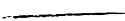
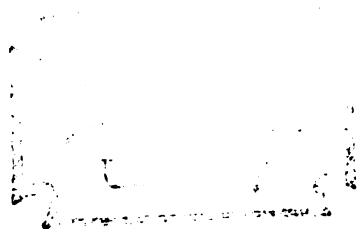


EFFECTS OF FEMALE PRESENCE ON MALE POLICE
OFFICERS' SHOOTING BEHAVIOR

Thesis for the Degree of M. S.
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CHRISTINA JACQUELINE JOHNS
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ABSTRACT

EFFECTS OF FEMALE PRESENCE
ON MALE POLICE OFFICERS' SHOOTING BEHAVIOR

By

Christina Jacqueline Johns

State Troopers responded individually to a training film designed to provoke impulsive aggression by presenting dangerous and threatening situations commonly confronted by law enforcement officers. The troopers were to fire a weapon loaded with blanks directly at the screen when they felt it would have been appropriate to do so in a real situation.

Eight troopers participated with a male partner and eight with a female partner. It was hypothesized that female presence would in some way affect the number of times the troopers fired and the appropriateness of their choices to fire. The results of the experiment confirmed the hypothesis.

Troopers with female partners fired more often and with a lower error rate than did troopers with male partners. The results are discussed in terms of three models of aggressive behavior and the nature of exclusively male groups.

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By

Christina Jacqueline Johns

A THESIS

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CHAPTER I

INTRODUCTION

The use of women in police work has always been a highly emotional issue. This has been especially so since policewomen were taken out of their traditional roles as guardians of morals and youth, and given a status equal to that of the patrolman.

The New York Times, July 15, 1974, reported

The assignment of policewomen in the last year to street patrol has turned into such an emotional issue that it is dividing the rank and file of the Police Department.

The assignment of women to patrol duty has caused a great deal of hostility and resentment among police officers. Catherine Milton, former Assistant Director of the Police Foundation, recorded some of the typical male attitudes she encountered in her research about women in policing (Milton, 1972). One patrolman she interviewed remarked, "...it's a man's job; let's not degrade it more by adding women." Another patrolman said, "...who wants a policeman with monthlies?"

In an article in the Chicago Tribune, Sunday, May 25, 1975, it was reported that nearly all the patrolmen on the Washington, D.C. Police Force who had ridden patrol

with a female officer, confessed that they "...still [didn't] trust a woman partner in a confrontation situation the way they would a man." One of the officers was reported as flatly refusing to work with a female.

It is in this climate of bitterness that the administrator must make decisions about the hiring and utilization of female police officers. He is vulnerable to charges of sexism on the one hand and preferential treatment on the other. This is largely due to the fact that he has no body of respected research on which to base and justify his decisions.

Research that has been done in this area deals largely with issues of performance, i.e., do females perform as well as males in certain situations. Differential performance is a valid issue but another, possibly more important issue, is how the introduction of females in a patrol capacity to police departments will affect the performance of male officers already on the force.

A police chief in one city remarked, "The trouble with women in policing is men in policing." This statement acknowledges the fact that most of the effect of females on police forces has been on the patrolmen themselves.

The administrator concerned with the efficiency and effectiveness of his police force, must concern himself not only with the performance of female officers, but with

how the utilization of female officers affects the performance of his male officers.

Because the question centers around issues of maleness and femaleness, it must be considered essentially sexual in nature; a male group is rejecting the inclusion of females into that group. Policing by definition represents authority, dominance, control, dependence, and aggressiveness; issues which are constantly involved in sexual conflict. Research on the linkage between aggressive and sexual behavior led me to believe that the male rejection of females in policing was more complex and possibly less malleable than had been previously considered.

The reaction of males to the presence of female officers can be tested behaviorally, in an attempt to bypass subjects' knowledge of how they "should" respond. The male response to females is so strong, it should alter not only what is said, but what is done.

The firing of a weapon was chosen as the response on which to measure reaction to female presence for several reasons. First, firing or not firing a gun is a specific behavioral act. There can be very little question about whether the event has or has not occurred. Measurement requires no subjective evaluation. Second, in a stressful situation, shooting is largely a reactive task, that is, the officer must act immediately in response to another person's behavior. There is very little time for the weighing

of complex circumstances. By using a reactive task, the probability of response mediated by considerations of proper behavior is minimized. Third, shooting is a task which is both familiar and important to police officers. It is an act which officers are accustomed to performing and one that carries great emotional significance. Fourth, shooting is an aggressive act and there is reason to suspect that aggressive and sexual behavior are closely linked.

CHAPTER II

REVIEW OF THE LITERATURE

Discussed in this chapter are three areas of research which support the testing of male reactions to female presence by a specific motor response, shooting. The first two areas of research, sex of partner and sex of experimenter, show sex of others to be an important determinant of subject behavior in a variety of situations. The third area, sex and aggression, details work that has been done to demonstrate the connection between sexual and aggressive behavior. It provides the rationale for using an aggressive response to measure effects of sex of partner. The fourth area, arousal, details some of the research that indicates that stress should produce physiological changes.

Sex of Partner

Sex of partner has been shown to have an effect on both verbal responses and more direct behavioral acts of subjects. Gurwitz and Dodge (1975) showed the effect of verbal responses of male and female college students to videotapes of a child identified sometimes as a male and sometimes as a female. The students rated opposite sex

children as being more assertive, aggressive, happy, energetic, motivated, adjusted, and as having a higher level of personality development than same sex children. Rothbart and Maccoby (1966) found adults to be more permissive toward an opposite sex child than towards a same sex child.

On a more basic behavioral level, sex of partner has been shown to have an effect on eye contact, helping behavior, reactions to crowding, use of personal space, interview responses, aggressive shocking and performance of duties by police officers.

Argyle and Dean (1965) found differences in eye contact between mixed sex pairs and same sex pairs. There was a highly significant interaction between sex of subject and sex of confederate. Subjects displayed much less eye contact in mixed sex pairs and also used much shorter glances. Exline, Gray, and Schuette (1965), however, found no differences in eye contact determined by sex of partner. Scherwitz and Helmreich (1973) found differences according to sex of partner in subject's evaluation of partner after a period of high eye contact. In mixed sex dyads, higher levels of eye contact reflected higher liking; in same sex dyads, it elicited less attraction.

Latane' and Dabbs (1975) employed confederates to drop a handful of pencils or coins in an elevator full of people. Subjects were somewhat more likely to help opposite

sex victims pick up the dropped articles. Females were much more likely than were males to receive help from all subjects.

In a study of crowding, Freedman, et. al. (1972) found that males were significantly more competitive when crowded with males than were females when crowded with females. When mixed sex groups were used, this competition effect did not appear. It is interesting to note here what happened in the mixed sex groups. Subjects were to assign sentences to offenders in a hypothetical legal case. When looking at the absolute level of severity of sentence administered by those in the mixed sex groups "...the female subjects are just about as severe as they were when they were in groups by themselves, whereas the male subjects became much less severe when they are in groups with females." In this situation, it is the males who are displaying the greater effect due to presence of opposite sex partners. This apparent male sensitivity to female presence appears frequently in a wide variety of behavioral research.

Dabbs, Johns, and Powell (1975) found no sex differences in response to crowding. They did, however, find eye contact and positive affect to be changed with crowding according to sex of partner. In a second experiment the authors found that, when crowded, subjects tended to shift their gaze from a male to a female confederate.

Utilization of personal space also seems to be affected by sex of partner. Nesbitt and Steven (1974) found that males tend to stand closer behind females in a line than females do behind males in the same situation. Dabbs and Stokes (1975) looked at personal space used by subjects passing confederates on the sidewalk. Pedestrians deviated in their paths to be farther away from male confederates than female confederates. There were no sex differences.

Powell and Dabbs (1974) found that when confederate interviewers stopped pedestrians on the street, subjects stayed longer with female confederates than they did with male confederates.

Taylor and Epstein (1967) observed that subjects responded quite differently according to the sex of an opponent who attempted to administer subjects increasingly intense levels of shock. Shock intensities given in return by the subjects were greater when they were directed toward a male opponent than when they were directed toward a female opponent. Additionally, there was a greater increase in aggression over trials to male than female opponents. Along with the differences in the administering of shock, there was a significant interaction between sex of opponent and basal skin conductance. The authors comment

...subjects of both sexes facing aggressive females exhibited far less aggression than when facing equally aggressive males.

That the control of aggression following provocation by a female took effort and was achieved only at the cost of a rise in emotional tension was indicated by the data on basal skin conductance and the spontaneous comments of a number of subjects during the encounter.

Borofsky, et. al. (1971) designed an experiment to test bystander reactions to physical assault. A dispute was simulated between two persons in a laboratory setting and subject bystanders were judged by their movements to intervene. Sex of aggressor and sex of victim were varied. Males interfered in the dispute significantly less in a male aggressor/female victim situation than they did in a male aggressor/male victim situation. They interfered even less in a female aggressor/female victim situation. The authors state

The results indicate that, when undergraduates are confronted with a situation in which a person is being injured by direct physical assault, they react differently as a function of their sex, and, for males, as a function of the sex of the people fighting.

Again, as in the Freedman study, males are being strongly affected by the sex of the participants in the situation, much more so than females.

Borden (1975) explored the significance of observers on subject's behavior and found that subjects observed by a male chose shock intensities for their partners that were significantly higher than those chosen by female observed subjects. After the observers left and subjects continued alone, male observed subjects decreased their shock

intensities and female observed subjects increased their shock intensities. Borden concludes

...the presence of observers serves to reduce an otherwise important determinant of aggression, the behavior of the opponent.

He explains the results, however, as an artifact of the subject's perception of the behavior that will be considered appropriate by the observer. He maintains that the sex of the observer is used as a clue to his beliefs about aggression.

Jaffey, Malamuth, Feingold and Feshbach (1974) found that sexually aroused and non-aroused subjects tended to administer more intense shocks to members of the opposite sex than to members of the same sex.

Sex of partner effects have been demonstrated in police literature. A study conducted in Washington, D.C. (Bloch and Anderson, 1974) and published by the Police Foundation, showed officer's behavior to be significantly affected by sex of observer. During one phase of the project, male and female observers rode in patrol cars with officers. The sex of the observer had a significant effect on the behavior in which the officers engaged. With female observers, both male and female officers tended to initiate more non-traffic incidents (stopping to talk with an adult) than they did with a male observer. With a male observer, females tended to make more traffic stops than they did with a female observer. Male and female

officers had significantly more incidents per tour with a female observer than with a male observer.

Weldy (1976) discusses the effect of female presence on the Dayton Ohio Police Force. Finding male partners for the females was difficult, but after six months

In almost every case, the attitude, enthusiasm, behavior, and general performance of the field training officer improved markedly.

The men themselves noticed the changes and agreed that the changes were due to the 'chemistry' between male and female.

Weldy asserts that male officers very rarely talk about positive police work. The conversation in the police car usually revolves around areas of common interest, sex, sports, politics, management criticism, and war stories. He maintains, that with a female partner, common ground is narrowed and topics gradually shift to positive police work.

Sex of Experimenter

Sex of experimenter has been shown to have an effect on verbal behavior as well as motor behavior and physiological process. Benney, Riesman and Star (1956) found that different combinations of interviewer and respondent sex produced different responses to a mental health survey. Walters, Shurley and Parsons (1962) found a small effect for sex of interviewer on responses given to questions about an underwater sensory deprivation experiment, especially if

the information being elicited was sexual in nature. Walters, Parsons and Shurley (1964) replicated the 1962 experiment and found an even stronger and significant effect.

Binder, McConnell and Sjöholm (1957), Sarason (1962), and Sarason and Harmatz (1965) found a significant effect for sex of experimenter in a verbal conditioning situation. Ferguson and Buss (1960), however, found no effect for sex of experimenter on verbal conditioning and maintained that the aggression of the experimenter rather than sex was the variable affecting responses. Sarason and Minard (1963) found sex of experimenter to interact with the hostility of the subject on responses to verbal conditioning.

Studies involving sex of experimenter and projective test responses show mixed findings. Overt and covert sexual responses on the Rorschach have been found to be affected by sex of experimenter (Curtis and Wolf, 1951; Milner and Moses, 1974). Alden and Benton (1951), however, found no effect for the sex of the experimenter on the Rorschach.

Garfield, Blek and Melker (1952) found no effect for sex of experimenter on responses to the TAT, but Barclay (1970) found sex of experimenter to influence the imagery on TAT protocols of subjects who were previously aggressively aroused.

Holtzman (1952) on the Draw-A-Person Test found that none of his judges could predict any better than chance the sex of experimenter.

Sex of experimenter has been shown to have an effect on the performance of a simple motor task for children (Gertirtz and Baer, 1958; Stevenson, 1961; Stevenson and Knight, 1962; Stevenson, Keen, and Knights, 1963; Hill and Stevenson, 1965; and Montanelli and Hill, 1969) and for adults (Stevenson and Allen, 1964; Singer and Llewellyn, 1973). In all these studies, a cross sex effect was established. Subjects performed best when reinforced by an experimenter of the opposite sex. Even under conditions where the experimenter was only very minimally interacting with the subject, Stevenson, Keen and Knight (1963) found an effect for sex of experimenter and Stevenson and Allen (1964) found an interaction between sex of experimenter and sex of subject.

In a study based solely on physiological responses, Fisher and Kotses (1974) found that sex of experimenter had a significant effect on basal skin conductance levels. Subjects in the female experimenter condition, had significantly higher basal conductance levels than those subjects in the male experimenter condition. The interaction between sex of experimenter and sex of subject was also significant. This interaction was largely due to differences between the male subjects serving in the female experimenter condition

and all other groups. Again, males appear to be more sensitive to the presence of opposite sex others than are females.

Sex of others, then, has been shown to have an effect on several types of behavior in various circumstances. Sex of experimenter has been shown to affect interview responses, verbal conditioning, projective test responses, performance of simple motor tasks, and basal skin conductance. Sex of partner affects verbal attribution of traits to children, permissiveness toward children, helping behavior, responses to crowding, use of personal space, eye contact, interview responses, aggressive administering of shock and performance of police officers in the field. Additionally, in several of these studies the most important reaction to opposite sex others was displayed by males in reaction to females.

Sex and Aggression

An aggressive behavior, shooting was chosen for measurement of the effect of female presence primarily because of the connection between sexual and aggressive behavior which would suggest that an aggressive act might be most influenced by sex of others.

Animal studies provide evidence that painful stimulation can selectively evoke sexual as well as aggressive responses. Caggiula and Eibergen (1969) observed a

greatly increased incidence of copulation in response to electric shock applied to the tails of rats. Other behaviors such as feeding, drinking, gnawing, and nest building were not found to be affected by tail shock. This evidence suggests that these two kinds of behavior may somehow be intimately linked to each other. MacLean (1965) has suggested that the linkage may be due to the proximity and possible overlap of the neural systems within the brain responsible for sexual and aggressive behavior.

The best documented findings in this area on the human level have dealt with fantasy responses to the Thematic Apperception Test (Clark, 1953; Barclay and Haber, 1965; and Barclay, 1969, 1970, 1971). Clark (1953) demonstrated that sexual arousal of males, in a situation considered appropriate to its expression, led to a parallel increase in hostile feelings. Barclay (1971) found that sexual arousal caused an increase in aggressive motives in both sexes. Exploring the converse proposition, Barclay and Haber (1965) and Barclay (1969, 1970, 1971) showed that an increase in aggressive motivation leads to an increase in sexual motivation.

Beit-Hallahmi (1971) working with male prison inmates, found a strong correlation between the expression of sexual and aggressive fantasies. There was a greater likelihood that in response to TAT protocols, sexual imagery would be elicited on aggressive pictures and aggressive imagery on sexual pictures.

Using shock intensity as a measure of aggression, Baron (1974) hypothesized that erotic stimuli would produce an increase in subsequent aggression in previously angered subjects, but have no effect on non-angered subjects. His results showed otherwise

...heightened sexual arousal was highly effective in inhibiting subsequent aggression by subjects in the angered group, but failed to influence significantly the strength of such behavior on the part of subjects in the non-angered condition.

Baron cites Barclay (1970) in offering an explanation for these findings.

...it seems possible that any increments in aggressive motivation experienced by subjects in the anger aroused group as a result of exposure to the erotic stimuli summated with their existing instigation to aggression, and so caused them to define their level of anger toward the victim as inappropriately high.

Jaffey, et. al. (1974) attempted to investigate the relationship between sexual and subsequent aggressive behavior. Experimental subjects read a series of erotic passages while controls read science fiction. Control and experimental groups reported no substantial differences in aggression on a mood scale. However, subjects exposed to erotic material delivered significantly more intense shocks to partners than did those exposed to neutral reading material. Jaffey concludes that the results "...offer further empirical support for the existence of a connection between sex and aggression."

Borden (1974) found that subjects observed by a male choose significantly higher shock intensities for

their opponents than did males observed by females. This was not affected by the opponent's responses. When the observers left, there was a reduction in intensity of shock after the removal of the female observer, but this change did not reach significance. Borden interprets this effect not as a reaction specifically to sex of the participants, but as an information process, sex giving information about behavior which will be approved of. He states

...when an individual has an opportunity to aggress and he is in the presence of others, he will use whatever information is available concerning the observer's values and expectations in order to maximize the probability of favorable evaluation.

Borden's followup study supports this contention. Male and female observers were presented as being either aggressive (members of the school karate team) or pacifistic (members of a peace organization). Male subjects responded with significantly higher shock intensities when observed by aggressive observers than when observed by a pacifistic observer. When observers left, the subjects observed by the aggressive observer decreased greatly their shock intensities, those with pacifistic observers increased aggression slightly. In both groups, those observed by males tended to choose higher shock intensities than those observed by females. Those differences, however, only approached significance.

The findings of Donnerstein, et. al. (1975) should help to clarify the Borden results. In this study, subjects

exposed to different levels of erotic pictures showed differences in aggressive arousal in an insult situation. The authors maintain that the effect of erotic stimuli tends to depend on the arousal level produced by the stimuli and the order of stimulus and anger arousal. Highly erotic stimuli facilitates aggression; mildly erotic stimuli inhibits it. The stimuli used in the Borden study would be considered mildly erotic.

Cantor, Zillman and Bryant (1975) found that male subjects in a physiological arousal state brought about by exercise responded with differing degrees of reported sexual arousal after viewing an erotic film depending on whether or not they still believed they were experiencing physiological excitement due to the exercise. Those subjects experiencing arousal and convinced they were not, reported significantly higher levels of sexual arousal than subjects recognizing their physiological arousal and the subjects not experiencing arousal. This finding supports Barclay's contention that subjects will suppress the effects of arousal they define as inappropriately high.

Because of the evidence of a connection between sexual and aggressive behavior, shooting responses were measured in the presence of same and opposite sex partners.

Arousal

There is evidence to expect that arousal whether sexual, aggressive or some other sort of arousal will lead

to differences in the particular response chosen for measurement, shooting behavior. Most of it is gathered from studies showing that arousal affects physiological process.

Berkowitz and Buck (1964) found significant changes in systolic blood pressure as a result of aggressive arousal. Geen and O'Neal (1969) found that even though there were no significant differences in reported anger levels, male subjects given external aggressive cues (violent film) and arousal (white noise) delivered significantly more shocks to their partners than subjects not aroused and not exposed to aggressive cues.

Hokanson and Shelter (1961), Hokanson and Burgess (1962), and Hokanson, Burgess and Cohen (1963) found that frustration produced significant increases in systolic blood pressure. Hokanson and Burgess (1962) found heart rate to be significantly elevated by frustration.

An article in the FBI Bulletin, January 1975, reveals popular interest in arousal and its effects on performance. The authors acknowledge that the lack of realism in firearms training is due in large part to the lack of emotional arousal of the officers.

...when facing an adversary who the officer feels intends to kill him, he will likely find himself confronted with an entirely different set of circumstances than he was exposed to in training.

The officer in this circumstance will be forced to fire under severe emotional stress. Physical stress greatly

affects small muscle groups in the hands and fingers.

Products of this stress - rapid heart beat, hurried and irregular breathing, and muscle tremors - combine to make accurate shooting under these conditions extremely difficult.

The FBI has organized a training unit specifically designed to familiarize the officers with problems encountered while shooting under stress. Experienced officers run a course and then fire on command. All but the most physically fit officers have great decreases in proficiency.

Often, emotional arousal especially in response to danger, is conceived of as a preparation of the body to either fight or escape danger. Martin Reiser, a clinical psychologist who frequently writes articles for the popular police journals, describes the physiological effects of covert arousal for fight or flight (Reiser, 1976).

...arousal for fight or flight is often inappropriate and leads to increased heart rate, elevation of blood pressure secretion of adrenalin and other hormones, mobilizations of glucose and fatty acids, and numerous other responses which prepare the organism for violent muscular excitation.

There is reason to expect, therefore, that arousal from the film or from the presence of a partner will affect physiological responses such as heart rate and blood pressure.

Hypotheses

Based on research demonstrating the effects of female presence on male behavior in other areas, the connections between sexual and aggressive behavior, and the effects of arousal on physiological process and motor response, it was hypothesized that:

1) troopers participating in the exercise with a female partner would display shooting responses different from troopers participating with male partners.

2) troopers participating in the exercise with a female partner would display different physiological responses such as pulse rate and blood pressure.

3) attitudes about females in policing would differ according to the sex of the partner.

In an effort to get a better understanding of attitudes about women in policing and to see if female presence would affect expressed attitudes, a questionnaire was administered to students in two classes offered by a criminal justice department. The hypothesis was that:

1) the sex of the experimenter administering the questionnaire would affect the responses of the subjects.

CHAPTER III

METHOD

Experiment I

The Questionnaire: In May of 1974, the Police Foundation published a volume called Policewomen on Patrol: Final Report. Quoted in that publication were excerpts from interviews conducted with police officers to assess their attitudes about women in police work. Statements from those interviews which seemed to reflect common attitudes about women in policing were chosen and classified into five categories: (1) Positive - statements reflecting a general approval of women in police work, (2) Qualified Positive - statements reflecting the view that women were useful in policework, but only in limited roles, (3) Neutral - statements emphasizing equality, i.e., women should be hired by the same standards and treated equally, (4) Qualified Negative - statements criticizing women in policing but not rejecting them outright, and (5) Negative - statements reflecting the position that females should not be used in police work at all.

The statements were randomized and subjects were asked to indicate their degree of agreement or disagreement with each statement.

Subjects: Two undergraduate classes in the School of Criminal Justice were chosen for study. Both classes were basic Criminal Justice core courses, one in Criminology and the other in a Senior Seminar. Each class contained regular college age students as well as Criminal Justice practitioners. There were a total of 116 students in both classes.

Experimenters: A male and a female graduate student acted as the experimenters. E's were matched in terms of their dress to minimize their being identified as either "student-types" or "practitioner-types". The male wore a suit and the female wore a business dress.

Procedure: The male E in one class and the female E in another, was introduced by the instructor as a graduate student working on a master's thesis involving attitudes about women in policing. E distributed the questionnaires and remained in the room until all students had completed them. E answered any questions that were asked and was generally friendly, but avoided prolonged interaction with members of the class.

Experiment II

The Film: Motorola has produced two training films for law enforcement agencies which deal with the decision of the police officer to shoot or refrain from shooting in an armed confrontation with a civilian. The films are

designed to teach the officer to recognize cues which might warn of the potentiality of such an armed confrontation and to respond appropriately by either shooting or holding fire. Of the two films, the more recent, Shoot/Don't Shoot II, was chosen for use in this experiment. In this film, eighteen simulations (filmed as though the officer were actually seeing them, "through the eyes of the viewer") are presented. Each simulation leads up to a point of climax where a shoot/no shoot decision must be made by the officer. A beep warns him a few seconds before the end of each sequence to be prepared to make that decision by actually shooting his weapon or holding his fire.

The officer is instructed to imagine himself as being involved in these simulations and to fire his weapon (loaded with blanks) directly at the screen when he feels it would be appropriate to do so in a real situation.

The simulations depict situations in which an officer's life might be threatened. The officer's task is to determine whether the threat is real or circumstantial and it is stressed that a mistake could be fatal to himself in some instances, or to an innocent citizen in others. The film, therefore, serves a double function, it (1) creates a state of tension and involvement, and (2) provides a situation to which the officer can attribute any arousal that might be caused by the presence of the partner.

Subjects: The Michigan State Police have an Academy where all of their recruits are trained. After a year of road experience, troopers are required to return to the Training Academy for a month's retraining, or 'retreading' as they call it. The 89th Advanced Trooper Training Class was returning for the training in April of 1976. The 89th was selected for use because (1) the troopers had not seen the Motorola Shoot/Don't Shoot film, and (2) they had not worked with female partners on the road. All troopers were sent a letter before the retraining school began, inviting them to participate in an exercise during the training session which was designed to test their reactions under stress.

When the troopers arrived to the Training Academy, a representative from Motorola (male) spoke to them and recruited them as subjects. He told them that Motorola, in conjunction with the Criminal Justice Department at Michigan State University, was conducting research designed to assess the reactions of police officers under stress. This research was directed toward the developing by Motorola of a new stress training program.

Confederates: Two male and two female police officers of about the same age as the troopers were hired as confederates. Students from Michigan State were used as practice subjects. They practiced with the confederates until the confederates could respond to the film

by shooting on the correct sequences without leading the responses of the subjects.

Procedure: The Experimenter, a male training officer from the East Lansing Police Department, met the trooper and ushered him into the experimental setting. The room was a large 30' by 60' garage attached to the Training Academy and used to store equipment. This room was selected because it gave an impression of open space and danger. All the sessions were run at night and the dark open room was more imposing than a classroom would have been.

The subject was seated at a small table while E took his blood pressure and pulse. The confederate, observing from a hidden window, entered the experimental room just when E had completed the blood pressure.

E: "Hi, I didn't expect you to come this early."

C: "Oh, sorry I _____"

E: "Well, since you're here, we might as well run the two of you together, unless you (the trooper) have any objections."

None of the troopers objected and E then introduced them. E used the interruption as an excuse to take the trooper's pulse and blood pressure again. He then asked the trooper to stand on a tape mark on the floor and took the blood pressure and pulse of the confederate.

E positioned the confederate across from the trooper at a distance of about five feet. He explained

that he was going to show the Motorola Shoot/Don't Shoot film and asked if they had seen it. None of the troopers had seen it and the confederates indicated that they had not either. E then explained that the guns to be used were on a table between and slightly behind them and were loaded with blanks. He showed them the cartridges for re-loading. The subjects were told that they were to fire directly at the screen when they felt it would be appropriate to do so in a real situation. The two were told to imagine themselves as partners, but that their responses would be scored individually. E explained that the film would give them all further instructions. E answered any questions that were asked, and started the film.

E scored shooting responses from the back of the room by marking each sequence on which the trooper fired. The author also scored responses from an observation window hidden from the subject. There was almost perfect agreement between the two sets of scores except, as happened on a few shots, the trooper raised his gun to fire and the gun misfired. While E could hear the sound of the hammer striking, the author could not. These instances were scored as shoots.

When the film was over, E again measured the trooper's pulse and blood pressure. He asked the confederate to sit down and wait for him to return and escorted the trooper into a classroom across the hall. He gave the trooper a

questionnaire to complete and told him that it was very important that he not tell the other troopers anything about the experiment. The questionnaire was designed to measure reported arousal level, and to measure attitudes about women in policing. The second part of the questionnaire was an expanded version of the questionnaire used in Experiment I.

Eight troopers were run with female partners, eight with male partners and five troopers were run alone. The five responding alone were later dropped from the analysis.

CHAPTER IV

RESULTS

Experiment I

A factor analysis of the items in the attitude questionnaire yielded four major factors which together accounted for 73% of the variance. Factor 1 was the most powerful, accounting for 48% of the variance; the other three factors added an additional 26% to the amount of the total variance accounted for.

Using items with a loading of .25 or higher, the four factors were interpreted as follows. Factor 1, Limited Role, is related to the idea that females should have a strictly non-patrol function in policing. Patrol work seems to be defined as an essentially masculine and physical task. Women are not thought physically or emotionally capable of handling the responsibilities. An example of the statements in this factor is: "Women should be taken out of regular uniformed patrol and allowed to do the jobs they are better suited for." Factor 2, Equality, reflects the view that there should be equality in hiring, training, and in the assigning of duties between male and female police officers. The item loading most highly on

this factor is: "For hiring purposes, women should be required to meet the same physical standards as men." Factor 3, Trait Advantage, measures the attitude that certain traits, considered to be characteristically feminine, particularly suit women for police work. An example of the items in this factor is: "I think that women are more likely than men to try to reason rather than threaten." Factor 4, Anti-Female, is composed of a whole host of statements that are related only in that they stress negative attitudes about having females in police work. Typical of the items in this factor is: "Most women panic easily and have neither the courage nor the physical strength to make an arrest unless they are backed up by a man." A complete list of the items in the factors and their rotated factor loadings are listed in Appendix I.

Using mean scores computed for each subject on each of the four factors an analysis of variance was performed to test the significance of sex of experimenter. The analysis revealed no significant differences between students completing the questionnaire for a male experimenter and students completing the questionnaire for a female experimenter in the different classes.

Male and female students differed significantly, however, in their responses to the four factors. The following table represents mean differences between male

and female respondents. Strong agreement was given a value of 1, strong disagreement a value of 5. Therefore, the higher the mean score, the more the disagreement with the factor.

TABLE 1
MEAN SCORES ON FACTORS BY SEX OF SUBJECT

FACTOR	MEANS		p
	Males	Females	
1	3.40	4.46	.001
2	2.77	3.33	.001
3	3.06	2.57	.002
4	3.51	4.53	.001

As the table shows, males agreed significantly more with the items represented by Factor 1, Limited Role, Factor 2, Equality, and Factor 4, Anti-Female. Females agreed significantly more with the items in Factor 3, Trait Advantage.

There are highly significant differences in attitudes between males and females about the proper function of women in policing. Males are still convinced that females should be used in non-patrol functions and females are convinced that they have skills equal and sometimes superior to those of males.

The results of Experiment I would suggest that males and females are still very polarized in their attitudes about women in policing. A study conducted in Washington in 1974, by the Police Foundation indicated much the same division of feeling as the present study. In the Washington study, although the conclusion was that the performance of male and female police officers was generally the same, after a year of experience with policewomen, "...patrolmen doubted that patrolwomen were the equal of men in performing most patrol skills." Patrolwomen felt that their patrol skills were "...for the most part, as good as patrolmen's and in a few cases, better" (Bloch and Anderson, 1974).

Asked to state traits of policewomen which they felt would be valuable to the patrol division, the officers in the Washington study most frequently mentioned (1) skill at handling females, (2) skill in handling children and (3) skill at paper work. Factor 1 is made up of statements which indicate that these same skills are considered by males as the proper role of females in policing.

It appears from these data that males still view patrol work as essentially a masculine and physical task. They reject strongly the "social work" image.

It is very interesting to note that attitudes have not changed greatly in two years, given the increased exposure of males to females in police work and in law enforcement oriented educational programs. Negative

feelings of males about women on patrol are still present and the increased exposure to females has evidently not changed them.

One could speculate, on the basis of these data whether or not male rejection of females in policing is not less changeable than was once thought. The data from Experiment II indicate that the reaction to females goes beyond attitudes expressed on a questionnaire.

Experiment II

The Motorola film contains eighteen sequences each depicting a potentially threatening situation that might be encountered by a law enforcement officer. In seven of these sequences, the officer is justified by the danger and threat pictured in shooting, in nine, it is inappropriate for him to fire. There are, therefore, two types of sequences: "shoot" and "no shoot". Consequently, there are two types of errors that can be made, (1) reactive errors - shooting on no shoot sequences, and (2) non-reactive errors - not shooting in situations in which it is appropriate to fire.

The amount and the appropriateness of reactivity was measured by several percentage scores. The hypothesis that female presence would have an effect on the shooting behavior of male police officers was confirmed by a number of these reactivity rates. Female presence was found to influence both the amount and the correctness of reactive

response. Scores for the troopers responding alone were dropped from the analysis because of the limited number of subjects.

Overall Response Rate and Power of Response were percentage scores which measured the amount of reactivity displayed by a subject. The Error Rate and the Shooting Response Rate measured the appropriateness of that reactivity.

The Overall Response Rate, the ratio of the number of sequences in which the trooper fired to the total number of sequences presented, was marginally higher for troopers with female partners than for troopers with male partners ($p = .07$). In other words, disregarding the appropriateness of the response, troopers with female partners shot on more sequences.

TABLE II
MEAN RESPONSE RATES AND ERROR RATES
BY SEX OF PARTNER

VARIABLE	MEANS		p
	Males	Females	
Overall Response Rate	27.75	37.37	.07
Power of Response	.64	.92	.05
Error Rate	23.00	14.00	.08
Non-Reactive	44.00	23.62	.05
Shooting Response Rate	54.88	76.63	.05
Pulse Rate After	88.00	101.25	.05

Troopers with female partners also fired a significantly higher number of shots than did troopers with male partners; this was called the Power of Response. Since there were seven sequences in which it was correct to shoot, it was necessary to fire seven shots in order to have a perfect score. The troopers with female partners were more inclined than were troopers with male partners to fire more than once per sequence.

Troopers seem, therefore, to be more reactive in the presence of a female partner. They shoot on more sequences and have a tendency to shoot more times on each sequence. Additional data indicates that they also have a better percentage of correct responses with female partners. The Error Rate for troopers with female partners was lower than the Error Rate for troopers with male partners ($p = .08$). Considering all errors, both reactive and non-reactive, troopers with female partners made less errors than troopers with male partners. The percentage of non-reactive errors, errors made by not firing on "shoot" sequences, was significantly lower for troopers with female partners.

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. Pulse rates, taken after the exercise had been completed, showed some sort of activation caused by female presence.

The pulse rates taken when the subject first arrived and after the confederate entered the room, were not significantly different due to sex of confederate. Pulse rates taken at the conclusion of the exercise, however, were significantly higher for those troopers who participated in the exercise with female partners. There were no significant blood pressure differences.

Even though shooting responses during the exercise and pulse rate after, differed significantly according to sex of confederate, the questionnaire data on arousal showed no differences in reported arousal level for self or arousal level attributed to partner. Questionnaire attitudes about women in policing were analyzed using the four factors established in Experiment I. Items with loadings of .50 or higher were used to make up each of the factors. A mean score for each trooper for each factor was established.

Analysis of variance, comparing responses of troopers to the four factors, revealed no significant differences in attitudes expressed between troopers participating in the exercise with male or with female partners.

It appears, therefore, that while the presence of a female did not affect reported attitudes, it did affect the shooting behavior and pulse rate of males participating with female partners.

In Experiment II, male police officers, responding with female partners to the Shoot/Don't Shoot training film, displayed an increased level of physical reactivity, as measured by shooting responses and pulse rates. The increased reactivity seems to facilitate correct rather than incorrect motor responses to the aggressive cues present in the situation. These findings fit closely with Berkowitz and Buck's (1967) formulation of the effects of impulsive aggression and arousal. The authors state

...the stronger a person is aroused the more inclined will he be to attack suitable target objects and the less will he react to peripheral stimuli...

CHAPTER V

DISCUSSION

This study is not intended to specify the behavioral mechanisms working that produce the effect; simply to show that the effect exists. Presented below are three models based on established research on aggressive behavior which might suggest frameworks from which to interpret the results.

It is necessary to note here that the responses to the Shoot/Don't Shoot film are talked about below as 'aggression' even though under strict definition of the term they would not be considered aggression because their intent is defensive. The behavior, therefore, can be more accurately understood as defensive aggression.

Frustration-Aggression - Consistent with the Dollard, Doob, et. al. (1939) formulation of the Frustration-Aggression hypothesis, female police officers may arouse hostile feelings in male police officers, and since there is no opportunity for these feelings to be discharged against the female officer, the consequent frustration is displaced and results in an increased reactivity to the film and an increased excitation.

General Arousal - A second alternative is that female presence stimulates a general level of arousal which heightens reactivity and the ability to respond correctly to the aggressive cues presented. Berkowitz and Buck (1967) maintain that "Emotional arousal, whether of a specific sort such as anger or of a more general undifferentiated state...heightens reactivity to aggression cues."

Sex and Aggression - A third alternative is that female presence involves some level of sexual arousal which mixes with the aggressive reactions. The series of experiments by Clark (1953), Barclay and Haber (1965), Barclay (1969, 1970, 1971), Beit-Hallahmi (1971), and Jaffee (1974), would support this proposition. In fact, Barclay (1971) suggests that

Men and women may have difficulty in separating the cues provided by either sexual or aggressive arousal and thus find it difficult to tell these two states apart.

Impetus for this research lay in knowledge of the connection between sex and aggression and consideration of policemen as a special sort of sexual grouping. Given the evidence in these two areas of research, male rejection of females is a predictable phenomenon.

Police officers represent a particular kind of group; a group which has been, until very recently, exclusively male. Lionel Tiger has written the definitive book on all-male groups and he sees the tendency of males to form and maintain exclusively male groups (a phenomenon

which he calls 'male bonding') as having been crucial to the survival of the species.

From Tiger's analysis three characteristics of the all-male group can be delineated that have particular significance here: (1) close and emotionally charged bonds between members, (2) a willingness to aggress against outsiders or an enemy, and (3) a concern with maleness.

Policemen characteristically maintain close emotional bonds. Fortier (1972) in discussing the police subculture stresses that the sense of fraternalism in policework is extremely strong. Officers tend to develop a we-versus-they attitude (Skolnik, 1968) and isolate themselves from the community forming their own in-group alliances (Radelet, 1973). The emotional attachment, especially of partners to each other, is poignantly expressed by an officer interviewed by the Police Foundation when they were doing research on women in policing (Bloch and Anderson, 1974). Speaking of his partner, the officer concluded

There's an attachment between you and your partner...I feel closer - I know more about my partner than I do about my own wife...If my partner were a female, I would have married him a long time ago.

Part of this strong emotional group attachment is forged by the shared exposure to danger and the willingness of individual members to aggress on each other's behalf. Tiger maintains that the threat, whether real or imagined,

of aggression from some out-group is what cements the group together. The drama that surrounds the death of an on-duty policeman or fireman is an example of the ritual that is made out of the symbolized external threat to strengthen the social bonds of the remaining members of the group. Berkowitz (1962) maintains that the strengthening of group identification itself increases hostility towards those outside the group.

Critical to the understanding of all-male groups is their concern with maleness. Tiger describes the all male group as being an aggregation "...facilitated by a sense of emotional maleness." Margaret Mead (1964) describes maleness as typically involving among other things, physical bravery, speed, and the use of violent force. Policing epitomizes this conception of maleness. An interesting example of this is found in a recruiting brochure from the Rochester Police Department which states

If you are looking for a real career for a real man, you should consider this new opportunity to become a Rochester police officer.

Wilson (1968) identifies as some of the working class concerns of policemen, the maintaining of self-respect, proving one's masculinity, "not taking any crap", and not being "taken in." Tiger sees the proving of masculinity or self-validation as being fundamental to this sort of male grouping. He asserts that all young males seek self-validation. He points out three important elements to

this process of self-validation:

- 1) validation involves a process of attachment to specific male peers and superiors who become defined as the "significant others" with respect to whom the individual seeks validation;
- 2) the process of attachment itself facilitates the effort to validation and in fact leads to a demand that satisfactory evidence of maleness be prerequisite to group membership;
- 3) the combination of the process of attachment and the need for validation leads to a cumulative group "feeling" which particularly under the stimulus of external threat or the perception of a possible advantage - tends to increasingly bold and effective activity.

Martin Reiser (1974) describes this framework of attachment and self-validation in a police department. He sees the department as representing a family structure with the older and younger siblings, the brass, and the younger patrolman, striving for self-validation.

The brass are usually older, more powerful "siblings" who behave in a paternal and patronizing way toward the young street policemen who occupy the role of younger siblings striving and competing for recognition, acceptance, and adulthood. This dynamic profoundly influences the organization in many significant areas such as communication, morale, discipline and professionalism.

Therefore, the group of police officers form an exclusively male group characterized by (1) strong emotional bonds of the members, (2) a willingness to aggress against outsiders, and (3) a concern with maleness and self-validation.

Tiger maintains that the process of male bonding and therefore male groups is essentially anti-female and

that it will make it "...difficult if not impossible - for ambitious females to reach the posts they wish." The tendency for males to persistently maintain all male groups will cause them to reject women not only as leaders but as colleagues. In other words, males will reject females in roles of dominance over other than children and females. This is precisely the point at which males began to react strenuously to females in policing, when they were taken out of dominance roles over women and juveniles and given positions of dominance over males.

Tiger points out several important aspects of the all male group which are relevant here. First, males, when they can, tend to choose their work mates in a process much like the process of sexual selection. Second, once a bond between males is established, it comes to generate a considerable amount of emotional attachment. Third, males seem to receive some form of emotional satisfaction from the male bond that they cannot get from an interaction with a female. Fourth, the wish of males to maintain their all male groups is motivated by other than simple temperamental and physical differences between men and women.

The rejection of females in policing by males seems, viewed from Tiger's perspective, to be a natural and predictable phenomenon. Males will attempt to retain their male groups and resist any attempt by a female to intrude. This analysis would lead one to believe that males would

not only reject females verbally but would also respond differently in their presence.

Based on the results of this experiment, female presence does significantly affect male response by increasing reactivity. In this instance, the effect is to facilitate correct rather than incorrect responses of males.

As in all exploratory research, this data raises as many questions as it answers. Will this effect transfer to the field? Will the effect remain strong between partners who have known each other over a period of time? Will this effect appear only in unpredictable, high stress, situations? Is the effect the result of social stereotyping or some very basic reaction of males to females?

None of these questions can be conclusively answered at the present time. Further research should clarify the nature of the effect. It seems evident, though, that since troopers strenuously denied being affected by the presence of the female and failed to report any differences in arousal or attitudes towards females in policing, the reaction to female presence was less cognitive than behavioral. The reactions of males to females in policing are probably more basic and less malleable than is usually considered.

CHAPTER VI

CONCLUSIONS

Fundamental behavioral differences exist between males and females which create differences in their responses to each other. The results of this study demonstrate that a female partner significantly affects motor behavior, shooting, and pulse rates of male police officers responding to a training film. If this effect transfers to the field, it could have important practical application: 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.

Since there is something about femaleness that affects behavior and in at least some instances the effects are desirable, we should perhaps emphasize rather than deemphasize femaleness in women police officers.

The behavioral differences between males and females as well as their reactions to each other should be studied and utilized to the advantage of the justice system.

APPENDIX

APPENDIX I

FOUR FACTORS FOR FEMALES IN POLICING QUESTIONNAIRE AND ROTATED FACTOR LOADINGS

FACTOR 1 LIMITED ROLE

Item	Loading
Women should be used in places their bodies and minds are suitable for - youth aid, station personnel, captain's clerks, administrative and morals.	.54
I feel some women police officers are capable of handling the duties of patrol work because being a man or woman does not determine your skills for a certain job.	-.52
Physical strength is a very small part of being a cop whether you're a man or a woman.	-.64
Women should be taken out of regular uniformed patrol and allowed to do the jobs they are better suited for.	.51
It's not the kind of job - being a patrolman - that I'd want my daughter or wife doing.	.46
Policewomen have an important role in the police department but not on uniformed patrol.	.45
A woman would be good in some limited situations. An example would be if the parents of a house full of children were locked up or if the children were abandoned. The patrol woman would be able to take charge of the children.	.42
Women patrol officers in a 50-50 ratio to men would result in less productive law enforcement.	.42
Women are neither emotionally nor physically equipped to handle a police officer's job.	.42

FACTOR 1 LIMITED ROLE (continued)

<u>Item</u>	<u>Loading</u>
Citizens don't seem to care whether you're a man or a woman you're an officer.	-.41
I don't want any policewoman coming to my house in an emergency.	.37
The presence of a female officer relieves tension.	-.36
Women are not effective on the street.	.34
The job has already too much of a social worker image; let's not degrade it more by adding women.	.30

FACTOR 2

EQUALITY

<u>Item</u>	<u>Loading</u>
For hiring purposes, women should be required to meet the same physical standards as men.	.86
Women should have to pass in training the same physical agility tests as men.	.57
Females should have to meet the same height requirements as men.	.43
If we hire women to be police officers then they should be treated the same as we treat male officers.	.39
I generally think women make good partners.	-.31
Physical strength is a very small part of being a cop whether you're a man or a woman.	-.29
Women are neither emotionally nor physically equipped to handle a police officer's job.	.28

FACTOR 3 TRAIT ADVANTAGE

Item	Loading
I think that women are more likely than men to try to reason rather than threaten.	.69
Women police officers are more sympathetic and compassionate than men police officers.	.63
In many instances, a woman may be able to prevent a situation from escalating because of her understanding.	.51
The job has already too much of a social worker image; let's not degrade it more by adding women.	-.29
The presence of a female officer relieves tension.	.25

FACTOR 4 ANTI-FEMALE

Item	Loading
Many women lack confidence, and it is apparent while on patrol.	.78
The job has already too much of a social worker image; let's not degrade it more by adding women.	.74
Women are neither emotionally nor physically equipped to handle a police officer's job.	.70
I feel at this time that if I had to work with one in a scout car my life would be in danger almost all the time.	.69
Women are not effective on the street.	.67
Women are not aggressive and tend to lay back and act as a ride along report taker.	.65
Most women panic easily and have neither the courage nor the physical strength to make an arrest unless they are backed up by a man.	.59
Women patrol officers in a 50-50 ratio to men would result in less productive law enforcement.	.55
Policewomen have an important role in the police department, but not on uniformed patrol.	.51
In recruiting women, we must be careful and selective, much more than in recruiting men.	.49
Policewomen have the ability more than a policeman to do office work or station work.	.49
Females are less quick to anger but are somewhat less decisive when an instant decision is required.	.47
I have not seen a situation which a woman couldn't handle.	-.47
I feel some women police officers are capable of handling the duties of patrol work because being a man or woman does not determine your skills for a certain job.	-.47

FACTOR 4 ANTI-FEMALE (continued)

Item	Loading
I don't want any policewoman coming to my house in an emergency.	.45
Women should be used in places their bodies and minds are suitable for - youth aid, station personnel, captain's clerks, administrative and morals.	.44
Women should be taken out of regular uniformed patrol and allowed to do the jobs they are better suited for.	.43
A majority of the women are unable to make decisions on their own.	.43
I generally think women make good partners.	-.35
A lot of times a female officer is not only able to be cool, calm, and persuasive with 'disorderlies' but she can also help to do the same with her male partner.	-.33
Most women are not used to taking the orders that are given in a para-military organization.	.26
Females should have to meet the same height requirements as men.	.26
Citizens don't seem to care whether you are a man or a woman, you're an officer.	-.26

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