POLICEWOMAN EFFECTIVENESS

by

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for the

CIVIL SERVICE COMMISSION

and

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1977

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ACKNOWLEDGMENTS

The Policewoman Effectiveness Study was a combined effort on the part of the Denver Civil Service Commission and the Denver Police Department. Denver Police Chief Art Dill made this study possible by ensuring the cooperation of the command staff and other agencies within the Denver Police Department. Other Police personnel aiding in the production of this report were Patrol Division Chief Robert Jevnager, Traffic Division Chief Robert Luby and the Captains, Lieutenants, and Sergeants who serve under them.

Special thanks to Sergeant Lewis Alverson and Technicians David Dunn and Don Lindley of Research and Development for arranging schedules and coordinating most of the total joint effort between the Commission and the Department.

Sergeant Milton Green of the Department Personnel Bureau located and obtained for the study, a large portion of the data from personnel records.

Captain Bates and the personnel of the Staff Inspection Bureau provided the data from the confidential files on commendations, complaints, etc.

Theresa Banfield and Marsha Nelson rode as field observers on all three shifts and all Police Districts, obtaining about 1/4 of the data in the study.

The subject officers, female and male and their partners put up with us for a year and a half, poking into their private files, asking questions and literally looking over their shoulders.

The Civil Service Commission Staff which provided the secretarial and support functions.

SUMMARY

The purpose of the present study is to test whether policewomen can perform all aspects of police work equally well as men.

Twenty-seven policewomen assigned to patrol and traffic duty, and twenty-seven policemen similarly assigned and matched for tenure were compared on fifty-six police performance variables. Differences occurred on nine variables. Men received more complaints and more resistances, had better shooting scores, higher patrol factor, and both gave more instructions to their partners as well as receiving more instructions from their partners. Women took more sick leave, had higher entrance test scores and were more variable in their attitudes towards citizens involved in police incidents. Since at least as many of the observed differences favored women as favored men, it was concluded that policewomen were as adequate in all police tasks observed as policemen.

INTRODUCTION

On or about August 27, 1975, the Civil Service Commission of the City and County of Denver entered into a Consent Decree with plaintiffs Carole C. Hogue, et al.. A portion of that Decree, approved by Judge Alfred Arraj of the United States District Court, provided that the Civil Service Commission conduct a study to determine whether Denver Policewomen could perform all aspects of police work.

With an eighteen-month time period and a relatively small number of policewomen dispersed throughout the Department in various capacities, the study was necessarily a limited one. Conclusions from such a study, therefore, are somewhat attenuated and must serve more as indicators than as definitive results.

From the outset, it was decided to examine only those aspects of police work in which differences between men and women officers might be expected a priori to occur. The nature of police work is so extensive and so varied that any other approach appeared unfeasible. Since the reason most often advanced for limiting the role and number of policewomen has to do with their physical strength (Milton, 1972), and since policewomen in a study conducted in Washington, D. C. tended to make fewer arrests and issue fewer citations (Bloch and Anderson, 1974), the focus of this study was on the patrol and traffic functions where these differences were more likely to appear.

The Bloch and Anderson study in Washington, D. C., just mentioned, also indicated two other differences between patrolmen and patrolwomen. In their study, men were more likely to engage in "serious unbecoming

conduct" and women were more likely to be assigned to light duty as the result of injuries, although injuries did not cause them to be absent from work more often than men. This latter finding would seem to be more a function of departmental policy than of any characteristic attributable to the women, whereas the former may be attributable to characteristic differences between men and women in the performance of police functions.

The principal aim of this study is to locate areas of weakness or of strength which may be exhibited by policewomen relative to policemen and to determine whether such differences, if any, are of a magnitude such that a deficiency in police service might be expected. This study does not address itself to the attitudes of policemen towards policewomen or vice-versa. It does not concern itself with departmental treatment or placement of women per-se, but rather, limits itself strictly to the observable performance of policewomen in the day-to-day process of enforcing the law.

Methodology

Subjects

All women assigned to Patrol or Traffic Divisions at the commencement of the study were included as subjects. This amounted to twenty-nine women. Six of these were in the Traffic Division, two at the airport and twenty-one on patrol. Ultimately, the two women assigned to Stapleton Airport were dropped from the study, as their activities were found to be unique and not often consisting of the arrest and enforcement elements of interest in the study. As a result, the study covers twenty-seven policewomen assigned to Patrol and Traffic.

A control group of twenty-seven men was matched for length of service and approximate assignment with the women officers. That is, for each woman working in the Patrol and Traffic Divisions, a male officer was selected who had the same amount of tenure, and worked in the same Division, District and Detail (shift). The average time on the job was about twenty-six months, with a minimum length of service of four months and a maximum of nine years.

By the end of the study, many of the assignments for both men and women had changed, but for the most part, assignments remained similar for both groups.

Variables

The study was divided into two distinct parts. The first part focuses attention on the recorded activities of subject and control officers over a period of about one year, and on various other performance records. These variables were taken from the officers' monthly performance summaries which, in turn, were abstracted from the officers' daily log sheets. In addition, others of these variables were obtained through the confidential records of the Staff Inspection Bureau, Personnel Bureau and the Training Bureau.

The variables obtained from the log sheets/monthly summaries were as follows:

1. Patrol Time: The time spent patrolling or cruising, not including time spent on actual incidents or out of service activities.

2. Patrol Factor: A percentage of total time on duty spent on patrol time. For example, an officer with a .5 patrol factor spent 50% of his or her time patrolling or cruising. The statistical relationship between this variable and patrol time is sufficient to consider them as one variable (Pearson r= .936).

3. Class I Felony Arrests: Felony arrests initiated by the dispatcher.

4. Class II Felony Arrests: Felony arrests initiated by the officer.

5. Class I Miscellaneous Arrests: Non-felony arrests initiated by the dispatcher.

6. Class II Miscellaneous Arrests: Non-felony arrests initiated by the officer.

7. Class I Actions: All incidents initiated by the dispatcher.

8. Class II Actions: All incidents initiated by the officer.

9. Class III Actions: All out of service periods during a tour of duty for meals, auto service, equipment breakdown, etc.

10. Class II DUI: Driving under the influence arrests.

11. Class II Open Door: Number of business establishments, etc. found open or unprotected after hours.

12. Recovered Units: Number of stolen motor vehicles found or recovered.

13. Contact Cards: Cards made out listing the name, address, description, etc. of persons who are suspicious or are contacted at or near a crime scene or other incident where no detention or arrest is warranted.

14. Offense Reports: Reports made out for serious crimes, accidental deaths, suicides, severe threats, etc.

15. Other Reports: Injuries, statements of witnesses, abandoned vehicles, etc.

16. Moving Violations: Traffic tickets on moving violations.

17. Parking Violations: Parking tickets written.

18. Warning Violations: Formal written warning, no ticket issued.

19. Accident Violations.

20. Accident Reports.

Other variables from the first part of the study, taken from departmental records included:

1. Training Academy ratings: Performance ratings by police academy staff.

2. Training Academy grades: Average grades on written academy tests, covering statutes, police procedure, etc.

3. Probationary efficiency ratings: Monthly performance ratings given during officer's first year of service.

4. On-the-job efficiency ratings (1 year previous to study).
5. Line of duty injuries.
6. Complaints: Formal citizens' complaints against officer on file.
7. Commendations: Formal departmental awards for exceptional action.
8. Positive letters from citizens.
9. Disciplinary charges (brought by the department against the officer.)
10. Types of disciplinary charges: (a) Failure to appear in court; (b) Failure to shoot; (c) Derogatory accidents; (d) Improper conduct; (e) Improper actions.
11. Disciplinary charges sustained.
12. Reported resistances.
13. Shooting records: Average monthly score for departmental qualifying target shooting.
14. Sick leave.
15. Written entrance test grades.

The second part of the study involved the use of four observers, two male (the authors) and two female, riding with the subjects and control officers during their tours of duty. Observers rode with both male and female officers in a balanced design to somewhat neutralize the effect, if any, of the sex of the observer or the interaction between the sex of the observer and the sex of the officer on the observed variables.

The four observers rode with subject and control officers for a total of thirty tours of duty, or 240 hours. Equal numbers of male and female officers were observed, and observation rides were distributed among all four Patrol Districts, and the Traffic Division, as well as among the three different work details or shifts

The purpose of the observation phase of the study was to attend to those variables or samples of job performance, such as the effect of the officer on the level of tension in an incident, amount of back-up received and others, which either are not normally recorded or do not lend themselves to record keeping.

Since the observable variables were quite numerous, and their possible interactions overwhelming in number, only select ones among them were actually chosen for testing. For major incidents observed (see Incident forms in appendix) these were:

1. Attitude of spectators at the scene

   Numerical scale ranging from 1=friendly to 5=hostile.

2. Effect of officer on spectators

   Numerical scale ranging from negative to positive.

3. Ethnic background and sex of persons directly involved with officers.

4. Emotional state of involved citizens on officers' arrival.

5. Emotional state of citizens on officers' departure.

6. Attitude of citizen towards officer

   Scale from positive to negative.

7. Attitude of officer towards citizen.

8. Effect of officer on the level of tension/violence.

9. Amount of instructions officer gave to partner.

10. Amount of instructions received by officer from partner.

11. Extent to which subject officer took charge of an incident.

12. Total back-up received by subject officer.

13. Number of arrests initiated by subject.

14. Number of reports taken.

Variables tested from brief, or non-major incidents included:

1. Type and number of traffic incident activity.

2. Type and number of non-traffic incident activity.

3. Reasons for leaving scenes with no action taken.

4. Attitude of citizen towards subject officer.

5. Attitude of officers towards citizen.

6. Giving instructions to partner.

7. Extent to which subject officer took charge of incident.

Variables which were not directly a function of length of service such as the twenty variables abstracted from the log sheets were subjected to standard T-tests. Separate T-tests on each variable were done for traffic officers and for patrol officers. It can be argued that log sheet variables are indeed a function of time on the job, and perhaps within very narrow boundaries, they are. However, matched T-tests were run on variables much more directly related to time on the job, such as number of commendations obtained, which included all commendations for the subject officer's work history. Additionally, while there is a clear and demonstrable correlation between time on the job and number

of commendations obtained, there is no apparent correlation between log sheet data and time on the job. Variables 1 - 9 and 11 - 14 from the non-log sheet variable group were compared using the T-test for matched samples. Variable 10 was compared using a Chi Square test for distributions and variable 15 from that group was compared via a standard T-test.

Most of the variables obtained from the observation rides were analyzed by Chi Square tests with the exception of 12 - 14 of the major incidents (analyzed by T-test), and variable 7 of the brief incident group (T-test for proportions).

Forms for both major and brief incident reports are included in the appendix.

Results

In a comparison between groups on a variable, statistical significance may or may not imply practical significance. In effect, statistical significance indicates that the magnitude of the observed differences between sample groups could not have occurred by chance (except at the probability level stated). Practical significance is a less precise term which refers to the fact that the difference observed is large enough to have some meaningful effect. This, of necessity, must be a value judgment on the part of the observer. An observed difference between sample statistics cannot be judged to be of practical significance if it is not of statistical significance no matter what the feelings of the observer. That is, there can be no practical significance where there is no statistical significance.

Where a difference is large, but is not statistically significant, the observed difference could reasonably have occurred by chance alone.

As might be expected in view of the Washington, D. C. study, most of the fifty-six variables on which men and women officers were compared showed no significant differences. On nine of the variables compared, there were differences reaching statistical significance. These were:

1. Women officers had higher entrance test scores than did men at probability less than 5%.
2. Men had more citizen complaints than did women at the 1% probability level.
3. Men had better shooting records at the 5% level.
4. Women took more sick leave at the 5% level.
5. Men have higher patrol factor and patrol time at the 5% probability level.
6. Women exhibit a greater variation in their attitudes towards citizens.
7. Women gave fewer instructions to male partners at the 5% level.
8. Women received fewer instructions from male partners at the 1% level.
9. Men have more resistances reported at the 1% level.

The 5% level means that the results could have occurred by chance only 5 times in a hundred experiments. The .01 or 1% means that the observed results could have occurred by chance only once out of a hundred experiments.

Following are tables summarizing the significant results:

Entrance Test Scores

Female mean 75.71 variance 69.64 N=26 T= 2.09
Male mean 71.63 variance 13.20. N=22

Complaints

Matched sample T-test

Female mean 1.60 per officer N=26 pairs T= 2.92
Male mean 2.67 per officer

Shooting Records

Female mean 79.53 N- 26 pairs T= -2.62
Male mean 84.85

Sick Leave

Female mean 18.58 days N=26 pairs T= -2.62
Male mean 9.50 days

Patrol factor - Patrol time

Patrol time	Female mean	197.94	variance 975.33	T= 2.77	
	Male mean	224.88	variance 865.47		
Patrol Factor	Female mean	.42	variance .004	T= 2.53	
	Male mean	.47	variance .003	N female = 21	
				N male = 21	

Attitude toward citizen

	positive				negative	
	1	2	3	4	5	
Females	3 | 1.75	19 | 22.22	46 | 40.93	0 | 3.51	1 | .59	69
Males	0 | 1.25	19 | 15.78	24 | 29.07	6 | 2.49	0 | .42	49
	3	38	70	6	1	118

$\chi^2_4 = 13.94$

Instructions given to (male) partners

	None				many	
	1	2	3	4	5	
Females	23 | 18.76	1 | 1.76	5 | 9.97	5 | 3.52	0 | 0	34
Males	9 | 13.4	2 | 1.24	12 | 7.03	1 | 2.48	0 | 0	24
	32	3	17	6	0	58

$\chi^2_4 = 10.61$

Instructions received from (male) partners

	none 1	2	3	4	many 5	
Females	21 | 16.38	5 | 3.51	5 | 9.94	0 | 1.17	0 | 0	31
Males	7 | 11.62	1 | 2.49	12 | 7.06	2 | .83	0 | 0	22
	28	6	17	2	0	53

$\chi^2_4 = 13.40$

Resistances

Female mean 2.54 N= 26 pairs T= -2.84
Male mean 4.81

The expected frequencies in many of the cells of the chi-square test are quite small. While this does not nullify the results, it does mean that the results must be viewed in a somewhat more conservative manner.

Discussion and Conclusions

It comes as no surprise that the entrance scores of the women were higher than those of the men. This difference cannot be attributed to anything other than the hiring practices involved. Because far fewer women than men have been appointed in the past, and because officers are appointed according to their rank on a list of written test scores, it is to be expected that those women hired would be from among the highest scorers. For example, if 100 men pass the test and 100 women pass the test, and if men and women as groups do equally well on the test (which they do) and further, if the top forty men are hired and only the top ten women, the average scores of the forty men so chosen would clearly be expected to be lower than the average scores of the 10 women so chosen. This difference then, is artifactual and is without much interest to the present study.

The number of citizen complaints and the number of reported resistances, as might be suspected are somewhat correlated. In fact, the correlation is about .36, significant at the .01 level.

Male officers average about 2.7 complaints per officer for their career while female officers average about 1.6 per officer or about 1-2/3 times higher rate of complaints for men. The number of reported resistances for male officers was 4.8 per officer while for females, about 2.5 per officer was the observed rate. Men officers have reported resistances at nearly double the rate of women officers. An argument could be advanced that men officers are more aggressive and in doing more work, particularly more of the physical aspects of the work, they get more complaints and resistances. While it may or may not be true that male officers are more aggressive, it is not true that they are doing more of the work. As we have seen above, women make, and initiate a similar number of arrests to men and they do it with fewer complaints and fewer reported resistances. Another argument advanced to explain these results is that male suspects might be more reluctant to make complaints about being roughed up by women. They might, in fact also be less likely to resist a woman in the first place. Nothing in this study can support or refute such an argument. As of the present, the only conclusion which can be made on the basis of these variables is that the women do as much work as the men without producing as many complaints or resistances.

Policemen shoot more accurately than do policewomen. Policemen average 84.85 out of a possible score of 100, while policewomen average

79.53 out of a possible 100. It should be pointed out however, that all but one policewoman shoot above the required level set by the department. This difference then, while real, is probably not of practical significance.

Policewomen take more sick leave than do policemen. This variable includes off-duty injuries. While policwomen do not lose work time for on-the-job injuries at any different rate than do policemen, their off-the-job injuries and sick leave show considerable difference. Women average 18.58 days for their career, and men average about 9.5 days. Women take almost twice as many sick days off. The sick leave taken does not include maternity leaves. In addition to their sick leave women may take one year for maternity leave. Only two women in the study are reported as having used the maternity leave. One of these has spent almost half of her six years on the department on maternity leave. It appears that the conclusions from this comparison are that women spend more time off work than do men due to illness, off-duty injury, maternity or possibly other reasons.

The patrol time and patrol factor variables were statistically significant for patrol officers but not for traffic. Males apparently average 47% cruising or patrol time while patrolwomen average about 42%. This difference, while statistically significant, does not appear to be very great in a practical sense. In addition, it is not clear which of the two is more desirable. A larger cruising time could indicate simply more riding about or it could indicate a more comprehensive preventive patrol. Other variables bear somewhat on this question, but

not to the extent we would have liked. Observations made on major incidents while riding with officers indicate no difference in the time taken on an incident so it cannot be asserted that women are simply taking longer to handle an incident. Of course, both men and women are on "good behavior" generally when observers are present in the patrol car, but it is doubtful that the officers were even aware that the time variable was being observed. It cannot be asserted that women are taking more Class III or "out of service" actions, thereby reducing their patrol time, since that variable, also taken from the log sheets, shows no difference. In any case, whatever the source, a difference between 47% and 42% is not likely to produce difficulty in either direction.

The attitudes of policewomen toward citizens are more widely varied than those of policemen. A very positive attitude was shown toward citizens in only three cases by women and in no cases by men. A somewhat positive attitude was shown in nineteen cases by both men and women. A neutral attitude toward the citizen occurred in 46 major incidents for the women and in 24 for the men. A somewhat negative attitude was expressed in no cases by the women and in six cases by the men. Lastly, a hostile attitude toward the citizen was expressed by a female on one occasion and on no occasion by a male. More total occasions of attitude interaction (incidents where attitudes were expressed between citizens and officers) occurred for women than men, but this was taken into account in the analysis. It is difficult to interpret these results but it appears that the best interpretation is that, during these

observations at least, women tended to express a fuller range of emotion, being more friendly than men with some, and more hostile than men with others. It is not in the province of this paper to judge which approach is better.

Women apparently both give and receive fewer instructions from their male partners than do men from their male partners. For this particular comparison, male or female officers with female partners were not included. The conclusion from this comparison must be that male officers are not directing women officers through incidents. There was some concern that male officers might be actually controlling the conduct of the incident with women not actually "pulling their own weight." With this finding, along with a finding of no significant difference on the variable measuring the tendency to "take charge" of the situation, it cannot be concluded that women are being dominated or supported through police incidents.

All in all, two variables described above represent problems. Against the effectiveness of policewomen is the amount of time lost from work through sick leave and through maternity leave. Against the effectiveness of policemen is the number of citizen complaints and reported resistances obtained. Although the actual incidence of resistances reported is quite low, the toll in public relations as indicated by the larger number of complaints is not trivial. In addition, even a small number of resistances which can be reduced to an even smaller number will be a reduction in potential injury to citizens and officers.

The shortcomings of this study became evident early. Log sheets contain essentially self reports, some of which can be checked, others not. Padding of log sheets by officers can, and as we were told, does occur. There was some indication from officers that male participants were encouraged to "step up their pace" by superior officers if they seemed to fall behind in any particular area. It is doubtful that this approach had any effect, based upon our conversations with officers. Nevertheless, the potential that such influences affected performance exists. There is no reason to believe that padding of log sheets occurs more among police men than women or vice-versa.

Resistance reports typically are made out only when someone is injured or when there is reason to believe that a complaint or other problems might arise from an incident. Thus, many of the minor scuffles occasionally engaged in by officers in the process of arresting suspects are not reported. Nonetheless, the number of these more major resistance incidents is a valuable variable since it reflects more serious encounters in which differences between men and women are more to be expected.

Some variables were not included which might have proven interesting but for one reason or another were not amenable to treatment. For example, Use of Weapon. There were no use of weapons reported for the the females in the study and only four for male officers for their entire careers. This is statistically too small an incidence for meaningful comparison. In addition, conversations with officers lead to the belief that such reports are not necessarily complete. This may also be true of other variables in the study. However, to the extent that such

reports represent a sampling of the behavior in question, unless there is reason to suspect a consistent bias in the reports (for or against one sex or the other), such incompleteness should not greatly effect statistical comparisons, since statistical tests are designed for random sampling.

Variables such as Arrests (Class I, Class II, miscellaneous) are not the same as Arrests Initiated by Officer, originating out of the observation rides. The latter was included to test the possibility that a "no difference" finding between men and women on a log sheet count was simply due to the women having male partners who "did all the work" in the arrest, since both partners take credit for an arrest on a log sheet regardless of which officer initiated the arrest. If such an assertion were true, a difference would have occurred, not in the log sheet arrest records but in the number of arrests initiated by the women versus those initiated by the men. Such differences did not occur in this study. In fact, unlike the Washington, D. C. study, the Denver study did not find that women made fewer arrests, either of the Class I (dispatcher initiated) or Class II (Officers' initiated) variety.

A non-statistical observation from this study may be worth discussing at this point. Both policemen and policewomen are well aware of the differences in physical strength between women and men in general. The occurrence of physical struggles in police work are relatively few (about 1.3 reported for men per annum for the average patrolman working the street). Policewomen say they are more circumspect in approaching a potentially violent male than policemen might be. In addition the use

of standard police weapons can often be relied upon if more cautious measures fail. If the frequency of resistance was high, this use of weapons might become problematic since frequent use of weapons increases the possibility of injury to suspects, and citizen bystanders. At present, however, the frequency of serious resistances is not high even for men officers and, as has been stated, is significantly lower for women. Thus, at present, the physical limitations of women do not seem to imply limitations on the ability to arrest suspects.

There is no way to project the effects that a large increase in the percentage of women on the force would have on these results. It is possible that a force composed of 50% women, for example, would produce a boldness in the criminal element that would increase resistances and thereby the use of weapons. (Although none of the women in this study has ever been reported to have resorted to the use of weapons, conversations indicated occasional threat of such use and even the possibility that some unreported use may have occurred.) On the other hand, such an increase in the percentage of policewomen on the force may simply result in a decrease in citizen complaints and in reported resistances.

In summary then, there is no replicable difference between policewomen and policemen in the number of arrests made in any category whether dispatcher initiated or self-initiated, no difference in the number or quality of other police actions taken, reports written, efficiency ratings, line of duty injuries, disciplinary charges, positive letters from citizens, effects of officers on spectators or citizens involved in police actions, effects of officers on the levels of violence or tension at an incident, or the amount of back-up received from other officers.

Variables where differences occurred were entrance test scores, complaints from citizens, resistances, shooting records, sick leave taken, patrol factor-patrol time, attitude of officers toward citizens, giving instructions to partners, and receiving instructions from partners. In some of these, women did less well than men. In others, men did less well than women.

The Denver study was not able to replicate the Washington, D. C. Study finding that women made fewer arrests, although the finding that men were more likely to engage in "unbecoming conduct" may be related to the Denver finding of men receiving more citizen complaints.

In spite of the small number of policewomen available and the small time span involved, and ignoring individual cases of poor or outstanding officers of either sex in favor of group averages, policewomen appear to be equally effective as policemen in all observed facets of police work.

References

1. Milton, Catherine *Women in Policing* Library of Congress Catalogue No. 72-83431 Police Foundation, 1972

2. Bloch, P.B., and Anderson, Deborah *Policewomen on Patrol, Final Report* Library of Congress Catalogue No. 74-19437 Police Foundation, 1974

APPENDIX A

All variables compared in the Policewomen's effectiveness study are presented herein. Where an N.S. follows the T value, the results were non-significant.

For the log sheet variables, twenty-one men and twenty-one women were included in the comparisons for Patrol, five men and six women for traffic.

Log Sheet Variables

	Male Mean	Female Mean	Male Variance	Female Variance		
Patrol Factor						
Traffic	.225	.199	.001	.009	T= .473	N.S.
Patrol	.471	.421	.003	.004	T= 2.53	
Patrol Time						
Traffic	106.89	127.33	247.64	2004.41	T= -.879	N.S.
Patrol	224.88	197.94	865.47	975.33	T= 2.77	
Class I Felonies						
Traffic	.019	.008	.00002	.0001	T= 1.05	N.S.
Patrol	.129	.130	.002	.003	T= -.029	N.S.
Class II Felonies						
Traffic	.028	.033	.0007	.0023	T= -.20	N.S.
Patrol	.089	.081	.0026	.0019	T= .532	N.S.
Class I Miscellaneous Arrests						
Traffic	.042	.02	.0016	.0001	T= 1.1	N.S.
Patrol	.299	.334	.0196	.0078	T= -.931	N.S.
Class II Miscellaneous Arrests						
Traffic	.086	.083	.0006	.0072	T= .062	N.S.
Patrol	.192	.172	.0117	.0065	T= .653	N.S.

	Male Mean	Female Mean	Male Variance	Female Variance		
Class I Actions						
Traffic	2.64	2.91	3.199	1.254	T= -.278	N.S.
Patrol	5.79	6.25	1.683	1.217	T=-1.195	N.S.
Class II Actions						
Traffic	5.67	5.05	1.44	7.86	T= .4161	N.S.
Patrol	4.20	5.13	1.399	5.958	T= -1.573	N.S.
Class III Actions						
Traffic	3.20	3.51	.146	.430	T=-.834	N.S.
Patrol	2.58	2.53	.168	.230	T= .3149	N.S.
Class II DUI						
Traffic	2.14	1.55	2.029	2.954	T= .559	N.S.
Patrol	.087	.108	.0061	.0118	T= -.703	N.S.
Class II Open Door						
Traffic	.05	.01	.0017	.0005	T= 1.786	N.S.
Patrol	.038	.060	.0010	.0022	T=-1.560	N.S.
Recovered Units						
Traffic	.084	.057	.0034	.0022	T= .789	N.S.
Patrol	.128	.137	.0026	.0029	T= -.526	N.S.
Contact Cards						
Traffic	.022	.043	.0015	.0070	T= -.477	N.S.
Patrol	.388	.356	.1627	.0437	T= .312	N.S.
Offense Reports						
Traffic	.010	.017	.0001	.0003	T= -.67	N.S.
Patrol	.708	.805	.018	.073	T= -1.42	N.S.
Other Reports						
Traffic	.260	.227	.0723	.0794	T= .180	N.S.
Patrol	2.405	2.360	.5956	.2932	T= .209	N.S.
Moving Violations						
Traffic	1.804	1.668	.8577	.6449	T= .235	N.S.
Patrol	1.558	1.559	.9845	1.1117	T=-.003	N.S.
Parking Violations						
Traffic	.304	.440	.0595	.1651	T= -.5936	N.S.
Patrol	1.105	1.428	.5585	.9192	T= -1.170	N.S.

	Male Mean	Female Mean	Male Variance	Female Variance		
Warning Violations						
Traffic	.056	.012	.0045	.0003	T= 1.402	N.S.
Patrol	.322	.572	.1840	.7587	T= -1.132	N.S.
Accident Violations						
Traffic	.926	1.057	.4040	.3444	T=-.320	N.S.
Patrol	.119	.122	.0018	.0024	T=-.206	N.S.
Accident Reports						
Traffic	1.552	1.777	.9648	.8211	T= -.357	N.S.
Patrol	.205	.208	.0076	.0044	T= -.147	N.S.

Other Variables from Departmental Records

Matched Sample T Tests

Line of Duty injuries	T= -.573	N= 26	N.S.
Academy ratings	T= -.74	N= 25	N.S.
Probation efficiency ratings	T= -179	N= 26	N.S.
Efficiency ratings average on-the-job	T= -1.047	N= 21	N.S.
Number of complaints	T= -2.922	N= 26	
Commendations	T= -1.56	N= 27	N.S.
Positive Citizens'letter	T= .661	N= 27	N.S.
Disciplinary charges (and sustained)	T= -.739	N=26	N.S.
Resistances	T= -2.84	N=26	

Correlation between resistances and complaints = .359

Shooting records	T= -2.6214	N=26	
Academy Grade Averages	T= .893	N=24	N.S.
Sick Leave	T= 2.109	N=26	

Disciplinary Actions

Sex	A	B	C	D	E	F	
F	7.962	5.308	3.096	3.981	1.769	.885	
	8	6	4	4	0	1	23
M	10.038	6.692	3.904	5.019	2.231	1.115	
	10	6	3	5	4	1	29
	18	12	7	9	4	2	52

$\chi^2_5 = 3.834$ N.S.

A = Failure to appear in court
B = Failure to shoot
C = Derogatory accident
D = Improper procedure
E = Improper conduct
F = Improper action

Major Incident Analysis

Attitude of Spectators

F	(+) 1	2	3	4	5 (-) H	
F	0	6.783	15.826	2.261	1.13	
	0	6	17	1	2	26
M	0	5.217	12.174	1.739	.87	
	0	6	11	3	0	20
	0	12	28	4	2	46

$\chi^2_4 = 3.565$ N.S.

Effect of Officer on Spectators

	(-) 1	2	3	4	5 (+)	
F	3.75	2.34	13.13	6.09	4.69	
	5	1	17	4	3	30
M	4.25	2.66	14.88	6.91	5.31	
	3	4	11	9	7	34
	8	5	28	13	10	64

$\chi^2_4 = 6.88$ N.S.

Attitude of Officer Towards Citizen

	(+) 1	2	3	4	5 (-)	
F	1.75	22.22	40.93	3.51	.59	
	3	19	46	0	1	69
M	1.25	15.78	29.07	2.49	.42	
	0	19	24	6	0	49
	3	38	70	6	1	118

$\chi^2_4 = 13.94$

Effect of Officer on Level of Tension/Violence

	inc. 1	2	3	4	5 dec.	
F	.5	3.00	19	6.5	2	
	0	3	19	7	2	31
M	.5	3.00	19	6.5	2	
	1	3	19	6	2	31
	1	6	38	13	4	62

$\chi^2_4 = 1.076$ N.S.

Gave Instructions to Partner

	none 1	2	3	4	5 many	
F	18.76	1.76	9.97	3.52	0	
	23	1	5	5	0	34
M	13.24	1.24	7.03	2.48	0	
	9	2	12	1	0	24
	32	3	17	6	0	58

$\chi^2_4 = 10.61$

Received Instructions from Partner

	none 1	2	3	4	5 many	
F	16.38	3.5	9.94	1.17	0	
	21	5	5	0	0	31
M	11.62	2.49	7.06	.83	0	
	7	1	12	2	0	22
	28	6	17	2	0	53

$\chi^2_4 = 13.40$

Ethnic Background of People Directly Involved

	A	B	H	AA	I	
F	41.95	15.25	13.08	.55	2.18	
	43	18	11	1	0	73
M	35.05	12.75	10.93	.46	1.82	
	34	10	13	0	4	61
	77	28	24	1	4	134

$\chi^2_4 = 7.49$ N.S.

Emotional State on Officer's Arrival (citizen)

	1	2	3	4	5	
F	35.84	19.46	4.10	2.05	2.56	
	34	22	2	1	5	64
M	34.16	18.54	3.94	1.95	2.44	
	36	16	6	3	0	61
	70	38	8	4	5	125

$\chi^2_4 = 8.90$ N.S.

Emotional State on Officer's Leaving (citizen)

	1	2	3	4	5	
F	37.32	15.64	3.53	1.01	.50	
	38	15	4	1	0	58
M	36.68	15.37	3.47	.99	.50	57
	36	16	3	1	1	
	74	31	7	2	1	115

$\chi^2_4 = 1.20$ N.S.

Attitude of Citizen Towards Officer

	(+) 1	2	3	4	5 (-) H	
F	2.67	26.16	34.70	6.41	1.07	
	0	28	38	4	1	71
M	2.33	22.84	30.30	5.59	.93	
	5	21	27	8	1	62
	5	49	65	12	2	133

$\chi^2_4 = 8.635$ N.S.

Backup (total) Number of incidents: Female - 34 Male - 37

Female mean = 1.455 Female variance = 5.701 T= -.898

Male mean = 2.833 Male variance = 18.474 ν = 21 N.S.

Number of Arrests

Female mean = .727 Female variance = .744 T = -1.417

Male mean = 1.25 Male variance = .687 ν = 21 N.S.

Of arrests initiated by one or the other partner

those initiated by subject males = 8/10 = .8

those initiated by subject females = 2/4 = .5

Four arrests made by female officers and partner were not attributable to either subject or partner.

One arrest made by male officers and partner was not attributable to either subject or partner.

One arrest made by male officers and partner was not attributable to either subject or partner.

$.8 - .5 = .3$

$\sigma_{p_1 - p_2} = .269$ $1.96\sigma = .527$ N.S.

The appearance of a difference is apparently due to the small numbers involved.

Reports Taken

Female mean = 2.00 Female variance = 1.636 T= 1.812

Male mean = 1.083 Male variance = 1.077 ν = 21 N.S.

Dominance (took charge

	1	2	3	4	5	
Females with male partners	3.97	4.63	28.44	3.31	.66	
	6	5	26	3	1	41
Male with female partners	2.03	2.37	14.57	1.69	.34	
	0	2	17	2	0	21
	6	7	43	5	1	62

$\chi^2_4 = 4.37$ N.S.

Gave Orders

	none	1	2	3	4	5	many	
Females with male partners	19.16	1.86	10.51	2.47	0			
	23	2	5	4	0			34
Males with male partners	11.84	1.14	6.49	1.53	0			
	8	1	12	0	0			21
	31	3	17	4	0			55

$\chi^2_4 = 12.09$ N.S.

Received Orders

	none	1	2	3	4	5	many	
Females with male partners	15.50	3.1	10.54	1.86	0			
	20	5	5	1	0			31
Males with female partners	9.50	1.9	6.46	1.14	0			
	5	0	12	2	0			19
	25	5	17	3	0			50

$\chi^2_4 = 15.21$

Brief Incident Analysis

Traffic Type

	1	2	3	4	5	7	
F	18.06	11.12	4.17	1.39	7.41	1.85	
	20	10	3	1	8	2	44
M	20.94	12.88	4.83	1.61	8.95	2.15	
	19	14	6	2	8	2	51
	39	24	9	3	16	4	95

$\chi^2_5 = 1.58$ N.S.

Non-Traffic Incidents

	1	2	3	4	5	6	7	8	
F	8.7	31.67	4.35	1.24	3.11	3.73	1.86	9.32	
	9	31	2	2	5	4	1	10	64
M	5.3	19.31	2.65	.76	1.89	2.27	1.14	5.68	
	5	20	5	0	0	2	2	5	39
	14	51	7	2	5	6	3	15	103

$\chi^2_7 = 8.91$ N.S.

Left Scene

	1	2	3	4	5	
F	0	8.87	.47	2.33	2.33	
	0	7	1	2	4	14
M	0	10.13	.53	2.67	2.67	
	0	12	0	3	1	16
	0	19	1	5	5	30

$\chi^2_4 = 4.126$ N.S.

Attitude of Citizen Towards Subject Officer

	1	2	3	4	5	
F	0	5.75	28.74	15.15	8.36	
	0	6	29	17	6	58
M	0	5.25	26.26	13.85	7.64	
	0	5	26	12	10	53
	0	11	55	29	16	111

$\chi^2_4 = 1.23$ N.S.

Attitude of Officer Towards Citizen

	1	2	3	4	5	
F	0	1.64	43.64	12.00	2.73	
	0	1	44	13	2	60
M	0	1.36	36.36	10.00	2.27	
	0	2	36	9	3	50
	0	3	80	22	5	110

$\chi^2_4 = 1.17$ N.S.

Giving Instructions

	few 1	2	3	4	5 many	
Female with male partner	46.5	2.5	10	3.0	0	
	50	1	10	1	0	62
Male with female partner	46.5	2.5	10 ,	3.0	0	
	43	4	10	5	0	62
	93	5	20	6	0	124

$\chi^2_4 = 4.99$ N.S.

Taking Charge

	sub. 1	2	3	4	5 dom.	
Female with male partner	5.58	6.82	38.41	3.10	3.1	
	8	5	38	3	3	57
Male with male partner	3.42	4.18	23.59	1.90	1.0	
	1	6	24	2	2	35
	9	11	62	5	5	92

$\chi^2_4 = 4.066$ N.S.

There were 13 cases of non-dominance out of 17 dominance situations or p'_F = .684 for females.

There were 7 cases of non-dominance out of 11 dominance situations or p'_M = .636 for males. N.S.

Observed proportional difference = .048.

Total Brief Incidents

Number male = 14 Male mean = 6.43 Male variance = 3.96

Number female = 15 Female mean = 7.33 Female variance = 13.56

T_{vcr} = -.7864 N.S.

APPENDIX B

INCIDENT DESCRIPTIONS *

1. Arguments in or around residence - family fight (FA), unwanted guest, boyfriend/girlfriend (BF/GF) arguments, neighborhood arguments.
2. Major disturbances outside of residence - street or bar fights, assaults, rapes (generally strangers or in public, physical contact--not just argument)
3. Drunk or intoxicated person
4. Disorderly person, (s) or juvenile complaint (disorderly juveniles, etc.)
5. Robbery - (if person present at the time, threatened with physical force or weapons)
6. Mentally disturbed - called M.O. (mental observation) or "sick case" by police
7. Sick or injured person (injuries apparently not as a result of a crime) traffic accident, investigate need for ambulance (INA), unconscious or dead person, suicide, man down (unless it's clear person was drunk)
8. Fire - other natural disasters
9. Attempted holdup, attempted rape, man chasing woman (direct contact threat but nothing happened), man with (weapon)
10. Theft, burglary, pocket picked, purse snatched (person not present or threatened), larceny (if not larceny, f.a.), breaking and entering (B+E)
11. Stolen or damaged auto, car or truck broken into, tires and/or tags stolen, larceny from auto (f.a.)
12. Damaged property, vandalism
13. Prowler, or attempted but unsuccessful entry
14. Lost property
15. Traffic or parking violation, PPP
16. Missing person
17. Animal bite or suspected rabid animal
18. Nuisance, e.g. loud party, noise
19. Request for service or assistance by citizen, e.g., locked out of house, telephone wire down
20. Unspecified or unclear, with indication of crime or injury, investigate trouble, suspicious subject
21. Unspecified or unclear, no crime or injury
22. No answer at door, refused police entrance, false alarm, unsubstantiated call
23. Don't know
24. Assist another police unit, transport person, take report (if not coded elsewhere)
25. Police-citizen conflict
26. Drug case (police diagnosis)

* Taken from Bloch & Anderson 1974

INCIDENT FORM

1. Nature of Incident (use codes)_____.

2a. How many spectators were at the scene?(estimate)_____.
2b. Attitude of spectators 1 2 3 4 5
very friendly neutral very hostile

2c. What effect did each officer have on the spectators?

	#1	#2	#3	#4	#5	Group
Subject	___	___	___	___	___	___
Partner	___	___	___	___	___	___

1 2 3 4 5
very negative neutral very positive

3a. How many citizens were directly involved with police? (excluding spectators)_____.

3b. What relationship did each citizen have to the incident?

Citizen Number #1	#2	#3	#4	#5	Group
___	___	___	___	___	___

1. complainant
2. victim
3. accused
4. informant
5. person in need of aid
6. participant
7. witness

3c. Age, sex, and race of citizens

	#1	#2	#3	#4	#5	Group
Age	___	___	___	___	___	___
Sex	___	___	___	___	___	___
Race or ethnic	___	___	___	___	___	

Age: 1-preteen (1-12)
2-teen (13-19)
3-young adult (20-29)
4-middle age (30-55)
5-retirement age (55-over)

Sex: male-0
female-1

Race or ethnic origin: 1-Anglo
2-Hispano
3-Black
4-Oriental
5-Native American
6-Other

3d. Relationship among principal citizens_____.
(more than one if applicable)

1. spouse
2. divorced/separated
3. child/parent
4. other relative_____
5. neighbor
6. boy friend / girl friend
7. landlord/tenant
8. juvenile
9. unrelated
10. other.

4. Describe the condition of each citizen from code below

Citizen	#1	#2	#3	#4	#5
	____	____	____	____	____

1-normal
2-disoriented
3-mildly intoxicated
4-drunk
5-unconscious
6-bruised, cut, or abrased
7-knife wound
8-gunshot wound
9-dead
10-other (specify)_____

5. Describe the emotional state of citizens at the scene from the code below:

	#1	#2	#3	#	#5	Group
when police arrived	____	____	____	____	____	____
when police left	____	____	____	____	____	____

1-calm
2-upset
3-angry
4-potentially violent
5-actually violent

6. Describe the level of violence/tension

	#1	#2	#3	#4	#5	Group
when police arrived	____	____	____	____	____	____
when police left	____	____	____	____	____	____

1-verbal abuse, threats
2-physical force (no weapon)
3-threat of weapon
4-use of weapon
5-other

7. Describe the direction of violence/tension

#1	#2	#3	#4	#5	Group
____	____	____	____	____	____

1-citizen toward absent citizen
2-citizen toward present citizen
3-citizen toward subject officer
4-citizen toward partner officer
5-citizen toward both officers
6-citizen toward other officers
7-no direction
8-other

8. Describe the general attitude of the citizens toward each officer

	#1	#2	#3	#4	#5	Group
Toward subject officer	____	____	____	____	____	____
Toward partner officer	____	____	____	____	____	____

1 2 3 4 5

very friendly — neutral — very hostile

9. Describe any specific appeals for sympathy or understanding made by citizens to either officer

	#1	#2	#3	#4	#5	Group
Subject officer	____	____	____	____	____	____
Partner officer	____	____	____	____	____	____

1-woman (e.g."you're a woman, you understand these things")
2-men
3-marriage (e.g. "you're married, you know how it is")
4-children
5-racial/ethnic
6-other

10. Check action(s) taken by officers_____.

1-frisked or searched
2-transported-involuntary
3-searched premises or vehicle
4-threatened arrest
5-threatened physical force
6-threatened use of weapon
7-arrest made
8-report taken
9-advised, settled, warned
10-assisted citizen
11-transported-voluntary
12-investigated
13-called for police assistance
14-called for superior officer
15-called for special police services
16-gave chase on foot
17-gave chase in car
18-called for ambulance
19-other (specify)_____

11. Describe the general attitude of each officer toward the citizens

	#1	#2	#3	#4	#5	Group
Subject officer	____	____	____	____	____	____
Subject partner	____	____	____	____	____	____

1 2 3 4 5
very friendly — neutral — very hostile

12. Describe the general effect of the officers on the level of violence/tension (circle)

1 2 3 4 5
greatly increased tension — neutral — greatly reduced tension

13. If both officers were present, did one tend to give instructions to the other? (circle)

subject officer: 1 2 3 4 5
gave no instructions — gave instructions constantly

partner officer: 1 2 3 4 5
gave no instructions — gave instructions constantly

4. Describe the condition of each citizen from code below

Citizen	#1	#2	#3	#4	#5
	___	___	___	___	___

1-normal
2-disoriented
3-mildly intoxicated
4-drunk
5-unconscious
6-bruised, cut, or abrased
7-knife wound
8-gunshot wound
9-dead
10-other (specify)_____

5. Describe the emotional state of citizens at the scene from the code below:

	#1	#2	#3	#	#5	Group
when police arrived	___	___	___	___	___	___
when police left	___	___	___	___	___	___

1-calm
2-upset
3-angry
4-potentially violent
5-actually violent

6. Describe the level of violence/tension

	#1	#2	#3	#4	#5	Group
when police arrived	___	___	___	___	___	___
when police left	___	___	___	___	___	___

1-verbal abuse, threats
2-physical force (no weapon)
3-threat of weapon
4-use of weapon
5-other

7. Describe the direction of violence/tension

#1	#2	#3	#4	#5	Group
___	___	___	___	___	___

1-citizen toward absent citizen
2-citizen toward present citizen
3-citizen toward subject officer
4-citizen toward partner officer
5-citizen toward both officers
6-citizen toward other officers
7-no direction
8-other

8. Describe the general attitude of the citizens toward each officer

	#1	#2	#3	#4	#5	Group
Toward subject officer	___	___	___	___	___	___
Toward partner officer	___	___	___	___	___	___

1 2 3 4 5

very friendly — neutral — very hostile

9. Describe any specific appeals for sympathy or understanding made by citizens to either officer

	#1	#2	#3	#4	#5	Group
Subject officer	___	___	___	___	___	___
Partner officer	___	___	___	___	___	___

1-woman (e.g."you're a woman, you understand these things")
2-men
3-marriage (e.g. "you're married, you know how it is")
4-children
5-racial/ethnic
6-other

10. Check action(s) taken by officers_____.

1-frisked or searched
2-transported-involuntary
3-searched premises or vehicle
4-threatened arrest
5-threatened physical force
6-threatened use of weapon
7-arrest made
8-report taken
9-advised, settled, warned
10-assisted citizen
11-transported-voluntary
12-investigated
13-called for police assistance
14-called for superior officer
15-called for special police services
16-gave chase on foot
17-gave chase in car
18-called for ambulance
19-other (specify)_____

11. Describe the general attitude of each officer toward the citizens

	#1	#2	#3	#4	#5	Group
Subject officer	___	___	___	___	___	___
Subject partner	___	___	___	___	___	___

1 2 3 4 5
very friendly — neutral — very hostile

12. Describe the general effect of the officers on the level of violence/tension (circle)

1 2 3 4 5
greatly increased tension — neutral — greatly reduced tension

13. If both officers were present, did one tend to give instructions to the other? (circle)

subject officer 1 2 3 4 5
gave no instructions — gave instructions constantly

partner officer 1 2 3 4 5
gave no instructions — gave instructions constantly

14. To what extent did subject officer take charge?

1	2	3	4	5
was completely subordinate		equal		took complete charge

15. If an arrest was made, which officer initiated the arrest?_____

Who took credit for the arrest?_____

16a. If officers received backup

	Called for	Received(how many officers arrived) male	female
Subject requested	_____	_____	_____
Partner requested	_____	_____	_____
Other requested or arrived independently	_____	_____	_____

16b. Did officers back up another officer?

backed up male_____ female_____

male-female team_____ male-male team_____

female-female team_____

17. Approximate time officers spent on incident_____.

18. Describe any of the incidents not covered in the questionnaire:

BRIEF INCIDENT SHEET

(USE ONLY IF THERE WAS NO CITIZEN CONTACT, OR BRIEF CONTACT, BUT NO SIGNIFICANT ACTIONS TAKEN BY OFFICERS OR CITIZENS)

Observer: Name_____ Code_____

Date: Month_____ day_____ Incident#_____

A. Number of minutes between start of incident and time back in service_____

1c. IF A TRAFFIC INCIDENT, (do not record parking tickets) describe actions of officers. If more than one action occurred, code priorities are: 4,1,2,3,5,7, (e.g., if 4 & 3 occurred, you would only code 4)

	Officer #1	Officer #2
1. gave traffic ticket.....	_____	_____
2. gave warning, no ticket	_____	_____
3. spot check for stolen auto(motorcycles bikes, etc.)	_____	_____
4. arrested person	_____	_____
5. other (describe)_____ ..	_____	_____
6. did not observe enough to judge	_____	_____
7. checked license or registration	_____	_____

2. IF AN INCIDENT OTHER THAN TRAFFIC WAS INITIATED BY OFFICERS, enter number of incident_____.

1. talk with juveniles
2. talk with adults
3. question suspicious person(s)
4. follow-up of prior incident (describe).____
5. business or bank check (talk to businessmen)
6. business or school check for breakin (unoccupied)
7. check of known criminal areas
8. other incidents (community relations or preventive patrol) not recorded in Q.2. (describe)_____

3. IF POLICE LEFT SCENE without performing any activity, why did they leave? (enter code)_____

1. wrong address
2. unable to locate any incident (nothing found)
3. police were not wanted
4. other police handled situation
5. other (specify)_____

3a. Describe the attitude of citizen toward officer

	#1	#2	#3	#4	#5
Subject	___	___	___	___	___
Partner	___	___	___	___	___

very hostile neutral very favorable

3b. Describe the attitude of officer toward citizen

	#1	#2	#3	#4	#5
Subject	___	___	___	___	___
Partner	___	___	___	___	___

very hostile neutral very favorable

Did one officer tend to give instructions to the other?

Subject officer

1	2	3	4	5
gave no instructions				gave instructions constantly

Partner officer

1	2	3	4	5
gave no instructions				gave instructions constantly

To what extent did subject officer take charge?

1	2	3	4	5
completely subordinate				took charge completely

Briefly describe incident: _____

_____

_____

END