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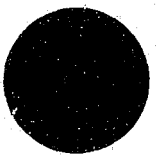

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REPORT ON PROSPECTS FOR FUTURE RESEARCH ON POLICING*

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EXTENDING RESEARCH ON POLICE SERVICES

This report summarizes an assessment of issues in policing which appear worthy of additional research attention. The emphasis is largely, though not exclusively, on the potential contributions of observational data, either through analysis of existing data sets or the collection of new data.

The initial task of this project was to assess the comparability of two major data sets on policing which relied heavily on observational data collection of police behavior. The first of these, was the pioneering data collection by Albert J. Reiss Jr. which in 1966 collected data on police citizen encounters in three metropolitan areas. The second major data collection, conducted in 1977 by Elinor Ostrom, Gordon Whitaker, and Roger Parks, was largely modeled after the earlier observational study conducted by Reiss. Both used observation as a primary means of assessing and measuring the day to day activities of police officers (primarily patrol officers). Moreover, since the observational data collection instruments used in the Police Services Study (1977 data collection) was largely patterned after the earlier study by Reiss, there are a large number of variables which were measured in both data sets. This overlap permitted the creation of a merged data file, which contained the common measures in the two data sets.[1]

One task of this project was to compare the distribution of dispositions in two types of encounters (police contacts with juveniles,

and domestic disputes) across these two data sets. Data on the how police resolve contacts with juveniles was coded into four mutually exclusive categories (arrest, referral of the child to a social service agencies, use or threat of force to handle the situation, and investigation with no additional action). The data from both studies could be collapsed into these categories and examined to determine if police handled encounters with juveniles differently in these two data sets separated by 10 years. Information on this question is presented in Table 1. The data reported in Table 1 show little evidence of differential handling of juvenile cases between these two data sets. Overall, 16.8 percent of contacts with juveniles resulted in arrest in the Reiss data compared to 16.9 percent of the cases in the Police Services Study. The overall percentages of cases referred, handled by coercion, or simply investigated are similarly close in these data sets.

However, the distribution of types of juvenile cases does vary somewhat across these data sets. For example, juveniles confronted by police in 1977 were approximately 3 times as likely to have been drinking than juveniles confronted by police in 1966. Another area of difference is in how the police - juvenile encounter began. In the 1977 data, police encounters with juveniles were about twice as likely to have resulted from the officer's initiative than in 1966. Thus, overall percentages of how police handle encounters with juveniles may mask differences that are specific two particular types of problems.

Information presented in Table 1 does suggest that police in 1977 handle certain types of problems with juveniles differently than their

TABLE 1

Disposition of Police-Juvenile Contacts (in percent) By Characteristic of Situation for Reiss (N=262) and Ostrom (N=261) Data

Characteristic	Arrest		Refer		Coerce		Investigate		Cases	
	Reiss	Ostrom	Reiss	Ostrom	Reiss	Ostrom	Reiss	Ostrom	Reiss	Ostrom
All Cases	16.8	16.9	5.3	7.3	18.3	14.6	59.5	61.3	262	261
Type of problem										
Violent	27.6	31.6	13.8	15.8	17.2	10.5	41.4	42.1	16.8	7.3
Conflict	10.7	10.0	7.1	7.5	10.7	17.5	71.4	65.0	5.3	15.3
Property	32.7	46.6	7.3	10.3	21.8	13.8	38.2	29.3	18.3	22.2
Peacekeeping	10.0	4.9	2.7	4.9	18.7	14.6	68.7	75.7	59.5	55.2
Race of juvenile										
White	8.9	11.4	5.3	6.7	15.9	15.4	70.8	66.4	43.1	57.1
Black	23.5	24.1	5.4	8.0	20.1	13.4	51.0	54.5	56.9	42.9
Sex of juveniles										
Male	20.0	16.5	5.8	8.5	18.9	16.0	55.3	59.0	72.5	76.6
Female	11.5	26.8	11.5	2.4	11.5	9.8	65.4	61.0	9.9	15.7
Mixed	6.5	0.0	0.0	5.0	19.6	10.0	73.9	85.0	17.6	7.7
Demeanor to police										
Civil	16.4	14.0	4.5	5.4	15.9	12.2	63.2	67.4	84.0	84.7
Antagonistic	19.0	27.5	9.5	17.5	31.0	27.5	40.5	27.5	16.0	15.3
Sobriety										
Sober	16.7	16.1	4.8	7.8	17.9	12.2	60.7	63.9	96.2	88.1
Drinking	20.0	22.6	20.0	3.2	30.0	32.3	30.0	41.9	3.8	11.9

Characteristic	Arrest		Refer		Coerce		Investigate		Cases	
	Reiss	Ostrom	Reiss	Ostrom	Reiss	Ostrom	Reiss	Ostrom	Reiss	Ostrom
Mobilization										
Reactive	14.4	19.4	6.3	7.1	17.6	13.5	61.7	60.0	84.7	65.1
Proactive	30.0	12.1	0.0	7.7	22.5	16.5	47.5	63.7	15.3	34.9
Setting										
Private	15.5	31.0	11.3	17.2	18.3	12.1	54.9	39.7	27.1	22.2
Public	17.3	12.8	3.1	4.4	18.3	15.3	61.3	67.5	72.9	77.8
Victim-Offender attributes										
No victim	11.8	11.7	.8	4.1	17.3	13.8	70.1	70.3	48.1	55.6
White offender-white victim	9.1	21.4	13.6	8.9	20.5	17.9	56.8	51.8	16.8	21.5
Black offender-black victim	28.8	18.2	6.8	15.9	17.8	13.6	46.6	52.3	27.9	16.9
Black offender-white victim	22.2	43.8	11.1	6.3	22.2	12.5	44.4	37.5	6.9	6.1
Victim-offender known	16.2	19.5	9.5	14.3	20.3	11.7	54.1	54.5	28.2	29.5
Victim-offender strangers	27.4	30.8	9.7	5.1	19.4	23.1	43.5	41.0	23.7	14.9
Victim wants arrest	56.3	64.0	6.3	4.0	12.5	8.0	25.0	24.0	6.1	9.6
No victim preference	15.9	12.1	9.5	13.1	19.1	17.6	57.1	57.1	45.8	34.9

colleagues did in 1966. For example, problems involving property offenses were more likely to result in arrest in 1977 compared to 1966. In 1966, police arrested about one third of juveniles involved in property crime. In 1977 this figure had risen to just under one half. Police in 1977 were also significantly more likely to arrest females. In 1966 only 11 percent of females were arrested compared to 26.8 percent of female juveniles confronted by police in 1977. Another area of some difference is the percentage of cases which result in arrest where the youth is judged as antagonistic toward police by the observer. In 1966, 19 percent of those juveniles judged antagonistic were arrested compared to 27.5 percent in 1977. Additional differences emerge when the how the encounter began is considered. While a larger percentage of police contacts with juveniles were police initiated in 1977, arrests were much less likely to occur in these encounters than in 1966. In 1966, nearly one third of police initiated contacts with juveniles resulted in arrest compared to about 1 in 9 arrests in similar cases in 1977. Finally, there is some indication that police in the 1977 data were more likely to make arrests in encounters with juveniles involving white offenders and less likely to make arrests in encounters involving black complainants when compared to the data collected in 1966.

A similar analysis was conducted on the domestic dispute cases in each of the data files. Again, how police handle these encounters was coded into four categories (arrest, separate, mediate only, and coolout). The distinction between some of these categories is difficult to draw and thus our attention focuses only on the percentage of cases that resulted in

TABLE 2

Disposition of Domestic Disputes (in percent) By Characteristic of Disputes
For Reiss (N=181) and Ostrom (N=158) Data

Characteristic	Arrest		Separate		Mediate		Coolout		Cases	
	Reiss	Ostrom	Reiss	Ostrom	Reiss	Ostrom	Reiss	Ostrom	Reiss	Ostrom
All Cases	13.8	12.7	10.5	36.1	30.9	23.4	44.8	27.8	181	158
Relationship										
Married	14.5	9.8	10.5	25.5	34.2	31.4	40.8	33.6	42.0	32.3
Other family	16.4	15.6	9.8	42.2	26.2	20.0	47.5	22.2	33.7	28.5
Other	9.1	12.9	11.4	40.3	31.8	19.4	47.7	27.4	24.3	39.2
Sobriety										
Sober	9.3	8.7	9.3	31.5	30.8	26.1	50.5	33.7	59.1	58.2
Drinking	20.3	18.2	12.2	42.4	31.1	19.7	36.5	19.7	40.9	41.8
Race										
White	14.0	11.1	14.0	22.2	30.2	31.1	41.9	35.6	23.8	28.5
Nonwhite	13.8	13.3	9.4	41.6	31.2	20.4	45.7	24.8	76.2	71.5
Violent Dispute										
No	10.3	9.6	11.1	36.8	33.3	22.8	45.2	30.7	69.9	72.2
Yes	21.8	20.5	9.1	34.1	25.5	25.0	43.6	20.5	30.4	27.8
Demeanor to police										
Civil	9.9	8.3	10.7	35.8	32.8	25.7	46.6	30.3	72.4	69.0
Antagonistic	24.0	22.4	10.0	36.7	26.0	18.4	40.0	22.4	27.6	31.0

Characteristic	Arrest		Separate		Mediate		Coolout		Cases	
	Reiss	Ostrom	Reiss	Ostrom	Reiss	Ostrom	Reiss	Ostrom	Reiss	Ostrom
Location										
Public	12.5	14.3	8.3	32.1	35.4	32.1	43.8	21.4	26.5	17.7
Private	14.3	12.3	11.3	36.9	29.3	21.5	45.1	29.9	73.5	82.3
Complainant preference										
Wants arrest	35.0	26.5	5.0	32.7	17.9	26.5	35.0	14.3	22.1	31.0
Does not want arrest	7.8	6.4	12.1	37.6	32.6	22.0	47.5	33.9	77.9	69.0
Gender										
Male - Female	14.3	13.2	8.9	35.3	32.1	25.0	44.6	26.5	92.8	86.1
Female - Female	0.0	10.0	33.3	50.0	11.1	10.0	55.6	30.0	5.0	6.3
Male - Male	25.0	8.3	25.0	33.3	25.0	16.7	25.0	41.7	2.2	7.6

arrest which is the least ambiguous of the response categories. Perhaps the most striking aspect of Table 2 is that, with very few exceptions, the percentage of cases arrested is roughly equal for the 1966 and 1977 data. One area of some difference is the percentage of arrests involving cases where the disputants were married. In the 1966 data, police made arrests in 14.5 percent of domestic disturbances among married couples, and this figure declined to 9.8 percent in 1977. The other area of some difference was in cases in which the complainant wanted an arrest to be made. In the 1966 data, police made arrests in 35 percent of these cases and this declined to 26.5 percent in 1977. For all other attributes examined in Table 2, the probability of arrest did not differ between the 1966 and 1977 data.

It should be added that additional analysis of juvenile and domestic encounters have been conducted in two Master's Theses using these data.[2] Both of these studies used more sophisticated multivariate methodology and the results essentially confirmed the bivariate findings noted above. Thus, it appears that independent data sets using observational methods to collect information on police - citizen encounters can be used to tentatively assess similarities and differences in how police handle specific types of problems across the two data sets. What is unknown, and can not be determined with the current data is whether differences in how police handle cases reflect changing trends in police decision making or whether they reflect differences in the departments studied or the types of areas in which police behavior was observed.

Because of this fundamental uncertainty in interpreting the above noted

differences in police decisions to arrest, it is strongly recommended that any future large scale observational study of policing be conducted in the same departments and same areas as either or both of the previous data collections. In this regard, the Police Services Study would appear to present the most significant opportunity for assessing changes in police behavior that are independent of type of place or type of department. Specifically, the Police Services Study collected victimization and other interview data from random samples of residents within the 60 study areas (mostly police beats) examined in that project. Thus, it would be possible to obtain equally detailed information on the social contexts within which police operate by replicating the citizen interview component of the police services study within the same geographic areas as were used in the 1977 study. The importance of this is underscored by evidence that police behavior (such as the rate of officer initiated contacts, the probability of arrest given a contact with a suspected offender, and the use of unassigned time) differs with the characteristics of social areas they operate in (Smith, 1986).

The potential questions which could be examined with this replication are many and varied. For example, do changes in the racial, economic, or housing composition of communities influence the discretionary choices of police officers? Are they more or less likely to make stops on suspicion, or arrest potential offenders with whom they have contact? Do police in these areas initiate more or fewer citizen contacts on average? Perhaps more importantly, are the hypothesized changes in police behavior which are discussed in the commissioned papers, which are appended to this

report, independent of changing community composition?

Moreover, a new observational study of policing conducted in the same areas as the Police Services Study would permit an assessment of the extent to which specific changes in police organizations have influenced patrol office behavior on the street. Twenty four police agencies, ranging from very small departments (with fewer than 50 sworn officers) to very large agencies (with over 2,000 sworn officers) were included in the Police Services Study. For example, has increasing minority representation in these departments resulted in increased delivery of service to minority members of the community? Has the composition of police departments changed in other ways (more educated for example) and do these changes shape the discretionary choices of police officers on the street? It would be possible to obtain rough indicators of changes in the composition of patrol forces between 1977 and today by replicating the officer interview component of the Police Services Study. Additionally, while the police services study did conduct interviews with each observed officer, little analysis of these data has been conducted. Yet it would be interesting to determine how different types of patrol officers exercise their discretionary choices in different types of areas. For example, the extent of police - community tension or the areas crime rate could impact officers differently depending on their experience or education.

In summary, the opportunity to meaningfully assess changes in policing over time, and many related issues, would be best addressed by returning to the original sites in the previous observational studies and using the

rich baseline information which already exists to assess the amount of change in policing and uncover its sources.

A second phase of the current project was to assess similarities and differences in the patrol officer activity in the Reiss and Police Services Study data. In Table 3 patrol officer activity is broken down into 11 categories. For each data set, the data in Table 3 give the probability of each type of encounter per eight hours of patrol time, the expected number of each type of encounter per week, and the percent of on-duty time taken up by each of these problem types. This information highlights some of the differences in the types of places in which these data were collected. For example, in the reiss study, "fast tracks" were selected for observation. In contrast, the Police Services Study, included not just high crime urban beats but also a number of beats in suburban police agencies. This difference in type of place, is reflected, for example, in the fact that officers in the Police Services Study have a .22 probability of encountering a violent crime in eight hours of patrol time compared to a .42 probability for officers in the Reiss data. Thus, officers in the Reiss data encountered 2.6 violent crimes per 40 hours of patrol time compared to 1.2 violent crimes for the same unit of time for officers in the Police Services Study. Perhaps the most striking differences in the types of places examined in these data can be seen in the probability of traffic stops. In the Police Services Study, the average officer had a probability of .79 of having one or more traffic stops in eight hours of patrol time. Over forty hours of patrol time this translates into an average of 7.2 traffic stops per officer. In contrast,

TABLE 3

Police Activity By Incident Type for Reiss and Ostrom Data

Incident Type	Probability of Encounter*		Encounters Per Week**		Percent of On-Duty Time	
	Reiss	Ostrom	Reiss	Ostrom	Reiss	Ostrom
Violent	.42	.22	2.6	1.2	3.4	2.0
Property	.80	.71	7.2	5.8	6.8	5.6
Disputes	.62	.43	4.6	2.7	3.2	2.3
Medical	.30	.19	1.7	1.0	1.9	1.3
Traffic	.38	.79	2.4	7.2	2.2	4.5
Peacekeeping	.63	.50	4.7	3.4	2.8	2.0
Suspicious	.25	.49	1.5	3.2	1.1	1.7
Service	.53	.59	3.7	4.3	3.5	2.5
Internal	.07	.28	.3	1.6	.2	.8
Investigative	.33	.20	1.9	1.1	.8	.5
Vice	.11	.07	.6	.4	.5	.3
Total			31.2	31.9	26.4	23.5

*Probability of encounter per 8 hours of patrol time
**A week is defined as 40 hours of patrol time

officers in the Reiss data averaged only 2.4 traffic stops per 40 hours of patrol time.

In general, the findings in Table 3 indicate that officers in the Reiss data had more crime and disturbance contacts than officers in the Police Service Study. While this is consistent with the fact the Reiss observed beats with more crime contact potential it raises some problems in drawing inferences about differences between the two studies. However, it is interesting to note that despite differences in the types of encounters police had in each of these data sets the average number of encounters per 40 hours of patrol time is almost identical between the two studies (31.2 encounters for Reiss and 31.9 encounters for officers in the Police Services Study). Moreover, in both data sets, the 11 problems categories accounted for approximately one quarter of officer's on duty time: leaving three fourths of their time for other activities such as preventive patrol. Thus, overall workload appears very similar in terms of total time spent and total number of encounters between these two data sets.

Data reported in Table 4 show the same type of information reported in Table 3 broken down by shift. This type of information is useful from a sampling perspective, to identify those types of shifts which are more or less likely to encounter specific types of problems. For example, if one were interested in a study of how police handle disputes, it might make sense to position observers in evening shifts (approximately from 4:00 pm to midnight) since in both data sets the average number of disputes which police encounter is highest during these hours. Moreover, in both data sets, officers on evening shifts appear to handle the largest

TABLE 4

Police Activity By Incident Type By Shift for Reiss and Ostrom Data

	Reiss							Ostrom						
	Probability of Encounter*				Encounters Per Week**			Probability of Encounter*				Encounters Per Week**		
Incident Type	Day	Evening	Night	Sig.	Day	Evening	Night	Day	Evening	Night	Sig.	Day	Evening	Night
Violent	.30	.45	.41	.01	1.8	2.9	2.6	.17	.25	.20	.04	.9	1.4	1.0
Property	.82	.80	.74	.06	7.8	7.4	6.2	.76	.72	.54	< .01	6.6	6.0	3.8
Disputes	.43	.67	.61	< .01	2.8	5.2	4.5	.28	.52	.41	< .01	2.7	3.5	2.6
Medical	.30	.32	.19	.01	1.7	1.9	1.0	.18	.20	.16	.44	1.0	1.1	.9
Traffic	.48	.60	.81	< .01	3.2	2.5	1.0	.78	.84	.65	< .01	7.0	8.3	5.0
Peacekeeping	.46	.65	.66	< .01	3.0	5.0	5.0	.36	.54	.60	< .01	2.2	3.7	4.3
Suspicious	.15	.24	.39	< .01	.8	1.4	2.4	.32	.45	.71	< .01	1.9	2.9	5.8
Service	.51	.56	.46	.06	3.5	3.9	3.0	.60	.64	.47	< .01	4.3	4.8	3.1
Internal	.06	.07	.06	.93	.3	.4	.3	.31	.30	.14	.01	1.8	1.8	.8
Investigative	.18	.13	.11	.19	1.0	.7	.6	.18	.21	.15	.31	1.0	1.2	.9
Vice	.08	.13	.06	.04	.4	.7	.3	.01	.09	.09	< .01	.1	.5	.5

*Probability of encounter per 8 hours of patrol time
**A week is defined as 40 hours of patrol time

number of encounters.

The data reported in Table 5 also address the frequency of different types of encounters. The distinction here is in terms of comparing weekdays to weekends (a weekend shift is defined as Friday evening through Sunday evening). Again, this type of information is useful in targeting specific types of shifts to maximize the likelihood of specific types of problems. For example violent crime and disputes are more likely to occur on weekends in both data sets, while property crimes are more likely to occur on weekdays. Additionally, these data can be used to gain a rough approximation of the number of shift which would need to be observed to obtain a specific number of certain types of encounters. For example, if we were interested in studying how police handle disputes, and we wanted a sample of 400 of such incidents, how many shift would we have to observe. If we only assigned observers to evening shifts we would need to observe between 385 and 570 shifts (385 based on data from the Reiss study and 570 based on data from the Police Services Study).

Recall however that the Police Services Study collected information on policing across departments of various size and in areas ranging from very high crime to low or no crime communities. To make a more comparable assessment of whether the work load of officers varies across departments of different size and whether officers in large departments handle a different mix of problems than officers in smaller departments we examined the distribution of encounters by size of department for the Police Service Study data. This information is presented in Table 6.

The data clearly indicate differences in the types of problems police

TABLE 5

Police Activity By Incident Type By Day of Week for Reiss and Ostrom Data

	Reiss					Ostrom				
	Probability of Encounter*			Encounters Per Week**		Probability of Encounter*			Encounters Per Week**	
Incident Type	Weekend	Weekday	Sig.	Weekend	Weekday	Weekend	Weekday	Sig.	Weekend	Weekday
Violent	.50	.38	<.01	3.3	2.3	.26	.20	.05	1.4	1.0
Property	.79	.80	.56	7.1	7.4	.68	.71	.36	5.5	5.8
Disputes	.70	.58	<.01	5.6	4.2	.47	.40	.07	3.1	2.5
Medical	.25	.31	.11	1.5	1.8	.17	.20	.31	.9	1.0
Traffic	.40	.38	.70	2.4	2.3	.77	.80	.21	6.8	7.4
Peacekeeping	.66	.61	.15	5.1	4.5	.52	.48	.31	3.6	3.2
Suspicious	.30	.23	.06	1.7	1.3	.56	.44	<.01	3.9	2.8
Service	.52	.54	.53	3.5	3.7	.54	.61	.03	3.7	4.5
Internal	.07	.06	.51	.4	.3	.21	.30	.03	1.2	1.8
Investigative	.14	.13	.57	.8	.7	.20	.20	.91	1.0	1.0
Vice	.16	.08	<.01	.8	.5	.08	.06	.25	.4	.3

*Probability of encounter per 8 hours of patrol time
**A week is defined as 40 hours of patrol time

TABLE 6

Police Activity By Incident Type By Size of Department for Ostrom Data

	Probability of Encounter*					Encounters Per Week**			
Incident Type	Large city	Large county	50-150 Officers	Less than 50 Officers	Sig.	Large city	Large county	50-150 Officers	Less than 50 Officers
Violent	.30	.20	.06	.20	<.01	1.7	1.0	.3	1.1
Property	.78	.72	.62	.59	<.01	7.0	6.0	4.5	4.3
Disputes	.59	.28	.22	.36	<.01	4.2	1.6	1.2	2.2
Medical	.16	.18	.20	.21	.46	.9	1.0	1.1	1.2
Traffic	.70	.80	.83	.85	<.01	5.7	7.2	8.2	8.5
Peacekeeping	.51	.55	.45	.48	.13	3.4	3.8	2.8	3.3
Suspicious	.51	.44	.50	.45	.58	3.4	2.7	3.3	2.8
Service	.61	.56	.60	.56	.65	4.5	3.9	4.3	4.0
Internal	.22	.31	.31	.29	.24	1.2	1.9	1.8	1.7
Investigative	.18	.23	.19	.19	.64	1.0	1.2	1.1	1.1
Vice	.08	.06	.06	.05	.46	.5	.3	.3	.3

*Probability of encounter per 8 hours of patrol time
**A week is defined as 40 hours of patrol time

encounter in departments of different sizes. Incidents involving violent or property crimes, for example, are encountered much more frequently by officers in larger departments than officers in smaller police agencies. Indeed, the data reported in Table 6 indicate that officers in larger departments in the Police Services Study are as likely as officers in the Reiss data to encounter property crimes or nonviolent interpersonal disputes. While officers in large departments handle more problems involving violent or property crime and disputes, they are less active in making traffic stops than their colleagues in smaller departments. Other types of problems occur with roughly equal frequency across departments of different sizes.

Another aspect of the types of problems police confront is displayed in Table 7 which shows the probabilities of different types of encounters by racial composition and income levels of neighborhoods. These figures are based only on the data from the Police Services Study for observations of officers in large city departments. These data indicate that within large city departments, the types of problems police must deal with vary by the type of neighborhoods in which they operate. Police are much more likely, for example, to handle disputes in poor and working class areas in contrast with higher income beats. Officers working in primarily black areas are less likely to make traffic stops than officers in racially mixed or primarily white communities.

The final comparison to the Reiss data involve the distribution of problem types by day of the week and time of shift for the Ostrom data from large cities. These data are reported in Table 8. These data

TABLE 7

Police Activity By Incident Type By Type Of Neighborhood for Ostrom Data(Large City Only)

Incident Type	Probability of Encounter* Black	White	Mixed	Sig.	Encounters Per Week** Black	White	Mixed	Probability of Encounter* Poor	Working	Middle	Sig.	Encounters Per Week** Poor	Working	Middle
Violent	.31	.30	.30	.89	1.8	1.7	1.8	.27	.33	.17	.20	1.5	2.0	1.0
Property	.74	.82	.77	.16	6.2	8.0	6.9	.72	.80	.75	.25	5.8	7.5	6.3
Disputes	.70	.42	.63	<.01	5.5	3.2	4.7	.65	.61	.23	<.01	5.0	4.5	1.3
Medical	.13	.20	.12	.21	.7	1.1	.7	.13	.18	.09	.23	.7	1.0	.5
Traffic	.59	.76	.80	<.01	4.2	6.6	7.3	.67	.71	.76	.69	5.3	5.7	6.5
Peacekeeping	.47	.54	.57	.41	3.0	3.7	4.0	.54	.51	.47	.75	3.7	3.5	3.1
Suspicious	.50	.50	.56	.67	3.3	3.2	4.0	.52	.50	.51	.89	3.5	3.4	3.5
Service	.58	.67	.55	.20	4.2	5.2	3.9	.57	.63	.58	.66	4.1	4.8	4.1
Internal	.23	.22	.18	.79	1.3	1.2	1.0	.25	.22	.15	.56	1.5	1.2	.8
Investigative	.18	.16	.18	.88	1.0	.9	1.0	.18	.18	.17	.99	1.0	1.0	.9
Vice	.08	.07	.12	.52	.4	.4	.7	.07	.09	.09	.96	.4	.5	.5

*Probability of encounter per 8 hours of patrol time
**A week is defined as 40 hours of patrol time

TABLE 8

Police Activity By Incident Type By Shift for Ostrom Data(Large City Only)

Incident Type	Probability of Encounter* Day	Evening	Night	Sig.	Encounters Per Week** Day	Evening	Night	Probability of Encounter* Weekend	Weekday	Sig.	Encounters Per Week** Weekend	Weekday
Violent	.20	.36	.30	.03	1.1	2.2	1.7	.40	.25	.01	2.4	1.4
Property	.86	.76	.65	<.01	8.8	6.6	5.1	.72	.81	.05	6.0	7.6
Disputes	.40	.71	.52	<.01	2.5	5.7	3.6	.64	.55	.11	4.8	3.9
Medical	.13	.20	.11	.09	.7	1.1	.6	.13	.30	.32	.7	1.0
Traffic	.75	.73	.52	.01	6.5	6.2	3.5	.68	.72	.59	5.5	5.9
Peacekeeping	.35	.56	.63	<.01	2.0	4.0	4.7	.55	.50	.26	4.0	3.2
Suspicious	.36	.45	.74	<.01	2.2	3.0	6.3	.64	.41	<.01	4.9	2.6
Service	.57	.68	.51	.02	4.0	5.4	3.5	.56	.64	.22	4.0	4.8
Internal	.13	.30	.17	.01	.7	1.8	.9	.16	.25	.13	.9	1.4
Investigative	.16	.19	.18	.89	.9	1.0	1.0	.23	.14	.04	1.3	.8
Vice	.00	.14	.10	<.01	0.0	.8	.5	.13	.06	.05	.7	.3

*Probability of encounter per 8 hours of patrol time
**A week is defined as 40 hours of patrol time

confirm the earlier pattern that police are more likely to confront property crimes during the day shifts (approximately 8:00 am to 4:00 pm) and encounter disputes and violent crimes during the evening. Collectively, these data are useful for tentatively identifying the times and places in which police officers are more or less likely to encounter specific types of incidents.

Finally, we examined a few issues involved in how police spend their time across different types of shifts in these two data sets and the closeness of supervision of patrol officers. Data presented in Table 9 show the percentage of time police were observed in various types of activities. Observed time is the amount of time the officer was observed by the observer. So, for example, in the Police Services Study, observed officers spend 16.7 percent of their time handling dispatched runs, and had approximately 63 percent of their time free for discretionary activities such as preventive patrol or proactive contacts with citizens. Officers in the Reiss data handled a larger number of dispatched runs per shift and a correspondingly larger percentage of their time (22.9 percent) was spent in this activity. Nevertheless, using the Police Services Study data to approximate the time spent on meals and reports, officers in the Reiss data still had a little over half of their time for discretionary activity.

If discretionary time is an organization resource which police managers can tap, there is even more of this resource in smaller police agencies. Data in Table 10 indicate that officers in smaller police agencies spend considerably less time per shift responding to dispatched calls than

TABLE 9

Time Allocation Per Shift in Percent of Observed Time

Type of Activity	Reiss		Ostrom	
	Percent of Time	Number*	Percent of Time	Number*
Dispatched Runs	22.9	5.1	16.7	3.4
Citizen Field Mobilizations	1.2	.3	1.2	.5
Meals and Reports	NA**		14.9	
Administrative	NA**		4.2	
Discretionary Time	56.8***		63.0	

*Number per 8 hours of observed time
**Not directly available
***Estimated using Ostrom estimates for meals and reports and administrative

TABLE 10

Time Allocation Per Shift By Department Size for Ostrom Data
(in percent of observed time)

Task	Large city	Large county	50-150 Officers	Less than 50 Officers	Sig.
Dispatched Runs	20.1	20.0	13.2	12.0	<.01
Citizen Field Mobilization	1.4	.9	.8	1.4	.07
Administrative	4.7	3.7	4.0	4.1	.30
Meals and Reports	15.4	14.5	14.5	14.6	.45
Discretionary Time	58.4	61.3	67.5	67.8	<.01

officers in large city or county departments. This translates into a larger percentage of discretionary time among officers in smaller police agencies.

The increased discretionary time among officers in the Police Services Study manifests itself in an increased number of police initiated contacts among these officers when compared to the officers in the Reiss data. This contrast is clearly evident in Table 11 which shows the number of police citizen contacts by type of mobilization for the Reiss and Police Services Study data. Thus, while officers in the two data sets have comparable numbers of citizen contacts, police in the Ostrom data handled fewer dispatched calls per shift and initiated more citizen contacts.

These data raise the issue of whether police in these data sets were equally proactive over comparable amounts of discretionary time. For example, the fewer average number of proactive contacts per shift in the Reiss data may reflect the fact that officers in the Reiss data had less discretionary time per shift since they were handling more dispatched calls than the officers in the Police Services Study. To determine whether differences exist in the rate of officer initiated contacts in these two data sets, the number of officer initiated contacts per eight hours of discretionary time was calculated. Additionally, proactive police contacts were defined as aggressive police contacts if they involved a proactive contact concerning traffic, suspicious persons or circumstances, peacekeeping, investigation, or vice.

Using this approach, police in the Reiss data averaged 2.3 proactive contacts per eight hours of discretionary time compared to 4.1 proactive

TABLE 11

Number of Encounters By Mobilization Type By Shift, Department and Neighborhood Characteristics

Mobilization Type	Day	Evening	Night	Weekend	Weekday	Black	White	Mixed	Poor	Working	Middle	Large City	Large County	50-150 Officers	Less Than 50 Officers
Reiss															
Dispatch	4.5	5.6	4.4*	5.5	5.0*										
Proact	.8	.9	1.0	1.0	.8										
Onview	.2	.4	.2*	.4	.3										
Ostrom															
Dispatch	3.2	3.9	2.7*	3.4	3.4	3.5	3.3	3.6	3.2	3.8	3.1*	4.1	3.0	2.9	3.0*
Proact	2.0	2.8	2.6*	2.5	2.4	2.3	2.5	2.7	2.4	2.3	2.6	2.2	2.7	2.6	2.7*
Onview	.6	.6	.5	.6	.6	.6	.5	.6	.6	.6	.5	.7	.4	.5	.5
Ostrom Large City Only															
Dispatch	3.7	4.7	3.4*	4.1	4.0	4.1	4.1	4.0	3.9	4.3	3.0*				
Proact	1.7	2.4	2.4*	2.4	2.1	2.0	2.3	2.7*	2.3	2.2	2.0				
Onview	.6	.7	.6	.8	.6	.6	.7	.7	.6	.7	.6				

* Sig. difference at less than .05 for the indicated row

contacts per 8 hours of discretionary time for officers in the Police Services Study. The difference in "aggressive" contacts (defined above) was even more striking. Officers in the Reiss data averaged .5 aggressive contacts per eight hours of discretionary time compared to 3.1 contacts for officers in the Police Services Study. In Table 12, information on these differences are presented by time of shift, and day of week for the Reiss and Police Services Data. In addition, for the Police Service Study data this information is presented by size of department and racial and economic status of police beats. These data indicate that officers in the Police Services Study act more aggressively during evening and night shift as well as on weekends. Moreover, officers in the Police Services Study are initiate more contacts in racially mixed areas.

The final area examined in terms of the time and task component of this project is the issue of closeness of supervision of patrol officer activities. For this analysis we asked the question whether officers in different types of departments or officers operating in different areas are more or less likely to encounter face to face contact with patrol supervisors. To address this question we calculated the number of contacts which were initiated by supervisors during each of the observed shifts. We then reported this information by various attributes of these shifts. These data are reported in Table 13.

Information reported in Table 13 indicate that supervisor initiated contacts do vary with aspects of patrol shifts. For example, officers on night shifts (approximately midnight to 8:00 am) are likely to have more contact with supervisors than officers on other shifts, especially day

TABLE 12

Police-Initiated Contacts Per 8 Hours of Discretionary Time By Shift, Department and Neighborhood Characteristics

	Reiss														
	Day	Evening	Night	Weekend	Weekday	Black	White	Mixed	Poor	Working	Middle	Large City	Large County	50-150 Officers	Less than 50 Officers
Aggressive Contacts**	.4	.5	.5	.5	.5										
Total Contacts	1.5	1.6	2.5*	2.8	1.5*										
	Ostrom														
Aggressive Contacts	2.5	3.4	3.6*	3.6	2.9	2.7	3.1	3.8*	3.2	3.0	3.3	2.9	3.4	3.2	3.4
Total Contacts	3.3	4.5	4.4*	4.4	4.0	3.7	4.0	4.8*	4.1	4.0	4.1	4.0	4.6	4.0	4.0
	Ostrom Large City														
Aggressive Contacts	2.2	2.8	4.0*	3.8	2.3*	2.4	2.7	4.5*	3.0	2.8	2.6				
Total Contacts	2.9	4.2	5.0*	4.8	3.5*	3.4	4.0	5.5*	4.1	4.1	3.2				

*Sig. difference at less than .05 for the indicated row
**Defined as traffic, suspicious, peacekeeping, investigative and vice

TABLE 13

Average Number of Supervisor Contacts for Ostrom Data

	All Cases		Large City	
Shift	Contacts	Sig.	Contacts	Sig.
Day	1.9		1.5	
Evening	2.6		2.6	
Night	3.0	<.01	2.8	< .01
Day				
Weekend	2.5		2.4	
Weekday	2.3	.47	2.2	.51
Racial Composition				
Black	2.6		2.3	
White	2.1		2.1	
Mixed	3.3	< .01	2.5	.67
Income Level				
Poor	2.4		2.1	
Working	2.5		2.5	
Middle	2.6	.82	1.5	.07
Department Size				
Large city	2.3			
Large county	1.6			
50-150 Officers	2.4			
Less than 50 officers	3.3	<.01		

shifts. Additionally, closeness of supervision varies inversely with department size - officers in smaller department have more supervisor initiated contacts than officers in larger police agencies. Finally, supervision appears more close in racially mixed areas, but only for officers in not in large city police agencies.

Specific Research Ideas

The major goal of this project was to identify future topics for research on policing. Toward that end, a workshop was held with 17 invited scholars and practitioners in the area of policing to help identify promising avenues for future research. Additionally, two papers on this topic were commissioned - one from Steve Mastrofski and one from Larry Sherman. These papers identify a number of potential research areas and are included as appendices to this report. readers of this report are encouraged to review these papers independently, for while the recommendations which follow in this report may overlap at times with the recommendations of Professors Mastrofski and Sherman, their specific points will not be summarized in detail in this report. Instead the majority of research ideas outlined in the next few pages will come from the workshop and subsequent discussions with workshop participants.

For the most part these proposed ideas incorporate some observational component. This reflects a belief that observation is the only way to obtain a realistic picture of the routine activities of police officers. The first issue concerns the use of observational data to validate the

information derived form computer aided dispatch and monitoring of patrol officer activity. Increasingly, police departments are turning to computer aided dispatch as a means to increase police efficiency. In some departments very detailed time log records can be generated from the computers which account for officer activity down to very fine time intervals. The basic question is the degree to which this information is a valid representation of how officers spend their time. It would seem an easy task to use observers in patrol cars to construct a time log of how officers spend their time and to compare this direct observation of how time is spent with the summaries that are generated by computers. Are their ways in which officers can manipulate the computer based systems, or do these systems give reasonably valid information on the utilization of officer time? This type of validation study could be easily appended to the observational component of a larger project.

A second issue concerns the factors which influence police officer's arrest decisions, especially in minor offenses. Perhaps no issue has been more examined with existing observational data than the question of what factors influence police arrest decisions. This research is important for two reasons. First, is the question of equity - are all persons equally at risk of arrest given a police contact for a suspected offense? During the conference the issue was raised that current models of police decision making at their best incomplete and somewhat primitive, especially in light of recent advances in decision making modeling. Perhaps what is missing in these models of officer decision making is any sense of the officer's perceived utility of various courses of action and a recognition

that utility of various choice sets may differ from one officer to the next. It would seem that in light of this concern, the next generation of decision making models of police activity link observational choice in the field with considerable data regarding officer's perceived utility associated with different choice sets. This latter data could come from vignette designs and provide a means of assessing the degree to which vignette based studies generalize to actual police behavior.

A closely related issue involving police decisions to arrest or not might focus on an analysis of existing data to ask whether the conditional probability of arrest across different neighborhoods was related to victimization or other types of crime measures across these neighborhoods. This approach suggests that delinquent or criminal networks are information networks. The consequence of letting an offender go is that others in the offenders network become aware that of that decision. One possible result is the perception among potential offenders that we can get away with behavior "x" in area "y". It would be a simple and potentially interesting issue to examine the relationship between neighborhood level victimization rates and the probability of arrest given a contact with a suspected offender in these same areas.

A second and less examined issue concerns the influence of arrest on future criminal activity. In recent analysis of the 1949 Racine cohort (attached as an appendix) evidence emerged indicating that, under some conditions, arrest of suspected offenders reduced their future rate of police contacts when compared to cases where police elected not to arrest to suspected offender. This suggests that police decisions to arrest may

have some deterrent value relative to simply warning or releasing the suspected offender. A potentially significant study would involve tracking the future criminal activity of persons confronted by police and either arrested or not. Such a study could potentially identify contingencies of deterrence which might become future guides for arrest decisions.

Another possible area for research is the degree of officer compliance with increasing legal constraints on their activity. One motivating concern for this type of study would seem to be the potential liability issues if officers are not sufficiently attentive to court imposed constraints, which would leave themselves and their departments open to suit. This issue is discussed in more detail in the commissioned papers.

As noted in the commissioned papers, significant changes in the composition of police departments has occurred over the last decade, especially in the demographics of the work force. One obvious question is whether changes in say the minority representation among patrol officers have influenced police behavior. For example, are black officers more able to handle problems involving black citizens? More importantly perhaps, are there any macro effects of increasing the minority representation of a patrol force? Does increasing the minority representation of a patrol force change the behavior of white officers toward minority offenders and victims? Additionally, have changes in the composition of police departments had any effect on how the public views police? Does increasing minority representation on police departments have any positive effect on how citizens view the police? This question

could be assessed by returning to the original police beats in the Police Services Study and measuring changes in citizen evaluation of the police and changes in the demographic composition of the police agencies which serve these areas. It would also appear possible to control for numerous other factors which might influence citizen evaluations of police performance since considerable baseline data exits for these beats on such factors as crime rates, racial composition and income levels. The ultimate dependent variable would be aggregate changes in the level of citizen satisfaction with police services. The independent variables would included current information on neighborhood characteristics and police agencies which serve these areas as well as changes in these variables between 1977 and today.

A closely related question involves assessing whether citizen expectations of police have changed over the last decade. As police departments face increasingly limited resources, the need for community support becomes more important than ever. One way to assess demand for police services is by evaluating calls for service from citizens. But a more accurate approach involves assess the specific requests made of police when they arrive at the scene of a call. One way to get a handle on the latter issue is to examine the specific requests citizens make of police when the officers are called to the scene. Put simply what do citizens want when they call the police and to what extent do police comply with these expectations when possible? Baseline information on these issues exist in the Police Services Study from the observational component and from followup interviews with citizens involved in

encounters with the police which were observed in these data. The basic questions which could be addressed here are whether citizen expectations of police have changed since 1977, whether police are more or less likely to comply with specific citizen requests for some action, and how these factors influence community support for the police.

Another interesting issue would involve assessing the interface between citizen attitudes of police and police attitudes of citizens. In the Police Services Study, citizens were asked a number of questions about how they viewed police, and police officers working in these areas were asked a number of questions about how they viewed citizens. It would be possible to identify areas where citizens and police held mutually favorable or unfavorable attitudes toward each other, or those areas where one group viewed the other more or less favorably than they were viewed. Two issues seem relevant. First, what are the sources of variation in citizen attitudes toward police and in police attitudes toward citizens? Second, do police officers conduct themselves differently or in general act differently in areas of differing degrees of police-community tension? Finally, one use of the baseline information on these issues from the 1977 Police Services Study would be to identify those neighborhoods where citizen attitudes toward police have improved and those areas where they have deteriorated and ask why?

Another research possibility might involve assessing the effects of varying degrees or types of supervision on officer activity. A number of supervisory condition could be established and experimentally administered to vary the amount and type of contacts between supervisors and patrol

officers. From observation of the officers, it would be possible to determine if variation in supervisor contacts had any influence on certain types of police activity such as whether they are more proactive, or initiate more contact with citizens? The question simply put is whether closer monitoring of patrol officers has an effect on job performance.

It was also suggested that research linking officer behavior with officer attitudes might be an important contribution. To what extent do the philosophies of policing held by different officer influence their job performance? Do officers who feel that police visibility is important use their discretionary time differently than officers who regard police visibility as less important. In this area a host of possible linkages exist between officer attitudes and their behavior in the field.

It is somewhat ironic that despite several large scale observational studies of the police we know very little about the effects of policing on the police themselves. For example, what happens to police officers after they handle especially traumatic events, or are continually confronted with such events? How does the reality of policing and the types of problems police confront influence or shape theirs views on policing and the public? In short we need to know more about the impact of policing on the police. What are the conditions of police work which are associated with increased stress? To what extent are the sources of stress based in the demands of citizens or the agencies to which police officers belong? One initial possibility here would require identifying stressful events and examining the natural variation in how officers react to these situations.

This admittedly brief sketch of possible research ideas, coupled with those identified in the commissioned papers are intended as points of departure for developing specific proposals which would advance our understanding of policing. Anext logical step might be to organize an additional meeting with members of the practitioner and research communities to critically assess which specific proposal merit further development.

Notes

1. Copies of this data set were distributed to researchers at a workshop held in conjunction with this project.

2. The juvenile contact data was examined by Roger Jarjoura. The domestic data were examined by Barbara Anderson. Both Master's Theses were conducted at the University of Maryland during the course of this project.

APPENDIX A

by

STEVE MASTROFSKI

APPENDIX B

by

LARRY SHERMAN