\_\_\_
4. Some Graduate Work \_\_\_\_\_
5. Graduate Degree \_\_\_\_\_

(18) \_\_\_\_\_

7. Age:

1. 21-25 \_\_\_\_\_
2. 26 and over \_\_\_\_\_

(19) \_\_\_\_\_

**APPENDIX D**

**POST-ACADEMY SURVEY**

MICHIGAN STATE UNIVERSITY

College of Social Science  
School of Criminal Justice  
Criminal Justice Systems Center  
Baker Hall (517) 355-2199

East Lansing Michigan 48824

Dear Recruit:

The following is another questionnaire prepared by the Criminal Justice Systems Center and School of Criminal Justice for the Michigan State Police to evaluate female troopers and to assist in the development of new programs to improve this agency. Please read this survey carefully by yourself and answer with your own opinions and to the best of your knowledge. ANSWER EVERY QUESTION. If you are unsure of your answer, please give your best estimate.

This questionnaire will be treated as confidential and only you will be aware of your individual responses.

Your help in completing this survey is greatly appreciated.

Sincerely,

John H. McNamara, Ph.D.  
Coordinator  
Criminal Justice Systems Center

mj

Attachment

## POST-ACADEMY SURVEY

Form 3  
Page 1

## Michigan State Police Female Trooper Project

Instructions

How do you expect the female troopers to perform the following tasks compared to male officers with the same training and experience? For each of the following statements, circle the symbol which most closely indicates your feelings:

- W++ I expect that the female troopers will probably perform much better than male troopers with the same training and experience.
- W+ I expect that the female troopers will probably perform somewhat better than male troopers with the same training and experience.
- W=M I expect that the female troopers will probably perform equally as well as male troopers with the same training and experience.
- M+ I expect that the male troopers will probably perform somewhat better than female troopers with the same training and experience.
- M++ I expect that the male troopers will probably perform much better than female troopers with the same training and experience.

Coding (Do  
not Mark in  
this Space)Female Trooper Performance Expectations

1. Stopping and making arrests of persons wanted for serious (felony) crimes.

W++ W+ W=M M+ M++

(20) \_\_\_\_\_

2. Making physical arrests of persons wanted for routine offenses.

W++ W+ W=M M+ M++

(21) \_\_\_\_\_

3. Using sufficient force to subdue combative persons.

W++ W+ W=M M+ M++

(22) \_\_\_\_\_

Coding (Do  
not Mark in  
this Space)

4. Using good judgment in issuing citations. (23) \_\_\_\_\_  
W++ W+ W=M M+ M++
5. Handling and use of heavy weapons such as rifles, shotguns, and tear gas gun. (24) \_\_\_\_\_  
W++ W+ W=M M+ M++
6. Dealing effectively with traffic violators and issuing citations. (25) \_\_\_\_\_  
W++ W+ W=M M+ M++
7. Recognizing traffic violations while operating the Patrol Vehicle. (26) \_\_\_\_\_  
W++ W+ W=M M+ M++
8. Taking command of accident scenes and other emergencies. (27) \_\_\_\_\_  
W++ W+ W=M M+ M++
9. Safely operating a Patrol car in routine and emergency situations. (28) \_\_\_\_\_  
W++ W+ W=M M+ M++
10. Maintaining personal control and dealing effectively with the public under stressful conditions. (29) \_\_\_\_\_  
W++ W+ W=M M+ M++
11. Lifting and carrying prisoners or accident victims. (30) \_\_\_\_\_  
W++ W+ W=M M+ M++
12. Investigating accidents and preparing written accident reports. (31) \_\_\_\_\_  
W++ W+ W=M M+ M++
13. Giving first aid to victims of accidents or other emergencies. (32) \_\_\_\_\_  
W++ W+ W=M M+ M++
14. Verbally expressing thoughts. (33) \_\_\_\_\_  
W++ W+ W=M M+ M++
15. Recognizing, testing, and arresting drivers under the influence of alcohol or drugs. (34) \_\_\_\_\_  
W++ W+ W=M M+ M++

Form 3  
Page 3

Coding (Do  
not Mark in  
this Space)

16. Handling and using the revolver. (35) \_\_\_\_\_

W++ W+ W=M M+ M++

17. Testifying in court. (36) \_\_\_\_\_

W++ W+ W=M M+ M++

18. Acting as the second officer in a two-officer team on Patrol. (37) \_\_\_\_\_

W++ W+ W=M M+ M++

19. What is your overall opinion of the ability of men vs women as Michigan State Troopers? (38) \_\_\_\_\_

W++ W+ W=M M+ M++

20. Why did you choose to become a Police Officer:

1. (39) \_\_\_\_\_
2. (40) \_\_\_\_\_
3. (41) \_\_\_\_\_

21. Which phrase most accurately describes the role of a Michigan State Police Trooper? (circle one) (42) \_\_\_\_\_

1. Order Maintenance (Peace Keeping)
2. Service (Public Assistance)
3. Law Enforcement (Strict Adherence to the Legal Code)

22. I plan to make my professional career in the Michigan State Police. (circle one) (43) \_\_\_\_\_

STRONGLY AGREE

STRONGLY DISAGREE

5

4

3

2

1

BIOGRAPHICAL DATA

Identification Number

(6-9) \_\_\_\_\_

\_\_\_\_\_

1. Sex: 1. Male \_\_\_\_\_ 2. Female \_\_\_\_\_ (10) \_\_\_\_\_

2. Race: 1. Black \_\_\_\_\_ 2. White \_\_\_\_\_ (11) \_\_\_\_\_

3. Other (specify) \_\_\_\_\_

Form 3  
Page 4

Coding (Do  
not Mark in  
this Space)

3. Marital status: 1. Married \_\_\_\_\_ 2. Widowed \_\_\_\_\_ (12) \_\_\_\_\_  
3. Divorced \_\_\_\_\_ 4. Single \_\_\_\_\_  
5. Other \_\_\_\_\_
4. Height: \_\_\_\_\_ (13-14) \_\_\_\_\_
5. Weight: \_\_\_\_\_ (15-17) \_\_\_\_\_
6. Education (Check one) (18) \_\_\_\_\_
1. High School \_\_\_\_\_  
2. Some College (A.A. included) \_\_\_\_\_  
3. College Degree \_\_\_\_\_  
4. Some Graduate Work \_\_\_\_\_  
5. Graduate Degree \_\_\_\_\_
7. Age: 1. 21-25 \_\_\_\_\_ (19) \_\_\_\_\_  
2. 26 and over \_\_\_\_\_

**APPENDIX E**

**ACADEMY RECRUIT SURVEY**

MICHIGAN STATE UNIVERSITY

College of Social Science  
School of Criminal Justice  
Criminal Justice Systems Center  
Baker Hall . (517) 355-2199

East Lansing . Michigan . 48824

Dear Recruit:

The following is another questionnaire prepared by the Criminal Justice Systems Center and School of Criminal Justice for the Michigan State Police to evaluate female troopers and to assist in the development of new programs to improve this agency. Please read this survey carefully by yourself and answer with your own opinions and to the best of your knowledge. ANSWER EVERY QUESTION. If you are unsure of your answer, please give your best estimate.

This questionnaire will be treated as confidential and only you will be aware of your individual responses.

Your help in completing this survey is greatly appreciated.

Sincerely,

John H. McNamara, Ph.D.  
Coordinator  
Criminal Justice Systems Center

mj

Attachment

## ACADEMY RECRUIT SURVEY

Coding (Do not  
mark in this  
space)

Form 4  
Page 1

- (20) \_\_\_\_\_ 1. Has your marital status changed since you entered  
the Academy?

- (21) \_\_\_\_\_ 1. Yes \_\_\_\_\_ 2. No \_\_\_\_\_. If yes, check one:

1. single to married \_\_\_\_\_
2. married to separated \_\_\_\_\_
3. married to divorced \_\_\_\_\_
4. married to widowhood \_\_\_\_\_

Instructions

Indicate whether you agree or disagree with each of the statements listed below by placing a number on the line to the left of each statement. Please use the following scale:

1. Strongly Disagree
  2. Moderately Disagree
  3. Slightly Disagree
  4. Slightly Agree
  5. Moderately Agree
  6. Strongly Agree
- 

- (22) \_\_\_\_\_ 2. The degree of regimentation present at the Academy is necessary.
- (23) \_\_\_\_\_ 3. The Academy staff is sympathetic to the problems of the Recruits.
- (24) \_\_\_\_\_ 4. The Academy staff treats the Recruits fairly.
- (25) \_\_\_\_\_ 5. The Academy staff lets the female troopers get away with too much.
- (26) \_\_\_\_\_ 6. I like most of the female Recruits in the Academy class.
- (27) \_\_\_\_\_ 7. I like most of the male Recruits in the Academy class.
- (28) \_\_\_\_\_ 8. There is a spirit of cooperation among female Recruits.

Coding (Do not  
mark in this  
space)

Form 4  
Page 2

- (29)            9. There is a spirit of cooperation among male Recruits.
- (30)            10. There is open competition between the male and female Recruits.
- (31)            11. The male Recruits accept the females as equals.
- (32)            12. Many of the male Recruits seem to expect the women to fail.
- (33)            13. The female Recruits are optimistic about their ability to succeed as State Police Troopers.
- (34)            14. The male Recruits are optimistic about their ability to succeed as State Police Troopers.
- (35)            15. The female Recruits seem more anxious than the males.
- (36)            16. The living conditions at the Academy are satisfactory.
- (37)            17. The training at the Academy can be generally related to the actual job of a State Police Trooper.
- (38)            18. I think the Michigan State Police administrators really want female troopers.
- (39)            19. I think the male troopers really want female troopers.
- (40)            20. Until I actually began my training, I really didn't understand the job of a State Trooper.
- (41)            21. During the selection process we were given an accurate picture of what Academy training would be like.
- (42)            22. The physical training at the Academy is too difficult.
- (43)            23. The academic training at the Academy is too difficult.

Coding (Do not  
mark in this  
space)

Form 4  
Page 3

- (44)            24. The technical training at the Academy, such as driving, pistol shooting and fingerprinting, is too difficult.
- (45)            25. I have difficulty controlling my temper at times.
- (46)            26. I don't think I would ever be able to control my temper as much as the Michigan State Police would require.
- (47)            27. I get along well with my roommates.
- (48)            28. I don't think that the female cadets should be required to participate in strenuous physical training during their menstrual periods.
- (49)            29. I feel that a woman can be a State Police Trooper and still be feminine.
- (50)            30. I am under a lot of pressure from home to resign.
- (51)            31. I think the process of selecting the women for this program was very fair.
- (52)            32. I dislike the use of firearms.
- (53)            33. I anticipate no problem learning to drive a car at high speeds.
- (54)            34. Female troopers should be expected to perform the same duties as a male trooper.
- (55)            35. I do not think that I would be reluctant to arrest a person.
- (56)            36. I am able to provide necessary care to my family members during Academy training.
- (57)            37. I am willing to accept long term separation when assigned to a different area in the state.
- (58)            38. I have the aggressiveness needed to be a law enforcement officer.
- (59)            39. There is undue stress placed upon me as a recruit.

Coding (Do not  
mark in this  
space)

Form 4  
Page 4

- (60) \_\_\_\_\_ 40. The morale of this class is high.
- (61) \_\_\_\_\_ 41. I have a fear of being injured.
- (62) \_\_\_\_\_ 42. Mandatory confinement is an essential part of any police training program.
- (63) \_\_\_\_\_ 43. A high degree of stress is essential in any police training program.

What do you feel the Academy staff considers the most important aspect of your training? (rank in the order of importance, 1 being most important and 3 being least important).

- (64) \_\_\_\_\_ 44. Physical prowess (boxing, stamina, strength).
- (65) \_\_\_\_\_ 45. Technical skills (pistol shooting, typing).
- (66) \_\_\_\_\_ 46. Academic performance (written exam).
47. What things about the academy and your experience here do you like best?

- (67) \_\_\_\_\_ 1.
- (68) \_\_\_\_\_ 2.
- (69) \_\_\_\_\_ 3.
48. What things about the academy and your experience here do you like least?

- (70) \_\_\_\_\_ 1.
- (71) \_\_\_\_\_ 2.
- (72) \_\_\_\_\_ 3.
49. What suggestions would you make for the Academy in the future?
- (73) \_\_\_\_\_ 1.
- (74) \_\_\_\_\_ 2.
- (75) \_\_\_\_\_ 3.

Coding (Do  
not mark in  
this space)

## BIOGRAPHICAL DATA:

## Identification #

1. Sex: 1. Male \_\_\_\_\_ 2. Female \_\_\_\_\_ (6-9) \_\_\_\_\_
2. Race: 1. Black \_\_\_\_\_ 2. White \_\_\_\_\_ 3. Other \_\_\_\_\_  
(specify) \_\_\_\_\_ (11) \_\_\_\_\_
3. Marital Status: 1. Married \_\_\_\_\_  
2. Widowed \_\_\_\_\_  
3. Divorced \_\_\_\_\_  
4. Single \_\_\_\_\_ (12) \_\_\_\_\_
4. Height: \_\_\_\_\_ (13-14) \_\_\_\_\_
5. Weight: \_\_\_\_\_ (15-17) \_\_\_\_\_
6. Education (check one):  
1. High School \_\_\_\_\_  
2. Some College \_\_\_\_\_  
(A.A. included)  
3. College Degree \_\_\_\_\_  
4. Some Graduate work \_\_\_\_\_  
5. Graduate Degree \_\_\_\_\_ (18) \_\_\_\_\_
7. Age: 1. 21-25 \_\_\_\_\_ (19) \_\_\_\_\_  
2. 26 and over \_\_\_\_\_

**APPENDIX F**

**QUESTIONNAIRE ITEMS INCLUDED  
IN ROLE MEASURES**

APPENDIX F

QUESTIONNAIRE ITEMS INCLUDED IN ROLE MEASURES

Pre- and Post-Academy Surveys

Physical Role Measures

1. Stopping and making arrests of persons wanted for serious (felony) crimes.
3. Using sufficient force to subdue compative persons.
11. Lifting and carrying prisoners or accident victims.

General Role Measure

4. Using good judgment in issuing citations.
6. Dealing effectively with traffic violators and issuing citations.
7. Recognizing traffic violations while operating the patrol vehicle.
10. Maintaining personal control and dealing effectively with the public under stressful conditions.

Technical Role Measure

9. Safely operating a patrol car in routine and emergency situations.
12. Investigating accidents and preparing written accident reports.
13. Giving first aid to victims of accidents or other emergencies.
14. Verbally expressing thoughts.
17. Testifying in court.

Academy Recruit Survey

Equality Role Measure

11. The male recruits accept the females as equals.
12. Many of the male recruits seem to expect the women to fail.

**APPENDIX G**

**PEER EVALUATION FORM  
MICHIGAN STATE POLICE  
TRAINING DIVISION**

## APPENDIX G

PEER EVALUATION FORM  
 MICHIGAN STATE POLICE  
 TRAINING DIVISION  
RECRUIT RATING FORM

RECRUIT RATED: \_\_\_\_\_ DATE OF RATING: \_\_\_\_\_

Do not consult with anyone regarding your evaluation of this recruit. You will note that you are to rate each recruit in each category on the scale of one to nine. Circle the number which indicates where you feel this recruit ranks in each category. A line is provided on which you may explain your choice or comment if you wish.

1. Effort expended in Recruit School, academic, physical, group assignments, etc.

No Effort      1 2 3 4 5 6 7 8 9      Outstanding Effort  
 Comments: \_\_\_\_\_

2. Interest evidenced in making the Michigan State Police a career (is it just a job?)

Lacks Interest      1 2 3 4 5 6 7 8 9      Outstanding Interest  
 Comments: \_\_\_\_\_

3. Does this Recruit possess the necessary prerequisites to become an effective and competent Trooper? (Table manners, personal hygiene, etc.)

Has Virtually      1 2 3 4 5 6 7 8 9      Possesses All  
 No Attributes      1 2 3 4 5 6 7 8 9      Necessary Attributes  
 Comments: \_\_\_\_\_

4. Does this Recruit exhibit courage and the necessary physical abilities to function as a Trooper?

No Courage      1 2 3 4 5 6 7 8 9      Strong Courage and  
 No Ability      1 2 3 4 5 6 7 8 9      Outstanding Abilities  
 Comments: \_\_\_\_\_

5. Does this Recruit show compassion, concern, and regard for fellow Recruits? (In terms of language, manner of speaking, regard for others feelings, behavior, etc.)

Impolite and      1 2 3 4 5 6 7 8 9      Highly Concerned  
 Lacks Concern      1 2 3 4 5 6 7 8 9      and Considerate  
 Comments: \_\_\_\_\_

6. Indicate your attitude toward working with this Recruit as a patrol partner:

Would not      1 2 3 4 5 6 7 8 9      Highly Desirable  
 work with      1 2 3 4 5 6 7 8 9      As a Patrol Partner  
 Comments: \_\_\_\_\_

7. Indicate your feelings concerning this Recruit's potential as a State Police Trooper:

No Potential      1 2 3 4 5 6 7 8 9      Extremely High  
 Not Acceptable      1 2 3 4 5 6 7 8 9      Potential--A Leader  
 Comments: \_\_\_\_\_

## BIBLIOGRAPHY

## BIBLIOGRAPHY

- Ahern, James F. Police in Trouble. New York: Hawthorn Books, Inc., 1972.
- Argyris, Chris. Personality and Organization. New York: Harper, 1957.
- Astrand, P. O. "Human Physical Fitness with Special Reference to Sex and Age." Physiological Reviews (July 1956): 307-335.
- Avent, Henrietta H.; Campbell, Donald E.; Malina, Robert M.; and Harper, Albert B. "Cardiovascular Characteristics of Selected Track Participants in the First Annual DGWS Track and Field Meet." The Research Quarterly (December 1971): 440-443.
- Babbie, Earl R. Survey Research Methods. Belmont, California: Wadsworth Publishing Company, Inc., 1973.
- Baetjer, Anna M. Women in Industry: Their Health and Efficiency. Philadelphia: W. B. Saunders Company, 1946.
- Bard, Morton. "Iatrogenic Violence." The Police Chief (January 1971): 16-17.
- Bayley, David H., and Mendelsohn, Harold. Minorities and the Police: Confrontation in America. New York: The Free Press, 1968.
- Becker, Howard S. "Problems of Inference and Proof in Participant Observations." In Stages of Social Research: Contemporary Perspectives, p. 205. Edited by Dennis P. Forcese and Stephen Richer. Englewood Cliffs, New Jersey: Prentice-Hall Inc., 1970.
- Bee, Helen. The Developing Child. New York: Harper and Row, Publishers, Inc., 1975.

Bercal, Thomas E. "Calls for Police Assistance: Consumer Demands for Governmental Service." American Behavioral Scientist (May, June, July, August 1970): 681-691.

Bettelheim, Brune. "Growing up Female." Harpers Magazine, October 1962, pp. 120-128.

Bittner, Egon. "The Police on Skid-Row: A Study of Peace-Keeping." American Sociological Review (October 1967): 699-715.

Blalock, Humbert M., Jr. Social Statistics. New York: McGraw-Hill Book Company, 1960.

. Social Statistics. 2nd ed. New York: McGraw-Hill Book Company, 1972.

Bloch, Peter B., and Anderson, Deborah. Policewomen on Patrol Final Report. Washington, D.C.: Police Foundation, 1974.

. Policewomen on Patrol Final Report Methodology, Tables and Measurement Instruments. Washington, D.C.: Police Foundation, 1974.

Bloch, Peter B.; Anderson, Deborah; and Gervais, Pamela. Policewomen on Patrol. (Major Findings: First Report, Volume 1). Washington, D.C.: Police Foundation, 1973.

Bogdan, Robert, and Taylor, Steven J. Introduction to Qualitative Research Methods: A Phenomenological Approach to the Social Sciences. New York: John Wiley and Sons, 1975..

Borg, Walter R., and Gall, Meredith D. Educational Research An Introduction. 2nd ed. New York: David McKay Company, Inc., 1971.

Bouchard, Thomas J. "Field Research Methods: Interviewing, Questionnaires, Participant Observation, Systematic Observation, Unobtrusive Measures." In Handbook of Industrial and Organizational Psychology, pp. 363-413. Edited by Marvin D. Dunnette. Chicago: Rand McNally College Publishing Company, 1976.

California Highway Patrol. Women Traffic Officer Project: Final Report. Sacramento: Department of California Highway Patrol, 1976.

Campbell, Donald T. and Stanley, Julian C. Experimental and Quasi-Experimental Designs for Research. Chicago: Rand McNally College Publishing Company, 1963.

Carmichael, Fred. "State Police Recruit School Investigation." Paper prepared for the Michigan State Department of Civil Service, June 23, 1975. (Typewritten.)

Computer Laboratory. User's Guide Supplement SPSS Revisions with Local Modifications. East Lansing: Michigan State University Board of Trustees, 1976.

Conger, Patricia R., and Macnab, Ross B. J. "Strength, Body Composition, and Work Capacity of Participants and Nonparticipants in Women's Intercollegiate Sports." The Research Quarterly (May 1967): 184-192.

Connolly, Harriet A. "Policewomen as Patrol Officers: A Study in Role Adaptation." Ph.D. dissertation, City University of New York, 1975.

Conover, W. J. Practical Nonparametric Statistics. New York: John Wiley and Sons, Inc., 1971.

Cumming, Elaine; Cumming, Ian; and Edell, Laura. "Police-men as Philosopher, Guide and Friend." Social Problems (Winter 1965): 276-286.

Cummins, Marvin. "Police and Service Work." In Police in Urban Society, pp. 279-290. Edited by Harlan Hahn. Beverly Hills: Sage Publications, 1971.

Davis, Robert H.; Alexander, Lawrence T.; and Yelon, Stephen L. Learning Systems Design: An Approach to the Improvement of Instruction. New York: McGraw-Hill Book Company, 1974.

Dean, John D.; Eichhorn, Robert L.; and Dean, Lois R. "Limitations and Advantages of Unstructured Methods." In An Introduction to Social Research, pp. 274-479. Edited by John T. Doby. Appleton-Century-Crofts, 1967.

Denzin, Norman. "The Research Act." In Symbolic Interaction: A Reader in Social Psychology. Edited by J. Manis and B. Meltzer. Boston: Allyn and Bacon, Inc., 1972.

. Sociological Methods: A Sourcebook. Chicago: Aldine Publishing Company, 1970.

Donelson, Elaine. "Development of Sex-Typed Behavior and Self-Concept." In Women: A Psychological Perspective, pp. 119-139. Edited by Elaine Donelson and Jeanne E. Gullahorn. New York: John Wiley and Sons, 1977.

Donelson, Elaine, and Gullahorn, Jeanne E. "Part Two: Psychobiological Foundations of Sex-Typed Behavior." In Women: A Psychological Perspective, pp. 33-36. Edited by Elaine Donelson and Jeanne E. Gullahorn. New York: John Wiley and Sons, 1977.

Earle, Howard H. Police Recruit Training Stress vs. Non-stress. A Revolution in Law Enforcement Career Programs. Springfield, Illinois: Charles C. Thomas, 1973.

Fitzgerald, Hiram E. "Infants and Caregivers: Sex Differences as Determinants of Socialization." In Women: A Psychological Perspective, pp. 101-118. Edited by Elaine Donelson and Jeanne E. Gullahorn. New York: John Wiley and Sons, 1977.

Fox, James C., and Lundman, Richard J. "Problems and Strategies in Gaining Research Access in Police Organizations." Criminology (May 1974): 52-69.

Galloway, Judith M. "The Impact of the Admission of Women to the Service Academies on the Role of the Woman Line Officer." American Behavioral Scientist (May-June 1976): 647-664.

German, A. C. "Community Policing: An Assessment." Journal of Criminal Law, Criminology and Police Science (March, 1969): 89-96.

Goldstein, Irwin. Training: Program Development and Evaluation. Monterey, California: Brooks/Cole Publishing Company, 1974.

Gorden, Raymond L. Interviewing Strategy, Techniques, and Tactics. Revised ed. Homewood, Illinois: The Dorsey Press, 1975.

Greenwald, Judith E. "Aggression as a Component of Police-Citizen Transactions: Differences Between Male and Female Police Officers." Ph.D. dissertation, City University of New York, 1976.

Gullahorn, Jeanne E. "Understanding the Psychology of Women." In Women: A Psychological Perspective, pp. 4-16. Edited by Elaine Donelson and Jeanne E. Gullahorn. New York: John Wiley and Sons, 1977.

Gump, P., and Kounin, J. "Issues Raised by Ecological and 'Classical' Research Efforts." Merrill-Palmer Quarterly (1960): 145-152.

Gurman, E., and Bass, B. "Objective Compared with Subjective Measures of the Same Behavior in Groups." Journal of Abnormal and Social Psychology (1961): 368-374.

Hahn, Harlan. "The Public and the Police." In Police in Urban Society, pp. 9-33. Edited by Harlan Hahn. Beverly Hills: Sage Publications, 1971.

Harris, Richard N. The Police Academy: An Inside View. New York: John Wiley and Sons, Inc., 1973.

Hatton, Glen. "Biology and Gender: Structure, Sex, and Cycles." In Women: A Psychological Perspective, pp. 49-54. Edited by Elaine Donelson and Jeanne E. Gullahorn. New York: John Wiley and Sons, 1977.

Hawley, Peggy. "What Women Think Men Think: Does It Affect Their Career Choice?" Journal of Counseling Psychology (May 1971): 193-199.

Hermansen, Lars, and Anderson, K. Langer. "Aerobic Work Capacity in Young Norwegian Men and Women." Journal of Applied Physiology (May 1965): 425-431.

Herzberg, Frederick; Mausner, Bernard; and Snyderman, Barbara. The Motivation to Work. New York: John Wiley and Sons, Inc., 1959.

Hettinger, Theodor; Birkhead, Newton C.; Horvath, Steven M.; Issekutz, Bela; and Rodahl, Kaare. "Assessment of Physical Work Capacity." Journal of Applied Physiology (January-November 1961): 153-156.

Higgins, Lois. "The Feminine Force in Crime Prevention." The Police Yearbook. 1958: 102-109.

\_\_\_\_\_. "Historical Background of Policewomen's Service." Journal of Criminal Law, Criminology and Police Science 41 (1951): 822-833.

\_\_\_\_\_. Policewoman's Manual. Springfield, Illinois: Charles C Thomas, 1961.

Hopper, Marianne. "Becoming a Policeman: Socialization of Cadets in a Police Academy." Urban Life (July 1977): 149-170.

Horne, Peter P. "Policewomen and International Women's Year." Law and Order (October 1975): 66-70.

\_\_\_\_\_. "The Role of Women in Law Enforcement." The Police Chief (July 1973): 60-63.

Hutzel, Eleanore. The Policewoman's Handbook. Worcester, Mass.: Columbia University Press, 1933.

International Association of Chiefs of Police and the Police Foundation. Deployment of Female Police Officers in the United States. Washington, D.C.: International Association of Chiefs of Police, 1974.

International City Management Association. "Women in Law Enforcement." Management Information Service Report (September 1973): 1-16.

International Encyclopedia of the Social Sciences. 1968 ed. "Individual Differences: Sex Differences." By L. E. Tyler.

Johns, Christina J. "Effects of Female Presence on Male Police Officers' Shooting Behavior." Masters thesis, Michigan State University, 1976.

Johnson, Robert E. "Applied Physiology." Annual Review of Physiology 8 (1946): 535-558.

Junger-Tas, J.; Zee-Nefkens, A. A. v.d.; and Smits, L. "Basic Police Training and Police Performance in the Netherlands." Paper presented at the American Sociological Convention, Tucson, Arizona, 1976.

Katz, Daniel, and Kahn, Robert. The Social Psychology of Organizations. New York: John Wiley and Sons, 1966.

Katzell, Mildred E., and Byham, William C. Women in the Work Force. New York: Behavioral Publications Inc., 1972.

Kluckhohn, Frank R. "The Participant Observer Technique in Small Communities." American Journal of Sociology (November 1940): 331-343.

Konarovsky, Mirra. "Where Angels Fear to Tread." In Womankind: Beyond the Stereotypes, p. 304. Edited by Nancy Reeves. Chicago: Aldine and Atherton, 1971.

Lawler, Edward. Motivation in Work Organizations. Monterey, California: Brooks/Cole Publishing, 1973.

Lebeuf, Annie M. D. "The Role of Women in the Political Organization of African Societies." In Womankind: Beyond the Stereotypes, p. 321. Edited by Nancy Reeves. Chicago: Aldine and Atherton, 1971.

Likert, Rensis. The Human Organization. New York: McGraw-Hill Book Company, 1967.

McGregor, Douglas. The Human Side of Enterprise. New York: McGraw-Hill Book Company, 1960.

MacLeod, R. "The Phenomenological Approach to Social Psychology." Psychological Review (1947): 193-210.

McNamara, John H. "Role-Learning for Police Recruits." Ph.D. dissertation, University of California, 1967.

\_\_\_\_\_. "Uncertainties in Police Work: The Relevance of Police Recruits' Backgrounds and Training." In The Police: Six Sociological Essays, pp. 163-252. Edited by David J. Bordua. New York: John Wiley and Sons, Inc., 1967.

Mager, Robert F. Preparing Instructional Objectives. Belmont, California: Fearon Publishers, Inc., 1962.

Manning, Peter. "The Researcher: An Alien in the Police World." In The Ambivalent Force: Perspectives on the Police. 2nd ed., pp. 103-121. Hinsdale, Illinois: The Dryden Press, 1976.

Mayo, Elton. The Social Problems of an Industrial Civilization. Cambridge, Mass.: Harvard University Press, 1945.

Mead, Margaret. Sex and Temperament in Three Primitive Societies. New York: William Morrow and Company, Inc., 1963.

Melchionne, Theresa M. "The Changing Role of Policewomen." The Police Journal (October 1974): 340-358.

. "The Current Status and Problems of Women Police." The Police Yearbook. 1967: 115-120.

Milton, Catherine Higgs; Abramowitz, Ava; Crites, Laura; Gates, Margaret; Mintz, Ellen; and Sandler, Georgette. Women in Policing: A Manual. Washington, D.C.: Police Foundation, 1974.

Mussen, Paul H. "Early Sex-Role Development." In Woman-kind: Beyond the Stereotypes, p. 396. Edited by Nancy Reeves. Chicago: Aldine and Atherton, 1971.

Myren, Richard A., and Swanson, Lynn D. "Police Contacts with Juveniles: Perspectives, Guidelines." 2nd Review Draft, June 1961. Washington D.C.: Children's Bureau, United States Department of Health, Education, and Welfare, 1961, cited by Arthur Niederhoffer, Behind the Shield: The Police in Urban Society. Garden City, N.Y.: Doubleday and Company, Inc., 1967.

National Advisory Commission on Criminal Justice Standards and Goals. Police. Washington D.C.: Government Printing Office, 1973.

Niederhoffer, Arthur. Behind the Shield: The Police in Urban Society. Garden City, N.Y.: Doubleday and Company, Inc., 1967.

Owings, Chloe. Women Police. Montclair, N.J.: Patterson, Smith, 1968.

Penn, Roger J., and Gabriel, Mary E. "Role Constraints Influencing the Lives of Women." The School Counselor (March 1976): 252-256.

Pennsylvania State Police. Pennsylvania State Police Female Trooper Study. Harrisburg: Pennsylvania State Police, 1974.

Perlstein, Gary R. "Certain Characteristics of Police-women." Police (January 1972): 45-46.

. "An Exploratory Analysis of Certain Characteristics of Policewomen." Ph.D. dissertation, Florida State University, 1971.

. "Policewomen and Policemen: A Comparative Look." The Police Chief (March 1972): 72-74, 83.

Perrow, Charles. Complex Organizations: A Critical Essay. Glenview, Illinois: Scott, Foresman and Company, 1972.

Plowman, Sharon. "Physiological Characteristics of Female Athletes." The Research Quarterly (December 1963): 349-362.

Population Reference Bureau. "Status of Women in the United States, 1950 and 1975." Social Education (April 1977): 319-320.

Preiss, Jack J., and Ehrlich, Howard. An Examination of Role Theory. Lincoln: University of Nebraska Press, 1966.

The President's Commission on Law Enforcement and Administration of Justice. The Challenge of Crime in a Free Society. Washington, D.C.: Government Printing Office, 1967.

. Task Force Report: The Police. Washington, D.C.: Government Printing Office, 1967.

Price, Barbara R. "A Study of Leadership Strength of Female Police Executives." Journal of Police Science and Administration (June 1974): 219-226.

Reiss, Albert. The Police and the Public. New Haven: Yale University Press, 1971.

Rubinstein, Jonathan. City Police. New York: Ballantine Books, 1973.

Schein, Edgar. Organizational Psychology. 2nd ed. Englewood Cliffs, N.J.: Prentice-Hall, 1970.

Sherman, Lewis J. "An Evaluation of Policewomen on Patrol in a Suburban Police Department." Journal of Police Science and Administration (December 1975): 434-438.

. "A Psychological View of Women in Policing." Journal of Police Science and Administration (December 1973): 383-394.

Siegel, Sidney. Nonparametric Statistics for the Behavioral Sciences. New York: McGraw-Hill Book Company, 1956.

Sjoberg, G., and Nett, R. A Methodology for Social Research. New York: Harper and Row, 1968.

Skolnick, Jerome H. Justice Without Trial: Law Enforcement in Democratic Society. 2nd ed. New York: John Wiley and Sons, Inc., 1975.

Smykla, John O. "Preliminary Analysis of Employment and Deployment of Women in Michigan Law Enforcement." Criminal Justice Systems Center, Michigan State University, East Lansing, Michigan, 1975. (Mimeo graphed.)

Stebbins, R. "Studying the Definition of the Situation: Theory and Field Research Strategies." In Symbolic Interaction: A Reader in Social Psychology, pp. 148-164. Edited by J. Manis and B. Meltzer. Boston: Allyn and Bacon, Inc., 1972.

. "A Theory of the Definition of the Situation." The Canadian Review of Sociology and Anthropology (1967): 148-164.

Surette, Ralph F. "Career Versus Homemaking: Perspective and Proposals." Vocational Guidance Quarterly (December 1967): 82-86.

Talney, Ronald G. "Women in Law Enforcement: An Expanded Role." Police (November-December 1969): 49-51.

Vidich, Arthur J., and Shapiro, Gilbert. "A Comparison of Participant Observation and Survey Data." American Sociological Review (February 1955): 28-33.

Vroom, Victor. Work and Motivation. New York: John Wiley and Sons, 1964.

Webb, E.; Campbell, D.; Schwartz, R.; and Sechrest, L. Unobtrusive Measures: Nonreactive Research in the Social Sciences. Chicago: Rand McNally and Company, 1966.

Webster, John. "Police Task and Time Study." Journal of Criminal Law, Criminology, and Police Science (March 1970): 94-100.

Weick, K. "Systematic Observational Methods." In The Handbook of Social Psychology. Volume II. Edited by G. Lindzey and E. Aronson. Reading, Mass.: Addison-Wesley Publishing Company, 1968.

Westley, William A. Violence and the Police. Cambridge, Mass.: The MIT Press, 1970.

..... "Violence and the Police." In Crime and Justice in Society, pp. 206-216. Edited by Richard Quinney. Boston: Little, Brown and Company, 1969.

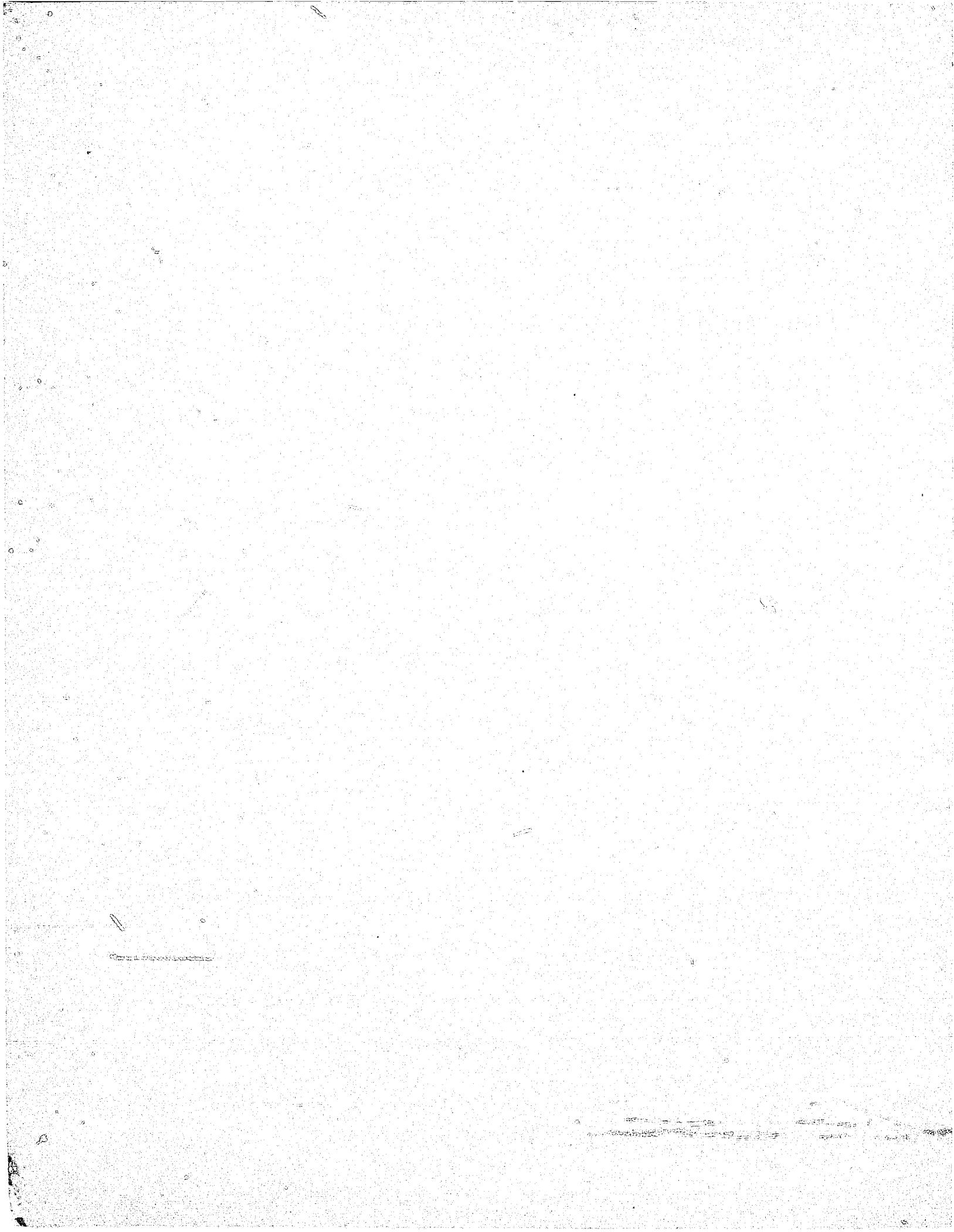
Whyte, William F. "Observational Field Work Methods." In Research Methods in Social Relations, pp. 493-513. Edited by Marie Jahoda, Morton Deutsch, and Stuart W. Cook. New York: Dryden Press, 1951.

..... Street Corner Society. Chicago: University of Chicago Press, 1943.

Wilson, James Q. Varieties of Police Behavior. Cambridge, Mass.: Harvard University Press, 1968.

United States of America v. State of Michigan, Director of State Police, and Director of the Michigan Civil Service Commission. Consent Decree. Civil Action No. G75-472-CA5, 1976.

Zelditch, Morris. "Some Methodological Problems of Field Studies." In Issues in Participant Observation: A Text and Reader, pp. 5-19. Edited by George J. McCall and J. L. Simmons. Reading, Mass.: Addison-Wesley Publishing Company, 1969.



**END**